DETERMINATION REPORT GLOBAL CARBON BV

DETERMINATION OF THE WASTE HEAPS DISMANTLING WITH THE AIM OF DECREASING THE GREENHOUSE GASES EMISSIONS INTO THE ATMOSPHERE

REPORT NO. UKRAINE/0070/2009

REVISION NO. 04

BUREAU VERITAS CERTIFICATION

Report № Ukraine/0070/2009

DETERMINATION REPORT

Date of first issue: 29/03/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: GLOBAL CARBON BV	Client ref.: Mr. Lennard de Klerk

Summary:

Bureau Veritas Certification has made the determination of the "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere" project of GLOBAL CARBON BV located near the town of Snizhne, Donetsk region, Ukraine on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Executive Board, 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 developed according the Guidance on Criteria for Baseline Setting and Monitoring and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.: UKRAINE/0070/2009	Subject Group: JI	
Project title: "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere"		
Work carried out by: Ivan Sokolov – Team leader , Lead Verifier Igor Kachan - Team member, Verifier Kateryna Zinevych – Team member, Verifier Denis Pishchalov - Team member, Financial Specialist		
Work verified by: Leonid Yaskin - Internal Technical Reviewer		
Date of this revision: 08/07/2010	Rev. No.: 04	Number of pages: 59

Indexing terms

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

Abbreviations

AIE	Accredited Independent Entity
CAR	Corrective Action Request
CL	Clarification Request
CO_2	Carbon Dioxide
DR	Document Review
ERU	Emission Reduction Unit
EIA	Environmental Impact Assessment
GHG	Green House Gas(es)
JI	Joint Implementation
I	Interview
IETA	International Emissions Trading Association
MoV	Means of Verification
MP	Monitoring Plan
NGO	Non Government Organization
PCF	Prototype Carbon Fund
PDD	Project Design Document
UNFCCC	United Nations Framework Convention for Climate Change

Table of Contents *Page*

1 INTRODUCTION

GLOBAL CARBON BV has commissioned Bureau Veritas Certification to determinate its JI project "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere" (hereafter called "the project"). The project is implemented at the LLC "Anthracite" located near the town of Snizhne, Donetsk region, Ukraine.

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 meet 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

The Donbas region of Ukraine is an area of massive coal production. The coal is predominately found at the average depth of 400-800 m and the average thickness of coal-bed is 0.6-1.2 m. The extraction method is mainly by mining. Most of the mines operate at the depth of 400-800 m, but there are 35 mines in the area that extract coal from 1000-1300 m.

The coal-beds in the Donetsk basin are interleaved with rock and usually are found every 20-40 m. Mining activities in such conditions require a large amount of matter being extracted and brought to the surface. Coal is separated from rock, and the non-coal matter is dumped in large waste heaps of tailings found almost everywhere in Donbas.

The separation process at the mines was not very efficient, and it was not deemed economically feasible to attempt to extract 100% of coal from the rock that was mined. As a result the waste heaps of Donbas contain a considerable amount of coal. Over time the waste heaps, containing coal, are vulnerable to spontaneous ignition and self-sustained burning. Waste heaps that are currently burning, or at risk of spontaneous ignition, are sources of uncontrolled greenhouse gas and hazardous substances emissions.

Despite the dangers caused by the burning waste heaps, it is common in the area of Donbas to not extinguish the fires immediately. The owners, whom are responsible for the waste heaps, receive relatively small fines for the air pollution, therefore there is little incentive for them to deal with the problem, and extinguishing those heaps that are currently alight can be postponed indefinitely.

In the baseline scenario it is assumed that this common practice will continue and waste heaps will be burning and emitting GHG into the atmosphere until the coal is consumed. Whereas using improved extraction techniques, proposed in this project, the residual coal can be extracted from the waste heaps and the coal can be used to for the energy needs of local consumers. The reclaimed coal will replace coal that would have otherwise been mined, causing fugitive emissions of methane during the mining process.

This Project is aimed at coal extraction from the mine's waste heaps near the town of Snizhne, Donetsk Region, Ukraine. This will prevent greenhouse gas emissions into the atmosphere during combustion of the heaps and will contribute an additional amount of coal, without the need for mining. The Project includes the installation of coal extraction units and the grading of the extracted coal. Extracted coal is then sold for heat and power production.

Therefore, in the project scenario the coal extracted from the waste heaps will partly substitute the coal from the mine, decreasing fugitive methane emissions, and reduce emissions GHG emissions due to waste heap combustion by extracted all the combustible material from the waste heaps.

Once the waste heap has been processed and coal is extracted, the land released from under the waste heap is remediated and returned to the community. The residue after processing, which is mainly barren rock, is used to shape terrain of abandoned open-cast mining sites so that such areas may be used again for development purposes. The technological process is environmentally sound and does not require the use of hazardous materials. Waste heaps are processed with semi-steep separators that use water in a closed cycle as an operating fluid.

The first stage of the project implementation was the construction of the "Snizhnyans'ka-1" unit in 2004. The second stage of the project includes the construction of the "Snizhnyans'ka-2" unit.

1.4 Determination team

The determination team consists of the following personnel:

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

Igor Kachan,
Bureau Veritas Certification, Team member, Climate Change Verifier

Kateryna Zinevych,
Bureau Veritas Certification, Team member, Climate Change Verifier

Denis Pischalov,
Bureau Veritas Certification, Team member, Financial Specialist

The determination report was reviewed by:
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 four 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 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 3: 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 4: 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 2.0) was submitted by GLOBAL CARBON BV 17/11/2009 together with supporting documentation in terms of calculation of GHG emission. PDD Version 2.0 and supporting documentation as well as additional background documents related to the project design, baseline, and monitoring plan, such as Kyoto Protocol, host Country laws and regulations, JI guidelines, JISC Guidance on criteria for baseline setting and monitoring, and Guidelines for users of the JI PDD Form were reviewed. PDD Version 2.2 was made publicly available for comments from 22 January 2010.

The first deliverable of the document review was the Draft Determination Report with 18 CAR's and 4 CL.

To address Bureau Veritas Certification corrective action and clarification requests, GLOBAL CARBON BV revised the PDD and as a response issued PDD version 2.7 dated 25/06/2010 and resubmitted it on 25/06/2010.
The determination findings presented in this report relate to the project as described in the PDD version 2.0, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6 and 2.7.

2.2 Follow-up Interviews

On 18/11/2009 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of GLOBAL CARBON BV and Limited society "Anthracite" were interviewed (see References). The main topics of the interviews are summarized in Table1.

Table 1 Interview topics

Interviewed organization	Interview topics
Limited society "Anthracite"	➢ Organizational structure. ➢ Responsibilities and authorities. ➢ Training of personnel. ➢ Quality management procedures and technology. ➢ Rehabilitation/Implementation of equipment (records). ➢ Metering equipment control. ➢ Metering record keeping system, database. ➢ Local stakeholder's response.
GLOBAL CARBON BV	➢ Baseline methodology. ➢ Monitoring plan.

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.

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 18 Corrective Action Requests and 4 Clarification Requests.
3) The conclusions for determination subject are presented.

3.1 Project Design

Bureau Veritas Certification recognizes that this Project is helping the host country fulfill its goals of promoting sustainable development. The project is expected to be in line with the host-country specific JI requirements.

