DETERMINATION REPORT
ING BANK N.V.

DETERMINATION OF THE

COAL MINE METHANE CAPTURE AND UTILIZATION AT SAMSONIVSKA-ZAKHIDNA MINE

REPORT NO. UKRAINE/0060/2009

REVISION NO. 02

BUREAU VERITAS CERTIFICATION

REPORT NO:UKRAINE/0060/2009

DETERMINATION REPORT ON JI PROJECT "COAL MINE METHANE CAPTURE AND UTILIZATION AT SAMSONIVSKA-ZAKHIDNA MINE"

Date of first issue: 29/03/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: ING Bank N.V.	Client ref.: Peter van Eijndhoven

Summary:
Bureau Veritas Certification being commissioned by ING Bank N.V. has made the determination of the "Coal Mine Methane Capture and Utilization at Samsonivska-Zakhidna Mine" project of OJSC Krasnodonvugillya located in the town of Molodogvardiysk, Krasnodon district, Luhansk Oblast, Ukraine on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

The determination scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final determination report and opinion. The overall determination, from Contract Review to Determination Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the determination process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the baseline and monitoring methodology and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.: UKRAINE/0060/2009	Subject Group: JI	
Project title: Coal Mine Methane Capture and Utilization at Samsonivska-Zakhidna Mine		
Work carried out by: Ivan Sokolov - Team Leader Svetlana Gariyenchyk - Team Member Igor Antipko - Team Member, Technical Specialist Denis Pishchalov - Financial Specialist		
Work verified by: Leonid Yaskin - Internal Technical Reviewer		
Date of this revision: 12/04/2010	Rev. No.: 02	Number of pages: 93

Indexing terms

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

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Abbreviations change / add to the list as necessary

AIE	Accredited Independent Entity
CAR	Corrective Action Request
CBM	Coal bed methane
CDM	Clean Development Mechanism
CH_4	Methane
CMM	Coal mine methane
JI	Joint Implementation
EF	Emission Factor
EIA	Environmental Impact Assessment
ERU	Emission Reduction Unit
CHP	Combined heat and power
CL	Clarification Request
CO_2	Carbon Dioxide
GHG	Green House Gas(es)
GWP	Global Warming Potential
I	Interview
IETA	International Emissions Trading Association
KGUU	Gas utilization unit
MoV	Means of Verification
MW	Mega Watt
NCV	Net Calorific Value
N_2O	Nitrogen oxides
NMHC	Non-methane hydrocarbons
PDD	Project Design Document
UES	United Energy System
UNFCCC	United Nations Framework Convention for Climate Change
VPS	Vacuum-pump station

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1 INTRODUCTION

ING Bank N.V. commissioned Bureau Veritas Certification to determinate its JI project "Coal Mine Methane Capture and Utilization at Samsonivska-Zakhidna Mine" (hereafter called "the project") of OJSC Krasnodonvugillya (belongs to Metinvest Holding) located at the town of Molodogvardiysk, Krasnodon district, Luhansk Oblast, Ukraine. The project was developed by GreenStream Network.

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

1.1 Objective

The determination serves as project design verification and is a requirement of all projects. The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Determination is a requirement for all JI projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reduction units (ERUs).

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

1.2 Scope

The determination scope is defined as an independent and objective review of the project design document, 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.

The determination is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 GHG Project Description

Coal mining is accompanied by release of methane which is held in coal beds and surrounding rocks. Methane is a natural gas by origin; also it is a by-product of coal and gas deposits exploitation. Coal Mine Methane (CMM) is a result of organic remains transformation under a high pressure

and temperature. CMM belongs to a group of greenhouse gases under the Kyoto Protocol; its Global Warming Potential (GWP) is 21 times higher than GWP of a carbon dioxide

At productive coal mines CMM has to be vented from mines according to safety regulations. Currently there are a few methods of methane recovery from coal beds.

Underground coal mine Samsonivska-Zakhidna was built and is currently operating in a way that methane is released to a mine working space when coal is mined; methane is removed from the mine through powerful ventilators which are part of safety system, and also through the degassing system.

Ventilators are capturing methane which is releasing to mine working areas and then emitting the gas trough drainage wells.

Degassing system, which consists of a network of mine degassing conduits and vacuum pumping station located on the surface, removes methane from coal beds and surrounding rocks.

In the baseline scenario it is assumed that all the methane collected by the degassing system of the Samsonivska-Zakhidna mine will be released into the atmosphere. No measures aimed at the utilization of the degassing system CMM will be taken; therefore the existing situation in the absence of project activity will be continued

The main goal of this project is the utilization of CMM that has been captured by degassing system. CMM captured at Samsonivska-Zakhidna mine will be used for: (I) generation of electricity for the onsite consumption, (II) substitution of coal, which is currently used as a fuel for existing boilers; (III) flaring.

Thus, CMM utilization project implementation will result in a rise of profitability of the mine through electricity and heat generation, the risk of methane explosion will be decreased, and reduction of greenhouse gas emissions to the atmosphere will be achieved.

1.4 Determination team

The determination team consists of the following personnel:

Ivan Sokolov
Bureau Veritas Certification,Team Leader, Climate Change Lead Verifier

Svitlana Gariyenchyk
Bureau Veritas Certification, Team memeber, Climate Change Verifier-trainee

Igor Antipko
Bureau Veritas Certification, Team memeber, Technical Specialist

Denis Pishchalov
Bureau Veritas Certification, Team member, Financial Spacialist

Leonid Yaskin
Bureau Veritas Certification, Internal Technical Reviewer

2 METHODOLOGY

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

In order to ensure transparency, a determination protocol was customized for the project, according to the Determination and Verification Manual (IETA/PCF). The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from determining the identified criteria. The determination protocol serves the following purposes:

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

The determination protocol consists of five tables. The different columns in these tables are described in Figure 1.

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

Determination Protocol Table 1: Mandatory Requirements			
Requirement	**Reference**	**Conclusion**	**Cross reference**
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (**OK**), a **Corrective Action Request (CAR)** or a **Clarification Request (CL)** of risk or non-compliance with stated requirements. The CAR's and CL's are numbered and presented to the client in the Determination Report.	Used to refer to the relevant protocol questions in Tables 2, 3 and 4 to show how the specific requirement is determined. This is to ensure a transparent determination process.

Determination Protocol Table 2: Requirements checklist				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in several sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (**OK**), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question. (See below). **Clarification Request (CL)** is used when the determination team has identified a need for further clarification.

Determination Protocol Table 3: Baseline and Monitoring Methodologies				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
The various requirements of baseline and monitoring methodologies should be met. The checklist is organized in several sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (**OK**), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question. (See below). **Clarification Request (CL)** is used when the determination team has identified a need for further clarification.

Determination Protocol Table 4: Legal requirements				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
The national legal requirements the project must meet.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (**OK**), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question. (See below). **Clarification Request (CL)** is used when the determination team has identified a need for further clarification.

Determination 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**	**Determination conclusion**
If the conclusions from the Determination 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 determination team should be summarized in this section.	This section should summarize the determination team's responses and final conclusions. The conclusions should also be included in Tables 2, 3 and 4, under "Final Conclusion".

Figure 1 Determination protocol tables

2.1 Review of Documents

The Project Design Document (PDD) version 1.0 dated 18/10/2009 was received on 13/11/2009 together with supporting documentation in terms of calculation of GHG emission.

The Project Design Document (PDD) submitted by GreenStream Network and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for Completing the Project Design Document (JI-PDD), Approved methodology, Kyoto Protocol, Clarifications on Determination Requirements to be Checked by an Accredited Independent Entity were reviewed.

Following the project site visit held on 17/11/2009, the project participant has made a decision to revise the PDD. As a result a revised PDD version 1.3 dated 01/12/2009 was submitted to BVC together with renewed supporting documentation.

The PDD version 1.3. dated 01/12/2009 was made publicly available for comments on UNFCCC site from 08 December 2009 to 06 January 2010.

The first deliverable of the document review was the Draft Determination Protocol (DDP) dated 05/01//2010.

To address Bureau Veritas Certification corrective action and clarification requests project participants revised the PDD and resubmitted it on 22/03/2010 in version 1.8.

On 29/03/2010 GreenStream Network submitted the amended version of PDD Version 2.0 together with further elaborated responses to BVC requests.

Following the Internal Technical Review a revised PDD version 2.01 dated 06/04/2010 appeared and it is considered the final one.

The determination findings presented in this report relate to the project as described in the above mentioned versions of the PDD.

2.2 Follow-up Interviews

On 17/11/2009 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Samsonivska-Zakhidna Mine, local administration and consulting company were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
OJSC Krasnodonvugillya, Samsonivska-Zakhidna Mine, Metinvest Holding	➢ History of the project ➢ Implementation schedule ➢ Project management organisation ➢ Environmental Impact Assessment ➢ Project monitoring responsibilities ➢ Monitoring equipment ➢ Quality control and quality assurance
LOCAL Stakeholders	➢ Environmental impacts affected ➢ Local authorities and public opinion ➢ Social issues ➢ Financial and other resources
ING Bank N.V., GreenStream Network	➢ Applicability of methodology ➢ Baseline and Project scenarios ➢ Barriers analysis ➢ Additionality justification ➢ Common practice analysis ➢ Monitoring plan ➢ Estimation of the leakage ➢ Conformity of PDD to JI requirements

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the determination 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 project design.

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

Corrective Actions Requests (CAR) are issued, where:

i) there is a clear deviation concerning the implementation of the project as defined in the PDD;
ii) requirements set by the Methodological Procedure 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.

Clarification Requests (CL) are issued where

iv) additional information is needed to fully clarify an issue.

3 DETERMINATION FINDINGS

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

1) The findings from the desk review of the original project design 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 Determination Protocol in Appendix A.
2) Where Bureau Veritas Certification had identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 37 Corrective Action Requests and 27 Clarification Requests.
3) The conclusions for determination subject are presented.

3.1 Project Design

The main goal of the project is the utilization of Coal Mine Methane (CMM) that has been captured by degassing system. CMM captured at Samsonivska-Zakhidna mine will be used for: (I) generation of electricity for the onsite consumption, (II) substitution of coal, which is currently used as a fuel for existing boilers; (III) flaring.

The project is expected to be in line with host-country specific JI requirements because it is aimed at utilization of methane as a fuel for electricity generation in gas engines, installed at the Samsonivska-Zakhidna mine. Implementation of the proposed project activities will reduce methane emissions into the atmosphere. Generated electricity will be used onsite to partially cover the needs of the mine that will reduce CO2 emissions originating from power generation in the energy system of Ukraine.

Existing coal boilers will be reconstructed and switched to methane as fuel, further reducing CO2 emissions. CMM burning in the flare units will also contribute to GHG emission abatement.

Thus, CMM utilization project implementation will result in a rise of profitability of the mine through electricity and heat generation, the risk of methane explosion will be decreased, and reduction of greenhouse gas emissions to the atmosphere will be achieved.

According to the Energy Strategy of Ukraine for the period until 2030, the use of coal is expected to grow significantly over the next twenty years. Coal is considered a national energy resource, which will be used to ensure energy independence of Ukraine. Improving of the Samsonivska-Zakhidna mine's safety, which will be achieved as a result of the proposed

project, meets the declared priorities of Ukraine regarding the further development of the coal industry.

The project design is sound and the geographical (the town of Molodogvardiysk, Krasnodon district, Luhansk Oblast) and temporal (10 years) boundaries of the project are clearly defined.

The identified areas of concern as to Project Design, PP's response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR 02-CAR 04, CAR 20, CAR 21, CL 01-CL 06).

The project has no approvals by the Parties involved, therefore CAR 01 remains pending.

3.2 Baseline and Additionality

The JI specific approach based on the ACM0008 (version 06) "Consolidated methodology for coal bed methane, coal mine methane and ventilation air methane capture and use for power (electrical or motive) and heat and/or destruction through flaring or flameless oxidation" methodology, the Methodological "Tool to determine project emissions from flaring gases containing methane"* and the approach used in the JI projects which passed determination has been used for baseline setting of this project.
The proposed project meets the following requirements of the ACM0008 methodology (version 06):

- Methane is captured and destroyed by the flaring, and also is recycled to produce heat and electricity;
- Unused methane can be released (by ventilation) to the atmosphere;
- All methane amounts which are included into design calculations will be either flared or recycled for heat and electricity production;
- The Samsonivska-Zakhidna mine is not an open cast mine;
- The Samsonivska-Zakhidna mine is in operation, and will be in operation throughout the crediting period;
- There is no capture of virgin coal-bed methane;
- There is no usage of CO2 or any other fluid/gas to enhance CMM drainage before the coal mining.

