VERIFICATION REPORT
OJSC "COAL MINE "KOMSOMOLETS-DONBASSA"

VERIFICATION OF THE "CMM UTILISATION ON THE JOINT STOCK COMPANY NAMED KOMSOMOLETS DONBASSA COAL MINE OF DTEK (DONBASSKAYA TOPLIVNAYA ENERGETICHESKAYA KOMPANYA)"

INITIAL AND 1ST PERIODIC
(09 AUGUST 2008 – 03 NOVEMBER 2009)

REPORT NO. UKRAINE/0050/2009
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BUREAU VERITAS CERTIFICATION

Date of first issue: 31/05/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: OJSC "Coal Mine "Komsomolec-Donbassa"	Client ref.: Martovitskiy Artur

Summary:

Bureau Veritas Certification has made the verification of the "CMM utilisation on the Joint Stock Company named Komsomolets Donbassa Coal Mine of DTEK (Donbasskaya Toplivnaya Energeticheskaya Kompanya)" project of OJSC "Coal Mine "Komsomolec-Donbassa" located in Kirovske city, Donetsk region, Ukraine on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting, as well as the host country criteria.

The verification scope is defined as a periodic independent review and 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, Project Design Document 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 Requests, Corrective Actions Requests, Forward Actions Requests (CL, CAR and FAR), presented in Appendix A.

The verification is based on the Monitoring Report (covers August, 9th 2008 – November, 3rd 2009), the revised Monitoring Plan version 1c of 25/05/2010, the determined PDD, version 4 of 14/04/2008, and supporting documents made available to Bureau Veritas Certification by the project participant.

In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in validated and registered project design documents. 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 without material misstatements.

Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents. Based on information seen and evaluated we confirm that the implementation of the project has resulted in 66137 t CO_2e reductions during period from 09/08/2008 up to 03/11/2009.

Report No.: UKRAINE/0050/2009	Subject Group: JI
Project title: CMM utilisation on the Joint Stock Company named Komsomolets Donbassa Coal Mine of DTEK (Donbasskaya Toplivnaya Energeticheskaya Kompanya)	
Work carried out by: Team Leader, Lead Verifier: Ivan Sokolov Team Member, Technical Specialist: Igor Antipko Team Member, Verifier: Victoria Legka	
Work verified by: Leonid Yaskin - Internal Technical Reviewer	

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Indexing terms

Climate Change, Kyoto Protocol, JI, Emission Reductions, Verification

Abbreviations

AIE	Accrediting Independent Entity
BVCH	Bureau Veritas Certification Holding SAS
CAR	Corrective Action Request
CH_4	Methane
CL	Clarification Request
CMM	Coal Mine Methane
CO_2	Carbon Dioxide
ERU	Emission Reduction Unit
FAR	Forward Action Request
GHG	Green House Gas(es)
GWP	Global Warming Potential
IETA	International Emissions Trading Association
IPCC	Intergovernmental Panel on Climate Change
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MoV	Means of Verification
MP	Monitoring Plan
MR	Monitoring Report
NMHC	Non methane hydrocarbons
PCF	Prototype Carbon Fund
PDD	Project Design Document
UNFCCC	United Nations Framework Convention on Climate Change

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1 INTRODUCTION

OJSC "Coal Mine "Komsomolec-Donbassa" has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project "CMM utilisation on the Joint Stock Company named Komsomolets Donbassa Coal Mine of DTEK (Donbasskaya Toplivnaya Energeticheskaya Kompanya)" (hereafter called "the project") at Kirovske city, Donetsk region, Ukraine, JI Registration Reference JI0079.
This report summarizes the findings of the verification of the project, performed on the basis of criteria given to provide for consistent project operations, monitoring and reporting, and contains a statement for the verified emission reductions. The order includes the initial and first periodic verification of the project.
Initial and first periodic verification has been performed as one integrated activity. It consisted of a desk review of the project documents including PDD, monitoring plan, determination report, monitoring report and further documentation.
The results of the determination were documented by Det Norske Veritas (DNV) in the report: "Determination of CMM utilisation on the Joint Stock Company named Komsomolets Donbassa Coal Mine of DTEK (Donbasskaya Toplivnaya Energeticheskaya Kompanya)" No.2008-0200, Rev.02 dated September, 18th 2008.

The project is approved by the Ministry of Environmental Protection of Ukraine and the Minister of Economic Affairs of the Netherlands (Letters of approval are presented, see Section 7) and registered under Track 2.

1.1 Objective

Verification is the periodic independent review and ex post determination by the AIE of the monitored reductions in GHG emissions during defined verification period.
The objective of verification can be divided in Initial Verification and Periodic Verification.
Initial Verification: The objective of an initial verification is to verify that the project is implemented as planned, to confirm that the monitoring system is in place and fully functional, and to assure that the project will generate verifiable emission reductions. A separate initial verification prior to the project entering into regular operations is not a mandatory requirement.
Periodic Verification: The objective of the periodic verification is to verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan; furthermore the periodic verification evaluates the GHG emission reduction data and express a conclusion with a high, but not absolute, level of assurance about whether the reported GHG emission reduction data is free of material misstatements; and verifies that the reported GHG emission data is sufficiently supported by evidence, i.e. monitoring

records. If no prior initial verification has been carried out, the objective of the first periodic verification also includes the objectives of the initial verification.
The verification follows UNFCCC criteria referring to the Kyoto Protocol criteria, the JI/CDM rules and modalities, and the subsequent decisions by the JISC, 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 and the determined project design document including the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. Bureau Veritas Certification has, based on the recommendations in the Validation and Verification Manual employed a risk-based approach in the verification, focusing on the identification of significant risks of the project implementation and the generation of ERUs.
The verification is not meant to provide any consulting towards the Client. However, stated requests for forward actions and/or corrective actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.
The audit team has been provided with a Monitoring Report version 01 and underlying data records, covering the period from 09 August 2008 to 03 November 2009 inclusive (see Section 7).

1.3 GHG Project Description

Degassing of Coal Mine Gas (CMM) is an unavoidable occurrence of hard coal mining. In addition to active coal mines there are also a lot of abandoned mines, which still emit CMM after mining. Even after shut down mining activities, the CMM escapes over many years through open shafts, cracks and existing degassing wells in the overburden directly or diffusely into the atmosphere. CMM mainly consists of the harmful greenhouse gas methane (GWP 21), so that using of CMM becomes more important particularly with regard to the world-wide consensus of reducing GHG emissions.
In this project CMM from two suction systems of the coal mine Komsomolets Donbassa should be utilized for heat and power generation and for flaring for methane destruction. The remaining amount of the CMM, which can not be utilized, should be further on released into the atmosphere unused.

The coal mine Komsomolets Donbassa has multiple shafts, two of which are fitted with CMM suction systems, the Central Shaft and the Air Shaft № 3. Before the project activity CMM was not utilized on the mine and all of the CMM was simply vented to the atmosphere. All heat used by the coal mine facilities was generated by coal fired boilers. All power was purchased from the Ukrainian grid.
In this project three new cogeneration units, one new CMM boiler and four new flares should be installed and should be fired with CMM. Furthermore two old coal boilers should be upgraded with a CMM burning system. The new and the modified units are supposed to displace the main part of the heat generated by the old coal boilers and displace a part of the power purchased from the grid.
The utilizations of the CMM should be installed coexistent on the Central Shaft and the Air Shaft № 3 of the Komsomolets Donbassa coal mine. The distance between the two shafts is about 3 km and no connecting CMM pipeline is planned, so that the utilizations on both locations are working independently.
Project activity at the Central Shaft:

1. Installation of a new gas boiler for heat production
2. Installation of two flares for methane destruction

Project activity at Air Shaft № 3:

3. Installation of three new cogeneration units for combined power and heat production
4. Upgrade of two old coal boilers with CMM burner systems for heat production
5. Installation of two flares for methane destruction

It is planned to utilise up to 100% of the CMM amount. The utilisation mainly depends on the heat demand of the coal mine. The units should be supplied with CMM in the following order: primary the cogeneration units, than the boilers, and at last the flares should destroy the remaining amount of CMM.

2 METHODOLOGY

The verification is as a desk review and field visit including discussions and interviews with selected experts and stakeholders.

In order to ensure transparency, a verification protocol was customized for the project, according to the Validation and Verification Manual (IETA/PCF) a verification protocol is used as part of the verification (see Section 7). 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 organises, details and clarifies the requirements the project is expected to meet; and

- 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 verification protocol consists of one table under Initial Verification checklist and four tables under Periodic verification checklist. The different columns in these tables are described in Figure 1.

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

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

Initial Verification Protocol Table 1			
Objective	**Reference**	**Comments**	**Conclusion (CARs/FARs)**
The requirements the project must meet	Gives reference to where the requirement is found.	Description of circumstances and further comments on the conclusion	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) of risk or non-compliance of the stated requirements. Forward Action Request (FAR) indicates essential risks for further periodic verifications.

Periodic Verification Checklist Protocol Table 2: Data Management System/Controls		
Identification of potential reporting risk	**Identification, assessment and testing of management controls**	**Areas of residual risks**
The project operator's data management system/controls are assessed to identify reporting risks and to assess the data management system's/control's ability to mitigate reporting risks. The GHG data management system/controls are assessed against the expectations detailed in the table.	A score is assigned as follows: • Full - all best-practice expectations are implemented. • Partial - a proportion of the best practice expectations is implemented • Limited - this should be given if little or none of the system component is in place.	Description of circumstances and further commendation to the conclusion. This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) of risk or non compliance with stated requirements. The corrective action requests are numbered and presented to the client in the verification report. The Initial Verification has additional Forward Action Requests (FAR). FAR indicates essential risks for further periodic verifications.

Periodic Verification Protocol Table 3: GHG calculation procedures and management control testing		
Identification of potential reporting risk	**Identification, assessment and testing of management controls**	**Areas of residual risks**
Identify and list potential reporting risks based on an assessment of the emission estimation procedures, i.e. ➢ the calculation methods, ➢ raw data collection and sources of supporting documentation, ➢ reports/databases/information systems from which data is obtained. Identify key source data. Examples of source data include metering records, process monitors, operational logs, laboratory/analytical data, accounting records, utility data and vendor data. Check appropriate calibration and maintenance of equipment, and assess the likely accuracy of data supplied. Focus on those risks that impact the accuracy, completeness and consistency of the reported data. Risks are weakness in the GHG calculation systems and may include: ➢ manual transfer of data/manual calculations, ➢ unclear origins of data, ➢ accuracy due to technological limitations, ➢ lack of appropriate data protection measures? For example, protected calculation cells in spreadsheets and/or password restrictions.	Identify the key controls for each area with potential reporting risks. Assess the adequacy of the key controls and eventually test that the key controls are actually in operation. Internal controls include (not exhaustive): ➢ Understanding of responsibilities and roles ➢ Reporting, reviewing and formal management approval of data; ➢ Procedures for ensuring data completeness, conformance with reporting guidelines, maintenance of data trails etc. ➢ Controls to ensure the arithmetical accuracy of the GHG data generated and accounting records e.g. internal audits, and checking/ review procedures; ➢ Controls over the computer information systems; ➢ Review processes for identification and understanding of key process parameters and implementation of calibration maintenance regimes ➢ Comparing and analysing the GHG data with previous periods, targets and benchmarks. When testing the specific internal controls, the following questions are considered: 1. Is the control designed properly to ensure that it would either prevent or detect and correct any significant misstatements? 2. To what extent have the internal controls been implemented	Identify areas of residual risks, i.e. areas of potential reporting risks where there are no adequate management controls to mitigate potential reporting risks Areas where data accuracy, completeness and consistency could be improved are highlighted.

	according to their design; 3. To what extent have the internal controls (if existing) functioned properly (policies and procedures have been followed) throughout the period? 4. How does management assess the internal control as reliable? 5.	

Periodic Verification Protocol Table 4: Detailed audit testing of residual risk areas and random testing		
Areas of residual risks	**Additional verification testing performed**	**Conclusions and Areas Requiring Improvement (including Forward Action Requests)**
List the residual areas of risks (Table 2 where detailed audit testing is necessary. In addition, other material areas may be selected for detailed audit testing.	The additional verification testing performed is described. Testing may include: 1. Sample cross checking of manual transfers of data 2. Recalculation 3. Spreadsheet 'walk throughs' to check links and equations 4. Inspection of calibration and maintenance records for key equipment ➢ Check sampling analysis results ➢ Discussions with process engineers who have detailed knowledge of process uncertainty/error bands.	Having investigated the residual risks, the conclusions should be noted here. Errors and uncertainties should be highlighted. Errors and uncertainty can be due to a number of reasons: ➢ Calculation errors. These may be due to inaccurate manual transposition, use of inappropriate emission factors or assumptions etc. ➢ Lack of clarity in the monitoring plan. This could lead to inconsistent approaches to calculations or scope of reported data. ➢ Technological limitations. There may be inherent uncertainties (error bands) associated with the methods used to measure emissions e.g. use of particular equipment such as meters. ➢ Lack of source data. Data for some sources may not be cost effective or practical to collect. This may result in the use of default data which has been derived based on certain assumptions/conditions and which will therefore have varying applicability in different situations. The second two categories are explored with the site personnel, based on their knowledge and experience of the processes. High risk process parameters or source data (i.e. those with a significant influence on the reported data, such as meters) are reviewed for these uncertainties.