The Project Scenario is considered additional in comparison to the baseline scenario, and therefore eligible to receive Emissions Reductions Units (ERUs) under the JI, based on an analysis, presented by the PDD, of investment, technological and other barriers, and prevailing practice.
The project design is sound and the geographical (located near the town of Snizhne, Donetsk region, Ukraine) and temporal (13 years or 156 months) boundaries of the project are clearly defined.
CARs (CAR1, CAR13), CLs (CL1-CL4) and their resolution/conclusion applicable to project design are listed in the APPENDIX A: DETERMINATION PROTOCOL (Table 4) below.
The project has no approvals by the Parties involved, therefore CAR1 remains pending. CAR1 will be closed after report finalizing.
Letter of Approval #882/23/7 issued by National Environmental Investment Agency of Ukraine (dated 24.06.2010) has been received. Issue is closed.

3.2 Baseline and Additionality

The "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere" project uses the baseline and monitoring approach developed according to the latest version of Guidance on Criteria for Baseline Setting and Monitoring and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.
In accordance with Guidance on Criteria for Baseline Setting and Monitoring, version 02 project participants have established baseline

greenhouse gas emission calculation methodology on a project specific basis in line with Annex B of Joint Implementation Guidelines.
The following step by step approach is applied in order to describe and justify the baseline chosen.
Step 1. Indication and description of the theoretical approach chosen regarding baseline setting
The baseline for the project is established on a project specific basis. No multi-project emission factor or sectoral baseline is applicable as the project under consideration is pioneering both in its sector (extraction of coal from the waste heaps in Ukraine) and in the area of joint implementation projects.
Taking into account the JI specific approach selected for baseline establishment above baseline has been identified by listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one.
The most plausible future scenario has been identified by checking that all alternatives are consistent with mandatory applicable laws and regulations and by performing a barrier analysis.
Step 2. Application of the approach chosen
Plausible scenarios have been identified in order to establish a baseline.
Sub step 2a. Identifying and listing plausible future scenarios.
Scenario 1. Continuation of existing situation
In the current situation waste heaps are not utilised. Spontaneous self-heating and subsequent burning of waste heaps is very common and measures to extinguish fire are taken sporadically. Burning waste heaps are sources of uncontrolled greenhouse gas emissions. Coal is not extracted from the waste heaps. Coal is produced by underground mines of the region and used for energy production or other purposes. Coal mining activities cause emissions of fugitive methane and also the formation of new waste-heaps.
Scenario 2. Direct energy production from the heat energy of burning waste heap. Waste heaps are not extinguished and not monitored properly. Some burning heaps are used to produce energy by direct insertion of heat exchangers into the waste heap. This captures a certain amount of heat energy for direct use or conversion into electricity. The coal is not extracted from the waste heaps. Coal is produced by underground mines of the region and used for energy production or other purposes. Mining activities, resulting in fugitive gas release, and the formation of more waste-heaps.
Scenario 3. Production of construction materials from waste heap matter. Waste heaps are being processed in order to produce construction materials (bricks, panels, etc.). Coal in the waste heap matter is burnt during the agglomeration process. Coal is produced by underground mines of the region and used for energy production or other purposes. Mining activities, resulting in fugitive gas release, and the formation of more waste-heaps.

Scenario 4. Coal extraction from waste heaps without JI incentives. This scenario is similar to the project activity only in this case the project does not benefit from the possible development as a joint implementation project. In this scenario waste heaps are processed in order to extract coal and used it the energy sector. Less coal is produced by underground mines of the region.

Scenario 5. Systematic monitoring of waste heaps condition and regular fire prevention and extinguishing measures. Waste heaps are systematically monitored and their thermal condition is researched. Regular fire prevention measures are taken. In case of a burning waste heap, the fire is extinguished and measures are taken to prevent burning in the future. Coal is not extracted from the waste heaps. Coal is produced by underground mines of the region and used for energy production or other purposes. Mining activities, resulting in fugitive gas release, and the formation of more waste-heaps.

Sub step 2b. Consistency with mandatory applicable laws and regulations.

Existing Ukrainian laws and regulations treat waste heaps as sources of possible dangerous emissions into the atmosphere. In general burning waste heaps should be extinguished and measures must be taken to prevent fires in the future. However, due to the large numbers of waste heaps and their substantial sizes, combined with the limited resources of the owners, they typically do not even undertake the minimum required regular monitoring. Even when informed of a burning waste heap, and measures have to be taken under existing legislation, it is more typical to accept the fine for air contamination, rather than take action to extinguish the burning waste heap itself.

All scenarios do not contradict existing laws and regulations.

Sub step 2c. Barrier analysis

Scenario 1. Continuation of existing situation

This scenario does not anticipate any activities and therefore does not face any barriers.

Scenario 2. Direct energy production from the heat energy of burning waste heap.

Technological barrier: This scenario is based on the highly experimental technology, which has not been implemented even in a pilot project. It is also not suitable for all waste heaps as the project owner will have to balance the energy resource availability (i.e. waste heap location) and the location of the energy user. On-site generation of electricity addresses this problem but requires additional interconnection engineering. In general this technology has yet to prove its viability. In addition it does not allow the control and management of the emitted gases. Investment barrier: Investment into unproven technology carries a high risk. In case of Ukraine, which carries a high country risk, investment into such unproven energy projects are less likely to attract investors than some other opportunities in the energy sector with higher returns. The pioneering character of the project may appeal to development

programmes and governmental incentives but cost of the produced energy is likely to be much higher than alternatives.

Scenario 3. Production of construction materials from waste heap matter. Technological barrier: This scenario is based on known technology, however, this technology is not currently available in Ukraine and there is no evidence that such projects will be implemented in the near future. It is also not suitable for all types of waste heaps as the content of waste heap has to be predictable in order for project owner to be able to produce quality materials. High contents of sulphur and moisture can reduce the suitability of the waste heap for processing. A large scale deep exploration of the waste heap has to be performed before the project can start.

Scenario 4. Coal extraction from waste heaps without JI incentives. Investment barrier: This scenario is financially unattractive and faces barriers. Detailed information is included in section B.2 of the PDD.

Scenario 5. Systematic monitoring of waste heaps condition and regular fire prevention and extinguishing measures.

Investment barrier: This scenario does not represent any revenues but anticipates additional costs for waste heaps owners. Monitoring of the waste heap status is not done systematically and in general actions are left to the discretion of the individual owners. Waste heaps are mostly owned by mines or regional coal mining associations. Coal mines in Ukraine suffer from limited investment resulting often in safety problems due to complicated mining conditions and financial constraints, with miners' salaries often being delayed by few months. Waste heaps in this situation are considered as additional burdens and mines often do not even perform minimum required maintenance. Spontaneous self-heating and subsequent burning of waste heaps is very common and among 594 surveyed waste heaps in Donetsk region alone, only 20 are known not to have been burning at sometime, exact data are not always available. From a commercial view point the fines that are usually levied by the authorities are considerably lower than costs of all the measures outlined by this scenario.

Sub step 2d. Baseline identification

All scenarios, except Scenario 1 - Continuation of existing situation, face prohibitive barriers. Therefore, continuation of existing situation is the most plausible future scenario and is the baseline scenario.