The proposed project is to be implemented at an existing mine. Forecast for CMM capturing and using has been developed according to the recommendations of the chosen methodology for calculating baseline emissions and leakages and is presented below in this PDD.

Hence ACM0008 (version 06) is fully applicable to the proposed JI

* CDM EB 28

project.

According to the chosen methodology, the alternatives considered for determination of the baseline scenario in the context of the project activity should list all technically feasible options of CMM production, which comply with safety regulations.
Several alternatives can be taken to treat the captured CMM of the project:

(i) Venting
(ii) Using / destroying ventilation air methane rather than venting it
(iii) Flaring of CMM
(iv) Use for additional grid power generation
(v) Use for additional captive power generation
(vi) Use for additional heat generation
(vii) Feed into gas pipeline (to be used as fuel for vehicles or heat / power generation)
(viii) Possible combinations of alternatives i to vii with the relative shares of gas treated under each option specified

Among mentioned possible alternatives there is only one realistic option for the baseline scenario, which is the continuation of the current situation: venting of the CMM into the atmosphere, heat generation with the existing coal fired boilers, and purchase of electricity from the grid.

In accordance with the chosen methodology, additionality has been proven by applying the "Tool for demonstration and assessment of additionality", (version 05.2).

Project scenario is additional compared with the baseline scenario.
Registration of the proposed project as a JI project will bring additional financing from the sale of emission reduction units, which in return will allow to overcome the financial barriers and barriers associated with the prevailing practice.

The identified areas of concern as to Baseline and Additionality, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 05-CAR 11, CAR 22-CAR 25, CAR 28, CAR 29, CL07-CL 10, CL 17-CL23, CL 26, CL 27).

The identified area of concern as to Project Starting, PP's response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR 12, CAR 26).

3.3 Monitoring Plan

The JI specific approach based on the ACM0008 (version 06) "Consolidated baseline methodology for coal bed methane and coal mine methane capture and use for power (electrical or motive) and heat and/or destruction by flaring or flameless oxidation" methodology, the Methodological "Tool to determine project emissions from flaring gases containing methane" and the approach used in the JI projects which passed determination has been used for establishing the monitoring plan for this project.

The adopted monitoring methodology has been chosen based on the following reasons:

Methodology ACM0008 is applicable for the projects, aiming at the CMM capture, utilization, and destruction at the operational coal mines, where the baseline comprises partial or complete methane escape to the atmosphere, and the project activity includes following measures:

- Methane capture and destruction through flaring;
- Methane capture and destruction through utilization for the electricity, motive energy, and heat production

Methodological "Tool to determine project emissions from flaring gases containing methane" can be applied under following conditions:

- Gas flow for flaring does not contain any other combustible gases, except methane, carbon monoxide, and hydrogen;
- Gas flow for flaring has to be received from organic decomposition or gases, being vented in the coal mines (CMM)

Variables to be monitored in the baseline scenario are the same as in project scenario and include the following list of parameters:

- Methane collected by the degasification system
- Methane combusted at flares
- Methane pressure at flares
- Methane temperature at flares
- Methane utilized by the gas engines
- Pressure of methane being utilized at the gas engines
- Temperature of methane being utilized at the gas engines

- GWP of methane
- Methane concentration in the captured gas
- Effectiveness of the methane destruction
- Carbon emission factor of NMHC
- Electricity production by the gas engines
- National grid baseline factor (for power savings)
- NCV of coal
- Electricity consumption from the national grid (displaced by the captive power generation in the project scenario)
- Coal consumption by the heat boilers
- Heat generation by the heat boilers
- Proportion of the non-methane hydrocarbon substances in the gas collected/ degasification compound
- Methane sent to boilers
- Pressure of methane being utilized in boilers
- Temperature of methane being utilized in boilers

An adequate quality control and assurance procedures to maintain a consistent and reliable performance of the automatic controlling and monitoring system are to be implemented in accordance with the existing national calibration standards and quality norms. Regular maintenance and testing regime to ensure accuracy of flow meters, gas-analyzers, electricity and heat measuring instruments will be provided, as required by the national standards. All measuring equipment will be calibrated periodically. The calibration protocols will be archived and proved by an independent entity on the annual basis. A consistency check for all measurement data and the calculation of the emission reductions will be carried out and reported monthly.

Detailed data on the collection and archiving of information on the environmental impacts as well as the operational and management structure that the project operator will apply implementing the monitoring plan are presented in Section D.1.5. of the PDD.

There are no identified areas of concern as to Monitoring Plan

3.4 Calculation of GHG Emissions

The formulae used for calculation of project and baseline emissions are presented in PDD Section D.

The initial data for calculations and the calculations are presented on the spreadsheet made available to Bureau Veritas Certification. The results are summarised in Section E. The verifiers checked the calculations and found them accurate.

The calculated amount of project emission reduction over the period 2009 - 2012 is 657 132 tCO2e. The annual average emission reduction for this period is 164 283 tCO2e.

The calculated amount of project emission reduction over the period 2013 - 2018 is 1 450 584 tCO2e. The annual average emission reduction for this period is 241 764 tCO2e.

The identified area of concern as to Calculation of GHG Emissions, PP's response and BV Certification's conclusion is described in Appendix A Table 5 (refer to CAR 24,CL 12 – CL 15).

3.5 Environmental Impacts

The use of degassing CMM as fuel will significantly decrease emissions of uncombusted methane from the Samsonivska-Zakhidna mine and possible transboundary transfer of such methane emissions. In addition, the proposed project will lead to decrease of the coal consumption by the boilers of the Samsonivska-Zakhidna mine and the subsequent decrease of the atmospheric emissions of hazardous substances (such as nitrogen and sulphur oxides). The proposed project activity is in line with the existing international treaties on transboundary pollution, in particular the Protocol to the 1979 Convention on Long-range Transboundary Air Pollution Concerning the Control of Emissions of Nitrogen Oxides or Their Transboundary Fluxes.

Detailed information on the quantitative change in the hazardous substances emissions from Samsonivska-Zakhidna mine will be available in the Environmental Impact Assessment. The expected time of the EIA completion is July 2010.

The identified area of concern as to Environmental Impacts, PP's response and BV Certification's conclusion is described in Appendix A Table 5 (refer to CAR 17-CAR 19, CAR 27, CAR 31, CL 16).

3.6 Comments by Local Stakeholders

On the stage of the project design documentation development, all relevant information on the project was provided to the Krasnodon City Council. The First Deputy of Acting Head of the Regional State Administration Y.V. Khorunzhyi during interview confirmed that the proposed Joint Implementation project on coal mine methane capture and utilization at Samsonivska-Zakhidna mine is economically and socially important and has positive impact on the environment. The financing of

the project will become essential investment into the coal mine industry in Krasnodon. The JI project will result in coal and energy savings, create new employment opportunities, improve safety, and secure the work place availability in the long term prospective. The project implementation will result in greenhouse gases reduction, in particular CO2.

No areas of concern as to Local Stakeholder Comments are identified.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to the modalities for the Determination of JI projects, the AIE shall make publicly available the project design document and receive, within 30 days, comments from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available.

Bureau Veritas Certification published the project documents on the UNFCCC JI website (http://JI.unfccc.int) on 08/12/2009 and invited comments within 06/01/2010 by Parties, stakeholders and non-governmental organizations.

No comments were received during this period.

5 DETERMINATION OPINION

Bureau Veritas Certification has been commissioned by ING Bank N.V. to perform a determination of the JI project "Coal Mine Methane Capture and Utilization at Samsonivska-Zakhidna Mine" of OJSC Krasnodonvugillya located in the town of Molodogvardiysk, Krasnodon district, Luhansk Oblast, Ukraine. The determination was performed on the basis of UNFCCC criteria for JI projects, in particular the verification procedures under the JI Supervisory Committee, as well as host country criteria and the criteria given to provide for consistent project operations, monitoring and reporting.

The determination is based on the information made available to us and on the engagement conditions detailed in this report. The determination has been performed using a risk-based approach as described above. The only purpose of the report is its use for the formal approval of the project under JI mechanism. Hence, Bureau Veritas Certification cannot be held liable by any party for decisions made or not made based on the determination opinion, which will go beyond that purpose.

The determination consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) the resolution of

outstanding issues and the issuance of the final determination report and opinion.

The review of the project design documentation, the subsequent follow-up interviews, and the resolution of the Corrective Action Requests have provided Bureau Veritas Certification with the sufficient evidences to determine the fulfilment of the above stated criteria and to demonstrate that the project is additional.

To prove the additionality Project participants applied the latest version of the "Tool for demonstration and assessment of the additionality". In line with this tool, the PDD provides benchmark analysis, barriers and common practice analyses to determine that the project activity itself is not the baseline scenario and to demonstrate that the emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The determination revealed one pending issue related to the current determination stage of the project: the issue of the written approval of the project by the host party. If the written approval by the host Party is awarded, it is our opinion that the project as described in the Project Design Document, Version 2.01 dated 06 April 2010 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

6 REFERENCES

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

/1/ PDD "Coal Mine Methane Capture and Utilization at Samsonivska-Zakhidna Mine" version 1.0 of 18.10.2009

/2/ PDD "Coal Mine Methane Capture and Utilization at Samsonivska-Zakhidna Mine" version 1.3 of 01.12.2009

/3/ PDD "Coal Mine Methane Capture and Utilization at Samsonivska-Zakhidna Mine" version 1.8 of 22.03.2010

/4/ PDD "Coal Mine Methane Capture and Utilization at Samsonivska-Zakhidna Mine" version 2.0 of 29.03.2010

/5/ PDD "Coal Mine Methane Capture and Utilization at Samsonivska-Zakhidna Mine" version 2.01 of 06.04.2010

/6/ Approved consolidated baseline and monitoring methodology ACM0008 "Consolidated methodology for coal bed methane, coal mine methane and ventilation air methane capture and use for power (electrical or motive) and heat and/or destruction through

flaring or flameless oxidation"

/7/ Guidelines for Users of the Joint Implementation Project Design Document Form/Version 04, JISC.

/8/ JISC Guidance on criteria for baseline setting and monitoring. Version 02.

/9/ Tool for the demonstration and assessment of additionality, Version 05.2.

/10/ Glossary of Joint Implementation Terms, Version 02.

/11/ Letter of Endorsement #578/23/7 dated 03.06.2009 issued by National Environmental Investment Agency of Ukraine.

/12/ Expert examination opinion #14.-02.-2161.08 on compliance of equipment with the legislation on labour protection and industrial safety dated 22.04.2008.

Category 2 Documents:

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

/1/ Feasibility study on utilization of air-methane mixture in KGUU for producing electrical and heat energy in a boiler of Samsonivska-Zakhidna Mine dated 2008.

/2/ Explanatory note #049.005657 ПЗ. КЕ-10-14С Boiler reconstruction for transferring it to co-combustion of methane-air mixture and coal. Samsonivska-Zakhidna Mine.

/3/ List of technical documentation 049.005679 dated 2004. КЕ-10-14С Boiler reconstruction for transferring it to co-combustion of methane-air mixture and coal. Samsonivska-Zakhidna Mine.

/4/ Protocol of commission meeting on KGUU operation knowledge check dated 30.09.2009

/5/ Training programme on KGUU -5/8 operation and maintenance dated 11.08.2008.

/6/ Annex #3 to the contract #1130 У/08-7-КУО dated 13.08.2007. Schedule of pre-commissioning works and providing services on project start and training of the Purchaser personnel

/7/ Permit #107 to conduct test operation dated 14.09.2009.

/8/ Record of services 43.42.66.001.00.00.000 dated 2008. Compressor gas-utilization device KGUU-5/8.

/9/ Log book #02-07of KGUU-5/8.

/10/ Operational manual 43.42.66.001.00.00.000 dated 2008.

/11/ Passport. Bimetal thermometer "WIKA-52" ser. #23119 dated 2004.

/12/ Certificate of acceptance. Modification monomer 212.20.100, ser. #23125 dated 12.12.2007

/13/ Log book on KGUU operation.

/14/ Photo - Reorganizer МД-3583М #3040

/15/ Photo - Diaphragm #14571 62521

/16/ Photo - Difmanometer #N1-W130-9688556

/17/ Statement of KGUU-5/8 acceptance testing dated 15.09.2009.