Verification Protocol Table 5: Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	**Ref. to checklist question in tables 2/3**	**Summary of project owner response**	**Verification conclusion**
If the conclusions from the Verification are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Tables 2, 3 and 4 where the Corrective Action Request or Clarification Request is explained.	The responses given by the Client or other project participants during the communications with the verification team should be summarized in this section.	This section should summarize the verification team's responses and final conclusions. The conclusions should also be included in Tables 2, 3 and 4, under "Final Conclusion".

Figure 1 Verification protocol tables

2.1 Review of Documents

The Monitoring Report (MR) version 1 dated 20/11/2009 submitted by OJSC "Coal Mine Komsomolets Donbassa" and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), applied methodology, Kyoto Protocol, Clarifications on Verification Requirements to be checked were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, OJSC "Coal Mine Komsomolets Donbassa" revised the MR and resubmitted it as version 1b of 22/01/2010, version 1c of 28/01/2010, version 2 of 21/04/2010, version 2a of 17/05/2010, version 2b of 20/05/2010, version 2c of 25/05/2010, version 2d of 25/05/2010 and final version 2e dated 01/06/2010.

The verification findings presented in this report relate to the project as described in the PDD version 4 of 14/04/2008, revised Monitoring Plan ver.1c and Monitoring Report version 1c and 2e.

2.2 Follow-up Interviews

On 16/12/2009 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of OJSC "Coal Mine Komsomolets Donbassa", Eco-Alliance Ltd., Carbon-TF B.V and local stakeholders were interviewed (see 6 References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
OJSC "Coal Mine Komsomolets Donbassa"	Organizational structure Responsibilities and authorities Training of personnel Quality management procedures and technology Implementation of equipment (records) Metering equipment control Metering record keeping system, database
Local Stakeholder: District State Administration	Social impacts Environmental impacts
Consultant: Carbon-TF B.V, Eco-Alliance Ltd.	Baseline methodology Monitoring plan Monitoring report Deviations from PDD Revised Monitoring plan

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.

Findings established during the initial verification can either be seen as a non-fulfilment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

Corrective Action Requests (CAR) are issued, where:
i) there is a clear deviation concerning the implementation of the project as defined by the PDD;
ii) requirements set by the MP or qualifications in a verification opinion have not been met; or
iii) there is a risk that the project would not be able to deliver (high quality) ERUs.

Forward Action Requests (FAR) are issued, where:
iv) the actual status requires a special focus on this item for the next consecutive verification, or
v) an adjustment of the MP is recommended.

The verification team may also use the term Clarification Request (CL), which would be where:
vi) additional information is needed to fully clarify an issue.

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 FINDINGS

In the following sections, the findings of the verification are stated. The verification findings for each verification subject are presented as follows:

1) The findings from the desk review of the original project activity documents and the findings from interviews during the follow up visit are summarized. A more detailed record of these findings can be found in the Verification Protocol in Appendix A.
2) The conclusions for verification subject are presented.

In the final verification report, the discussions and the conclusions that followed the preliminary verification report and possible corrective action requests are encapsulated in this section.

3.1 Remaining issues CAR's, FAR's from previous determination/verification

One task of the verification is to check the remaining issues from the previous determination and verification or issues which are clearly defined for assessment in the PDD. The determination report of the present project prepared by Det Norske Veritas (DNV) did not note any open issues.

3.2 Project Implementation

The present JI project implies utilization of CMM from two suction systems of the coal mine Komsomolets Donbassa for heat and power generation and for flaring. According to the PDD version 04 of 14/04/2008 three new cogeneration units, one new CMM boiler and four new flares should be installed and should be fired with CMM.

During the fist monitoring period (09 Aug. 2008 – 03 Nov. 2009) the delay in the installation of some project units as to the PDD occurred due to the Global Financial Crisis. The status of project activity implementation compared to the PDD is presented in the table below:

Table 1. Status of implementation including time table for project component

Unit	**Planned installation date, as stated in the PDD**	**Implementation status**
Central Shaft		
new boiler	Oct 2007	Delayed, planned for late 2011 or

		early 2012
flare No: 1	Sep 2007	Delayed, planned for late 2011 or early 2012
flare No: 2	Apr 2008	Delayed, planned for late 2011 or early 2012
Air Shaft № 3		
cogeneration unit 1	Sep 2008	Delayed, planned for summer 2011
cogeneration unit 2	Sep 2008	Delayed, planned for summer 2011
cogeneration unit 3	Sep 2008	Delayed, planned for summer 2011
upgraded boiler	Oct 2007	Installed in winter 2009/2010 (after the monitoring period)
flare No: 3	Sep 2007	Installed in 2008
flare No: 4	Apr 2008	Installed in 2008

The installation of further units as stated in the PDD is delayed due to the Global Financial Crisis. The coal production decreased and the financial situation of the coal mine get worse. As only two of nine planned units have been installed, the planned amount of emission reductions could not be achieved. Since the coal production and financial situation of the coal mine improved in 2009 the continuation of the project installation is planned for coming years.

Central Shaft

At the time the main degasification pipe is renewed. The works should be finalized in summer 2011. The installation of the flares 1 and 2 as well as the boiler 1 is planned for late 2011 or early 2012.

Air shaft

The boiler 2 at Air Shaft has been upgraded with a CMM burner system and started operation in November 2009. A monitoring system for the boiler has not been installed yet; the installation is planned for early 2010.

The installation of the cogeneration units is planned for summer 2011.

Because of the fact that the maximum supply pressure from the existing central gas suction system turned out to be not sufficient for the supply of the flares and the boiler with gas, both flares have been equipped with compressors for additional pressure generation. This additional power consumed by the project has been included into the project emissions.

The starting date of the crediting period was changed from 1st January 2008 to 09th August 2008, which is the date of the first start of flare 3 operation. It was caused by the delay in the delivery and installation of the flare.

The identified areas of concern as to Project Implementation, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR01, CAR02, CAR03, CL01, CL02, CL03, CL04).

3.3 Internal and External Data

The monitoring approach in the Monitoring Plan of the PDD version 04 requires monitoring and measurement of variables and parameters necessary to quantify the baseline emissions and project emissions in a conservative and transparent way. The same approach is applied in the revised Monitoring Plan revision 1c developed because of additional power consuming equipment (compressors) installation, monitoring period change and adjustment of emission calculation formulas as to monitoring method used.
The parameters that are determined to quantify the baseline and project emissions are presented in the revised Monitoring Plan ver.1c and Monitoring Report ver.2e.

Due to the installation of compressors for additional pressure generation at flares additional electric power was consumed by the project. This power was accounted into the project emissions for energy use for capture and use methane in contrast to the assumption made in the PDD where power consumption of flares was considered negligible. As during given monitoring period no power meters were installed for accounting of this additional electricity consumed the new formula was introduced for calculation of the power amount used by the compressors installed at the flares. Consequently, new parameters included in the newly introduced formula were embedded: operation hours of the flares, compressor motor capacity, total motor capacity of flare unit, effective load of electric motor, effective load of the flare during standby.

Changes that have been implemented do not affect conservativeness of the approach to the emission reductions calculations and procedures of the data collection and archiving.

Internal and external data required for calculation of emission reductions are presented in Monitoring Report section B.2 and revised Monitoring Plan ver.1c. The monitored values (measured, estimated, and calculated) are presented in excel file including detailed calculation of emission reductions. The monitoring equipment used for baseline and project emission calculation is present in the section B.1.2 of Monitoring Report. All the monitoring equipment is checked and calibrated according calibration plans.

The verification team checked the appropriateness of default external and internal data, the state of monitoring equipment, the calibration procedures, data control, and assessed the qualification of personnel.

The identified areas of concern as to Internal and External Data, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR04, CL05, CL06, CL07, CL11).

3.4 Environmental and Social Indicators

In the given project the utilisation of otherwise unused CMM reduces in an active manner the amount of CMM which is released to the atmosphere and provides significant benefits for the global climate condition by converting the harmful methane into the less harmful carbon dioxide. The new and the modified project units (cogeneration units and CMM boiler) are supposed to displace the main part of the heat generated by the old coal boilers and displace a part of the power previously purchased from the grid.
Furthermore, the operation of the project units reduces the uncontrollable migration of CMM to the surface in the surrounding area and reduces consequently the accident hazard by fire and explosions caused through methane which would otherwise uncontrollable discharge to the atmosphere. Required permissions and licences as to environmental impact of the project are available.

The project implementation was positively accepted by the local community and received set of positive comments particularly due to the increase of work safety at the coal mine.

The identified areas of concern as to Environmental and Social Indicators, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR05).

3.5 Management and Operational System

The general project management is implemented by the Technical Director of the Coal Mine Komsomolets Donbassa through supervising and coordinating activities of his subordinates, such as the Director of Capital Development, the Deputy Director on surface degasification, heat technician, head of safety engineering departments, etc. The project management structure is presented in the MR section C.1.1 and revised Monitoring Plan ver.1c.

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 daily. For each of the two 12h-shift there is one person on-duty responsible for the proper operation and keeping of the journals.

The data are collected, processed and stored using electronic system and specialized software. The collected data are stored electronically by a data logger and on paper in journals by the coal mine personnel. The data are read out hourly from the data logger and stored and archived in an internet-based data base. The data base is provided with an internet front end, by which all stored data can be visualised, controlled and analysed. The data can be read any time from the internet data base by authorised personnel. Eco-Alliance, the administrator of the data base is responsible for the proper work of the data base, routine backups, data storage and general supervision of the electronically monitoring system. Eco-Alliance regularly verifies the electronically recorded data with the handwritten data and checks the stored data for plausibility, errors, deviations and non-conformity. All inconsistencies are discussed with the service and the operation teams, at which the operational and monitoring experience is gained, the plant operation is optimised. The monitoring engineer (Eco-Alliance) checks the data from web-site every day and makes internal weekly reports.

The employees responsible for the monitoring control have been trained on–the–job during the installation of the system. The mechanic on duty from the Coal Mine Komsomolets Donbassa makes daily audits.
The troubleshooting procedures are defined and the coal mine personnel are instructed accordingly.

Besides, the Coal Mine has Occupational Health and Safety Management System certified against the requirement of OHSAS 18001:2007 international standard.

The existing management and operational systems are eligible for reliable project monitoring.

The identified areas of concern as to Management and Operational System, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR09, CL08, CL09, 12).

4 FIRST PERIODIC VERIFICATION FINDINGS

4.1 Completeness of Monitoring

4.1.1. Determination of the revised Monitoring Plan (Version 1c of 25.05.2010)

In the course of first monitoring period (09.08.2008 – 03.11.2009) the original monitoring plan described in the registered PDD version 04 of 14/04/2008 was changed by the project participants. As a response to the CAR 11 raised by BV Certification during initial and first periodic verification (refer to Appendix A Table 5) OJSC “Coal Mine “Komsomolec-Donbassa” revised the original Monitoring Plan and submitted it for the determination of proposed revisions in respect of improvement the accuracy and completeness of information of the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans. During determination process Bureau Veritas Certification reviewed the revised Monitoring Plan dated 21/04/2010 which was provided by OJSC “Coal Mine Komsomolets Donbassa” and its subsequent version of 17/05/2010, version 1b of 20/05/2010 and final version 1c of 25/05/2010 resulted from addressing corrective action and clarification raised by BV Certification in course of the determination.

The project participants provided an appropriate justification for the proposed revision. The revision was caused by set of reasons: delay is project implementation resulted into change of monitoring period and frequency of some parameters calculation, installation of the additional equipment (compressors for additional pressure generation) and introduction of new parameters for calculation of project emissions related to equipment operation, necessity to adjust some formulae in order to fit better the measuring/monitoring method applied. Changes introduced are sufficiently described in the revised Monitoring Plan ver. 1c and Monitoring report ver.2e.

The monitoring approach in the Monitoring Plan of the PDD version 04 requires monitoring and measurement of variables and parameters necessary to quantify the baseline emissions and project emissions in a conservative and transparent way. The same approach is applied in the revised Monitoring Plan version 1c.

The reporting procedures reflect the revised monitoring plan completely.

Changes that have been implemented do not affect conservativeness of the approach to the emission reductions calculations and procedures of the data collection and archiving.

The Management and Operational Systems are eligible for reliable project monitoring according new plan.

Bureau Veritas Certification confirms that the proposed revisions to the monitoring plan 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.