This baseline scenario has been established according to the criteria outlined in the Guidance:

1) On a project specific basis. This project is the first of its kind and therefore other options could not be used;

2) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors. All parameters and data are either monitored by the project participants or are taken from sources that provide a verifiable reference for each parameter;

3) Taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector. It is demonstrated by the above analysis that the baseline chosen clearly represents the most probable future scenario given the circumstances of modern day Donetsk coal sector;
4) In such a way that emission reduction units cannot be earned for decreases in activity levels outside the project activity or due to force majeure. According to the proposed approach emission reductions will be earned only when project activity will generate coal from the waste heaps, so no emission reductions can be earned due to any changes outside of project activity.
5) Taking account of uncertainties and using conservative assumptions. A number of steps have been taken in order to account for uncertainties and safeguard conservativeness:
a. Same approaches as used for the calculation of emission levels in the National Inventory Reports (NIRs) of Ukraine are used to calculate baseline and project emissions when possible. NIRs use the country specific approaches and country specific emission factors that are in line with default IPCC values;
b. Lower range of parameters is used for calculation of baseline emissions and higher range of parameters is used for calculation of project activity emissions;
c. Default values were used to the extent possible in order to reduce uncertainty and provide conservative data for emission calculations.
Baseline Emissions
In order to calculate baseline emissions following assumptions were made:
1) The project will produce energy coal that will displace the same amount of the same type of coal in the baseline scenario;
2) The coal that is displaced in the baseline scenario and the coal that is generated in the project activity are used for the same type of purpose and is stationery combusted;
3) The coal that is displaced in the baseline scenario is produced by the underground mines of the region and as such causes fugitive emissions of methane;
4) Waste-heaps of the region are vulnerable to spontaneous self-heating and burning and at some point in time will burn;
5) Probability of the waste heap burning at any point in time is determined on the basis of the survey of all the waste heaps in the area that provides a ratio of waste heaps that are or have been burning at any point in time to all existing waste heaps;
6) Coal burning in the waste heaps will oxidize to CO_2 completely if allowed to burn uncontrolled.
Baseline emissions come from three major sources:
7) Carbon dioxide emissions that occur during combustion of energy coal. These are calculated as stationery combustion emissions from coal in the

equivalent of the amount of coal that is extracted from the waste heaps in the project scenario.
8) Fugitive methane emissions due to the mining activities. As coal in the baseline scenario is only coming from mines it causes fugitive emissions of methane. These are calculated as standard country specific emission factor applied to the amount of coal that is extracted from the waste heaps in the project scenario.
9) Carbon dioxide emissions from burning waste heaps. These are calculated as stationery combustion emissions from coal in the equivalent of the amount of coal that is extracted from the waste heaps in the project scenario, adjusted by the probability of a waste heap burning at any point in time. As the baseline suggests that the current situation is preserved regarding the waste heaps burning, it is assumed that for any given waste heap, actual burning will occur in some point in time. This probability of burning is established by the study that assessed the status of all existing waste heaps in Donetsk Region historically. Based on the gathered data it is concluded that 78% of all waste heaps in the Donetsk Region have been, or are now, on fire.
The analysis performed allowed Bureau Veritas Certification to conclude that the baseline has been chosen according to the requirements and the project activity is additional to any that would otherwise occur.

CARs (CAR2-CAR12) and their resolution/conclusion applicable to baseline and additionality are listed in the APPENDIX A: DETERMINATION PROTOCOL (Table 4) below.

3.3 Monitoring Plan

In order to provide a detailed description of the monitoring plan chosen a step-wise approach has been used:
Step 1. Indication and description of the approach chosen regarding monitoring. Option *a* provided by the *Guidelines For The Users Of The Joint Implementation Project Design Document Form, Version 04* has been used: JI specific approach is used in this project and therefore will be used for establishment of monitoring plan.
Step 2. Application of the approach chosen
Baseline emissions.
The baseline scenario is the continuation of the existing situation. Coal is produced by the underground mines causing fugitive methane emissions and used for energy generation. Waste heaps are often self-heating and burning causing carbon dioxide emissions into the atmosphere. Emission sources in the baseline are:
- Fugitive methane emissions during the underground coal mining,
- Carbon dioxide emissions due to the coal consumption for the production of energy,
- Carbon dioxide emissions from the burning of coal in the waste heaps.

Project emissions

In the project scenario waste heaps being processed are removed and all combustible matter is extracted from them. Therefore, the possibility of emissions due to spontaneous self-heating and burning of these waste heaps is eliminated. Project activity anticipates combustion of auxiliary diesel fuel to supply coal extraction plant with rock from the waste heaps. Electricity is used to run the project equipment. Additional coal provided by the project reduces the need for coal to be mined from underground. Emission sources in the project scenario:

- Carbon dioxide emissions from the use of fuel to run part of the project equipment (motor cars),
- Carbon dioxide emissions associated with the electricity consumption by the project equipment,
- Carbon dioxide emissions due to the coal consumption for the production of energy.

The analysis performed allowed Bureau Veritas Certification to conclude that the monitoring plan has been chosen in line with the requirements and will provide sufficient accuracy of the data to be monitored.

CARs (CAR14-CAR18) and their resolution/conclusion applicable to monitoring plan are listed in the APPENDIX A: DETERMINATION PROTOCOL (Table 4) below.

3.4 Calculation of GHG Emissions

As per approach proposed, emissions in the baseline scenario are calculated as follows:

$$BE_y = BE_{Coal,y} + BE_{CH_4,y} + BE_{WHB,y}$$

$BE_{Coal,y}$ - Baseline Emissions due to combustion of coal for energy needs in the baseline scenario in the year y (tCO_2e),

$BE_{CH_4,y}$ - Baseline Emissions due to fugitive emissions of methane in the mining activities in the year y (tCO_2e),

$BE_{WHB,y}$ - Baseline Emissions due to burning of the waste heaps in the year y (tCO_2e).

To calculate the baseline emissions due to burning of the waste heaps the value of probability of waste heaps burning 78% was used. This value was taken form the "Report on the fire risk of Donetsk Region's waste heaps, Scientific Research Institute "Respirator", Donetsk, 2009 that has been made available to the AIE.

As per approach proposed, the project emissions in the project scenario are calculated as follows:

$$PE_y = PE_{Coal,y} + PE_{EL,y} + PE_{Diesel,y}$$

$PE_{Coal,y}$ project emissions due to combustion of coal for energy needs in the project activity in the year *y* (tCO_2e),

$PE_{EL,y}$ project emissions due to consumption of electricity from the grid by the project activity in the year *y* (tCO_2e),
$PE_{Diesel,y}$ project emissions due to consumption of diesel fuel by the project activity in the year *y* (tCO_2e).
The annual emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y$$

ER_y - Emissions reductions of the JI project in year y (tCO_2e);
BE_y - Baseline Emission in year y (tCO_2e);
PE_y - Project Emission in year y (tCO_2e);
With reference to the approach, project also does not lead to any leakage (estimated leakage amount is negligible).
The detailed algorithms for calculations are also described under sections D and E of the PDD.
The estimated annual average of approximately 98 813 tCO_2e over the crediting period of emission reduction represents a reasonable estimation using the assumptions given by the project.