/18/ Statement of KGUU-5/8 acceptance testing dated 2009.

/19/ Order #3108 dated 30.03.2009 on beginning of testing of the gas-utilisation device KGUU-5/8.

/20/ Recommendation on site choosing for acceptance testing and further usage of compressor gas-utilization devices KGUU-5/8 at OJSC "Krasnodonvugillya" mines

/21/ Programme and methodology on KGUU-5/8 initial and acceptance testing 43.42.66.001.00.00.000 dated 31.01.2008.

/22/ Expert examination opinion №14.-02.-18.-2704.09 compliance of Programme and Methodology with the legislation on labour protection and industrial safety dated 15.07.2009

/23/ Coal quality certificates

Persons interviewed:

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

/1/ Yevgen Groza, GeenStream Network, Ukraine, Director

/2/ Victor Skarshevsky, Metinvest Holding, Kyoto Protocol Chief Manager

/3/ Peter van Eijndhoven, ING Bank N.V., Natural Resources, Vice-President

/4/ Yevgen Kaydanovsky, Samsonivska-Zakhidna Mine, Chief Engineer

/5/ Alexander Angelovsky, Samsonivska-Zakhidna Mine, Technical Director

/6/ Marina Frolova, OJSC "Kasnodonvugillya", Project Manager

/7/ Yaroslav Vladimirovich Khorunzhy, Krasnodon District State Administration, First Deputy Head

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APPENDIX A: COMPANY JI PROJECT DETERMINATION PROTOCOL

Table 1 Mandatory Requirements for Joint Implementation (JI) Projects

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
1. The project shall have the approval of the Parties involved.	Kyoto Protocol Article 6.1 (a)	**CAR 01**. The project has no approval of the host Party. Verifiers' Note: JISC Glossary of JI terms/Version 02 defines the following: a) At least the written project approval(s) by the host Party(ies) should be provided to the AIE and made available to the secretariat by the AIE when submitting the determination report regarding the PDD for publication in accordance with paragraph 34 of the JI guidelines; (b) At least one written project approval by a Party involved in the JI project, other than the host Party(ies), should be provided to the AIE and made available to the secretariat by the AIE when submitting the	Table 2 Section A.5.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		first verification report for publication in accordance with paragraph 38 of the JI guidelines, at the latest. After finishing of project determination report, the PDD and Determination Report will be presented to National Environmental Agency of Ukraine for receiving the Letter of Approval.	
2. Emission reductions, or an enhancement of removal by sinks, shall be additional to any that would otherwise occur.	Kyoto Protocol Article 6.1 (b)	OK	Table 2, Section B.2
3. The sponsor Party shall not acquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7.	Kyoto Protocol Article 6.1 (c)	OK	N/A
4. The acquisition of emission reduction units shall be supplemental to domestic actions for the purpose of meeting commitments under Article 3.	Kyoto Protocol Article 6.1 (d)	OK	N/A
5. Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects.	Marrakech Accords, JI Modalities, §20	OK	Both countries have designated their Focal Points. National guidelines and procedures for approving JI projects have been published.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
			Contact data in Ukraine: **National Environmental Investment Agency of Ukraine** 35 Urytsky Str., Kyiv, P.O. 03035 Phone: +380 44 594 91 11 Fax: +380 44 5949115 Email: info.neia@gmail.com National guidelines and procedures for the approval of JI projects are available (www.neia.gov.ua) Contact data in the Netherlands: **Ministry of Economic Affairs** Catharijnesingel 59

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
			P.O. Box 8242 3503 RE Utrecht Netherlands Phone: +31 30 239 3413 Email: d.de.haan@sentern ovem.nl National guidelines and procedures for the approving JI projects are available (http://ji.unfccc.int/UserManagement/FileStorage/XQ0CYFTBQDSELQJSZUKHKRMANMD6QD
6. The host Party shall be a Party to the Kyoto Protocol.	Marrakech Accords, JI Modalities, §21(a)/24	OK	The Ukraine is a Party (Annex I Party) to the Kyoto Protocol and has ratified the Kyoto Protocol at April 12th, 2004.
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities	Marrakech Accords,	OK	In the Initial Report submitted by

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
for the accounting of assigned amounts.	JI Modalities, §21(b)/24		Ukraine on 29. Dec. 2006 the AAUs are quantified with: 925 362 174.39 (x 5) = 4 626 810 872 tCO2-e
8. The host Party shall have in place a national registry in accordance with Article 7, paragraph 4.	Marrakech Accords, JI Modalities, §21(d)/24	OK	Ukraine national GHG registry has been outlined in the Initial Report. (http://unfccc.int/national_reports_under_the_kyoto_protocol/items/3765.php)
9. Project participants shall submit to the independent entity a project design document that contains all information needed for the determination.	Marrakech Accords, JI Modalities, §31	OK	GreenStream Network has submitted the PDD to Bureau Veritas Certification, which contains all information needed for determination.
10. The project design document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments.	Marrakech Accords, JI Modalities, §32	OK	PDD Version 1.3. dated 01/12/2009 was made publicly available for comments on UNFCCC JI website

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
			from 08 December 2009 till 06 January 2010.
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, in accordance with procedures as determined by the host Party shall be submitted, and, if those impacts are considered significant by the project participants or the host Party, an environmental impact assessment in accordance with procedures as required by the host Party shall be carried out.	Marrakech Accords, JI Modalities, §33(d)	OK	Table 2, Section F
12. The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section A.2
13. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B.2
14. The baseline methodology shall exclude to earn ERUs for decreases in activity levels outside the project activity or due to force majeure.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B.2
15. The project shall have an appropriate monitoring plan.	Marrakech Accords, JI Modalities, §33(c)	OK	Table 2, Section D

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
16. A project participant is a legal entity authorized by a Party involved to participate in the JI project.	JISC "Modalities of communication of Project Participants with the JISC" Version 01, Clause A.3	Conclusion is pending a follow-up on CAR 01. Refer to Verifiers' Note in 1 above.	Table 2, Section A

Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A. General Description of the project					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A.1 Title of the project					
A.1.1. Is the title of the project presented?		DR	The title of the project is indicated correctly. See section A.1.	OK	OK
A.1.2. Is the current version number of the document presented?		DR	The current PDD versionis is 2.01. <u>Corrective Action Request (CAR) 2</u> Please provide sectoral scope of the project in the section A.1. of the PDD.	CAR2	OK
A.1.3. Is the date when the document was completed presented?		DR	The date of the project is presented. See section A.1.	OK	OK
A.2. Description of the project					
A.2.1. Is the purpose of the project included?		DR I	The purpose of the project is stated clearly as separate abstract. The main goal of this project is the utilization of CMM that has been captured by degassing system.	OK	OK
A.2.2. Is it explained how the proposed project reduces greenhouse gas emissions?		DR	CMM captured at Samsonivska-Zakhidna mine will be used for: (I) generation of electricity for the onsite consumption, (II) substitution of coal, which is currently used as a fuel for existing boilers; (III) flaring. CMM utilization project implementation will result in a rise of profitability of the mine through electricity and heat generation, the risk of methane explosion will be decreased, and reduction of greenhouse gas emissions		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			to the atmosphere will be achieved. Corrective Action Request (CAR) 3 Please provide brief description of the baseline scenario in the section A.2. Corrective Action Request (CAR) 4 Please include into section A.2. brief summary of the JI project history.	CAR3 CAR 4	OK OK
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?		DR	Project participants and parties involved are listed in Table1 section A.3. of the PDD version 1.2.	OK	OK
A.3.2. Are project participants authorized by a Party involved?		DR	The Project Idea Note (PIN) has been submitted to the National Environmental Investments Agency of Ukraine in April 2009. The project has received a Letter of Endorsement № 578/23/7 dated 03.06.2009. Upon completing of the determination procedure, the PDD and the Determination report will be submitted to the National Environmental Investments Agency of Ukraine for receiving a Letter of Approval.	OK	OK
A.3.3. The data of the project participants are presented in		DR	Project participants and parties involved are	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
tabular format?			listed in Table1 section A.3. of the PDD version 1.2.		
A.3.4. Is contact information provided in annex 1 of the PDD?		DR	Yes, the information is provided in Annex 1 of the PDD version 1.2.	OK	OK
A.3.5. Is it indicated, if it is the case, if the Party involved is a host Party?		DR	Ukraine is indicated as a Host party in Table1 section A.3. of the PDD version 1.2.	OK	OK
A.4. Technical description of the project					
A.4.1. Location of the project activity					
A.4.1.1. Host Party(ies)		DR	Ukraine is indicated as a host party.	OK	OK
A.4.1.2. Region/State/Province etc.		DR	Lugansk region	OK	OK
A.4.1.3. City/Town/Community etc.		DR	The town of Molodogvardijsk, Lugansk region	OK	OK
A.4.1.4. Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)		DR	Information on the project physical location details is provided in full.	OK	OK
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					
A.4.2.1. Does the project design engineering reflect current good practices?		DR	Clarification request (CL) 1 Please, explain in what way the project design engineering reflects current good practices Clarification request (CL) 2 Please clarify whether information provided in Table 2 of Section A.4.2. "Provisional	CL1 CL2	OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			schedule of the measures envisaged by the JI project" corresponds to the real state of affaires		
A.4.2.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?		DR	Clarification request (CL) 3 Please, explain whether the project uses state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country	CL3	OK
A.4.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?		DR	Clarification request (CL) 4 Please, provide information on whether the project technology likely to be substituted by other or more efficient technologies within the project period	CL4	OK
A.4.2.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?		DR	Clarification request (CL) 5 Please, provide information on whether the project requires extensive initial training and maintenance efforts in order to work as presumed during the project period	CL5	OK
A.4.2.5. Does the project make provisions for meeting training and maintenance needs?		DR	Clarification Request (CL) 6 Please, clarify whether the project makes provisions for meeting training and maintenance needs	CL6	OK
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances					
A.4.3.1. Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)		DR	Methane emissions into the atmosphere will be reduced by the following ways: - Utilization of methane as a fuel for electricity generation in gas engines to partially cover the needs of the mine and in its turn will reduce CO2 emissions originating from power generation in the UES of Ukraine - Reconstruction and switching of the existing coal boilers to methane as fuel that will lead to further reducing CO_2 emissions. - CMM burning in the flare units will also contribute to GHG emission abatement. Improving of the Samsonivska-Zakhidna mine's safety meets the declared priorities of Ukraine regarding the further development of the coal industry.	OK	OK
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?		DR	The estimation of emission reductions over the crediting period is provided in Table 3 in Section A.4.3.1. of the PDD.	OK	OK
A.4.3.3. Is it provided the estimated annual reduction for the		DR	The estimation of annual reductions over	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
chosen credit period in tCO_2e?			the crediting period is provided in Table 3 in Section A.4.3.1. of the PDD.		
A.4.3.4 Are the data from questions A.4.3.2 to A.4.3.4 above presented in tabular format?		DR	Yes, see sections A.4.3.2. and A.4.3.3. of this protocol.	O	OK
A.5. Project approval by the Parties involved					
A.5.1. Are written project approvals by the Parties involved attached?		DR	The Project Idea Note (PIN) for the project has been submitted for revision by the National Environmental Investment Agency Ukraine in April 2009. The Project has received the Letter of Endorsement № 578/23/7 dated 03.06.2009. After finishing of project determination procedure, the PDD and Determination Report will be submitted to the National Environmental Investments Agency of Ukraine for receiving the Host Country Letter of Approval.	OK	OK
B. Baseline					
B.1. Description and justification of the baseline chosen					
B.1.1. Is the chosen baseline described?		DR	A baseline was set in accordance with appendix B of the JI guidelines. The project uses consolidated baseline and monitoring methodology ACM0008 "Consolidated		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			methodology for coal bed methane, coal mine methane and ventilation air methane capture and use for power (electrical or motive) and heat and/or destruction through flaring or flameless oxidation" (Version 06) approved by the JISC.	OK	OK
			Corrective Action Request (CAR) 5 According to the "Guidelines for users of the JI PDD form, version 04, which is the latest one, Section B. shall contain all key elements of the baseline. Annex 2 (baseline information) that should be prepared in parallel to completing the remainder of Section B. shall contain a summary of the key elements in tabular form as well as additional supporting documentation/information.	CAR5	OK
B.1.2. Is it justified the choice of the applicable baseline for the project category?		DR	The choice of the applicable baseline for the given project category is fully justified; the 4 step-wise approach has been applied for the baseline choice; the baseline scenario is included among its alternatives	OK	OK
B.1.3. Is it described how the methodology is applied in the context of the project?		DR	The proposed project involves the use of degassing methane, which is captured by surface and underground drainage systems. This activity is included into the list of projects for which the chosen methodology	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			can be applied. The proposed project meets the requirements of the ACM0008 methodology (version 06). ACM0008 (version 06) is fully applicable to the proposed JI project.		
B.1.4. Are the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)?		DR	The basic assumptions of the baseline methodology in the context of the project are presented in the section B.1. of the PDD version 1.4.	OK	OK
B.1.5. Is all literature and sources clearly referenced?		DR	Yes. There are all references clearly provided.	OK	OK
B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project					
B.2.1. Is the proposed project activity additional?		DR	The most recent "Tool for the demonstration and assessment of additionality (version 05.2)" is applied to prove that the anthropogenic emissions are reduced below those that would have occurred in the absence of the JI project. Approach selected for determination of appropriate analysis method is correct. Benchmark analysis is the proper method of analysis for the present project.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Corrective Action Request (CAR) 6 In order to follow the pattern prescribed by the Additionality Tool ver. 05.2 please provide the results of financial analysis in Sub-step 2c instead of Sub-step 2b. The results of sensitivity analysis shall be indicated in sub-step 2d (now they are placed in sub-step 2c and sub-step 2d is absent).	CAR6	OK
			Corrective Action Request (CAR) 7 Virtually all formulas in Excel tables were removed and substituted with resulting values. Please note that according to the Guidance for the Assessment of Investment analysis (hereinafter referred as the Guidance) article 8 all formulas used in this analysis shall be readable and all relevant cells shall be viewable and unprotected. Please correct your Excel file.	CAR7	OK
			Corrective Action Request (CAR) 8 Project period selected for calculations is 10 years which does not mate with the service period of the major part of equipment (Jenbacher gas-piston engines) having the life time of 25 years as stated in the PDD. Please base financial calculations on the	CAR8	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			project period of 2011+25 years. <u>Corrective Action Request (CAR) 9</u> The financial model does not account for liquidation value of flares and boilers. Please indicate their fair value for the date of liquidation as required by the Guidance. <u>Clarification Request (CL)7</u> Please provide comprehensive presentation of capital expenditures and their structure. The values currently provided on the sheet "investments" differ from those represented on sheet "savings". <u>Clarification Request (CL)8</u> Please provide comprehensive presentation of operational expenses for project equipment including salaries, O&M and other reasonable cash expenses. The values provided on the sheet "investments" differ from those represented on sheet "savings". Please note that operational costs shall be adjusted by proposed inflation rate of 15% as well just like coal and electrical power savings. <u>Corrective Action Request (CAR) 10</u>	CAR9 CL7 CL8	OK OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Excel model does not contain the relevant calculations and formulas. Please submit the spreadsheets with calculation of deviation scenarios indicating formulas in order the reader could reproduce and check your results. <u>Corrective Action Request (CAR)11</u> Cash flow calculations start from 2009 and do not account for 2008 while this year is actually the first project year with some cash disbursed. Please correct/clarify. It is highly recommended preparing the cash flow for the project following the usual practice i.e. with cash flow from operations and investment cash flows indicated separately. It will largely facilitate the reading of the tables.	CAR10 CAR11	OK OK
B.2.2. Is the baseline scenario described?		DR	Yes. As it is stated in Section B.1 of the PDD, there is only one realistic option for the baseline scenario, which is the continuation of the current situation: venting of the CMM into the atmosphere, heat generation with the existing coal fired boilers, and purchase of electricity from the grid	OK	OK
B.2.3. Is the project scenario described?		DR	The project scenario is clearly described	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			and compared to the baseline one with the help of the "Tool for the demonstration and assessment of additionality (version 05.2)".		
B.2.4. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario included?		DR	Clarification Request (CL)9 Please, show the evidence of why the emissions in the baseline scenario would likely exceed the emissions in the project scenario	CL9	OK
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?		DR	Yes. It is obvious from the baseline description that the proposed project activity is not a likely baseline scenario	OK	OK
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?		DR	Clarification Request (CL) 10 Please provide a summary of national policies and circumstances relevant to the baseline of the proposed project activity.	CL10	OK
B.3. Description of how the definition of the project boundary is applied to the project activity					
B.3.1. Are the project's spatial (geographical) boundaries clearly defined?		DR	The project's geographical boundaries are clearly defined in Section A.4.1. of the PDD.	OK	OK
B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline					
B.4.1. Is the date of the baseline setting presented (in DD/MM/YYYY)?		DR	The date of the baseline setting is presented correctly.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
B.4.2. Is the contact information provided?		DR	The contact information is provided in Annex 1 of the present PDD.	OK	OK
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?		DR	The entity is the project participant listed in Annex 1 of the PDD version 1.2.	OK	OK
C. Duration of the small-scale project and crediting period					
C.1. Starting date of the project					
C.1.1. Is the project's starting date clearly defined?		DR	The project's starting date is clearly defined	OK	OK
C.2. Expected operational lifetime of the project					
C.2.1. Is the project's operational lifetime clearly defined in years and months?		DR	The project's operational lifetime is properly defined	OK	OK
C.3. Length of the crediting period					
C.3.1. Is the length of the crediting period specified in years and months?		DR	Corrective Action Request (CAR) 12 Please, state the length of the crediting period in years and months.	CAR12	OK
D. Monitoring Plan					
D.1. Description of monitoring plan chosen					
D.1.1. Is the monitoring plan defined?		DR	A monitoring plan is developed in accordance with the "Approved consolidated baseline methodology ACM0008", Version 06 – "Consolidated methodology for coal bed methane, coal mine methane and ventilation air methane capture and use for power (electrical or motive) and heat and/or destruction through	CL11	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			flaring or flameless oxidation' as well as Annex 13 to Methodological "Tool to determine project emissions from flaring gases containing methane" Clarification Request (CL)11 Please, provide references for the Methodological "Tool to determine project emissions from flaring gases containing methane" Corrective Action Request (CAR) 13 The original JI PDD Form format is not preserved in Table D.1.1.1. of the PDD.	CAR13	OK
D.1.2. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.		DR	Collected monitoring data shall be archived in electronic and/or paper format. The measurements are to be done by the calibrated measurement equipment in accordance with the industrial standards. Some parameters outlined in the table "Variables" of Section D.1.1.1. need to be monitored over the crediting period following the procedures for baseline settings and guidelines for the "frequency of monitoring". The main indicator, which reflects the actual emission reductions, is a decrease of fossil fuel consumption due to the CMM utilization.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.		DR	Information on data collected to monitor emissions from the project and means of its archiving is presented in tabular format in Section D.1.1.1 of the PDD	OK	OK
D.1.4. Description of the formulae used to estimate project emissions (for each gas, source etc,; emissions in units of CO2 equivalent).		DR	Formula used for estimating project emissions from the planned project activities are provided in Section D.1.1.2 of the PDD. Corrective Action Request (CAR) 14 The formulae used are not appropriately numbered throughout the whole Section D.	CAR14	OK
D.1.5. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived.		DR	Data necessary for determining the baseline of anthropogenic emissions of GHG by sources within the project boundary and the means of its archiving are presented in Section D.1.1.3 of the PDD	OK	OK
D.1.6. Description of the formulae used to estimate baseline emissions (for each gas, source etc,; emissions in units of CO2 equivalent).		DR	The formula used to calculate the baseline emissions are described in Section D.1.1.4 of the PDD	OK	OK
D.1.7. Option 2 – Direct monitoring of emissions reductions from the project (values should be consistent with those in section E)		DR	N/A	OK	OK
D.1.8. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived.		DR	Corrective Action Request (CAR) 15 Please, state if this section is left blank on purpose	CAR15	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
D.1.9. Description of the formulae used to calculate emission reductions from the project (for each gas, source etc,; emissions/emission reductions in units of CO2 equivalent).		DR	NA	OK	OK
D.1.10. If applicable, please describe the data and information that will be collected in order to monitor leakage effects of the project.		DR	According to ACM0008 methodology there are no leakages which have to be scrutinized within the project boundaries	OK	OK
D.1.11.Description of the formulae used to estimate leakage (for each gas, source etc,; emissions in units of CO2 equivalent).		DR	Not applicable, since there are no expected leakages	OK	OK
D.1.12. Description of the formulae used to estimate emission reductions for the project (for each gas, source etc,; emissions in units of CO2 equivalent).		DR	The formula used to estimate emission reductions for the project is presented in Section D.1.4 of the current PDD	OK	OK
D.1.13.Is information on the collection and archiving of information on the environmental impacts of the project provided?		DR, I	Information on the collection and archiving of information on the environmental impacts of the project is not provided. Corrective Action Request (CAR) 16 Please provide information on the collection and archiving of information on the environmental impacts of the project	CAR16	OK
D.1.14. Is reference to the relevant host Party regulation(s) provided?		DR, I	The reference to the relevant host Party regulations is not provided. Corrective Action Request (CAR) 17	CAR17	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Please provide reference to the relevant host party regulations.		
D.1.15. If not applicable, is it stated so?		DR, I	See Clause D.1.13 of the present Protocol	OK	OK
D.2. Qualitative control (QC) and quality assurance (QA) procedures undertaken for data monitored					
D.2.1. Are there quality control and quality assurance procedures to be used in the monitoring of the measured data established?		DR	Description of quality control and quality assurance procedures is clearly presented in Section D.2. of the PDD	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
D.3. Please describe of the operational and management structure that the project operator will apply in implementing the monitoring plan					
D.3.1. Is it described briefly the operational and management structure that the project participants(s) will implement in order to monitor emission reduction and any leakage effects generated by the project		DR	The operational and management structure is presented In Section D.3 of the PDD by the scheme comprising relevant references for the data to be monitored	OK	OK
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
D.4.1. Is the contact information provided?		DR	Yes. Contact information on entities establishing monitoring plan is provided in Annex 1 of the PDD	OK	OK
D.4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?		DR	Entities establishing the monitoring plan are project participants listed in Annex 1	OK	OK
E. Estimation of greenhouse gases emission reductions					
E.1. Estimated project emissions					
E.1.1. Are described the formulae used to estimate anthropogenic emissions by source of GHGs due the project?		DR	The formula used to estimate project emissions is described in the section D.1.1.2 of the PDD.	OK	OK
E.1.2. Is there a description of calculation of GHG project emissions in accordance with the formula specified in for the applicable project category?		DR	Clarification Request (CL)12 Please, provide a description of calculation of GHG project emissions in accordance with the specified formula.	CL12	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?		DR	Clarification Request (CL)13 Please, explain whether conservative assumptions been used to calculate project GHG emissions	CL13	OK
E.2. Estimated leakage					
E.2.1. Are described the formulae used to estimate leakage due to the project activity where required?		DR	Not applicable, since there are no leakages for the project.	OK	OK
E.2.2. Is there a description of calculation of leakage in accordance with the formula specified in for the applicable project category?		DR	N/A	OK	OK
E.2.3. Have conservative assumptions been used to calculate leakage?		DR	N/A	OK	OK
E.3. The sum of E.1 and E.2.					
E.3.1. Does the sum of E.1. and E.2. represent the small-scale project activity emissions?		DR	It is a large scale project	OK	OK
E.4. Estimated baseline emissions					
E.4.1. Are described the formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline using the baseline methodology for the applicable project category?		DR	The formula used to estimate the baseline emissions is presented in Section D 1.1.4. of the current PDD.	OK	OK
E.4.2. Is there a description of calculation of GHG baseline emissions in accordance with the formula specified in for the applicable project category?		DR	There is no description of calculation of GHG baseline emissions Clarification Request (CL)14 Please, provide a description of calculation of GHG baseline emissions in accordance	CL14	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
E.4.3. Have conservative assumptions been used to calculate baseline GHG emissions?		DR	with the specified formula. Clarification Request (CL)15 Please explain whether conservative assumptions have been used to calculate baseline GHG emissions	CL15	OK
E.5. Difference between E.4. and E.3. representing the emission reductions of the project					
E.5.1. Does the difference between E.4. and E.3. represent the emission reductions due to the project during a given period?		DR	Difference between E.4. and E.3. represents the emission reductions due to the project during a given period.	OK	OK
E.6. Table providing values obtained when applying formulae above					
E.6.1. Is there a table providing values of total CO_2 abated?		DR	Table 13 of Section E.6. of the PDD comprises values of total CO_2 abated	OK	OK
F. Environmental Impacts					
F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party					
F.1.1. Has an analysis of the environmental impacts of the project been sufficiently described?		DR, I	In the course of the project implementation the following advantages are to be achieved: 1) Methane release to the atmosphere is to be decreased; elimination of a GHG emission source is to be achieved.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			2) The project implementation is to contribute to diminishing of the Ukraine's dependency from the imported energy resources. 3) The coal mine methane usage for electricity generation results in a numbers of benefits for the environment compared to widely spread fossil fuel combustion. 4) The project employs the enabling technology, which is to reduce electricity consumption from the national grid by 36 108 MWh per year during the 2011-2018 period.		
F.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is and EIA approved?		DR, I	According to the current legislation, the environmental impact assessment (EIA) has to be undertaken before the permit for the gas engines and flares installation is issued by the state authorities. The EIA is expected to be prepared in due course before the state permit for operating the flares and gas engines is issued. As of 2009, the first KGUU-5/8 unit is operating in the testing mode with a temporary state permit issued as of September 14th, 2009. The fuel switch at the mine's boilers does not create any new emission sources, and in fact is decreasing hazardous emissions to the atmosphere. According to the existing national regulations, no EIA		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			procedure is required for the fuel switch activities at the existing boilers of Samsonivska-Zakhidna. In accordance with the Ukraine's legislation, the coal mines are obliged to report on the emissions of hazardous substances. Samsonivska-Zakhidna mine has received all relevant permits issued by the State Department of Environmental Protection in Luhansk Oblast. The permits are valid until 2014. Clarification Request (CL)16 Please, provide information on whether there is an EIA undertaken and a respective permit issued for the Flare #1 installation that had to be put into operation in April 2009 as it is stated in Table 2 of Section A.2. of the PDD.	CL16	OK
F.1.3. Are the requirements of the National Focal Point being met?		DR, I	NFP requires applying EIA approach and JI project activity shall not worsen local environmental conditions. These requirements are followed by the project.	OK	OK
F.1.4. Will the project create any adverse environmental effects?		DR, I	There is no obvious provements concerning any adverse environmental effects which the project may create. Corrective Action Request (CAR) 18 Please, provide information from the reliable	CAR18	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			officaial sources on this point and include it to section F.1		
F.1.5. Are transboundary environmental considered in the analysis?		DR, I	The information considering transboundary environmental effects is not provided. Corrective Action Request (CAR) 19 Please include information considering transboundary environmental effects into section F of the PDD.	CAR19	OK
F.1.6. Have identified environmental impacts been addressed in the project design?		DR, I	See section F.1.1. of this protocol.	OK	OK
***G.* Stakeholders' comments**					
G.1. Information on stakeholders' comments on the project, as appropriate					
G.1.1. Is there a list of stakeholders from whom comments on the project have been received?		DR	On the stage of the project design documentation development, all relevant information on the project was provided to the Krasnodon City Council. The received answer enclosed in Annex 4. A letter of support was received in return from Lugansk Regional State Administration in the city of Krasnodon to support the project.	OK	OK
G.1.2. The nature of comments is provided?		DR	As it is stated in the Letter of Support, the proposed Joint Implementation project on coal mine methane capture and utilization at Samsonivska-Zakhidna mine is	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			economically and socially important and has positive impact on the environment. The financing of the project will become essential investment into the coal mine industry in Krasnodon. The JI project will result in coal and energy savings, create new employment opportunities, improve safety, and secure the work place availability in the long term prospective. The JI mechanism implementation in accordance with the Kyoto Protocol will assist OJSC Krasnodonvugillya in attracting significant additional investments into Samsonivska-Zakhidna mine modernization. The project implementation will result in greenhouse gases reduction, in particular CO_2.		
G.1.3. Has due account been taken of any stakeholder comments received?		DR	NA	OK	OK