The monitoring of the project is complete, effective and reliable and generally complies with comply with the monitoring methodology described in the PDD and Monitoring Plan revision 1c of 25/05/2010. All relevant emission sources are covered by the monitoring plan and the boundaries of the project are defined correctly and transparently. All pertinent parameters were monitored and determined as prescribed. The collected data were stored during the whole monitoring period. The monitoring methodologies and supporting records were sufficient to enable verification of emission reductions. During the verification process, no significant lacks of evidence were detected. The reporting procedures, which were described in the final MR and examined during the on-site visit, were found to reflect the ones defined by the PDD and revised Monitoring Plan.
Due to the delay in project implementation caused by the problems with delivery and installation of the flare unit the start of the monitoring period originally planed for 01/01/2008 was postponed till 09/08/2008 (starting date of flare 3 operation), so first 6 months of the crediting period were not considered for the monitoring.

The identified areas of concern as to Completeness of Monitoring, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR11, CAR12).

4.2 Accuracy of Emission Reduction Calculations

All used data were of a high quality to assure accurate calculation. It is evidenced that the whole monitoring system was fully operational during the entire monitoring period. The calibration results ensure the correct functionality of all the necessary equipment pertinent to the project activity. The verification team received access to all relevant documentation needed to verify the emission reduction calculation. All used information was traceable and appropriately archived.

As only two of nine planned project units have been installed owing to financial difficulties at the coal mine, the planned amount of emission reductions were not achieved.

The verification team confirms that emission reduction calculations have been performed according to the revised monitoring plan and to the calculation methodology in the final MR. The verification team checked

the transfer of monitored data sets to spreadsheets used by project participants, correctness of the formulae versus revised monitoring plan ver.1c, programming of formulae and connections, as well as calculations of emission reductions. The calculation excel file "ER-KD-2008-01-01-2009-11-03.V2b.xls" was checked by the verifiers.

The identified areas of concern as to Accuracy of Emission Reduction Calculation, project participants response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR06, CAR07, CAR08, CAR10, CAR13, CL10).

4.3 Quality Evidence to Determine Emissions Reductions

The evidences that were obtained by the verification team in order to provide confidence in the provided emission reduction calculation, such as:

- Explicitly defined JI project management structure
- Clear allocation of roles, responsibilities and authorities
- Occupational Health and Safety Management System certified against OHSAS 18001:2007 international standard
- Automatic data acquisition system
- Reliable IT for data collection, processing and storing
- Procedures for protection and back up of electronic and paper data
- QC and QA procedures
- Implementation of data traceability
- Appropriate archiving system
- Competent and qualified personnel
- Maintained and calibrated measuring equipment
- Regular check-ups and audits
- Collation of spot manual calculations with excel file results
- Check for consistency and adequacy of calculations and data

are observed as consistent and to high quality. All used parameters were of sufficient and appropriate quality to assure an accurate monitoring.

4.4 Management System and Quality Assurance

To ensure quality of project operation and monitoring an efficient Management and Operation System is developed and maintained as discussed as a part of the Initial Verification in Section 3.5 above.

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5 PROJECT SCORECARD

Risk Areas		Conclusions			Summary of findings and comments
		Baseline Emissions	Project Emissions	Calculated Emission Reductions	
Completeness	Source coverage/ boundary definition	✓	✓	✓	All relevant sources are covered by the monitoring plan and the boundaries of the project are defined correctly and transparently.
Accuracy	Physical Measurement and Analysis	✓	✓	✓	State-of-the-art technology is applied in an appropriate manner. Appropriate backup solutions are provided.
	Data calculations	✓	✓	✓	Emission reductions are calculated correctly
	Data management & reporting	✓	✓	✓	Data management and reporting were found to be satisfying.
Consistency	Changes in the project	✓	✓	✓	Results are consistent to underlying raw data.

6 INITIAL AND FIRST PERIODIC VERIFICATION STATEMENT

Bureau Veritas Certification has performed a verification of the JI project "CMM utilisation on the Joint Stock Company named Komsomolets Donbassa Coal Mine of DTEK (Donbasskaya Toplivnaya Energeticheskaya Kompanya)". The verification is based on the currently valid documentation of the United Nations Framework Convention on the Climate Change (UNFCCC).

The management of the OJSC "Coal Mine "Komsomolec-Donbassa" 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 revision 1c that was determined by Bureau Veritas Certification and found more accurate for the monitoring period stated. 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 2d for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as planned and described in validated and registered project design documents and revised Monitoring Plan. 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 calculated without material misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated we confirm the following statement:

Reporting period: From 09/08/2008 to 03/11/2009
Baseline emissions : 79 156 t CO2 equivalents.
Project emissions : 13 019 t CO2 equivalents.
Emission Reductions : 66 137 t CO2 equivalents.

7 REFERENCES

Category 1 Documents:
Documents provided by project participants that relate directly to the GHG components of the project.

/1/ Project Design Document, version 04 dated 14/04/2008
/2/ Monitoring Report version 1 dated 20/11/2009
/3/ Monitoring Report version 1b dated 22/01/2010
/4/ Monitoring Report version 1c dated 28/01/2010
/5/ Monitoring Report version 2 dated 21/04/2010
/6/ Monitoring Report version 2a dated 17/05/2010
/7/ Monitoring Report version 2b dated 20/05/2010
/8/ Monitoring Report version 2c dated 25/05/2010
/9/ Monitoring Report version 2d dated 25/05/2010
/10/ Monitoring Report version 2e dated 01/06/2010
/11/ Revised Monitoring Plan of 21/04/2010
/12/ Revised Monitoring Plan of 17/05/2010
/13/ Revised Monitoring Plan version 1b of 20/05/2010
/14/ Revised Monitoring Plan version 1c of 25/05/2010
/15/ Determination Report by Det Norske Veritas (DNV) No.2008-0200 "Determination of CMM utilisation on the Joint Stock Company named Komsomolets Donbassa Coal Mine of DTEK (Donbasskaya Toplivnaya Energeticheskaya Kompanya)", Rev.02 dated 18/09/2008
/16/ Letter of Approval of Ministry of Environmental Protection of

Ukraine No M000011, issued on 03/10/2007

/17/ Approval of voluntary participation in a Joint Implementation Project of the Ministry of Economic Affairs of the Netherlands No 2007JI04, issued on 26/11/2007

Category 2 Documents:

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

/18/ Documents checked during the verification onsite are presented in Annex C

Persons interviewed:

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

/1/ A. Mikhaylov – Lead Specialist of the Department for Generation of DTEK

/2/ K. Vyalyj – Acting General Director of the OJSC “Komsomolets Donbassa Coal Mine”

/3/ V. Raskidkin – Chief Engineer of the OJSC “Komsomolets Donbassa Coal Mine”

/4/ T. Dudlya – Director of Economics of the OJSC “Komsomolets Donbassa Coal Mine”

/5/ A. Uzhva – Acting Deputy HR Director of the OJSC “Komsomolets Donbassa Coal Mine”

/6/ V. Rogovets - Head of Mining Operations on Capital Construction of the OJSC “Komsomolets Donbassa Coal Mine”

/7/ N. Lebedenko - Chief Surveyor of the OJSC “Komsomolets Donbassa Coal Mine”

/8/ A. Kaminskiy – Chief Power Engineering Specialist of the OJSC “Komsomolets Donbassa Coal Mine”

/9/ L. Chernomorskiy – Head of division for preventive works and safety measures of the OJSC “Komsomolets Donbassa Coal Mine”

/10/ V. Chegrinets - Chief Ecologist of the OJSC “Komsomolets Donbassa Coal Mine”

/11/ I. Avdiyenko - Chief Technologist of the OJSC “Komsomolets Donbassa Coal Mine”

/12/ P. Shelegeda – Chief of Technical Department of LLC “Eco-Aliance”

/13/ A. Didenko - Head of Service Department of LLC “Eco-Aliance”

/14/ O. Samus - Monitoring Engineer of LLC “Eco-Aliance”

/15/ A. Hadulla – Director Business Development of Carbon-TF B.V.

APPENDIX A: COMPANY JI PROJECT VERIFICATION PROTOCOL

Initial Verification Protocol Table 1

Objective	Reference	Comments	Conclusion (CARs/FARs)
1. Opening Session			
1.1. Introduction to audits	17	The intention and the target of the audit were illustrated to the participants of the audit. Participants at the audit were the following persons: Verification team: - Mr. Ivan Sokolov – Team Leader, Lead Verifier, Bureau Veritas Ukraine, - Mr. Igor Antipko – Team Member, Technical Specialist, Bureau Veritas Ukraine, - Ms. Victoria Legka – Team Member, Verifier-trainee, Bureau Veritas Ukraine. Interviewed persons: A. Mikhaylov – Lead Specialist of the Department for Generation of DTEK; K. Vyalyj – Acting General Director of the OJSC “Komsomolets Donbassa Coal Mine”; V. Raskidkin – Chief Engineer of the OJSC “Komsomolets Donbassa Coal Mine”;	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
		T. Dudlya – Director of Economics of the OJSC "Komsomolets Donbassa Coal Mine"; A. Uzhva – Acting Deputy HR Director of the OJSC "Komsomolets Donbassa Coal Mine"; V. Rogovets - Head of Mining Operations on Capital Construction of the OJSC "Komsomolets Donbassa Coal Mine"; N. Lebedenko - Chief Surveyor of the OJSC "Komsomolets Donbassa Coal Mine"; A. Kaminskiy – Chief Power Engineering Specialist of the OJSC "Komsomolets Donbassa Coal Mine"; L. Chernomorskiy – Head of division for preventive works and safety measures of the OJSC "Komsomolets Donbassa Coal Mine" V. Chegrinets - Chief Ecologist of the OJSC "Komsomolets Donbassa Coal Mine"; I. Avdiyenko - Chief Technologist of the OJSC "Komsomolets Donbassa Coal Mine"; P. Shelegeda – Chief of Technical Department of LLC "Eco-Aliance"; A. Didenko - Head of Service Department of LLC "Eco-Aliance"; O. Samus - Monitoring Engineer of LLC "Eco-Aliance"; A. Hadulla – Director Business Development of Carbon-TF B.V.	
1.2. Clarification of access to data archives, records, plans, drawings etc.	17	The verification team got open access to all required plans, data, records, drawings and to all relevant facilities.	OK
1.3. Contractors for equipment and installation works	1, 2, 9, 17	The manufacturer of the flares #3 and flares #4 is OJSC "NPAO Vniikompressormash"; installation and service during first monitoring period was performed by this	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
		organization as well.	
1.4. Actual status of installation works	2, 9, 17	During the fist monitoring period (09 Aug. 2008 – 3 Nov. 2009) the delay in the installation of some project units as to the PDD occurred due to the Global Financial Crisis. Only flare unit #3 and flare unit #4 was installed in 2008. The delay in the delivery and installation of the flare #3 caused change of the crediting period from 1st January 2008 to 09th August 2008, which is the date of the start of flare 3 operation. The status of project activity implementation compared to the PDD is presented in the Monitoring Report ver. 2d. Installation of further units should follow in late 2011 and 2012.	OK
2. Open issues indicated in determination report			
2.1. Missing steps to final approval	14, 15, 16	Based on the determination report the verification team identified no missing steps. The project has been approved by both NFPs. The Letters of Approval were presented to the verification team. *Corrective Action Request 01:* Please include information about project approval of parties involved in the JI project and brief information on project determination and registration into the Monitoring Report.	CAR 01 The issue is closed.