No issues of concern applicable to calculation of GHG emissions were found.

3.5 Environmental Impacts

The Host Party for this project is Ukraine. Environmental Impact Assessment is the part of the Ukrainian project planning and permitting procedures. Implementation regulations for EIA are included in the Ukrainian State Construction Standard DBN A.2.2.-1-2003.
The full scope EIA in accordance with the Ukrainian legislation has been conducted for the proposed project in 2004-2005 by the local developer PE "Agency of environmental management and audit". Key findings of this EIA are summarized below:
- Impact on air is the main environmental impact of the project activity. Due to the project activity additional amount of coal dust and coal concentrate dust will be emitted into the atmosphere. However, the study of emission levels and disbursement patterns of the contaminators show that maximum concentration limits will not be exceeded throughout the project lifetime. Also, uncontrolled dust and hazardous substances emissions from the waste heap will be avoided;
- Impact on water is minor. The project activity will use water in a closed cycle without discharge of waste water. To feed the water cycle the drainage water from the nearby mine will be used. This will reduce the discharge of this water (treated with chlorine) into the environment;
- Impacts on flora and fauna are mixed. Due to the project activity the existing landscape will be changed but the overall resulting impact is positive. Grass and trees will be planted on the re-cultivated areas. No rare or endangered species will be impacted. Project activity is not located in the vicinity of national parks or protected areas;

- Noise impact is limited. Main source of noise will be located at the minimum required distance from residential areas, mobile noise sources (automobile transport) will be in compliance with local standards;
- Impacts on land use are positive. Significant portions of land will be freed from the waste heaps and will be available for development;
- Transboundary impacts are not observed. There are no impacts that manifest within the area of any other country and that are caused by a proposed project activity which wholly physically originates within the area of Ukraine. (listed in section F.2. of the PDD)

No issues of concern applicable to environmental impacts were found.

3.6 Comments by Local Stakeholders

No stakeholder consultation process for the JI projects is required by the Host Party. Stakeholder comments have been collected during the time of PDD publication in the internet during the determination procedure.

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 22 of January 2010 and invited comments by Parties, stakeholders and non-governmental organizations. There are no comments from stakeholders.

5 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere" located near the town of Snizhne, Donetsk region, Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The 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.

Project participant/s used the latest tool for demonstration of the additionality. In line with this tool, the PDD provides analysis of investment and other barriers to determine that the project activity itself is

not the baseline scenario. 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.
Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The review of the project design documentation and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria.
The determination revealed one pending issue related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party (Ukraine). If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, version 2.7 meets all the relevant UNFCCC requirements for the JI and the relevant host country criteria.

The determination is based on the information made available to us and the engagement conditions detailed in this report.

6 REFERENCES

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

/1/ PDD "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere", ver. 2.0, dated 01.11.09

/2/ PDD "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere", ver. 2.1, dated 28.12.09

/3/ PDD "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere", ver. 2.2, dated 12.01.10

/4/ PDD "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere", ver. 2.3, dated 15.03.10

/5/ PDD "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere", ver. 2.4, dated 24.03.10

/6/ PDD "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere", ver. 2.5, dated 06.04.10

/7/ PDD "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere", ver. 2.6, dated 25.06.10

/8/ PDD "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere", ver. 2.7, dated 08.07.10

/9/ Decree of Cabinet of Ministers of Ukraine № 206, dated 22.02.2006

/10/ Guidelines for users Joint of the Implementation Project Design Document Form, ver. 04, JISC

/11/ Glossary of JI terms, ver. 02, JISC.

/12/ Guidance on criteria for baseline setting and monitoring, ver. 02.

/13/ Tool for the demonstration and assessment of additionality, ver. 05.2.

/14/ JISC "Clarification regarding the public availability of documents under the verification procedure under the Joint Implementation Supervisory Committee.", ver. 03.

/15/ 2006 IPCC Guidelines for National Greenhouse Inventories. Energy.

/16/ Letter of Endorsement № 911/23/7 dated 12.02.2008 issued by the National Environmental Investments Agency of Ukraine

/17/ Letter of Approval № 882/23/7 dated 24.06.2010 issued by the National Environmental Investment Agency of Ukraine

/18/ Letter of Approval № 2010JI10 dated 24.04.2010 issued by the NL Agency Ministry of Economic Affairs (The Netherlands)

/19/ Report on the fire risk of Donetsk Region's waste heaps, Scientific Research Institute "Respirator", Donetsk, 2009.

Category 2 Documents:

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

/1/ Act on performed work, rendered services according to the contract #4 dated 03.02.2005.

/2/ Act of acceptance-transferring of coal products # 15-2 dated 08.02.2008 according to the contract #16 dated 01.02.2008.

/3/ Act of acceptance-transferring of coal products #22-2 dated 29/02/2008 according to the contract #16 dated 01.02.2008.

/4/ Act of acceptance-transferring #y-2125235 dated 31.08.2009.

/5/ Expenditure bill #PH-0000343 dated 25.09.2009.

/6/ Opinion #03-5466 of state ecological expertise C #04.09.201 on compliance of project documentation with regulations of environmental protection dated 07.09.2004.

/7/ Opinion #07-5045 of state ecological expertise C #03.07.201 on compliance of project documentation with regulations of environmental protection dated 22.07.2003.

/8/ Opinion #07-5-265 of state ecological expertise C #04.08.186 on compliance of project documentation with regulations of environmental protection dated 30.08.2004.

/9/ Opinion #07-784 of state ecological expertise C #05.02.035 on

compliance of project documentation with regulations of environmental protection dated 08.02.2005.

/10/ Extract from the protocol #4-5491 of the meeting of Regional Committee for the control of use of coal enrichment and coal extraction waste dated 28.10.2002.

/11/ Contract BBB #764155 of lease in Snizhne, Yaltynska st., b.1, fl.1.

/12/ Permit for the start of performance of high-risk work #602.04.30-10.10.3.

/13/ Permit for the continuation of performance of high-risk work #0498.08.14-10.10.3 dated 16.05.2008. Annex to the permit #0498.08.14-10.10.3.

/14/ Conclusion on the probability of spontaneous combustion of rock mine dumps before and after their enrichment.

/15/ Statement of intention. Client LLC "Anthracite".

/16/ Statement of environmental implications of disassembling of rock dumps #1 of the mine #32 "Podyomnaya", #2 of the mine "Severnaya-1", "Severnaya-2" and freed up land recultivation in Snezhnoye.

/17/ Statement of environmental implications of recultivation of lands disturbed by technological activity in Snezhnoye.

/18/ Receipt of acceptance of cargo #50506133 on the route or cars dated 29.02.2008.

/19/ Licence AA #223550 given to private enterprise "Agency Environmental Management and Auditing" for construction activity (survey and design work for construction, construction of bearing and protecting designs, construction and installation engineering and transport networks) dated 10.01.2002.

/20/ Work task dated 07.08.2009. Performance result dated 07.08.2009.

/21/ Report on the analysis of rock dumps fire hazards in Donetskaya region (Contract #1950910131) dated 31.08.2009.

/22/ Report on electricity consumed by LLC "Anthracite" for July 2008.

/23/ Report on electricity consumed by LLC "Anthracite" for June 2009.