Table 3 Baseline and Monitoring Methodologies

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Baseline Methodology					
1.1. Applicability					
1.1.1. Is the latest version of the methodology used?			Approved consolidated and baseline monitoring methodology ACM0008/Version 06 is used. This is the latest available version	OK	OK
1.1.2. Do project activities involve the use of the listed extraction activities?	2	DR I	The proposed project involves the use of degassing methane, which is captured by surface and underground drainage systems. This activity is included into the list of projects for which the chosen methodology can be applied.	OK	OK
1.1.3. Are project activities implemented at a working coal mine?	2	DR I	The proposed project is to be implemented at an existing mine. The Samsonivska-Zakhidna mine is in operation, and will be in operation throughout the crediting period.	OK	OK
1.1.4. Do project activities include a method/the methods of treating the gas captured listed in the methodology?			The methods of treating the gas captured used by the project are among the ones listed in the methodology and are not among the project activities which the current methodology does not apply to. See Section B.1.	OK	OK
1. 2. Project boundary					
1.2.1. Did the project participant include the CO2 emissions from the activities listed in the Methodology for determining *project activity emissions*?	2	DR	CO2 emissions from the transport of fuel are not included to the project activity emissions, which doesn't correspond to the requirements of the methodology applied. See Table 36 of Section B.3. Clarification Request (CL) 17 Please, give reasonable explanations for this issue	CL17	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			According to the methodology, fugitive emissions of unburned methane should be included to the project activity emissions Clarification Request (CL) 18 Please, give reasonable explanations for this issue	CL18	OK
1.2.2. Did the project participant include the CO2 and CH4 emission sources listed in the Methodology for determining *baseline emissions*?	2	DR	Yes. See Table 5 of Section B.2.	-	-
1.2.3. Does the *spatial extent* of the project boundary comprises the equipment and facilities installed and used as part of the project activity; transport/ power plants connected to the electricity grid, where the project activity exports power to the grid ?	2	DR	Clarification Request (CL) 19 Please, provide explanations on whether the *spatial extent* of the project boundary comprises the equipment and facilities installed and used as part of the project activity; transport/ power plants connected to the electricity grid, where the project activity exports power to the grid.	CL19	OK
1.3. Identification of alternative baseline scenarios					
1.3.1. Do the baseline scenario alternatives include all possible options that are technically feasible for CBM and CMM or VAM extraction?	2	DR	Yes. See sub-step 1a of Section B.1. Note, that according to the methodology, there should be steps 1a,1b,1c under step 1. Corrective Action Request (CAR) 22 Please, make corresponding corrections	CAR22	OK
1.3.2. Do the baseline scenario alternatives include all possible options that are technically feasible for extracted CBM and CMM or VAM treatment?	2	I	Yes. See sub-step 1b of Section B.1. Please, see the above mentioned clause for corrections	–	–
1.3.3. Do the baseline scenario alternatives include all possible options for energy production (electricity			Yes. See sub-step 1c of Section B.1.	–	–

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
and/or heat generation)?			Please, see clause 1.3.1. of the present protocol for corrections		
1.3.4. Are baseline scenario alternatives formulated? Is there the JI project activity not being registered as a JI project among these alternatives?			Possible alternative scenarios of the project were identified in sub-steps 1b and 1c. The JI project activity not being registered as a JI project is among these alternatives	OK	OK
1.3.5. Do the baseline scenario alternatives clearly identify what share or volume of potential CBM, CMM and VAM would be managed according to the different technology options, and what share or volumes of CBM/CMM/VAM would be used for which end-users, where appropriate?			According to the applied methodology the baseline scenario alternatives should clearly identify what share or volume of potential CBM, CMM and VAM would be managed according to the different technology options, and what share or volumes of CBM/CMM/VAM would be used for which end-users, where appropriate. Clarification Request (CL) 20 Please, provide comments to this statement	CL20	OK
1.3.6. Do the baseline scenario alternatives identify whether the power used at the coalmine would be from the grid, from captive power, or a combination of the two?			According to the applied methodology the baseline scenario alternatives should clearly identify whether the power used at the coalmine would be from the grid, from captive power, or a combination of the two. Clarification Request (CL) 21 Please, provide comments to this statement	CL21	OK
1.3.7. Is a complete list of prohibitive barriers established?			Yes. Possible prohibitive barriers are listed in step 4 of Section B.1.	OK	OK
1.3.8. Is investment analysis included to the identification of the baseline scenario alternatives?			Yes. See step 2 of Section B.2.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1.4. Additionality					
1.4.1. Was the additionality of the project activity demonstrated and assessed using the latest version of the "**Tool for demonstration and assessment of addiotionality"**?	2	DR	In accordance with the chosen methodology, additionality is proven by applying the "Tool for demonstration and assessment of additionality", (version 05.2) which is the latest one. <u>Corrective Action Request (CAR) 23</u> According to the above mentioned tool, investment analysis doesn't go under sub-step 2d. Original names of the headings should be preserved. <u>Corrective Action Request (CAR) 24</u> There must be an Outcome of step 3a. Without satisfying this step you can't proceed to the following step. <u>Corrective Action Request (CAR) 25</u> To comply with the structure of the Tool, you can't ignore sub-steps under the relevant steps. Please, provide sub-steps 4a and 4b with references to the steps where the required information has been already provided. Please, make respective corrections.	OK CAR23 CAR24 CAR25	OK OK OK OK
1.4.2. Is consistency ensured between baseline scenario determination and additionality demonstration?			Consistency between baseline scenario determination (Section B.1) and additionality demonstration (Section B.2.) is ensured.	OK	OK
1.5 Project Emissions					
1.5.1. Did the project emissions were determined	2	DR	Yes. Project emissions are calculated according to	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
according to the equation: $PE_y = PE_{ME} + PE_{MD} + PE_{UM}$?			the equation $PE_y = PE_{ME} + PE_{MD} + PE_{UM}$. See Section D 1.1.2.		
1.5.2. Are emissions from un-combusted methane calculated?	2	DR	No. Emissions from un-combusted methane are not calculated. Clarification Request (CL) 22 Please, provide reasonable explanation for that.	CL22	OK
1.6. Baseline Emissions					
1.6.1. Did the baseline emissions were determined according to the formula $BE_y = BE_{MD,y} + BE_{MR,y} + BE_{Use,y}$?	2	DR	Yes. Baseline emissions are given by the following equation $BE_y = BE_{MD,y} + BE_{MR,y} + BE_{Use,y}$. See Section D.1.1.4.	OK	OK
1.7. Leakage					
1.7.1.Were the leakage emissions determined?	2	DR	Not applicable, since there are no leakages within the project boundaries.	OK	OK
1.8. Emission Reduction					
1.8.1. Did the emissions reductions were determined according to the formula $ER_y = BE_y - PE_y - LE_y$?	2	DR	The greenhouse gas emission reductions that the project activities result in are calculated in accordance with the following formulae: $ER_y = BE_y - PE_y - LE_y$ See section D.1.4.	OK	OK
2. Monitoring Methodology					
2.1. Applicability					
2.1.1 Do project activities involve the use of the listed extraction activities?	2	DR I	The proposed project involves the use of degassing methane, which is captured by surface and underground drainage systems. This activity is included into the list of projects for which the chosen methodology can be applied.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
2.1.2. Are project activities implemented at a working coal mine?	2	DR I	The proposed project is to be implemented at an existing mine. The Samsonivska-Zakhidna mine is in operation, and will be in operation throughout the crediting period.	OK	OK
2.1.4. Do project activities include a method/the methods of treating the gas captured listed in the Methodology?	2	DR I	The methods of treating the gas captured used by the project are among the ones listed in the methodology and are not among the project activities which the current methodology does not apply to. See Section B.1. of the PDD.	OK	OK
2.2. Monitoring Methodology					
2.2.1. Are the main indicators reflecting the actual emission reductions identified?	2	DR	The main indicator, which reflects the actual emission reductions, is a decrease of fossil fuel consumption due to the CMM utilization. See section D.1.1.	OK	OK
2.3. Quality Control (QC) and Quality Assuarance (QA) Procedures					
2.3.1. Does the monitoring plan require all measurements be conducted with according to relevant industry standards?	2	I	Yes. The measurements are to be done by the calibrated measurement equipment in accordance with the industrial standards. See Section D.1.1.	OK	OK