Objective	Reference	Comments	Conclusion (CARs/FARs)
3. Implementation of the project			
3.1. Physical components	1, 4, 9, 17	The delay in the project implementation caused by financial difficulties occurred during 1st monitoring period. Because of the fact that the maximum supply pressure from the existing central gas suction system turned out to be not sufficient for the supply of the flares and the boiler with gas, both flares (#3 and #4) have been equipped with compressors for additional pressure generation. *Corrective Action Request 02:* Please amend the Monitoring Report with description of all components of project activity and their implementation status and indicate more precisely what exactly caused the delay in project implementation. *Corrective Action Request 03:* Please include summary of characteristics of additionally installed compressors into the Monitoring Report.	CAR 02 CAR 03 The issues are closed.
3.2. Project boundaries	1, 4, 9, 17	Project boundaries are in line with those defined in the PDD version 04 of 14/04/2008.	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
3.3. Monitoring and metering systems	4, 9, 10, 13, 17	The flare units are equipped with the metering devices in accordance with the defined parameters for monitoring: - Standard orifice for gas flow measuring - Pressure difference transmitter for pressure difference measuring - Pressure transmitter pressure measuring - Resistance thermometer for temperature measuring - Thermocouple for flame temperature measuring - Gas analyzer for CH4 concentration measuring - Chromatograph for NMHC measuring The amount of the energy consumed by the compressors installed in the flares has not been measured in the regarded monitoring period due to absent of the electricity meter, but calculated using the operation hours of a flare unit and the electric load. All measuring equipment complies with national law and regulations. Calibration procedures for all equipment are defined. The monitored data 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 server provider ensures regular back ups and archiving. Further on the data is stored and archived by Eco-Alliance LLC.	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
		The monitoring system is supervised by the administration of the coal mine under the existing control and reporting system. Overview calculations about the methane amount utilised are made on a monthly and yearly basis and notified in the journal. The general supervision of the electronically monitoring system is executed by Eco-Alliance LLC (the consultant for the coal mine).	
3.4. Data uncertainty	1, 4, 9, 10, 13	At the "Komsomolets Donbassa" Coal Mine the best available techniques are used in order to minimize uncertainties. The level of uncertainty is generally low and accounted in data collected. All monitoring equipment used for monitoring purposes is in compliance with national legislative requirements and standards. *Clarification Request 01:* The information regarding data source in tables 7, 8, 9 and information on uncertainty level in table 5 of Monitoring Report is not relevant. Please provide appropriate information in the tables.	CL 01 The issue is closed
3.5. Calibration and quality assurance	4, 9, 10, 13, 17	The measurements are carried out by metering equipment calibrated in accordance with the national standards. During the audit, the status of calibration of all used measuring devices was checked and found proper. Responsibility for maintenance of metering equipment is established, documented and communicated.	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
3.6. Data acquisition and data processing systems	4, 9, 10, 13	The data are collected, processed and stored using electronic system and specialized software. The collected data are stored electronically by a data logger and on paper in journals by the coal mine personnel. The data base is provided with an internet front end, by which all stored data can be visualised, controlled and analysed. Eco-Alliance, the administrator of the data base is responsible for the proper work of the data base, routine backups, data storage and general supervision of the electronically monitoring system as well as for the regular verifications of the electronically recorded data with the handwritten data and checks the stored data for plausibility, errors, deviations and non-conformity. Flow data, flare efficiency, and methane amount destroyed by flaring are recorded in 15 min. intervals in Excel sheets. The main emissions variables for project emissions, baseline emissions and emissions reductions are calculated on a monthly basis. The calculation of the emission reductions is done for an individual monitoring period. *Clarification Request 02* Please clarify how parameter P13 (flare combustion efficiency) is monitored and included into project emission reduction calculations. Please explain how this corresponds to monitoring plan. Please also clarify how the value of this	CL 02 The issue is closed

Objective	Reference	Comments	Conclusion (CARs/FARs)
		parameter stated in the Excel file “ER-KD-2008-01-01-2009-11-03.V1b” is received and why it differs from applied default value from PDD and MR.	
3.7. Reporting procedures	4, 9, 10, 13	The collected data should be stored electronically by the installed data logger and on paper by the plant manager. The data should be read out daily from the data logger and stored and archived in a central data base. The plant manager is responsible for correctness of the logged data and the administration of the data base. All stored data will be kept during the whole operation period of the plant and furthermore for at least 5 years. The plant manager is responsible for the preparation of the standardized weekly report. He is also in charge for the preparation of the summarized monthly and yearly reports, which should be revised by the project manager. Based on the collected information a detailed monitoring report for the established monitoring period is prepared by Eco-Alliance and provided for the verification.	OK
3.8. Documented instructions	2, 10, 17	The documented instructions for operation of the flare units and maintaining monitoring documentation have been developed. The instructions are followed by the responsible personnel.	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
3.9. Qualification and training	1, 2, 9, 10, 13, 17	The employees responsible for the monitoring control have been trained on–job during the installation of the system. The responsible personnel of Eco-Alliance have been trained on the handling with CMM-utilisation units and the applied monitoring systems, during several practical courses in Germany. In this courses which has been carried out by A-TEC Anlagentechnik GmbH, a Joint-Venture participant of Eco-Alliance, also the basic principles of emissions trading and the background of the monitoring has been explained. A-TEC Anlagentechnik GmbH is already running several CMM utilisation plants and monitoring systems in Germany. These trained personnel is the basis of a team of engineers, which should establish a specialised service team in the Ukraine and instruct further operating and monitoring personnel, as well for this project. During interviews onsite training was checked and found adequate.	OK
3.10. Responsibilities	2, 9, 10, 13	The responsibility structure is established. The general project management is implemented by the Technical Director of the Coal Mine Komsomolets Donbassa through supervising and coordinating activities of his subordinates, such as the Director of Capital Development, the Deputy Director on surface degasification, heat technician, head of safety engineering departments, etc. Daily a group of mechanics and electricians who are responsible for the measures and maintenance of all	CL 03 The issue is closed

Objective	Reference	Comments	Conclusion (CARs/FARs)
		technological equipment and measuring instruments are present on-site. For every 12h-shift there is one person on-duty responsible for the proper operation and keeping of the logs. Overview calculations about the methane amount utilised are made on a monthly and yearly basis and notified in the log. The monitoring system is supervised by the administration of the coal mine under the existing control and reporting system. The general supervision of the electronically monitoring system is executed by Eco-Alliance LLC. *Clarification Request 03* In the section C.2. of the Monitoring Report it is states that Eco-Alliance has been involved in the monitoring since summer 2009 which does not correspond to PDD. Please clarify who was responsible for project monitoring and data compiling before this period.	
3.11. Troubleshooting procedures	1, 2, 9, 10, 13	The plants installed in the project are designed to run fully automatic, so that the operating personnel have only to supervise the correct operation of the plant and the plausibility of the collected and monitored data. In case of disturbances and emergency the plant is shut down automatically and no unintended emissions are caused. Fire arresters prevent from backfiring into the CMM pipe for safety of the personnel and equipment. In case of	CL 04 The issue is closed

Objective	Reference	Comments	Conclusion (CARs/FARs)
		emergency an alarm message is sent to a permanently manned place in the control room. The operating personnel, who are on duty, check the plant status and decide on further procedures as clearing the fault, eliminating danger and restarting the plant, sending a service team, informing the project manager, a fire brigade, etc. Every emergency case is journalised. The general troubleshooting procedures for the whole coal mine are available on-site. The coal mine personnel are instructed to follow the procedures. The flares are automatically shut down in case of faults. Internal trouble shooting procedures are available inside the flares. *Clarification Request 04* Please clarify what kind of special events are meant in section B.4 of the Monitoring Report and their potential impact on the project.	
4. Internal Data			
4.1. Type and sources of internal data	1, 2, 9, 10, 13	The internal parameters are obtained according to the revised monitoring plan and the PDD. Monitoring report version 2e, Table 8, contains internal parameters that are monitored, Internal data to be collected during crediting period are:	CL 05 The issue is closed

Objective	Reference	Comments	Conclusion (CARs/FARs)
		– amount of methane sent to flares, – methane amount sent to power plant, – methane amount sent to heat generation, – concentration of methane in extracted gas, – operation hours of the flares and compressors, – electricity generation by the project, – heat generation in the project activity. *Clarification Request 05* Please explain how the value "CH4 used" indicated in the Excel file "KD-Data-F3", spreadsheet "Daten KD F3" is calculated and how this agrees with the monitoring method for this parameter stipulated in the PDD.	
4.2. Data collection	1, 2, 9, 10, 13	Methane flow data (methane amount sent to flares, to power plant, and for the heat generation), methane concentration in the extracted gas and flare efficiency as well as the methane amount destroyed by flaring MD_{FI} are recorded in 15 min. intervals in Excel sheets. The operating hours (flare operation hours when flare is running and total operation time when flare is running or on standby) are recorded manually in operation journals by the personnel of the Coal Mine "Komsomolets Donbassa" separately for each flare. The electricity and heat production by the project will be recorded monthly. The main emissions variables for project	CAR 04 CL 06 The issues are closed

Objective	Reference	Comments	Conclusion (CARs/FARs)
		emissions, baseline emissions and emissions reductions are calculated on a monthly basis. The calculation of the emission reductions is done for an individual monitoring period. *Corrective Action Request 04:* No information is provided as to monitoring of additional project parameters in newly introduced formulas described in Annex 4 of the Monitoring Plan (refer to CAR11). Neither intermediate data on these parameters are available in the Excel emission calculation spreadsheets. Please provide an explanation on how mentioned parameters were taking into account in emission reduction calculations. Please clarify why no monthly data are available on parameters P2 and P5. *Clarification Request 06:* Please clarify how the value of parameter B14 is monitored as this information is not consistent throughout the Monitoring Report and PDD. Please note that formula for calculation of this parameter stated in the MR does not correspond to the formula indicated in the Excel file “ER-KD-2008-01-01-2009-11-03.V1b”.	

Objective	Reference	Comments	Conclusion (CARs/FARs)
4.3. Quality assurance	1, 2, 9, 10, 13	The plants installed in the project are designed to run fully automatic, so that the operating personnel have only to supervise the correct operation of the plant and the plausibility of the collected and monitored data. In case of disturbances and emergency the plant is shut down automatically and no unintended emissions are caused. Eco-Alliance, the administrator of the electronic data base is responsible for the proper work of the data base, routine backups, data storage and general supervision of the electronically monitoring system. Eco-Alliance regularly verifies the electronically recorded data with the handwritten data and checks the stored data for plausibility, errors, deviations and non-conformity. All inconsistencies are discussed with the service and the operation teams, at which the operational and monitoring experience is gained, the plant operation is optimised. The monitoring engineer (Eco-Alliance) checks the data from web-site every day and makes internal weekly reports.	OK
4.4. Significance and reporting risks	1, 2, 9	Risks might be caused by human errors made during manual data recording and transfer of measured data to the excel spread sheet. Owing to control and regular verification by independent persons, as described above, the risks are minimized.	OK
5. External Data			

Objective	Reference	Comments	Conclusion (CARs/FARs)
5.1. Type and sources of external data	2, 9, 10, 13	There are the following types of external data in the revised monitoring plan and the PDD: - NMHC concentration in coal mine gas (lab analysis performed by accredited laboratory at MAKNII); - Flare combustion efficiency (99,5%, 1996 IPCC, Tool to determine project emissions from flaring gases containing methane, EB 28, Meeting report, Annex 13) positively determined by DNV; - Carbon emission factor for combusted non-methane hydrocarbons (used when NMHC concentration more that 1%); - Carbon emission factor for the Ukrainian power grid determined by SenterNovem (Terms of References, ERUPT 5 Tender, Version 1.0, 10/03/2004); - Efficiency of methane destruction/oxidation in power plan (99,5%, IPCC); - Efficiency of methane destruction/oxidation in heat plant (99,5%, IPCC); - Carbon emission factor for combusted methane (2,75 tCO2eq/t CH4, IPCC); - CO_2 emission factor of fuel used for captive power or heat (0,3406 tCO_2/ MWh, IPCC) - Global warming potential of methane (21, IPCC)	OK
5.2. Access to external data	1, 2, 9	The external data are obtained according to the revised monitoring plan and the PDD. The documents that confirmed the external data were provided for the verification team.	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
5.3. Quality assurance	2, 9	The NMHC concentration measurements in coal mine gas are performed the accredited laboratory of MAKNII; accreditation certificate and calibration records of the measuring equipment used are available. The flare combustion efficiency applied was comprehensively justified and positively determined by AIE DVN. The justification of application of Carbon emission factor for the Ukrainian power grid determined by SenterNovem is provided in the PDD, the same factor was used in the previously registered JI project. *Clarification Request 07:* Please provide the information on equipment used for NMHC concentration measurement as well as evidence of accreditation of laboratory performed NMNC concentration measurements.	CL 07 The issue is closed
5.4. Data uncertainty	2, 9	See section 3.4 of this table.	OK
5.5. Emergency procedures	2, 9	See section 3.11 of this table.	OK
6. Environmental and Social Indicators			

Objective	Reference	Comments	Conclusion (CARs/FARs)
6.1. Implementation of measures	2, 9, 17	In the given project the utilisation of otherwise unused CMM reduces in an active manner the amount of CMM which is released to the atmosphere and provides significant benefits for the global climate situation by converting the harmful methane into the less harmful carbon dioxide. The new and the modified project units (cogeneration units and CMM boiler) are supposed to displace the main part of the heat generated by the old coal boilers and displace a part of the power previously purchased from the grid. Furthermore, the operation of the project units reduces the uncontrollable migration of CMM to the surface in the surrounding area and reduces consequently the accident hazard by fire and explosions caused through methane which would otherwise uncontrollable discharge to the atmosphere. *Corrective Action Request 05:* Please provide the information on environmental impacts of the project and their monitoring in the relevant section of the Monitoring Report.	CAR 05 The issue is closed
6.2. Monitoring equipment	2, 9, 17	Monitoring equipment is in place, functional and appropriately calibrated. Supporting evidences were checked onsite and found satisfactory.	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
6.3. Quality assurance procedures	1, 2, 4, 9, 10, 13	All installed aggregates and gauges are controlled during the regular inspections, at least weekly, to assure a proper operation of the facility. Beside the monitored values any other values which are needed for the supervision of the plant are logged. Emissions measurement for dust, CO, NOx etc. for all combustion units are carried out and archived as required by the legal requirements of the Ukrainian Authorities.	OK
6.4. External data	-	N/A	OK
7. Management and Operational System			
7.1. Documentation	1, 4, 2, 9, 17	The first periodic monitoring was conducted based on the established responsibility structure as well as the PDD and revised Monitoring Plan, and numerous instructions for personal with regard to control of measured data and calibration of measuring devices as a part of the coal mine operation routine.	OK
7.2. Qualification and training	2, 4, 9, 17	See chapter 3.9 of this protocol.	OK
7.3. Allocation of responsibilities	2, 4, 9, 17	The project management structure was established. The responsibilities and authorities are described for each individual in job descriptions as required statutorily. Persons working at sites are aware of their responsibilities, and relative records are maintained. The documented	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
		instructions to operate the facilities are stored at the working places.	
7.4. Emergency procedures	2, 4, 9	See Section 3.11 of the present protocol.	OK
7.5. Data archiving	2, 4, 9	All stored data are kept during the whole operation period of the plant and furthermore for at least 5 years. Both in paper and electronic format. Responsible personnel are defined.	OK
7.6. Monitoring report	2 - 9	Overview calculations about the methane amount utilised are made on a monthly, yearly basis and individual monitoring period and notified in the journal. The general supervision of the electronic monitoring system is executed by Eco-Alliance, who is also responsible for preparation of the detailed monitoring report based on information collected. *Corrective Action Request 06:* Please include the correct formula for measurement of parameter B14 in the MR. Please number the formulae for emission reduction calculations for transparency of reported data. *Corrective Action Request 07:* The formula for calculation of parameter P5 (additional electricity consumed by the project) is not consistent	CAR 06 CAR 07 CAR 08 CL 08 CL 09 The issues are closed.