/24/ Letter #01-12/2-695 of the mayor of Snizhne V.S. Chepurnogo to the chief executive of LLC "Anthracite" V.D.Perederiyu dated 03.08.2004.

/25/ Letter #119/182a of Donetsk botanic garden NAS to the chief executive of LLC "Anthracite" V.D. Perederiyu dated 12.06.2004.

/26/ Letter #313 of working draft conformity "Construction of enrichment plant to processing of carboniferous dumps of mines at Snezhnoe region" dated 30.08.2004.

/27/ Letter #1531/03.2 to the director LLC "Anthratsit" Perederiy V.D. dated 12.07.04.

/28/ Letter to Head of ПКБ-ДП ГХК "Makeevugol" Osypchuk V.V. of presenting of original data.

/29/ Explanatory note "Disassemble of nature dumps #1 Ш.32 "Podyomnaya", №2 ш. "Severnaya-1", №3 ш. "Severnaya-2" and land recultivation in Snezhnoe", 2004.

/30/ Pre-project of elaboration to working draft "Recultivation of nature dumps #11,12,13 and 14 in Snezhnoe" dated 23.06.2004.

/31/ Order #06-ф of fixed assets of the enterprise dated 30.09.2008.

/32/ Order #НА-1 of intangible fixed assets of the enterprise dated 01.08.2003.

/33/ Order #ОС-1 of fixed assets of the enterprise dated 01.01.2004.

/34/ Order #ОС-1 of fixed assets of the enterprise dated 01.01.2007.

/35/ Order #ОС-1 of fixed assets of the enterprise dated 08.08.2003.

/36/ Order #ОС-11 of fixed assets of the enterprise dated 30.12.2004.

/37/ Order #ОС-12 of fixed assets of the enterprise dated 30.12.2004.

/38/ Order #ОС-13 of fixed assets of the enterprise dated 30.12.2004.

/39/ Order #ОС-4 of fixed assets of the enterprise dated 23.03.2007.

/40/ Order #ОС-5 of fixed assets of the enterprise dated 01.05.2007.

/41/ Order #ОС-7 of fixed assets of the enterprise dated 01.06.2007.

/42/ Order #ОС-8 of fixed assets of the enterprise dated 30.12.2004.

/43/ Order #ОС-9 of fixed assets of the enterprise dated 30.12.2004.

/44/ Annex to the contract #3. Statement of acceptance-transferring dated 26.04.2002.

/45/ Project "Disassebly of nature dumps #1 Ш.32 "Podyomnaya", №2 ш. "Severnaya-1", №3 ш. "Severnaya-2" and land recultivation in Snezhnoe". Environmental impact assessment. Book 1. П 2005-EIA.

/46/ Project of land recultivation in Snezhnoe that was disrupted by technogenic activity. Explanatory note. Book 1.

/47/ Project of land revegetation in Snezhnoe that was disrupted by technogenic activity. Explanatory note. Environmental impact assessment. Book 1. П 2004-EIA.

/48/ Working draft "Elaboration of nature dump #11, 12, 13, 14 and revegetation of freed up land in Snezhnoe РП-521", 2003.

/49/ Working draft of the enrichment plant construction with separator КНС for processing of carboniferous dumps of mines at Snezhnoe region, 2004

/50/ Bill #171/5 dated 27.05.2008.

/51/ Register of transferred documents at the enterprise "Donugletehinvest LLC" for 2009.

/52/ Mode measurements of consumed energy by LLC "Anthratsit" dated 17.12.2008.

/53/ Certificate of acceptance of electricity meter НІК 2303 АРКІ ser.

#0028148. Verification date 20.05.2009.

/54/ Certificate #24/4-155 of work measurement devices verification dated 13.07.2009.

/55/ Certificate of acceptance and selling of three-faze electric meter CA4-105 #160602.

/56/ Feasibility study of construction of enrichment plant with separator KHC for processing of carboniferous dumps of mines at Snezhnoe region, 2004.

/57/ Technical opinion of prestage evaluation results of general carboniferous wastes that in the nature dump of closed mine #32 "Podyomnaya", 2005.

/58/ Certificate #6 of quality run-of-mine coal (enrichment products) dated 08.02.2008. Model AM. Type 13-25.

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/ Gogolev Andrey – director of "Anthracite" LLC

/2/ Fartushny Anrey – deputy director in production, "Anthracite" LLC

/3/ Kapustin Ivan – chef engineer of "Snizhnyans'ka-1" , "Anthracite" LLC

/4/ Slabukhina Marina – economist of "Anthracite" LLC

/5/ Treba Svetlana - environmental protection engineer

/6/ Savenko Andrey – chif engineer of "Scientific production association "Mekhanik"

/7/ Reznik Alexander – innovation development manager of "Scientific production association "Mekhanik"

/8/ Shevchenko Nikolay – head sanitary inspector of Snizhne town

/9/ Prusakov Denis – developer representative Global Carbon BV

- o0o -

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)	Letter of Endorsement #911/23/7 has been issued by the National Environmental Investment Agency of Ukraine on the 12th of August 2008. **CAR1**. Letter of Approval from the National Environmental Investments Agency of Ukraine and Letter of Approval from the sponsor party must be received. The evidence of the project approval by the Parties involved must be provided. Verifiers' Note: JISC Glossary of JI terms/Version 01 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	Table 2, Section A.5

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		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 first verification report for publication in accordance with paragraph 38 of the JI guidelines, at the latest	
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
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)	Article 5 requires "…Annex I Parties to having in place, no later than 2007, national systems for the estimation of greenhouse gas emissions by sources and removals by sinks." Article 7 requires "… Annex I Parties to submit annual greenhouse gas inventories,	

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		as well as national communications, at regular intervals, both including supplementary information to demonstrate compliance with the Protocol". The Netherlands has submitted its Initial Report on 21 December 2006 (http://unfccc.int/national_reports/initial_reports_under_the_kyoto_protocol/items/3765.php).	
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	
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	Both countries have designated their Focal Points. National guidelines and procedures for approving JI projects have been published. Contact data in Ukraine: National Environmental Investment Agency of Ukraine 35, Urytskogo str., Ukraine Email: info.neia@gmail.com **Mr. Igor Lupaltsov** Head National Environmental	

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		Investment Agency of Ukraine Phone: +380445949111 Fax: +380 44 594 9115 Email: lupaltsov@ukr.net Contact data in the Netherlands: Ministry of Housing, SenterNovem, Catharijnesingel 59, P.O. Box 8242, 3503 RE Utrecht, **Mr. Derk de Haan,** Phone: +31302393413 Email:d.de.haan@senternovem.nl National guidelines and procedures for the approving JI projects are available: http://unfccc.int/national_reports/initial_reports_under_the_kyoto_protocol/items/3765.php	
6. The host Party shall be a Party to the Kyoto Protocol	Marrakech Accords, JI Modalities, §21(a)/24	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 for the	Marrakech Accords,	In the Initial Report submitted by Ukraine on 29. Dec. 2006	

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
accounting of assigned amounts	JI Modalities, §21(b)/24	the AAUs are quantified with: 925 362 174.39 (x 5) = 4 626 810 872 tCO2-e 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	The designed system of the national registry has been described in the Initial Report mentioned above	
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	
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	The PDD will be made publicly available via http://ji.unfccc.int/ website from January 17th 2010 to February 18th 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 B