Table 4 Legal requirements

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. **Legal requirements**					
1.1. Is the project activity environmentally licensed by the competent authority?		DR, I	There are no evident proofs that the project activity is environmentally licensed by the competent authority. According to the current legislation, the environmental impact assessment (EIA) has to be undertaken before the permit for the gas engines and flares installation is issued by the state authorities. The EIA is expected to be prepared in due course before the state permit for operating the flares and gas engines is issued. According to Provisional schedule of the measures envisaged by the JI project presented in the Table 2 of Section A.4. of the PDD, Flare №1 installation is to be put into operation in April 2009. <u>Corrective Action Request (CAR) 20</u> Please, explain what is the actual situation on this issue.	CAR20	OK
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?		DR, I	In accordance with the Ukraine's legislation, the coal mines are obliged to report on the emissions of hazardous substances, such as sulphur dioxide, nitrogen dioxide, carbon monoxide, dust emissions, etc. Samsonivska-Zakhidna mine has received all relevant permits	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			issued by the State Department of Environmental Protection in Luhansk Oblast. The permits are valid until 2014. See Section F.1.		
1.3. Is the project in line with relevant legislation and plans in the host country?		DR, I	There are no reliable evidence that the project is in line with relevant legislation and plans in the host country. Corrective Action Request (CAR) 21 Please, provide evidence that the project is in line with relevant legislation and plans in the host country.	CAR21	OK

Table 5 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Corrective Action Request (CAR) 1 There is no approval of the Parties involved.	1 Table 1		Conclusion is pending. The approval should be obtained following the determination of the project.
Corrective Action Request (CAR) 2 Please provide sectoral scope of the project in the section A.1. of the PDD.	A.1.2.	Sectoral scopes: (8) Mining/mineral production, and (10) Fugitive emissions from fuels (solid, oil and gas).	Sectoral scopes are added to the PDD. Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Corrective Action Request (CAR) 3 Please provide brief description of the baseline scenario in the section A.2.	A.2.2.	In the baseline scenario it is assumed that all the methane collected by the degassing system of the Samsonivska-Zakhidna mine will be released into the atmosphere. No measures aimed at the utilization of the degassing system CMM will be taken; therefore the existing situation in the absence of project activity will be continued. For the detailed analysis of baseline scenario please refer to the Section B of this PDD.	Brief explanation of the baseline scenario is added to Section A.2. of the PDD. Issue is closed.
Corrective Action Request (CAR) 4 Please include into section A.2.brief summary of the JI project history.	A.2.2.	The first steps towards the project preparation were taken by Samsonivska-Zakhidna in 2004, when the mine ordered a feasibility study for switching the existing boilers from coal to CMM. In 2008 CJSC "Kotloenergoproekt" prepared feasibility study regarding the possibility of CMM utilization for power production by using methane as fuel for gas engines. The testing phase of the first KGUU-5/8 flare started in April 2009. The owners of Samsonivska-Zakhidna mine are to take final decision regarding investing into the proposed project based on the results of the testing phase of the first KGUU-5/8 unit and the availability of additional financing	A brief summary of the JI project history is included into Section A.2. of the PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		from the JI mechanism.	
Corrective Action Request (CAR) 5 According to the "Guidelines for users of the JI PDD form, version 04, which is the latest one, Section B. shall contain all key elements of the baseline. Annex 2 (baseline information) that should be prepared in parallel to completing the remainder of Section B. shall contain a summary of the key elements in tabular form as well as additional supporting documentation/information.	B.1.1.	Response 1 Summary table added to Annex 2. Response 2 Requested changes were made to Annex 2.	Conclusion on Response 1 The response is not accepted since according to the "Guidelines for users of the JI PDD form, version 04, which is the latest one, Section B. shall contain all key elements of the baseline. Annex 2 (baseline information) that should be prepared in parallel to completing the remainder of Section B. shall contain a summary of the key elements in tabular form as well as additional supporting documentation/information. Information on key elements of the baseline presented shall be consistent throughout the whole text of the PDD. This CAR is not closed. Conclusion on response 2 The CAR 05 is not closed as the key elements of the baseline are

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		Response 3 Requested changes were made to the Section B.1 and the Annex 2.	still not provided in the required tabular format in Section B.1. of the PDD Conclusion on response 3 The CAR is closed since the Annex 2 has been amended by the required data.
Corrective Action Request (CAR) 6 In order to follow the pattern prescribed by the Additionality Tool ver. 05.2 please provide the results of financial analysis in Sub-step 2c instead of Sub-step 2b. The results of sensitivity analysis shall be indicated in sub-step 2d (now they are placed in sub-step 2c and sub-step 2d is absent).	B.2.1.	Changes have been made to the Sub-steps 2b, 2c and 2d of the additionality analysis.	Changes have been made in accordance with the prescribed pattern. Issue is closed
Corrective Action Request (CAR) 7 Virtually all formulas in Excel tables were removed and substituted with resulting values. Please note that according to the Guidance for the Assessment of Investment analysis (hereinafter referred as the Guidance) article 8 all formulas used in this	B.2.1.	The updated excel file with formulas is provided together with the updated PDD.	The required information has been provided. Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
analysis shall be readable and all relevant cells shall be viewable and unprotected. Please correct your Excel file.			
<u>Corrective Action Request (CAR) 8</u> Project period selected for calculations is 10 years which does not mate with the service period of the major part of equipment (Jenbacher gas-piston engines) having the life time of 25 years as stated in the PDD. Please base financial calculations on the project period of 2011+25 years.	B.2.1.	In accordance with the latest version of the Additionality tool, the period for the financial analysis was extended to cover 10 years of the lifetime of the gas engines (2009-2020). A fair residual value of GE Jenbacher J-420 engines at the end of the proposed crediting period (15/25 of the initial USD value) is taken into account in the financial model to reflect the remaining 15 years of the equipment lifetime.	The CAR is closed based on the required changes provided in calculations.
<u>Corrective Action Request (CAR) 9</u> The financial model does not account for liquidation value of flares and boilers. Please indicate their fair value for the date of liquidation as required by the Guidance.	B.2.1.	The lifetime of a KGUU 5/8 unit is 8 years. Therefore, by the end of the proposed crediting period all three KGUU 5/8 units will be decommissioned. Their scrap value was added into the financial model. The existing boilers will not be replaced; the proposed project activity is related only to modifications in the existing boilers allowing to use CMM as fuel. Therefore, the value of boilers themselves shall not be accounted.	The CAR is closed based on the explanation provided.

Draft report clarifications and corrective action requests by determination team	**Ref. to checklist question in tables 2, 3 and 4**	**Summary of project owner response**	**Determination team conclusion**
Corrective Action Request (CAR) 10 Excel model does not contain the relevant calculations and formulas. Please submit the spreadsheets with calculation of deviation scenarios indicating formulas in order the reader could reproduce and check your results.	B.2.1.	The spreadsheets with original formulas and calculations were provided to the determinator.	The calculations were reproduced based on the formulas provided. The CAR 10 is closed.
Corrective Action Request (CAR)11 Cash flow calculations start from 2009 and do not account for 2008 while this year is actually the first project year with some cash disbursed. Please correct/clarify. It is highly recommended preparing the cash flow for the project following the usual practice i.e. with cash flow from operations and investment cash flows indicated separately. It will largely facilitate the reading of the tables.	B.2.1.	The first KGUU 5/8 unit was purchased by OJSC 'Krasnodonvugillya' in 2007. Respective changes were made to the table, the first cash disbursement is corrected to 2007. Cash flow from operations and investment cash flows are provided separately.	The CAR 11 is closed based on the changes made to calculations.
Corrective Action Request (CAR) 12 Please, state the length of the crediting period in years and months.	C.3.1.	10 years (120 months) since the Starting date of the project (01/04/2009) Section C.3 updated correspondingly.	Information is presented in accordance with the JI PDD Form requirements. Issue is closed.

Draft report clarifications and corrective action requests by determination team	**Ref. to checklist question in tables 2, 3 and 4**	**Summary of project owner response**	**Determination team conclusion**
Corrective Action Request (CAR) 13 The original JI PDD Form format is not preserved in Table D.1.1.1. of the PDD.	D.1.1.	Respective changes were made to the Table D.1.1.1.	Respective changes were made to the Table D.1.1.1. Issue is closed.
Corrective Action Request (CAR) 14 The formulae used are not appropriately numbered throughout the whole Section D.	D.1.4.	Formulae numbers were added to the Section D.	All formulae in Section D have been numbered. Issue is closed.
Corrective Action Request (CAR) 15 Please, state if this section is left blank on purpose	D.1.8.	Respective changes were made to the section D.1.2.1 .	Respective changes have been made. Issue is closed.
Corrective Action Request (CAR)16 Please provide information on the collection and archiving of information on the environmental impacts of the project	D.1.13.	Information on the collection and archiving of information on the environmental impacts is added to the Section D.1.5	The required information has been added to Section D.1.5. Issue is closed.
Corrective Action Request (CAR) 17 Please provide reference to the relevant host party regulations.	D.1.14.	The collection of information on the environmental impacts of the project is regulated by the Decree of the Cabinet of Ministers of Ukraine "On approving the procedure of state accounting in the field of atmospheric air protection" #1655 dated 13.12.2001.	Necessary explanation has been provided. Issue is closed.
Corrective Action Request (CAR) 18	F.1.1.	Flaring of CMM is expected to decrease the methane emissions on the local level. Boilers	The response is accepted based

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Please, provide information from the reliable officaial sources on this point and include it to section F.1		switch from coal to natural gas will lead to a decrease in emissions of sulphur and nitrogen oxides locally. Introduction of the gas engines will lead to a more effective power generation compared to the national grid. Detailed information on the quantitative change in the hazardous substances emissions from Samsonivska-Zakhidna mine will be available in the Environmental Impact Assessment. The 'Pryroda' company has been commissioned to perform the Environmental Impact Assessment of the proposed project. The expected time of the EIA completion is July 2010.	on the concise explanation provided by Project developers. EIA is to be checked during the verification stage. Issue is closed.
<u>Corrective Action Request (CAR) 19</u> Please include information considering transboundary environmental effects into section F of the PDD.	F.1.5.	The use of degassing CMM as fuel will significantly decrease emissions of uncombusted methane from the Samsonivska-Zakhidna mine and possible transboundary transfer of such methane emissions. In addition, the proposed project will lead to decrease of the coal consumption by the boilers of the Samsonivska-Zakhidna mine and the subsequent decrease of the atmospheric emissions of hazardous	Exhaustive information is provided and is to be checked during verification stage. Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		substances (such as nitrogen and sulphur oxides). The proposed project activity is in line with the existing international treaties on transboundary pollution, in particular the Protocol to the 1979 Convention on Long-range Transboundary Air Pollution Concerning the Control of Emissions of Nitrogen Oxides or Their Transboundary Fluxes. Detailed information on the quantitative change in the hazardous substances emissions from Samsonivska-Zakhidna mine will be available in the Environmental Impact Assessment. The 'Pryroda' company has been commissioned to perform the Environmental Impact Assessment of the proposed project. The expected time of the EIA completion is July 2010.	
Corrective Action Request (CAR) 20 Please, explain the actual situation on the following: according to Provisional schedule of the measures envisaged by the JI project presented in the Table 2 of Section A.4. of the PDD, Flare №1 installation is to be put into operation in April 2009.	1.1. Table 4	According to Provisional schedule of the measures envisaged by the JI project presented in the Table 2 of Section A.4. of the PDD, Flare №1 installation was put into operation in April 2009. The testing phase of the operation has started on April 01, 2009, in accordance with the mine director's order. At	Respective documentation was provided and found adequate for justification of the Flare #1 putting into operation. Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		the moment of determination a temporary operation permit was issued by the relevant state authorities.	
Corrective Action Request (CAR) 21 Please, provide evidence that the project is in line with relevant legislation and plans in the host country.	1.2. Table 4	The "Energy Strategy of Ukraine until 2030" (Approved by the Decree of the Cabinet of Ministers of Ukraine #145-p dated 15th March 2006) envisages steady increase of domestic coal extraction during the following two decades. Coal mine methane use for energy production is set as one of the priorities of the Strategy. The Energy strategy until 2030 does not envisage introduction of any financial incentives for CMM utilization. Conclusion: the proposed JI project is in line of the relevant legislation and plans in the host country.	This CAR is closed based on the sufficient explanations
According to the chosen methodology, there should be steps 1a,1b,1c under step 1. Corrective Action Request (CAR) 22 Please, make corresponding corrections	1.3.1. Table 4	Respective changes were made to the Section B.1.	This CAR is closed based on the adequate additions made to the PDD.
In accordance with the chosen methodology, additionality is proven by applying the "Tool	1.4.1. Table	Respective corrections were made to the	Respective corrections made to the Section B.2 have been