Objective	Reference	Comments	Conclusion (CARs/FARs)
		throughout the Monitoring Report (table 10 and Annex 4). Please correct. *Corrective Action Request 08:* Please provide the reference in the Monitoring Report to the document (Excel spreadsheets) where emission reduction calculations of all monitoring parameters can be found, as MR contains cumulative data only. *Clarification Request 08:* Please provide the references to "Possible sources of error" document (section D.2 of the Monitoring Report). *Clarification Request 09:* In the table 4 of the Monitoring Report serials number of infrared measurement equipment (positions 7a, 7b) are not indicated. Please specify.	

Objective	Reference	Comments	Conclusion (CARs/FARs)
7.7. Internal audits and management review	2, 4, 9	The internal audits are regularly carried out. Every 2 weeks a monitoring engineer from Eco-Alliance makes audits and remarks this in the operation journal. The mechanic on duty from the Coal Mine Komsomolets Donbassa makes daily audits. The monitoring engineer (Eco-Alliance) checks the data from web-site every day and makes internal weekly reports. Eco-Alliance makes service audits every month. Methane concentration and CMM flow data of the flares are compared with the indication of the meters from the vacuum pump station for plausibility. *Corrective Action Request 09:* Please include the information on internal audits into the Monitoring Report.	CAR 09 The issue is closed.

Periodic Verification Checklist Protocol Table 2: Data Management System/Controls

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
1. Defined organizational structure, responsibilities and competencies		
1.1. Position and roles	Full	Position and role of each person in the GHG data management process is clearly defined and implemented from raw data generation to submission of the final data. The management structure and organigram of the project are available.
1.2. Responsibilities	Full	The responsibility structure is established. The general project management is implemented by the Technical Director of the Coal Mine Komsomolets Donbassa through supervising and coordinating activities of his subordinates, such as the Director of Capital Development, the Deputy Director on surface degasification, heat technician, head of safety engineering departments, etc. 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. For every 12h-shift there is one person on-duty responsible for the proper operation and keeping of the logs. Overview calculations about the methane amount utilised are made on a monthly and yearly basis and notified in the

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
		log. The monitoring system is supervised by the administration of the coal mine under the existing control and reporting system. The general supervision of the electronically monitoring system is executed by Eco-Alliance LLC.
1.3. Competencies needed	Full	The employees responsible for the monitoring control have been trained on–job during the installation of the system. The responsible personnel of Eco-Alliance have been trained on the handling with CMM-utilisation units and the applied monitoring systems, during several practical courses in Germany, also the basic principles of emissions trading and the background of the monitoring has been explained. These trained personnel is the basis of a team of engineers, which should establish a specialised service team in the Ukraine and instruct further operating and monitoring personnel, as well for this project. During interviews onsite training and competencies were checked and found adequate.
2. Conformance with monitoring plan		
2.1. Reporting procedures	Full	Reporting procedures used reflects the monitoring methodology content. There were not deviations of reporting procedures from the PDD and revised Monitoring Plan ver.1c. *Corrective Action Request 10:* Please provide an explanation in the Monitoring Report regarding

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
		difference between planned and reported project emission reductions.
2.2. Necessary Changes	Partial	During first monitoring period the original monitoring plan from the PDD ver.04 was revised; the appropriate justifications of the revisions were provided. The revision was caused by set of reasons: delay is project implementation resulted into change of monitoring period and frequency of some parameters calculation, installation of the additional equipment (compressors for additional pressure generation) and introduction of new parameters for calculation of project emissions related to equipment operation, necessity to adjust some formulae in order to fit better the measuring/monitoring method applied. Changes introduced are sufficiently described in the revised Monitoring Plan ver. 1c and Monitoring report ver.2e. Changes that have been implemented do not affect conservativeness of the approach to the emission reductions calculations and procedures of the data collection and archiving. The reporting procedures reflect the revised monitoring plan completely. *Corrective Action Request 11:* Please submit for determination revised monitoring plan in respect of additional equipment installed (compressors), new formulas and

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
		monitoring parameters introduced, changes of parameter monitoring methods (e.g. electricity consumed by the project) and reported monitoring period change with appropriate justification for the proposed revision and explanation on how they improve accuracy of and/or applicability of information collected compared to the original monitoring plan. *Corrective Action Request 12:* The monitoring period as per registered PDD is one year and formulas applied were designed for this time period, however actual reported monitoring period is different. Please include justification and description of the formulas applied to the revised monitoring plan (see CAR11).
3. Application of GHG determination methods		
3.1. Methods used	Full	The project closely follows the CDM Methodology AM0008 Version 3. The equations used to determine GHG emissions are properly documented in MR and the revised monitoring plan and formalized in terms of the excel spreadsheet which was observed the verifier as transparent and correct.

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
3.2. Information/process flow	Full	The process of information/data flow from data sources (raw data) to the reported totals is well traceable and transparent. The values of parameters received from measuring equipment are collected, processed and stored using electronic system and special software. Further on the data is stored and archived by Eco-Alliance LLC. Overview calculations about the methane amount utilized are made on a monthly and yearly basis and notified in the journal. The values collected are then complied into monitoring report for the defined period by LLC “Eco-Aliance”. *Clarification Request 10:* In order to ensure better transparency and traceability of monitoring data and parameters please indicate the parameter ID number for each type of data monitored in tables 4 and 5 in the Monitoring report. Please make sure that all parameters stated in the monitoring plan in PDD are reflected in the Monitoring report with relevant information provided for every parameter.
3.3. Data transfer	Full	Data transfer between or within different areas of responsibilities is highlighted in the internal procedures. Manual transfer occurred as well. The complete data is stored electronically.

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
3.4. Data trails	Full	The necessary procedures have been defined in internal procedures and additional internal documents relevant for the determination of the all the parameters listed in the monitoring plan.
4. Identification and maintenance of key process parameters		
4.1. Identification of key parameters	Full	The critical parameters for the determination of GHG emissions are the parameters listed in section D of the approved PDD version 04 and revised monitoring plan. *Clarification Request 11:* Please clarify why methane amount sent to flare 3 in September 2008, May-July 2009 is zero and how is it taking into account in calculation of emission reductions.
4.2. Calibration/maintenance	Full	Records of calibration of all measuring devises were checked and the status of calibration was verified as proper.
5. GHG Calculations		
5.1. Use of estimates and default data	Partial	Refer to 5.1 and 5.3 in the Initial Verification Protocol. *Corrective Action Request 13:* Please insert the brief summary on justification of combustion

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
		efficiency applied in the project or provide the reference to the registered PDD. Note that more precise reference to the source of default value must be indicated (e.g., IPCC Volume, section, table or web-link to the document).
5.2. Guidance on checks and reviews	Full	Eco-Alliance regularly verifies the electronically recorded data with the handwritten data and checks the stored data for plausibility, errors, deviations and non-conformity. The monitoring engineer (Eco-Alliance) checks the data from web-site every day and makes internal weekly reports. Every 2 weeks a monitoring engineer from Eco-Alliance makes audits and remarks this in the operation journal. The mechanic on duty from the Coal Mine Komsomolets Donbassa makes daily audits. The monitoring engineer (Eco-Alliance) checks the data from web-site every day and makes internal weekly reports. Eco-Alliance makes service audits every month. Overview calculations about the methane amount utilized are made on a monthly and yearly basis and notified in the journal.
5.3. Internal validation and verification	Full	Eco-Alliance is responsible for correctness of the logged data and the administration of the data base. Eco-Alliance regularly verifies the electronically recorded data with the handwritten data and checks the stored data for plausibility, errors, deviations and non-conformity. All inconsistencies are discussed with the service and the operation teams, at which the operational and monitoring experience is gained, the plant operation is optimized, and a more accurate monitoring results.

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
		Some minor errors which have been identified in hand written operation journals have been corrected. Mistakes were made during the writing the DATA from the monitor into journals. During checking the DATA, the monitoring engineer has made adjustments to the time of measurement. *Clarification Request 12:* Please clarify what kind of errors was observed in the journals during Eco-Alliance supervision and their impact on the monitored emission reduction amount (section D.2 of the Monitoring Report).
5.4. Data protection measures	Full	The necessary procedures relating to Information technology are in place to provide necessary data security, and also prevent the unauthorized use of the same. The server provider ensures regular back ups and archiving. Further on the data is stored and archived by Eco-Alliance. As all input data are stored, the automatically calculation can be checked in retrospect any time.
5.5. IT systems	Full	Data are collected in electronic database.

Periodic Verification Protocol Table 3: GHG calculation procedures and management control testing

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
Potential reporting risks based on an assessment of the emission estimation procedures can be expected in the following fields of action: ➢ raw data collection and sources of supporting documentation, ➢ the calculation methods, ➢ reports/databases/information systems from which data is obtained. Key source data applicable to the project assessed are hereby: ➢ metering records, ➢ process monitors, ➢ operational logs (metering records), ➢ laboratory/analytical data (for energy content of fuels), ➢ utility/vendor data, Appropriate calibration and maintenance	Regarding the potential reporting risks identified in the left column the following mitigation measures have been observed during the document review and during site visit: • All installed measuring devices are to high industry standard; • Only skilled and trained personnel is allowed to operate the relevant equipment and take metering records; • Regular visual inspection of equipment; • Immediate replacement of dysfunctional equipment; • Proper maintenance of data and document control procedure; • Responsibilities for the raw data collection are established; • Appropriate archiving system established.	The issue remaining is the way the data obtained is used to calculate the emission reduction in a conservative manner according to the approach prescribed in the PDD version 04 and the revised monitoring plan as well as the way data obtained is used to calculate the emissions reductions.

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
of equipment resulting in high accuracy of data supplied is in place. It is hereby needed to focus on those risks that impact the accuracy, completeness and consistency of the reported data. Risks are weakness in the GHG calculation systems and include: ➢ manual transfer of data/manual calculations, ➢ unclear origins of data, ➢ accuracy due to technological limitations, ➢ lack of appropriate data protection measures.	The metering equipments are installed appropriately in the enclosure panels and same are of reputed make. Calculation methods: • Quality of input data is ensured; • Validated methodology and electronic tool for calculation emission reduction; • Detailed review of excel spreadsheet.	

Periodic Verification Protocol Table 4: Detailed audit testing of residual risk areas and random testing

Areas of residual risks	Additional verification testing performed	Conclusions and Areas Requiring Improvement (including Forward Action Requests)
The issue remaining is the way the data obtained is used to calculate the emission reduction in a conservative manner according to the approach prescribed in the PDD.	There has been a complete check of data transferred from daily consumption and generation readings to the calculation tool. There was no error in such transfer. The correct installation of the metering equipment can be confirmed.	Having investigated the residual risks, the audit team comes to the following conclusion: Immediate action is not needed with respect to the current emission reduction calculation. Those corrections have been considered during the verification process, so no residual risk is open.