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
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	See CARs and CLs, table 2, section B below.	Table 2, Section B
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
15. The project shall have an appropriate monitoring plan	Marrakech Accords, JI Modalities, §33(c)	See CARs and CLs, table 2, section D below.	Table 2, Section D
16. A project participant may be: (a) A Party involved in the JI project; or (b) A legal entity authorized by a Party involved to participate in the JI project.	Marrakech Accords, JI Modalities	A project participant is the legal entity authorized by the Party involved to participate in the JI project	Table 2, Section A

Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A. General Description of the project					
A.1 Title of the project					
A.1.1. Is the title of the project presented?	1, 7	DR	Yes. «Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere»	OK	OK
A.1.2. Is the current version number of the document presented?	5, 7	DR	Yes. Version 2.7	OK	OK
A.1.3. Is the date when the document was completed presented?	5, 7	DR	Yes. Dated 08 of July 2010.	OK	OK
A.2. Description of the project					
A.2.1. Is the purpose of the project included?	1, 7	DR I	The Project is aimed at coal extraction from the mine's waste heaps near the town of Snizhne, Donetsk Region, Ukraine. This will prevent greenhouse gas emissions into the atmosphere during combustion of the heaps and will contribute an additional amount of coal, without the need for mining. Therefore, in the project scenario the coal extracted from the waste heaps will partly substitute the coal from the mine, decreasing fugitive methane emissions, and reduce emissions GHG emissions due to waste heap combustion by extracted all the	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A.2.2. Is it explained how the proposed project reduces greenhouse gas emissions?	1, 7	DR	combustible material from the waste heaps. Yes. Section A.4.3 of the PDD Version 2.0 explains the way of greenhouse gas emissions reduction.	OK	OK
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?	1, 7	DR	Yes. Ukraine (Host party): Limited society "Anthracite" Netherlands: Global Carbon BV	OK	OK
A.3.2. Are project participants authorized by a Party involved?	1, 7	DR	**CAR1** Letter of Approval from the National Environmental Investments Agency of Ukraine and Letter of Approval from the sponsor party must be received. The evidence of the project approval by the Parties involved must be provided.	**CAR1**	OK
A.3.3. The data of the project participants are presented in tabular format?	1, 7	DR	Yes. The data of the project participants are presented in tabular format in the section A.3 of the PDD.	OK	OK
A.3.4. Is contact information provided in annex 1 of the PDD?	1, 7	DR	Yes. The contact information provided in annex 1 of the PDD.	OK	OK
A.3.5. Is it indicated, if it is the case, if the Party involved is a host Party?	1, 7	DR	Yes. Ukraine is a host Party.	OK	OK
A.4. Technical description of the project					
A.4.1. Location of the project activity					
A.4.1.1. Host Party(ies)	1, 7	DR	Ukraine	OK	OK
A.4.1.2. Region/State/Province etc.	1, 7	DR	Donetsk region	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A.4.1.3. City/Town/Community etc.	1, 7	DR	Town of Snizhne	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)	1, 7	DR	See section A.4.1.4. of the PDD	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?	1, 7	DR	**CL1** Please clarify in section A.4 of the PDD if the project design engineering reflects current good practices.	**CL1**	OK
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?	1, 7	DR	See section A.4 of the PDD. **CL2.** Please clarify in the section A.4 of the PDD if the project uses state of the art technology or the technology would result in a significantly better performance than any commonly used technologies in the host country.	**CL2**	OK
A.4.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1, 7	DR	No. The project includes the construction of "Snizhnyans'ka-1" unit (was completed in 2004) and "Snizhnyans'ka-2" unit (is scheduled to commence operation in 2010) for processing of waste heaps. No other technologies within the project period are scheduled.	OK	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?	1, 7	DR	**CL3.**Please clarify in section A.4 of the PDD if the project requires extensive initial training and	**CL3**	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			maintenance efforts.		
A.4.2.5. Does the project make provisions for meeting training and maintenance needs?	1, 7	DR	**CL4** Please clarify in section A.4 of the PDD if the project makes provisions for meeting training.	**CL4**	OK
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to 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)	1, 7	DR	Yes. See section A.4.3 of the PDD	OK	OK
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?	1, 7	DR	Yes. Total estimated emission reductions over the crediting period within 2008 – 2012 – 494 065 tCO_2eq.	OK	OK
A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	1, 7	DR	The estimated annual reduction for the credit period is about 98 813 tCO_2e	OK	OK
A.4.3.4. Are the data from questions A.4.3.2 to A.4.3.4 above presented in tabular format?	1, 7	DR	Yes, the data from questions A.4.3.2 and A.4.3.3 above are presented in tabular format.	OK	OK
A.5. Project approval by the Parties involved					
A.5.1. Are written project approvals by the Parties involved attached?	1, 6, 7	DR	There is no evidence of written project approvals by the Parties involved. Conclusion is pending a response to **CAR1**	**Pending**	-
B. Baseline					
B.1. Description and justification of the					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
baseline chosen					
B.1.1. Is the chosen baseline described?	1,5, 7,9	DR	Yes. See section B.1 of the PDD. **CAR2.** The potential leakage of the project is not assessed nor is explained which of sources of leakage are to be calculated and which can be neglected.	**CAR2**	OK
B.1.2. Is it justified the choice of the applicable baseline for the project category?	1,7,9	DR	Yes. See section B.1 of the PDD.	OK	OK
B.1.3. Is it described how the methodology is applied in the context of the project?	1,7,9	DR	See section B.1. of the PDD. The JI specific approach has been chosen. Its application is described in a complete and transparent manner.	OK	OK
B.1.4. Are the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)?	1,7,9	DR	Yes. The methodology used to calculate emission factors for the Ukrainian electricity grid is presented in Annex 2. A summary of the key elements in tabular form is also presented in Annex 2. Other assumptions of the baseline methodology are presented in section B.1. of the PDD.	OK	OK
B.1.5. Is all literature and sources clearly referenced?	1,7,9	DR	Yes. All literature and sources are clearly referenced.	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?	1-5, 7,9,10	DR	"Tool for the demonstration and assessment of additionality" v.5.02 is	**CAR3 CAR4**	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			applied to prove that the anthropogenic emissions are reduced below those that would have occurred in the absence of the JI project. **CAR3**.The developer is using the discount rate derived from OVGZ (Ukrainian government bonds) denominated in UAH, while making cash flow calculations in EUR. With this respect the discount rate shall be based on the rates for Ukrainian funds in EUR. **CAR4** The average interest rates were the same for both periods – 11,4%. Information is readily available from the NBU web site. Please refer to Excel table attached and correct link. **CAR5** Taking into account that the fixed prices are used in the model, the real IRR should be calculated in the following way: IRRr = (IRRn+1)/(I+1)-1, where IRRr- is real IRR, IRRn – nominal IRR, I – inflation index **CAR6** The calculations for S1 and S2 subprojects combined are made in the wrong manner. The investment costs are indicated as for 2004 and 2008 while operation cash flow is made basing on 2004 prices for both subprojects.	**CAR5** **CAR6** **CAR7** **CAR8** **CAR9** **CAR10**	