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
for demonstration and assessment of additionality", (version 05.2) which is the latest one. <u>Corrective Action Request (CAR) 23</u> According to the above mentioned tool, investment analysis doesn't go under sub-step 2d. Original names of the headings should be preserved. Please, make respective corrections	4	Section B.2	checked. Issue is closed.
<u>Corrective Action Request (CAR) 24</u> There must be an Outcome of step 3a. Without satisfying this step you can't proceed to the following step. Please, make respective corrections	1.4.1. Table 4	Respective corrections were made to the Section B.2	The CAR is closed based on the corrections made to the PDD.
<u>Corrective Action Request (CAR) 25</u> To comply with the structure of the Tool, you can't ignore sub-steps under the relevant steps. Please, provide sub-steps 4a and 4b with references to the steps where the required information has been already provided.	1.4.1. Table 4	Respective corrections were made to the Section B.2	The response is accepted based on the corrections made to the PDD. The CAR is closed.
<u>Clarification request (CL) 1</u> Please, explain in what way the project design engineering reflects current good	A.4.2.1.	The project design engineering proposes to install gas engines that allow using energy potential of methane in most effective way.	This CAR is closed based on the sufficient explanations made by the PDD developers.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
practices		Flaring of methane at flaring systems allows to avoid methane emission to the atmosphere in case of decreasing methane concentration. Using boilers also allows to avoid simple flaring methane at flaring systems. Thereby this scheme is one of the best that give possibility to use power potential of methane from the degassing system.	
Clarification request (CL) 2 Please clarify whether information provided in Table 2 of Section A.4.2. "Provisional schedule of the measures envisaged by the JI project" corresponds to the real state of affairs	A.4.2.1.	Response 1 The schedule provided under Table 2 of Section A.4.2 corresponds to the real state of affairs and is not expected to be modified. Response 2 Answer 2: Information on the PDU units was removed as irrelevant to the JI activity. Changes were made to Section 4.2.	Conclusion on Response 1 Please, explain whether two remote control devices PDU-50M mentioned in CMM degasification activities are included to the project. If not, please, make respective corrections to the PDD section A.4.2. The CL is not closed. Conclusion on Response 2 The CL 2 is closed based on the changes made to the PDD
Clarification request (CL) 3 Please, explain whether the project uses state of the art technology or would the	A.4.2.2.	In the best cases at some Ukrainian mines part of methane uses in boilers for heat generation and usually main part of methane	Sufficient explanation on this issue is provided.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
technology result in a significantly better performance than any commonly used technologies in the host country		together with ventilation methane is released to the atmosphere. Venting of methane from degassing system to the atmosphere is the common practice in Ukraine. Using flaring system and gas engines reflects the most modern way of utilization methane. Gas engines will allow to obtain electricity with high efficiency and flaring systems will allow to avoid methane emission to the atmosphere in case of decreased methane concentration.	Issue is closed.
Clarification request (CL) 4 Please, provide information on whether the project technology likely to be substituted by other or more efficient technologies within the project period	A.4.2.3.	No changes or substitution of technology is foreseen within the project crediting period.	Explanation is accepted. Issue is closed.
Clarification request (CL) 5 Please, provide information on whether the project requires extensive initial training and maintenance efforts in order to work as presumed during the project period	A.4.2.4.	Response1 The staff responsible for KGUU 5/8 unit operation has passed training programme organized by OJSC "NPAO VNII Kompressormash", the equipment supplier. As a part of training, the staff was examined to prove familiarity with operation and maintenance procedures of KGUU 5/8. Protocols of the exams are kept in the archives of Samsonivska-Zakhidna mine.	Conclusion on Response1 Please, insert this information to the PDD Section A.4.2 which covers the measures on personnel training envisaged by the project. Issue is not closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		Response 2 Respective changes were made to the Section A.4.2.	Conclusion on Response2 The CL 5 is closed based on the respective amendments made to the PDD
Clarification Request (CL) 6 Please, clarify whether the project makes provisions for meeting training and maintenance needs	A.4.2.5.	Response 1 The staff responsible for KGUU 5/8 unit operation has passed training programme organized by OJSC "NPAO VNII Kompressormash", the equipment supplier. In addition to that, an extensive training programme will be necessary for the operation of the GE Jenbacher J-420 gas engines. Trainings regarding the operation of the gas engines will be organized before their commissioning in 2011. Response 2 Respective changes were made to the Section A.4.2.	Conclusion on Response1 Please, insert this information to the PDD Section A.4.2 which covers the measures on personnel training envisaged by the project. Issue is not closed. Conclusion on Response2 The CL 6 is closed based on the respective amendments made to the PDD
Clarification Request (CL)7 Please provide comprehensive presentation of capital expenditures and their structure.	B.2.1.	A detailed breakdown of project-related costs (equipment cost, salaries, electricity costs, maintenance costs, project design, startup and adjustment costs) is provided in the	The CL7 is closed based on the detailed breakdown of project related costs presented in the PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
The values currently provided on the sheet "investments" differ from those represented on sheet "savings".		updated financial model. 'Savings' and 'investments' sheets were updated.	
Clarification Request (CL)8 Please provide comprehensive presentation of operational expenses for project equipment including salaries, O&M and other reasonable cash expenses. The values provided on the sheet "investments" differ from those represented on sheet "savings".	B.2.1.	A detailed breakdown of project-related costs (equipment cost, salaries, electricity costs, maintenance costs, project design, startup and adjustment costs) is provided in the updated financial model. 'Savings' and 'investments' sheets were updated.	The CL8 is closed based on the detailed breakdown of project related costs presented in the PDD.
Clarification Request (CL)9 Please, show the evidence of why the emissions in the baseline scenario would likely exceed the emissions in the project scenario	B.2.4.	Response 1 The volume of CMM flared at KGUU-5/8 units and used as fuel for boilers and gas engines would otherwise be released into the atmosphere. The heat generated with the use of CMM as fuel would otherwise be produced with the use of coal. The electricity produced by the gas engines using CMM as fuel would otherwise be consumed from the grid, therefore leading indirectly to the fuel combustion by the grid power plants. Please refer to the Section E for the detailed	Conclusion on Response1 Please, insert this information under Section B.2 of the PDD. Issue is not closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		breakdown of the emissions in the baseline and project scenario, as well as the emission reductions. Response 2 Respective changes were made to the Section B.2.	Conclusion on Response2 The CL 9 is closed based on the changes made to the PDD
Clarification Request (CL) 10 Please provide a summary of national policies and circumstances relevant to the baseline of the proposed project activity.	B.2.6.	Response 1 National polices in the field of mining industries are regulated by the following laws: 1) Ukraine's Code "On mineral wealth" № 132/94-BP; 2) The Law "On environmental protection" № 1264-12; 3) The Law "On labour protection" № 2694-12; 4) "The mining law of Ukraine" № 1127-XIV; 5) The Law "On coal mine gas (methane)" № 1392-VI. None of these laws is prohibiting the release of coal mine methane into the atmosphere. Therefore, the proposed baseline scenario is in compliance with the existing national regulation.	Conclusion on Response 1 This information properly referenced should be used as an evidence or supporting documentation under Step 2 of Identification of the baseline scenario as it is required by the Methodology chosen. The CL is not closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		Response 2 Respective changes were made into the Section B.1, Step 2.	Conclusion on Response 2 Information amended to the PDD has been checked. The CL 10 is closed
Clarification Request (CL)11 Please, provide references for the Methodological "Tool to determine project emissions from flaring gases containing methane"	D.1.1.	Approved at the 28th Meeting of the CDM Executive Board. See Annex 13 to the Report of the 28th Meeting of the CDM Executive Board.	The CL is closed based on the appropriate additions made to the PDD.
Clarification Request (CL)12 Please, provide a description of calculation of GHG project emissions in accordance with the specified formulae.	E.1.2.	The calculations are based on the baseline determined in the section B and formulae presented in the Section D. Please refer to the Section E for more detailed explanation.	CL 12 is closed as an irrelevant.
Clarification Request (CL)13 Please, explain whether conservative assumptions been used to calculate project GHG emissions	E.1.3.	The following assumptions were used to calculate the project and baseline scenario emissions: 1) Only CO2 emissions from fuel combustion are included into the calculations; emissions of other	The explanation of the conservative assumptions used to calculate project GHG emissions is accepted. The CL is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		greenhouse gases (e.g. methane, N2O) origination from combustion were excluded from the calculations. This is a conservative assumption. 2) The amount of the methane released into the atmosphere was calculated using the default IPCC factor. This is a conservative assumption. 3) In accordance with the methodology chosen, the manufacturer's data regarding the efficiency of boilers and gas engines was used in the calculations. This is a conservative assumption. Please see Section E for more detailed description of the emission reduction calculations.	
Clarification Request (CL)14 Please, provide a description of calculation of GHG baseline emissions in accordance with the specified formula	E.4.2.	The calculations are based on the baseline determined in the section B and formulae presented in the Section D. Please refer to the Section E for more detailed explanation.	Explanation is accepted. Issue is closed.
Clarification Request (CL)15	E.4.3.	1) Only CO2 emissions from fuel	The explanation of the

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Please explain whether conservative assumptions have been used to calculate baseline GHG emissions		combustion are included into the calculations; emissions of other greenhouse gases (e.g. methane, N2O) origination from combustion were excluded from the calculations. This is a conservative assumption. 2) Emissions from transporting the coal used by the boilers for heat production are not taken into account. This is a conservative assumption. 3) The historical average NCV of the coal used by the boilers for heat production, that is below the IPCC value, was used. This is a conservative assumption. 4) The amount of the methane released into the atmosphere was calculated using the default IPCC factor. This is a conservative assumption. 5) In accordance with the methodology chosen, the manufacturer's data regarding the efficiency of boilers and gas engines was used in the calculations. This is a conservative assumption.	conservative assumptions used to calculate project GHG emissions is accepted. The CL is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Clarification Request (CL)16 Please, provide information on whether there is an EIA undertaken and a respective permit issued for the Flare #1 installation that had to be put into operation in April 2009 as it is stated in Table 2 of Section A.2. of the PDD.	F.1.2.	The 'Pryroda' company has been commissioned to perform the Environmental Impact Assessment of the proposed project. The expected time of the EIA completion is July 2010. The Flare #1 is operated with a temporary permit; a permanent operation permit is expected to be issued upon the EIA completion.	The PDD developer's reasoning is observed as convincing. EIA completion planned for July 2010 is to be checked during the verification stage. The CL is closed.
CO2 emissions from the transport of fuel are not included to the project activity emissions, which doesn't correspond to the requirements of the methodology applied. See Table 36 of Section B.3. Clarification Request (CL) 17 Please, give reasonable explanations for this issue	1.2.1. Table 3	Fuel for boilers (coal) is provided by an external supplier and receiving the data regarding the transportation emissions would be complicated. The transportation emissions were excluded from the calculations for simplicity. Since the project aims at reducing the amount of the fuel (coal) transported to the project site, the amount of the transported coal will be reduced. Emissions from coal transportation will decrease respectively; therefore this approach is conservative.	The PDD developer's reasoning is observed as convincing. Issue is closed.
According to the methodology, fugitive emissions of unburned methane should be included to the project activity emissions	1.2.1. Table 3	The emissions of the unburned degassing CMM are included into the project boundaries, please refer to Section B.1,	The CAR is closed based on the convincing explanation provided by the PDD developers.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Clarification Request (CL) 18 Please, give reasonable explanations for this issue		Table 3; Section B.3; Section E. The emissions of the ventilation system methane are not changed in the project scenario compared to the baseline; ventilation system CMM emissions are excluded from the project boundaries for simplicity. The same approach is used in the JI projects "CMM utilisation for heat generation and flaring – "Pivdennodonbaska No 3" (http://ji.unfccc.int/JIITLProject/DB/69TQLBPSCWNP7XINEPV9K0U24YGPJ5/details) and "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna" (http://ji.unfccc.int/JIITLProject/DB/3ZB2MAIQDXW59TH4RXNN2JLBQR0VL8/details), which had received final determination.	
Clarification Request (CL) 19 Please, provide explanations on whether the *spatial extent* of the project boundary comprises the equipment and facilities installed and used as part of the project activity; transport/ power plants connected to	1.2.3. Table 3	The spatial extent of the project boundary includes: a) the degassing system of the mine; b) the national grid of Ukraine (power plants connected to the grid); c) the new equipment of the Samsonivska-Zakhidna mine (three KGUU-5/8 flares and three	The CL is closed based on the convincing explanation provided by the PDD developers.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
the electricity grid, where the project activity exports power to the grid.		Jenbacher J-420 engines); d) two existing heat boilers (KE-10/14 and KVTS-20-150). The transport emissions originating from transporting coal that is used by the heat boilers (KE-10/14 and KVTS-20-150) are not included into the boundaries for simplicity. This is a conservative assumption, since the CMM use for heating is expected to decrease coal consumption and related transport emissions. Similar approach is used in the JI projects "CMM utilisation for heat generation and flaring – "Pivdennodonbaska No 3" (http://ji.unfccc.int/JIITLProject/DB/69TQLBPSCWNP7XINEPV9K0U24YGPJ5/details) and "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna" (http://ji.unfccc.int/JIITLProject/DB/3ZB2MAIQDXW59TH4RXNN2JLBQR0VL8/details), which had received final determination. The project does not envisage power export to the grid. Please refer to the Sections A.2, A.4.2 B.1 of the PDD.	