Verification Protocol Table 5: Resolution of Corrective Action and Clarification Requests

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
CAR 01.Please include information about project approval of parties involved in the JI project and brief information on project determination and registration into the Monitoring Report.	Table 1, 2.1	The following information are included in the MR under Annex 1: • Project Design Document; Version 04, dated 2008-04-14 • Final Determination Report for the project: JI0079 CMM utilisation on the Joint Stock Company named Komsomolets Donbassa Coal Mine of DTEK (Donbasskaya Toplivnaya Energeticheskaya Kompanya), Report No: 2008-200 Rev 02, by DNV Det Norske Veritas, dated 2008-09-18 • Letter of Approval, Nr. M000011, issued on 2007-10-03 by the Ukraine (host party) • Letter of Approval, Nr. 2007JI04, issued on 2007-11-26 by the Kingdom of the Netherlands (investor party) • Letter of Endorsment, Nr. 11439/10/310, issued on 2006-12-22 by the Ukrainian Ministry of Environmental Protection A link to Annex 1 has been established under A.2 The following information are included in the MR under	The issue is closed based on amendments observed in the final version of Monitoring Report (ver.2e)

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
		A.2: JI0079 / UA2000011, registered at 09/12/2008. Details of the project approval can be found under Annex I of this Monitoring Report.	
CAR 02. Please amend the Monitoring Report with description of all components of project activity and their implementation status and indicate more precisely what exactly caused the delay in project implementation.	Table 1, 3.1	A new Table-2: Status of Implementation has been inserted in the MR. *Response #1:* The text under A7 has been extended: The installation of further units as stated in the PDD is delayed due to the Global Financial Crisis. The coal production decreased and the financial situation of the coal mine get worse. Since the coal production and financial situation of the coal mine improved in 2009 the continuation of the project installation is planned for coming years. Central Shaft At the time the main degasification pipe is renewed. The works should be finalised in summer 2011. The installation of the flares 1 and 2 as well as the boiler 1 is planned for late 2011 or early 2012. Air shaft The boiler 2 at Air Shaft has been upgraded with a CMM burner system and started operation in November 2009. A	*Conclusion 1:* Please make the information consistence in the section A.6 of the MR (information in Table-2 and last paragraph of the section contradicts each other). *Conclusion final:* The issue in closed based on corrections made to the Monitoring Report ver.2.

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
		monitoring system for the boiler has not been installed yet, the installation is planned for early 2010. The installation of the cogeneration units is planned for summer 2011. *Response #2:* The MR has been corrected: Installation of further units as stated in the PDD is delayed due to the Global Financial Crisis and should follow in late 2011 and 2012.	
CAR 03. Please include summary of characteristics of additionally installed compressors into the Monitoring Report.	Table 1, 3.1	*Response #1:* The characteristics of the additionally installed compressors have been included in the MR as Table-4 under A-7. All following tables have been renumbered. *Response #2:* The MR has been corrected.	*Conclusion 1:* Please exclude Russian text from the Table-4 in A-7 and from figure-2 in Annex 2 . *Conclusion final* The issue is closed based on due corrections made and observed in the final version of the Monitoring Report (ver. 2e).
CAR 04. No information is provided as to monitoring of additional project	Table 1, 4.2	*Response #1:* The new formula is a makeshift arrangement for the calculation of the power amount used by the compressors	*Conclusion 1:* Please note that if new formulas have been

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
parameters in newly introduced formulas described in Annex 4 of the Monitoring Plan (refer to CAR11). Neither intermediate data on these parameters are available in the Excel emission calculation spreadsheets. Please provide an explanation on how mentioned parameters were taking into account in emission reduction calculations. Please clarify why no monthly data are available on parameters P2 and P5.		installed of the flares. Actually the consummated power amount should have been measured by a power meter. As this power meter has not been installed, the operation hours of the flares have been taken into account for the determination of the power amount used. The operation hours are manually logged in Journal. For the calculation the counter has been read once – at the end of the monitoring period, so that no intermediate data are available. The detailed description can be fond in the MR under A4.2 and the revised monitoring plan. In future the power meter should be installed, so that no monitoring of operation hours is planned. *Response #2:* All parameters have been inserted in Table D.1.1.1 of the revised monitoring plan, A formula for the calculation of P11 has been introduced in the MP. The monitoring period for P1, P2 and P5 (and further belonging formulae) has been corrected in MP and MR.	introduced in the revised monitoring plan the information is needed to be provided as to monitoring of all parameters (monitoring methods, frequency, data archiving etc.) contained in that new formulas (e.g., additional electricity used by flares, operation hours of flares and compressors, effective load, motor capacity of compressor; mass flow rate, flare efficiency η) and values of these parameters for given monitoring period (in the general Excel file or other). Besides, formula for calculation of amount of methane destroyed from flaring (P11) is not described in the revised monitoring plan. Please make necessary

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
			corrections. Please consider in the revised MP and MR that if no monthly data are available for parameters P5 and P2 consequently project emissions (P1) and emission reductions can't be calculated monthly, so it is improper to calculate monthly values for P1 and ER. Please make corrections (Excel spreadsheet, revised MP). *Conclusion final:* The revised Monitoring Plan (ver.1c), final version of Monitoring Report (ver. 2e), Excel file "ER-KD-2008-01-01-2009-11-03.V2b" were reviewed, provided amendments were found sufficient. The issue is closed.

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
CAR 05. Please provide the information on environmental impacts of the project and their monitoring in the relevant section of the Monitoring Report.	Table 1, 6.1	*Response #1:* By utilization of methane emissions from the mine, the methane is burned to CO2 and Water. This conversion reduces the GHG effect by 18,25 t CO2e for every ton of burned methane. The environmental impact of the project has been monitored and is described in the MR, see Section D.3 of the MR. Despite the project emissions of 13,019 tCO2 a net emissions reduction of 66,138 tCO2 has been achieved due to destruction of 3,769 t CH4. *Response #2:* The MR has been extended.	*Conclusion 1:* Please amend the section B.2.6. of the MR with description of positive or negative social and environmental impacts of the project (activities, equipment installed etc.) including any Host party requirements on environmental monitoring in respect of project activity (e.g. positive influence in respect of increase in occupational safety etc.). *Conclusion final:* The issue is closed based on information provided.
CAR 06. Please include the correct formula for measurement of parameter B14 in the MR. Please number the	Table 1, 7.6	The formula has been included in table 11. Numeration of formulae was added.	The issue is closed based on amendments provided in the MR ver.2a.

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
formulae for emission reduction calculations for transparency of reported data.			
CAR 07. The formula for calculation of parameter P5 (additional electricity consumed by the project) is not consistent throughout the Monitoring Report (table 10 and Annex 4). Please correct.	Table 1, 7.6	The formula in Table-11 (previously Table-10) has been corrected.	The issue is closed based on due amendments made to the 1st version of MR
CAR 08. Please provide the reference in the Monitoring Report to the document (Excel spreadsheets) where emission reduction calculations of all monitoring parameters can be found, as MR contains cumulative data only.	Table 1, 7.6	The reference has been included under D3 in the MR.	The issue is closed based on corrections made to MR ver.2.

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
CAR 09. Please include the information on internal audits into the Monitoring Report.	Table 1, 7.7	The required information has been included in the MR under C3. Every 2 weeks monitoring engineer from Eco-Alliance makes audits and remarks this in the operation journal. The mechanic on duty from the Coal Mine Komsomolets Donbassa makes daily audits. The monitoring engineer (Eco-Alliance) checks the data from web-site every day and makes internal weekly reports. Eco-Alliance makes service audits every month.	The issue is closed based on due amendments made to the 1st version of Monitoring Report.
CAR 10. Please provide an explanation in the Monitoring Report regarding difference between planned and reported project emission reductions.	Table 2, 2.1	The text under A7 has been extended: The installation of many units as stated in the PDD is delayed due to the Global Financial Crisis. The coal production decreased and the financial situation of the coal mine get worse. As only two of nine planned units have been installed, the planned amount of emission reductions could not be achieved.	The issue is closed based on due amendments made to the 1st version of Monitoring Report.
CAR 11. Please submit for determination revised monitoring plan in respect of additional equipment installed (compressors), new formulas and	Table 2, 2.2	*Response #1:* A revised monitoring plan including the changes has been provided. The formulae included in the monitoring plan are taken from the CDM Methodology ACM0008.	*Conclusion 1:* According to the JI Determination and Verification Manual cl.99 the project participants must provide an appropriate

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
monitoring parameters introduced, changes of parameter monitoring methods (e.g. electricity consumed by the project) and reported monitoring period change with appropriate justification for the proposed revision and explanation on how they improve accuracy of and/or applicability of information collected compared to the original monitoring plan.		Two new formulae have been applied. In the excel sheet the monthly data are listed, and the yearly data are calculated. *Response #2:* A justification for the revision of the monitoring plan has been included in the MR. The revised monitoring plan and the MR have been revised. "A revised monitoring plan has been provided. See < Revised Monitoring Plan-Komsomolets Donbassa.pdf> As both flares have been equipped with compressors for additional pressure generation, additional power has been consumed by the project. Formulae for the calculation of consumed power and additional project emissions have been included in the revised Monitoring Plan. These formulae were missing in the original Monitoring Plan. The formula for the calculation of project emissions from uncombusted methane has been updated. Formulae from the «Methodological "Tool to determine project emissions from flaring gases containing methane"» [AM_Tool]) have been applied, see Annex 4. The calculation of project	justification for the proposed revision and "the proposed revision improves 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". Please provide the required information. The information on additional electricity consumption monitoring contradicts with factual monitoring method of this parameter. Please make appropriate corrections to the revised monitoring plan. Please also include all new parameters from newly introduced formula to the revised MP (see CAR 07).

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
		emissions from uncombusted methane from flaring is now more accurate." The calculation of the emission reductions is not calculated on a yearly basis, but for an individual period. The monitoring period lasts from 09/08/2008 to 03/11/2009. Flow data and flare efficiency as well as the methane amount destroyed by flaring MD_{FI} are calculated in 15 min. intervals in Excel sheets. The main emissions variables for project emissions, baseline emissions and emissions reductions are calculated on a monthly basis. Yearly sums and a total sum for the monitoring are calculated. *Response #2:* T_{flame} has been included in table D.1.1.1 in the revised MP and in table 8 of the MR. The revised monitoring plan has been corrected.	*Conclusion 2* All new parameters are included except for flare (flame) temperature ($T_{Flame,i}$). As this parameter is also constantly monitored it must be described in the table D.1.1.1 in the revised monitoring plan and also mentioned in the appropriate table of the Monitoring Report. In the revised Monitoring Plan definitions of the formula (9a) components do not correspond to the actual components stated in the formula (power generation vs. flaring). Please correct. Please provide also appropriate information in the section D.1.5 (collection and archiving of information on

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
			the environmental impacts of the project as required by host Party). *Conclusion final* The revised monitoring plan reflects in full all introduced changes and the proposed revision improves the accuracy and/or applicability of information collected compared to the original monitoring plan. The updated Monitoring Report complies with the revised Monitoring Plan and PDD. The issue is closed based on information provided.
CAR 12. The monitoring period as per registered PDD is one year and formulas applied were designed for this time period, however actual	Table 2, 2.2	*Response #1:* The monitoring period starts with the first production of flare 3. The end date has been set at the request of the Coal Mine Komsomolets Donbassa. The start of the monitoring period was originally planned for 01/01/2008 and is delayed due to problems with the delivery and	*Conclusion 1:* The applied methodology defines precise calculation time periods for certain formulas (mostly yearly (y)). For those parameters (P1,

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
reported monitoring period is different. Please include justification and description of the formulas applied to the revised monitoring plan (see CAR regarding revision of monitoring plan).		installation of the flare. A revised monitoring plan including the changes is provided. The formulae in the revised monitoring plan have been adapted to the new monitoring period. See also CAR 03. *Response #2:* The calculation of the emission reductions is not calculated on a yearly basis, but for an individual period. The monitoring period lasts from 09/08/2008 to 03/11/2009. Flow data and flare efficiency as well as the methane amount destroyed by flaring MD_{Fl} are calculated in 15 min. intervals in Excel sheets. The main emissions variables for project emissions, baseline emissions and emissions reductions are calculated on a monthly basis. Yearly sums and a total sum for the monitoring are calculated.	P9, B1, B3, B4, B14, B46, B47, ER) that needs to be calculated annually according to the ACM 0008 please indicate the time period for which they are calculates (if different). *Conclusion final:* The revised MP and MR ver.2a were corrected appropriately. Actual monitoring frequency for each parameter has been specified in the mentioned documents. The issue is closed based on due amendments provided.
CAR 13. Please insert the brief summary on	Table 2, 5.1	*Response #1:*	*Conclusion 1:* Please provide reference in

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
justification of combustion efficiency applied in the project or provide the reference to the registered PDD. Note that more precise reference to the source of default value must be indicated (e.g., IPCC Volume, section, table or web-link to the document).		The sources have been inserted in the MR. T_{Flame} / $\eta_{flare,h}$ / Source > 850℃ / 99.5% / [PDD, Section D.1.1 and Annex 3] 500-850℃ / 90.0% / [AM_Tool_07-15] < 500℃ / 0% / [AM_Tool_07-15] *Response #2:* The references have been included in the MR and MP.	the MR where justification on combustion efficiency applied can be found (reference to the appropriate section in the revised monitoring plan). Please provide more detailed reference to the data sources (e.g., IPCC Volume, section, table or web-link to the document) in the MR. In the table 7 of the MR please correct the information regarding value of the parameter P13 applied. *Conclusion final:* The revised MP and MR ver.2a were checked, provided amendments were found sufficient. The issue is closed.
CL 01. The information regarding data source in tables 7, 8, 9 and	Table 1, 3.4	The MR has been corrected.	The issue is closed based on due amendment provided in the MR ver.2a