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			CAR7 The liquidation amount for both subprojects is calculated using solely the scrap value of the equipment. Please provide justification that trucks and other equipment employed at S1 site can not be transferred to S2 site for further use. **CAR8** Please replace the links referring to the UAH/EUR exchange rates on the sheet Input with correct one. **CAR9** Please provide the details regarding the expenses included in the Salaries and overhead costs, Maintenance and other fixed costs. Please note that depreciation and other non-cash expenses shall not be included in the expenses when calculating cash flow. **CAR10** Sensitivity analysis provides reasonable and comprehensive review of possible price/costs variations. Please recalculate the values for deviation scenarios taking into account the changes to the model described above.		
B.2.2. Is the baseline scenario described?	1,7,9,10	DR	Yes. The baseline scenario is the continuation of the existing situation. Coal is produced by the underground mines causing fugitive methane emissions and used for energy	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			generation. Waste heaps are often self-heating and burning causing carbon dioxide emissions into the atmosphere. See also section B1 of the PDD.		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
B.2.3. Is the project scenario described?	1,7,9,10	DR	Yes. See section B.3 of the PDD	OK	OK
B.2.4. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario included?	1,7,9,10	DR	Yes. See section B.2 and B.3 of the PDD.	OK	OK
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?	1,7,9,10	DR	Yes. The baseline scenario is the continuation of the existing situation. In the project scenario waste heaps under processing are taken down and all combustible matter is extracted. Therefore, the possibility of emissions due to spontaneous self-heating and burning of these waste heaps is eliminated.	OK	OK
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?	1,7,9,10	DR	Yes. See section B.1. sub step 2b.	OK	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?	1,7	DR	Yes. The project's spatial boundaries are clearly defined in the section B.3 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)?	1,7	DR	**CAR11** Please present the date of baseline setting in the DD/MM/YYYY format.	**CAR11**	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
B.4.2. Is the contact information provided?	1,7	DR	Yes. The contact information of the entity setting the baseline is provided in Annex I.	OK	OK
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,7	DR	**CAR12** Please indicate in the section B.4. if the person/entity is also a project participant.	**CAR12**	OK
C. Duration of the project and crediting period					
C.1. Starting date of the project					
C.1.1. Is the project's starting date clearly defined?	1,8, 7	DR	**CAR13** Please provide any evidence that the project's starting date is the 1st of January 2005.	**CAR13**	OK
C.2. Expected operational lifetime of the project					
C.2.1. Is the project's operational lifetime clearly defined in years and months?	1,7	DR	Yes. The operational lifetime will be 13 years or 156 months.	OK	OK
C.3. Length of the crediting period					
C.3.1. Is the length of the crediting period specified in years and months?	1,7	DR	Yes. The length of the crediting period is 5 years or 60 months.	OK	OK
D. Monitoring Plan					
D.1. Description of monitoring plan chosen					
D.1.1. Is the monitoring plan defined?	1,2,4	DR	Yes. See section D.1 of the PDD.	OK	OK
D.1.2. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.	1,7,9	DR	Monitoring of the emissions in the project scenario and the baseline scenario is described in the section D.1.1. Data to be collected are presented in the table D.1.1.1. and table D1.1.3. of the PDD.	OK	OK
D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.	1,7,9	DR	Refer to section D.1.1.1. of the PDD.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
D.1.4. Description of the formulae used to estimate project emissions (for each gas, source etc,; emissions in units of CO2 equivalent).	1,7,9	DR	See section D.1.1.2. of the PDD. **CAR14** The measurement units in the equations 6 and 8 are not consistent.	**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.	1,7,9	DR	Refer to section D.1.1.3 of 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).	1,7,9	DR	Refer to section D.1.1.4 of PDD. **CAR15** The measurement units in the equations 10 and 12 are not consistent.	**CAR15**	
D.1.7. Option 2 – Direct monitoring of emissions reductions from the project (values should be consistent with those in section E)	1,7,9	DR	Not applicable.	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.	1,7,9	DR	Not applicable.	OK	OK
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).	1,7,9	DR	Refer to item D.1.4. $ER_y = BE_y - PE_y$	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.	1,7,9	DR	This section is left blank on purpose	OK	OK
D.1.11. Description of the formulae used to estimate leakage (for each gas, source etc,;	1,7,9	DR	Not applicable.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
emissions in units of CO2 equivalent).					
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).	1,7,9	DR	Refer to section D.1.4 of PDD	OK	OK
D.1.13. Is information on the collection and archiving of information on the environmental impacts of the project provided?	1,7,9	DR, I	**CAR16** Please provide detailed information about archiving of information on environmental impacts in the section D.1.5. as per *Guidance on criteria for baseline setting and monitoring*.	**CAR16**	OK
D.1.14. Is reference to the relevant host Party regulation(s) provided?	1,7,9	DR, I	Refer to section F.1. of the PDD.	OK	OK
D.1.15. If not applicable, is it stated so?	1,7,9	DR, I	Not applicable.	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?	1,7,9	DR	Yes. Quality control and quality assurance procedures are described in section D.2 **CAR17** Please provide information about the procedures for calibration of measuring devices calibration as per *Guidance on criteria for baseline setting and monitoring.*	**CAR17**	OK
D.3. Please describe of the operational and management structure that the project operator will apply in implementing the monitoring plan					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
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	1,7,9	DR	The principle structure is presented in section D.3. of the PDD. A detailed structure of the team and team members will be established in the Monitoring Manual prior to initial and first verification.	OK	OK
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
D.4.1. Is the contact information provided?	1,7,9	DR	Yes. The contact information of persons/entities establishing the monitoring plan is presented 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?	1,7,9	DR	Yes. The persons/entities are listed in Annex 1 of PDD. **CAR18** Please indicate in the section D.4. if the person/entity is also a project participant.	**CAR18**	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?	1,7	DR	See CARs from section D.1.4. above.	**Pending**	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?	1,7	DR	Conclusion is pending a request to CAR from section D.1.4.	**Pending**	OK
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	1,7	DR	Yes. The conservative assumptions have been used to calculate project GHG emissions.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
E.2.Estimated leakage					
E.2.1. Are described the formulae used to estimate leakage due to the project activity where required?	1,7	DR	Leakages are not expected.	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?	1,7	DR	Refer to E.2.1 above.	OK	OK
E.2.3. Have conservative assumptions been used to calculate leakage?	1,7	DR	Refer to E.2.1 above.	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 project activity emissions?	1,7	DR	Yes. See section E.3. of the PDD.	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?	1,7	DR	See CARs from section D.1.6. above.	**Pending**	OK
E.4.2. Is there a description of calculation of GHG baseline emissions in accordance with the formula specified for the applicable project category?	1,7	DR	Conclusion is pending a request to CAR from section D.1.6.	**Pending**	OK
E.4.3. Have conservative assumptions been used to calculate baseline GHG emissions?	1,7	DR	Yes. The conservative assumptions have been used to calculate baseline GHG emissions.	OK	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	1,7	DR	Conclusion is pending a request to CAR from sections D.1.4. and D.1.6.	**Pending**	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
project during a given period?					
E.6. Table providing values obtained when applying formulae above					
E.6.1. Is there a table providing values of total CO_2 abated?	1,7	DR	Yes. The table is presented in section E.6 of the PDD.	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?	1,7	DR, I	Sections F.1 and F.2. of the PDD give sufficient environment impact analysis description. EIA is available to the accredited independent entity.	OK	OK
F.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	1,7	DR, I	Yes. See section F.1.1. of the PDD. Implementation regulations for EIA are included in the Ukrainian State Construction Standard. The full scope EIA in accordance with the Ukrainian legislation has been conducted for the proposed project in 2004-2005 by the local developer PE "Agency of environmental management and audit".	OK	OK
F.1.3. Are the requirements of the National Focal Point being met?	1,6,7	DR, I	The requirements of the National Focal Point are being met. The EIA had been prepared before the submission of the project to National Environmental Investment Agency of Ukraine	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
F.1.4. Will the project create any adverse environmental effects?	1,7	DR, I	Impact on air is the main adverse environmental impact of the project activity. However, the study of emission levels and disbursement patterns of the contaminators show that maximum concentration limits will not be exceeded throughout the project lifetime. Also, uncontrolled dust and hazardous substances emissions from the waste heap will be avoided.	OK	OK
F.1.5. Are transboundary environmental considered in the analysis?	1,7	DR, I	Transboundary impacts are not observed.	OK	OK
F.1.6. Have identified environmental impacts been addressed in the project design?	1,7	DR, I	Identified environmental impacts have been addressed in the PDD. Section F.1.	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?	1-5,7	DR	No stakeholder consultation process for the JI projects is required by the Host Party. Stakeholder comments will be collected during the time of this PDD publication in the internet during the determination procedure.	OK	OK
G.1.2. The nature of comments is provided?	1-5,7	DR	See G.1.1. above.	OK	OK
G.1.3. Has due account been taken of any stakeholder comments received?	1-5,7	DR	See G.1.1. above.	OK	OK