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
According to the applied methodology the baseline scenario alternatives should clearly identify what share or volume of potential CBM, CMM and VAM would be managed according to the different technology options, and what share or volumes of CBM/CMM/VAM would be used for which end-users, where appropriate. Clarification Request (CL) 20 Please, provide comments to this statement	1.3.5. Table 3	Please refer to the Section B.1, Table 3. The VAM emissions are not taken into account, please see CL18.	This CL is closed based on the sufficient explanations presented for CL18.
According to the applied methodology the baseline scenario alternatives should clearly identify whether the power used at the coalmine would be from the grid, from captive power, or a combination of the two. Clarification Request (CL) 21 Please, provide comments to this statement	1.3.6. Table 3	The power used at the coal mine in the baseline scenario is 100% provided from the grid. In the project scenario a part of the mine's electricity demand is to be covered by the power generated by the gas engines. Therefore, in the project scenario the power used at the coal mine is a combination of the grid electricity and captive electricity. For more detail please refer to the Section B.	The CL is closed based on the exhaustive explanation provided by the PDD developers.
Emissions from un-combusted methane are not calculated. Clarification Request (CL) 22 Please, provide reasonable explanation for that.	1.5.2. Table 3	Emissions of the uncombusted degassing system CMM are taken into account, please refer to Section B.1, Table 3; Section B.3; Section E. Emissions from uncombusted methane were	The response is accepted since the concise and transparent demonstration in what way emissions from the un-combusted CMM are calculated.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		calculated separately in the calculation spreadsheet. Changes were made to the Section D.	The CL is closed.
Corrective Action Request (CAR) 26 Concrete starting date of the project is not identified and not supported by the corresponding documents.	C.1.1.	The starting date, according to the conclusion of Donetsk technical expertise center is 22/04/2008. The project activity has started on 01/04/2009 with the launch of the first KGUU-5/8 unit. Respective changes were made into the Section C.1.	The starting date of the project has been defined and supported by the respective documentation. The CAR 26 is closed.
Correcrive Action Request (CAR) 27 Total and annual average of estimated emission reductions over the crediting period must be calculated separately for Kyoto and post-Kyoto periods and presented in different tables.	A.4.3.2.-A.4.3.4.	Requested changes were made to the Section A.4.3.1.	The required amendments made to the PDD were checked. The CAR 27 is closed.
Correcrive Action Request (CAR) 28 Emissions from NMHC destruction is not included to Table 6 Section B.2. of the PDD "Emission sources included or excluded from the project scenario". It does not go in line with the chosen Methodology and information provided in Section D.1.1.1.	D.1.3.	Respective changes were made to the Section B.2 Table 6.	The CAR 28 is closed.
Correcrive Action Request (CAR) 29 According to the chosen Methodology, if NMHC account for more than 1% by volume	D.1.1.2.	Respective changes were made to the Section D.1.1.2	The CAR 29 is closed based on the respective changes made to the PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
of the extracted CMM/CBM or more than 0.1% by volume of the extracted VAM, combustion emissions from these gases should be included to calculations. The PDD states that emissions from NMHC are included to project scenario (parameter K18 of the PDD Section D.1.1.1.) than relative proportion of NMHC compared to methane should be observed and included to project emission calculations.			
Correcrive Action Request (CAR) 30 It is not vividly demonstrated in what way project emissions from un-combusted methane, as well as NMHC are included into calculations.	D.1.1.2.	Respective changes were made to the Section D.1.1.2	This CAR is closed based on the explanation provided.
Correcrive Action Request (CAR) 31 Section F.1. does not comprise a list of documentation on the analysis of the environmental impacts of the project, including transboundary impacts in accordance with procedures as determined by the host Party.	F.1.1.	Respective changes were made into the Section F.1.	The CAR is closed based on the required list of documents included to the PDD.
Correcrive Action Request (CAR) 32 There is no Letter of Endorsement provided with supporting documents.	1. Table 1	The Letter of Endorsement is enclosed.	The LoE is provided. The CAR is closed
CL 23. It is stated in the provided supporting	B.2.	The gas engines are complicated equipment	The CL 23 is closed based on the

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
spreadsheets that utilisation rate for the gas engines is calculated at the level of about 67% with the reference to Metinvest source. Please, provide more detailed justification for the chosen utilization rate. Please, insert explanatory information to Section B.2. of the PDD (additionality assessment)		and stopovers in the operation become more likely due to the use of CMM, having inferior quality compared to the natural gas, which is the intended fuel for the Jenbacher engines. Stopovers may be caused by: 1) Unexpected drop of methane concentration, causing emergency stop of the operation; 2) Unexpected drop of methane flow below the required level; 3) Unexpected stops due to impurities in the CMM The assumptions given above can be well proven by the example of Zasyadko coal mine, where only one out of three CHP sites was operational in the latest period of 01.10.2009 – 31.01.2010. The electricity generated from CMM at the period mentioned was 43 975 MWh, compared to the 120 732 MWh expected according with the PDD (utilization rate of CHPs estimated in the PDD was 6800 hours / year). For further reference please see the monitoring report #5 of the project JI 0035 : Utilization of Coal Mine	explanation made to Section B.2 of the PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		Methane at the Coal Mine named after A.F. Zasyadko, http://ji.unfccc.int/UserManagement/FileStorage/3CWZ1XUKV5YSIGO0PD2QNR9TMJAHBE Therefore, the assumption on the gas engine utilization rate is realistic. This explanation was added to the Section B.2.	
CAR 33. Wrong format in Section D.1. Please check it with the JI PDD Form, version 01 and make respective corrections	D.1.	The format of the first page of the Section D.1 was changed.	The format in Section D. has been changed. The CAR is closed.
CAR 34. There are no description of terms in some equations of Section D.1.1.2. (e.g. term E_p in D.1.1) and D.1.1.4. Measurement units are wrong or absent in some equations (e.g. D.1.2). Names of the terms used do not correspond to ones used in the Methodology chosen. Please, make appropriate corrections.	D.1.4. D.1.9.	Respective corrections were made to the Section D.	The CAR 34 is closed based on the respective corrections made to the Section D.
CAR 35. Section B of the PDD does not contain key information and data used to	B.2.	Key baseline information in the tabular form was added to the Section B.	The CAR 35 is closed since the required information was added to

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
establish the baseline. Data and parameters for baseline setting are presented in the format other than proposed by the methodology or Guidelines for users of the JI PDD Form, version 04. Please, provide the required information in the prescribed tabular format in section B.1. of the PDD			the PDD.
CAR 36. Methodology chosen is not followed in its totality as it is required by Guidelines for users of the JI PDD Form, version 04.	B.1. D.1.	Notes on the methodology used were added to Section B and Section D.	The CAR is closed based on the modifications made to the PDD.
Outstanding issues as for the PDD version 1.8 dated 22.03.2010			
CL 24. Constant values to be applied in calculations are not properly referenced. Please provide more specific references where these values are taken from in the tables in Section B.1. of the PDD	B.1.	<u>Response 1</u> Constants used for calculations are taken from the IPCC data provided in the Chapter 2 of the Revised 1996 IPCC Guidelines for national greenhouse gas inventories. (Volume 2 (Energy), 1996). <u>Response 2</u> Changes were made to the Section B.1.	<u>Conclusion on response 1</u> The CL is not closed since insufficient information has been provided. Please indicate chapters, pages/tables where the constants applied have been taken from. <u>Conclusion on response 2</u> Required changes have been added to the PDD The CL 24 is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
CL 25. The following statement "Emissions from energy use to capture and use methane are not taken into account in the project scenario emissions…" claimed by the PP in Section D.1.1.2. contradicts the information on project boundary emissions sources, as well as the information provided in Section D.1.1.1. (K15) of the PDD. Please give explanation for this inconsistency.	D.1.	Item K15 under the Section D.1.1.1 represents power consumption by the mine, displaced by the captive power generation in the project scenario. Respective change is made to the Section D.1.1.1.	The CL 25 is closed based on the changes made.
CL 26. Please provide more detailed explanation why project emissions from the electricity consumption are excluded from the calculations.	B.3.	<u>Response 1</u> The power consumption for CMM extraction and capture is not changed by the project activity, therefore the power consumption in the project scenario (except the captive power generation displacing the onsite consumption) is excluded from the project boundaries. This is a conservative assumption being in line with the ACM0008 v.06 requirements regarding the project boundaries identification. <u>Response 2</u> The power consumption for the flares operation is negligible compared to the project scenario emissions and comprises	<u>Conclusion on response 1</u> The CAR is not accepted. Further explanation on this issue is required. <u>Conclusion on response 2</u> The CL 26 is closed based on the explanation provided.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		less than 1% of the annual project scenario emissions. For example, in 2009 the power consumed for flare operation was 262.74 MWh (235 t CO2e or 0.49% of the overall project emissions). Therefore, this source is excluded for simplification.	
CAR 37. The name of the methodology used in Section B.1. and Excel spreadsheets is wrong. Please check this and make appropriate corrections	B.1.	ACM0008 v.6 methodology is used; the methodology's full name was added to the Section B.1.	The CAR 37 is closed based on the corrections made in the PDD.
CL 27. Please provide justification for the use of Cef $_{COAL}$ taken as "Anthracite"	B.1.	The 1996 IPCC Guidance http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_1_Ch1_Introduction.pdf (Table 1.4) defines anthracite as a generic hard coal with the carbon emission factor of 26.8 t C/TJ. In accordance with the National Inventory of Ukraine http://www.menr.gov.ua/cgi-bin/go?node=Nac%20kadastr%20parn%20gaz ('The draft national inventory of Ukraine for 1990-2008'), page 252, the CEF used for hard coal from Donetsk basin is 26.8 t C/TJ. Since no other studies regarding the coal carbon emission factor were done in Ukraine, the default factor is used.	The CL 27 is closed based on the information provided.

Appendix B: Verifiers CV's

Work carried out by:

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)
Team Leader, Climate Change Lead Verifier
Internal Technical Reviewer, Bureau Veritas Certification Holding SAS Local Climate Change Product Manager for Ukraine
Bureau Veritas Black Sea District Health, Safety and Environment Department Manager

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 is Lead Tutor of the Clean Development Mechanism /Joint Implementation Lead Verifier Training Cours and he was involved in the determination/verification over 50 JI/CDM projects.

Igor Antipko, Technical Specialist
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).

Svitlana Gariyenchyk, Ecology Specialist

Team member, Climate Change Verifier
Bureau Veritas Ukraine Health, Safety and Environment Department Project Manager.

She has 8 year working experience as a Project Manager, Head of Investment, Environmental Programs and Training Department in the company operating in the sphere of ecological audit, management and certification. She is experienced in European Union programs as an environmental protection expert.
She followed study and training course within TACIS program on training of managers in the sphere of environmental protection. She has completed intensive training course "Lead verifier of JI projects". She is involved in the determination/verification of 7 JI projects.

Denis Pishchalov (specialist in economics)
Team member, Financial Specialist
Bureau Veritas Ukraine, Specialist in economics

Master of foreign trade, he has more than five year of experience in foreign trade and procurement. In particular one year as foreign trade manager in the Engineering Corporation (manufacturer and contractor in the municipal sector) and one year in the NIKO publishing house, one year as sales manager in the ITALCOM srl. In addition Denis has spent four years working as procurement specialist in Ukrainian Energy Service

Company and two years as chief product manager in the Altset JSC. At the moment Denis is deputy director for finance and economy in the SUD of UTEM JSC.

The determination 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.