<table>
<tr><th>Report clarifications and corrective action requests</th><th>Ref. to checklist question in table 1</th><th>Summary of project owner response</th><th>Verification conclusion</th></tr>
<tr><td>information on uncertainty level in table 5 of Monitoring Report is not relevant. Please provide appropriate information in the tables.</td><td></td><td></td><td></td></tr>
<tr><td>CL 02. Please clarify how parameter P13 (flare combustion efficiency) is monitored and included into project emission reduction calculations. Please explain how this corresponds to monitoring plan. Please also clarify how the value of this parameter stated in the Excel file “ER-KD-2008-01-01-2009-11-03.V1b” is received and why it differs from applied default value from PDD and MR.</td><td>Table 1, 3.6</td><td>Response #1:

The parameter P13 is calculated on a 15 min basis in the large sheets containing all data (KD-Data-F3 and KD-Data-F4). The parameter is calculated using the flame temperature of the flare. P13 can take three different values, depending on the flame temperature:

<table><tr><td>T_{Flame}</td><td>$\eta_{flare,h}$ (P13)</td><td>Source</td></tr><tr><td>> 850℃</td><td>99.5%</td><td>[PDD, Section D.1.1 and Annex 3]</td></tr><tr><td>500-850℃</td><td>90.0%</td><td>[AM_Tool_07-15]</td></tr><tr><td>< 500℃</td><td>0%</td><td>[AM_Tool_07-15]</td></tr><tr><td></td><td></td><td></td></tr></table>In the PDD the medium value for the temperature range</td><td>Conclusion 1:
Please note that parameter P13 is absent in the methodology ACM 0008. The amount of methane destroyed from flaring is calculated through the formula $MD_{FL} = MM_{FL} - (PE_{flare}/GWP_{CH4})$. Please adjust the calculations to the methodology applied and make necessary correction to the documentation (MR, revised MP).

Conclusion final:
The clarification is accepted.</td></tr>
</table>

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
		(500-850℃) was missing. The values stated in the table “ER-KD-2008-01-01-2009-11-03.V1b” represent monthly average values of P13. As mentioned above, P13 is calculated on a 15 min basis in the large data sheets. So the monthly values in the table “ER-KD-2008-01-01-2009-11-03.V1b” represent average values of about 3,000 single values. *Response #2:* The formulae for the calculation of MD_{FL} and PE_{Flare} have been corrected in the MR and revised MP. In the revised MR it is stated that formulae from the flaring tool and ACM000 version 5 have been adopted. PE_{Flare} is calculated using adopted formulae from the «Methodological “Tool to determine project emissions from flaring gases containing methane”» [AM_Tool] and ACM0008 Version 5. The original formulae refers to a yearly basis. The formulae have been adapted in the revised monitoring plan to variable monitoring periods: In the revised monitoring plan and this monitoring report, formulae 9a and 5, see above have been resolved to fit better to the monitored data. Both, the original and resolved formulae are given in the	The corrections are found sufficient. The issued is closed based on information provided.

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
		MR under Annex 4- 4.1. The MP uses only the resolved formulae.	
CL 03. In the section C.2. of the Monitoring Report it is states that Eco-Alliance has been involved in the monitoring since summer 2009 which does not correspond to PDD. Please clarify who was responsible for project monitoring and data compiling before this period.	Table 1, 3.10	The MR has been corrected. Eco-Alliance was responsible for monitoring from the beginning of the project and responsible for service since summer 2009.	The issue is closed based on clarifications provided and due amendments made to the 1st version of MR.
CL 04. Please clarify what kind of special events are meant in section B.4 of the Monitoring Report and their potential impact on the project.	Table 1, 3.11	The MR has been extended: Fire, accidents, strikes, vandalism, theft etc. No special events occurred during monitoring period.	The clarification is accepted. The issue is closed based on due amendment provided in the Monitoring Report ver.2a.
CL 05. Please explain how the value "CH4 used"	Table 1, 4.1	*Response #1:*	*Conclusion 1:* Please clarify whether the

<table>
<tr><th>Report clarifications and corrective action requests</th><th>Ref. to checklist question in table 1</th><th>Summary of project owner response</th><th>Verification conclusion</th></tr>
<tr><td>indicated in the Excel file “KD-Data-F3”, spreadsheet “Daten KD F3” is calculated and how this agrees with the monitoring method for this parameter stipulated in the PDD.</td><td></td><td>The mass flow of CH_4 (column M, 15 min value) is selected by an “if-else” selection depending on the flame temperature (column H):
If {T_{Flame} > 850℃}, the value from column M is copied into column N

Else if {500℃ < T_{Flame} < 850℃}, the value from column M is copied into column O

Else if {T_{Flame} < 500℃}, column M and O are zero

In column P the value from column N is multiplied with 99.5% and the value from column O with 90%. If column N is not zero than column O is zero, if column O is not zero than column N is zero. Both columns N and O can be zero if the temperature is below 500℃. So the methane destruction is always calculated according to the efficiencies given below:

<table>
<tr><th>T_{Flame}</th><th>$\eta_{flare,h}$ (P13)</th><th>Source</th></tr>
<tr><td>> 850℃</td><td>99.5%</td><td>[PDD, Section D.1.1 and Annex 3]</td></tr>
</table>
</td><td>mass flow parameter stated in the Excel file “KD-Data-F3” stands for total residual gas flow or methane flow. Please indicate this in the Excel file.
Please also specify what monitoring parameter represents the value “CH4 used” in the Excel file.

Conclusion final:
The clarification as to data contained in the Excel files “KD-Data-F3” and “KD-Data-F4” and references to the monitoring parameters were provided. The issue is closed.</td></tr>
</table>

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
		<table><tr><td>500-850℃</td><td>90.0%</td><td>[AM_Tool_07-15]</td></tr><tr><td>< 500℃</td><td>0%</td><td>[AM_Tool_07-15]</td></tr></table> In the PDD the medium value for the temperature range (500-850℃) was missing. See also CL01. *Response #2:* The indications in the Excel files have been updated.	
CL 06. Please clarify how the value of parameter B14 is monitored as this information is not consistent throughout the Monitoring Report and PDD. Please note that formula for calculation of this parameter stated in the MR does not correspond to the formula indicated in the Excel file "ER-KD-2008-01-01-2009-11-03.V1b".	Table 1, 4.2	*Response #1:* The formula in the excel sheet is the correct one. The formula in the MR has been corrected (and deleted later) *Response #2:* The MR has been corrected.	*Conclusion 1:* Please include the correct formula for measurement of parameter B14 in the MR and provide correct information as to data source of this parameter in the tables 8 and 10 as well as for parameter P12 in the table 8. The information on how the value of parameter is obtained should be consistent throughout all monitoring documentation (MR, Excel spreadsheets etc.)

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
			Conclusion final: The issue is closed based on clarification and correction provided.
CL 07. Please provide the information on equipment used for NMHC concentration measurement as well as evidence of accreditation of laboratory performed NMNC concentration measurements.	Table 1, 5.3	The following information has been included in the MR. Chromatograph “Gasochrom 3101”, LHM-8MD The license of MAKNII has been provided to BV.	The certificate of MAKNII laboratory accreditation No. UA6.001.H.037 valid until 22/12/2009 issued by National Accreditation Agency of Ukraine, and calibration certificate for Chromatograph “Gazochrom” of No. 3888 valid until 14/10/2010 were checked. The issue is closed based on the evidences provided.
CL 08. Please provide the references to “Possible sources of error” document (section D.2 of the Monitoring Report).	Table 1, 7.6	The link to the document was a copy-paste error from a previous document. The MR has been corrected.	The clarification is accepted. The issue is closed.
CL 09. In the table 4 of the Monitoring Report serials number of infrared	Table 1, 7.6	The following information has been included in the MR: Gamma 100 - # 89 and # 90	The issue is closed based on due amendments made to the 1st version of MR

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
measurement equipment (positions 7a, 7b) are not indicated. Please specify.		SHI-12: 100156, 500516, 100038	
CL 10. In order to ensure better transparency and traceability of monitoring data and parameters please indicate the parameter ID number for each type of data monitored in tables 4 and 5 in the Monitoring report. Please make sure that all parameters stated in the monitoring plan in PDD are reflected in the Monitoring report with relevant information provided for every parameter.	Table 2, 3.2	The MR has been changed ID numbers have been included in tables 8, 9 and 10. The links to table 5 have been provided.	The issue is closed based on corrections made.
CL 11. Please clarify why methane amount sent to flare 3 in September 2008,	Table 2, 4.1	The flare 3 was out of order during this period, so no methane has been sent to the flare. According to this, the value of *zero for flare 3* has been	The issue is closed based on clarifications provided.

Report clarifications and corrective action requests	Ref. to checklist question in table 1	Summary of project owner response	Verification conclusion
May-July 2009 is zero and how is it taking into account in calculation of emission reductions.		taken into account for the calculation of emission reductions. As flare 4 was in operation during this period, the emission reduction is only calculated for flare 4.	
CL 12. Please clarify what kind of errors was observed in the journals during Eco-Alliance supervision and their impact on the monitored emission reduction amount (section D.2 of the Monitoring Report).	Table 2, 5.3	The MR has been extended. Mistakes were made during the writing the DATA from the monitor into journals. During checking the DATA, the monitoring engineer has made adjustments to the time of measurement, namely: record the exact time (hours and minutes).	The issue is closed based on amendments made to the section D.2 of the MR and presented in the Monitoring Report ver.2a.

APPENDIX B: VERIFICATION TEAM

The verification team consists of the following personnel:

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)

Team Leader, Climate Change Lead Verifier
Bureau Veritas Certification Local Climate Change Product Manager for Ukraine

He has over 25 years of experience in Research Institute in the field of biochemistry, biotechnology, and microbiology. He is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered), Quality Management System (IRCA registered), Occupational Health and Safety Management System, and Food Safety Management System. He performed over 140 audits since 1999. Also he is Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and Lead Tutor of the IRCA registered ISO 9000 QMS Lead Auditor Training Course. He has undergone intensive training on Clean Development Mechanism /Joint Implementation and he is involved in the determination/verification of 50 JI projects.

Igor Antipko (Mining Electro-Mechanics)
Team member, Bureau Veritas Ukraine Technical Specialist

Graduated from Stahanov College of Mines, specialist in Mining Electro-Mechanics (Automation processes of production of minerals, development of the circuits of electrosupply of mines, management of chisel and explosive works in mines). Completed full course of the Labour protection and Safety, was employed at the position of the Mine mechanic on repair of the equipment, Mine underground electromechanic (service and repair of mechanisms and equipment, lines of transportation of the electric power in mine of extraction stone coal, service and repair of gas analyzer of methane, monitoring and repair mine of air control devices).

Victoria Legka, (biology)

Team Member, Verifier
Bureau Veritas Ukraine Health, Safety and Environment Project Manager

Victoria Legka has graduated from National University of Kyiv-Mohyla Academy with the Bachelor Degree in Biology. She has successfully completed IRCA registered Lead Auditor Training Course for Environment Management Systems and Quality

Management Systems and participated in 5 audits. Ms. Legka has undergone a training course on Clean Development Mechanism /Joint Implementation. She is involved in the determination/verification of 4 JI projects.

The verification report was reviewed by:

Leonid Yaskin, PhD (thermal engineering)
Internal Technical Reviewer
Bureau Veritas Certification Rus General Director, Climate Change Local Manager, Lead Auditor, IRCA Lead Tutor, Climate change Lead Verifier

He has over 30 years of experience in heat and power R&D, engineering, and management, environmental science and investment analysis of projects. He worked in Krzhizhanovsky Power Engineering Institute, All-Russian Teploelectroproject Institute, JSC Energoperspectiva. He worked for 8 years on behalf of European Commission as a monitor of Technical Assistance Projects. He is a Lead auditor of Bureau Veritas Certification for Quality Management Systems (IRCA registered), Environmental Management System (IRCA registered), Occupational Health and Safety Management System (IRCA registered). He performed over 250 audits since 2002. Also he is a Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and a Lead Tutor of the IRCA registered OHSAS 18001 Lead Auditor Training Course. He is an Assuror of Social Reports. He has undergone intensive training on Clean Development Mechanism /Joint Implementation and was/is involved in the determination of over 50 JI projects.

APPENDIX C: DOCUMENTS CHECKED DURING VERIFICATION

1. ULTRAMAT 23. Gas analyzers for IR-absorbing gases and oxygen 7MB2337, 7MB2338. Operating instructions Edition 03/2005.
2. Statement #1 of the inspection board. Approved on 26.09.2008.
3. Statement of finished work on servicing of gas utilization equipment of OJSC "Komsomolets Donbassa Mine" (Contract #226/1 dated June 12, 2009) dated 18.06.2009.
4. Statement of finished work on service of gas utilization equipment of OJSC "Komsomolets Donbassa Mine" (Contract #226/1 dated June 12, 2009) dated 24.11.2009.
5. Statement of finished work dated 03.07.2009.
6. Statement of finished work on warranty service compressor unit (station) УКГ-5/8 ser. #03-08 dated 24.07.2009.
7. Statement of finished work on warranty service compressor unit (station) УКГ-5/8 ser. #04-08 от 07.05.2009.
8. Statement of finished work on technical service of gas utilization compressor unit УКГ-5/8 ser. #03-08 dated 07.03.2009.
9. Statement of finished work on installation УКГ-5/8 ser. #03-08 dated 22.07.2008.
10. Statement of finished work on unit (station) УКГ-5/8 ser. #03-08 dated 03.12.2008.
11. Statement of finished work on unit (station) УКГ-5/8 ser. #03-08 dated 23.01.2009.
12. Statement of finished work on unit (station) УКГ-5/8 ser. #04-08 dated 03.01.2009.
13. Statement of finished work on unit (station) УКГ-5/8 ser. #04-08 dated 07.03.2009.
14. Statement of finished work on unit (station) УКГ-5/8 ser. #04-08 dated 19.12.2008.
15. Statement of delivery-acceptance of finished work dated 03.12.2008. Bill #1871.
16. Statement of service of compressor unit (station) for determine the reasons of its failure dated 03.08.2009.
17. Statement of investigation of the unit УКГ-5/8 ser. #03-08 and #04-08 dated 31.10.2008.
18. Statement of the acceptance of finished work on compressor gas utilization unit УКГ-5/8 dated 14.08.2008.
19. Statement of the acceptance of finished work on unit УКГ-5/8 ser. #04-08 dated 31.10.2008.
20. Statement of the work commission on the acceptance of commissioning of built building and facilities dated 10.12.2008.

21. Emergency protection block БАЗ-01М. Operation instructions. АГШИ.426.475.002 РЭ.
22. Register. Vacuum pump station #1 (central industrial area). Vacuum pump station #2 (area ВПС-3). Gas utilization unit УКН-5/8.
23. State ecological expertise opinion С #09.02.001 on compliance of project documentation to the legislation on environmental protection dated 04.02.2009.
24. ГОСТ 30319.1-96. Natural gas. Methods of physical properties calculation. Defining of physical properties of the natural gas, its components, and its waste products.
25. Passport ОМС 160.00.00.ПС. Sensor-relay control of flame. Парус-002УФ-1/220.
26. IEC motors. Low voltage motors. Documentation. Operating instructions. 06.2007.
27. Contract #КД-169/774 dated 14.02.2008.
28. Annex 4 of the PDD "Assessment of GHG emission".
29. Permission of the start of dangerous work implementation #1146.09.14-10.10.1 dated 12.10.2009. Permission is valid from 12.10.2009 to 12.10.2012.
30. Parts substitution journal. Unit #3 ("Komsomolets Donbassa Mine").
31. Failure, interruprtion journal. Unit УКГ №3 ("Komsomolets Donbassa Mine").
32. Journal of work. УКГ #3. Komsomolets Donbassa. ВПС 3.
33. Journal of work. УКГ #4. Komsomolets Donbassa. ВПС 3.
34. Maintenance Journal. Unit #3 ("Komsomolets Donbassa Mine").
35. Maintenance Journal. Unit #4 ("Komsomolets Donbassa Mine").
36. Conclusion #9 of state complex expertise of the work project "Gas utilization units УКГ-5/8 at industrial sites Central and ВПС #3" of OJSC "Komsomolets Donbassa Mine".
37. Conclusion #14.-02.-2161.08 of the expertise on compliance of equipment to requirements of legislation on labor protection and industrial safety.
38. Pilot burner ЭИВ-01-НН. Operation instruction ОМС 057.00.00РЭ.
39. Instructions on labor protection for driver of pumping units of "Preventive work on safty" site. Approved 28.12.2007 #1164.
40. Instructions for recalculation of the volume flow of the mix 43.42.66.001.00.00.000 И. Gas compressor unit УКГ-5/8.
41. Information on the usage of electricity and power for own needs 2008-2009.
42. Operating Instructions for Radiator Oven Type 700/...

43. Rotor compressor of type ГР and ВР. Operations manual. 43.42.62.001.00.00.000 РЭ dated 12.07.2005.
44. Licence АВ #378279 State Geological Service dated 07.11.2008. Validity term: from 01.11.2008 to 01.11.2013.
45. Pressure-measuring instruments WIKA with Bourdon tube 837-1. Operations mannual. 2007.
46. Pressure-measuring instruments WIKA with Bourdon tube 837-3. Operations mannual. 2007.
47. OJSC "The mine "Komsomolets Donbassa". "Gas compressor unit УКГ-5/8" on Central and ВПС №3 industrial sites. Working draft/ Volume 1. Explanatory note. Book #2. Environmental Impact Assesssment (EIA) РП 7211-П32, 2008.
48. Staff training. The unit УКГ 5/8 (The mine "Komsomolets Donbassa").
49. LLC "Inter-Arm Inzhiniring". Turning butterfly valve DN 150 PN 16. Passport 900.16-200.00 ПС dated 2008.
50. LLC "Inter-Arm Inzhiniring". Turning butterfly valve DN 200 PN 16. Passport 900.16-200.00 ПС dated 2008.
51. LLC "Obshchemash". Boiler. ЭИВ-01-НН. Passport. ОМС 076.00.00.ПС.
52. LLC "Obshchemash". Relay sensors of flame control. Parus-002УФ.
53. LLC "Obshchemash". Boiler. ЭИВ-01-НН.
54. LLC "Obshchemash". Electromagnetic valves. ЭМКГ8-6-6-220-а168.
55. LLC "Obshchemash". Electromagnetic valves. ЭМКГ8-6-ХХХ-а168.
56. Basic information about the product and technical data ser. #08259.
57. Passport 9Ж4.030.041-01 ПС on the product #407007 dated 2007.
58. Passport #123516. Butterfly valve with manual control (handle) dated 20.09.2007.
59. Passport #123517. Butterfly valve with manual control (handle) dated 20.09.2007.
60. Passport #123518. Butterfly valve with manual control (handle) dated 20.09.2007.
61. Passport #123519. Butterfly valve with manual control (handle) dated 20.09.2007.
62. Passport #123524. Butterfly valve with manual control (handle) dated 20.09.2007.
63. Passport #123528. Butterfly valve with manual control (handle) dated 20.09.2007.
64. Passport #123530. Butterfly valve with manual control (handle) dated 20.09.2007.
65. Passport ААЭИ.405211.024 ПС. Resistance temperature

detector.

66. Passport ААЭИ.411531.013-02 ПС ser. #08069-08076.
67. Passport АГШИ.426471.003 ПС on the product #307242..
68. Passport АГШИ.426475.002 ПС on the product #108067. 2008.
69. Passport АГШИ.426475.002 ПС on the product #108070. 2008.
70. Passport АГШИ.426475.002 ПС on the product #108106. 2008.
71. Passport ИФАК.647316:001 ПС Current thermal electrical relays ser. РТЛ-1000, РТЛ-2000.
72. Passport ОМС 050.00.00.ПС Burner control unit "СТАРТ-02" ser. #888.
73. Passport АГШИ.426471.003 on the product #108106. 2008.
74. Passport АГШИ.426471.003 ПС on the product #108142. 2008.
75. Passport АГШИ.426471.003 ПС on the product #407044. 2007.
76. Passport. Thermoelectrical transducer of type ТПП, ТПР.
77. Letter #08/5473 on results of obsereving captive gas debit dated 04.08.2009.
78. Order #1236 on appointment of the persons responsible for tne monitoring dated 14.10.2008.
79. The training programme for the exploitation of the device, the principle of operation, operation and maintenance of the gas compressor unit УКГ-5/8.
80. Protocol of meetings of the Committe on verification of knowledge on operation issues УКГ-5/8 dated 14.08.2008.
81. Protocol of meetings of the Committee for acceptance testing of the gas compressor unit УКГ-5/8 dated 26.09.2008.
82. Protocol of metrological attestation #2050 dated 05.07.2007.
83. Protocol of metrological attestation #2050/2 dated 05.07.2007.
84. Protocol of metrological attestation #2053/7 dated 05.07.2007.
85. Protocol of metrological attestation #727/7 dated 18.04.2008.
86. Protocol of metrological attestation #736/3 dated 18.04.2008.
87. Protocol of preliminary tests of the prototype unit of the gas compressor unit УКГ-5/8 ser. #03-08 dated 28.04.2008.
88. Protocol technical acceptance (commissioning) УКГ-5/8 ser. #03-08 dated 02.10.2008.
89. Protocol technical acceptance (commissioning) УКГ-5/8 ser. #04-08 dated 31.10.2008.

90. Recommendations on the order of actions of staff supporting the unit УКГ-5/8 at the mine "Komsomolets Donbassa".
91. Certificate of acceptance and conservation. Turning butterfly valve DN 200 PN 16. Ser.263 dated 14.04.2008.
92. Certificate of acceptance. Ser. #23117 dated 12.12.2007.
93. Certificate of acceptance. Ser. #23120 dated 12.12.2007.
94. Certificate of acceptance. Ser. #23123 dated 12.12.2007.
95. Certificate of acceptance. Ser. #23126 dated 12.12.2007.
96. Certificate of acceptance. Boiler ЭИВ-01-НН ser. #1241 dated 04.2008.
97. Certificate of accepptance. Temperature transducer ser. #1055 dated 29.01.2008.
98. Certificate of acceptance. Электромагнитный клапан ЭМКГ8-6-6-220-а168 ser.#11905 dated 04.2008.
99. Certificate of acceptance. The unified control unit БУПУ #108106 dated 29.03.2008.
100. Certificate of packaging. Block of emergency protection БАЗ-01М #108067. 27.03.2008.
101. Certificate of packaging. Block of emergency protection БАЗ-01М #108070. 27.03.2008.
102. Certificate of packaging. Block of emergency protection БАЗ-01М #108106. 27.03.2008.
103. Certificate of acceptance. The unified control unit БУПУ #108142 dated 29.03.2008.
104. Certificate of acceptance. The unified control unit БУПУ #407044 dated 25.10.2008.
105. Certificate of metrological attestation #2050 dated 05.07.2007.
106. Certificate of metrological attestation #2050/2 dated 05.07.2007.
107. Certificate of metrological attestation #2053/7 dated 05.07.2007.
108. Certificate of metrological attestation #726/3 dated 18.04.2008.
109. Certificate of metrological attestation #726/6 dated 18.04.2008.
110. Certificate of metrological attestation #727/3 dated 18.04.2008.
111. Certificate of metrological attestation #727/7 dated 18.04.2008.
112. Verification certificate. Flame-arrester dated 09.10.2007.
113. Certificate of registration #0340 OHSAS 18001:2007. Issue date 30/03/2009. Expiry date 30/03/2012.
114. Special permit for the usage of subsoil #3756 dated 27.12.2005.

115. Register of persons, who have access to the device УКГ 5/8 №3 (the mine "Komsomolets Donbassa").
116. Information on gas-methane capted by decontaminants for the period from 01.01.2008 to 26.08.2009.
117. Information on fuel and heat consumption at the OJSC "The mine "Komsomolets Donbassa"
118. Information on value of the completed contract works for December 2008.
119. Informartion of OJSC "Komsomolets Donbassa". Information on the heat consumption of the mine.
120. Bimetal thermometer "WIKA-52". Passport. 2004.
121. Flowsheet УКГ-5/8 dated 16.12.2009.
122. Gas compressor unit УКГ-5/8. Operations manual. 43.42.66.001.00.000 РЭ
123. Gas filter. FM-FMC-FGM. Operation instructions.
124. Photo - EG-Konformitatserklarung. 664.30005.21.
125. Photo - EG-Konformitatserklarung. 664.30006.21.
126. Photo. MEDENUS Gas-Druckregeltechnik GmbH. R100.
127. Photo. Siemens. Ultramat 23.
128. Photo. Meter. ГАММА-100.
129. Photo. Siemens. Sitrans P Serie Z. Transmitter.
130. Electromechanisms МБОВ-63/1-0,25Т МБОВ-125/1-0,25 for quick-lock energy fittings. Operations manual. 9Ж4.030.041 РЭ.
131. Work procedure "Description and order of keeping the documentation on monitoring"
132. Certificate of the calibration of measuring device # 3888 valid until 14.10.2010, chromatograph Gasokhrom, issued by SE "Donetskstandardmetrologiya"
133. Certificate for validity update of accredication certificate of the MakNII testing laboratory # UA 6.001.H.037, valid until 22.12.2009.