Table 3 Legal requirements

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
***1.* Legal requirements**					
1.1. Is the project activity environmentally licensed by the competent authority?	1-5, 6	DR, I	Yes. Project activity has been licensed. (Licence AA #223550 dated 10.01.2002 is available). The full scope EIA has also been conducted for the project by the local developer PE "Agency of environmental management and audit".	OK	OK
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?	1-5, 6	DR, I	Yes. The conditions of the environmental are permitted.	OK	OK
1.3. Is the project in line with relevant legislation and plans in the host country?	1-5, 6	DR, I	Yes. The project is in line with relevant legislation in the host country.	OK	OK

Table 4 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 1 Letter of Approval from the National Environmental Investments Agency of Ukraine and Letter of Approval from the sponsor party must be received. The evidence of the project approval by the Parties involved must be provided.	Table 2, checklist question A.3.2	The project participants will submit necessary documents in order to obtain approval from the Host Party after the determination report will be issued as indicated by the project approval procedures of the Host Party.	Letter of Approval issued by Ukraine has been received. Issue is closed.
Corrective Action Request 2 The potential leakage of the project is not assessed nor is explained which of sources of leakage are to be calculated and which can be neglected.	Table 2, checklist question B.1.1	Corrected. Following text added to the Section B.1. of the PDD ver. 2.3. "The project activity does not result in a leakage or the net change of anthropogenic emissions by sources and/or removals by sinks of GHGs which occurs outside the project boundary, and that is measurable and attributable to the JI project. The possible source of the leakage is the energy required to replenish the water which is used in a closed cycle of the facility. External water supply is organized through the water refill from a nearby coal mine. Coal mine pumps the mine water and discharges it into the ground reservoirs in the course of its normal activities. The project activity only uses some of the mine water for replenishing operational water. Mine water is channelled into the installation by a control valve and is transported by gravitation.	PDD was checked. 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
		No extra energy is used to replenish the water as the mine would have pumped the water in the course of its normal activities both in the baseline and in the project scenario. In the project scenario no additional energy is used to transport the water to the facility as this is done by gravitation. Therefore, no change of anthropogenic emissions by sources and/or removals by sinks of GHGs."	
Corrective Action Request 3 The developer is using the discount rate derived from OVGZ (Ukrainian government bonds) denominated in UAH, while making cash flow calculations in EUR. With this respect the discount rate shall be based on the rates for Ukrainian funds in EUR.	Table 2, checklist question B.2.1	Corrected. Section B.2. of the PDD ver. 2.3. now contains the following information "Discount rate for NPV calculation is taken as an average commercial loan rates in foreign currencies prevailing in Ukraine for that time (December 2004 and June 2008) which is 11,4%[*] for both periods and adjusted for the inflation. 10 years average inflation rate for EuroZone (EuroZone inflation is applied because financial calculations are made in Euros) for the period of 1998-2007 is 2,0%[†]. The discount rate is equal to 9,2% for both cases[‡]" . See also 20100315_ER_Anthracite_ver.2.3_en spreadsheet.	Documents were checked. Issue is closed.
Corrective Action Request 4 The average interest rates were the	Table 2, checklist question	Corrected. See 20100315_ER_Anthracite_ver.2.3_en spreadsheet.	Spreadsheet was checked. Issue is closed.

[*] Average USD and EUR loan rates as of December 2004 and June 2008 http://bank.gov.ua/Fin_ryn/Pot_tend/2004/2004.zip and http://bank.gov.ua/Fin_ryn/Pot_tend/2008/2008.zip

[†] Eurostat data http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&language=en&pcode=tsieb060&tableSelection=1&footnotes=yes&labeling=labels&plugin=1

[‡] *Real discount rate=(1+Nominal Discount Rate)/(Inflation+1)-1*

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
same for both periods – 11,4%. Information is readily available from the NBU web site. Please refer to Excel table attached and correct link.	B.2.1		
Corrective Action Request 5 Taking into account that the fixed prices are used in the model, the real IRR should be calculated in the following way: IRRr = (IRRn+1)/(I+1)-1, where IRRr- is real IRR, IRRn – nominal IRR, I – inflation index	Table 2, checklist question B.2.1	Corrected. See 20100315_ER_Anthracite_ver.2.3_en spreadsheet. The discount rate has been recalculated and is now 9,2% for both cases. Please refer to Section B.2. of the PDD ver. 2.3. for additional information.	Spreadsheet was checked. Issue is closed.
Corrective Action Request 6 The calculations for S1 and S2 subprojects combined are made in the wrong manner. The investment costs are indicated as for 2004 and 2008 while operation cash flow is made basing on 2004 prices for both subprojects.	Table 2, checklist question B.2.1	Corrected. See 20100315_ER_Anthracite_ver.2.3_en spreadsheet.	Spreadsheet was checked. Issue is closed.
Corrective Action Request 7 The liquidation amount for both subprojects is calculated using solely the scrap value of the equipment. Please provide justification that trucks and other	Table 2, checklist question B.2.1	Please refer to the SD03_EquipmentLife. Due to the high level of deterioration the lifetime of main equipment including trucks does not exceed 7 years which is the calculated depletion tame of the waste heaps for each project. Factors of the high deterioration include severe conditions such as temperature	Spreadsheet was checked. 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
equipment employed at S1 site can not be transferred to S2 site for further use.		changes, off-road exploitation etc. and corrosive environment: high humidity, dust and direct contact with mine slug.	
Corrective Action Request 8 Please replace the links referring to the UAH/EUR exchange rates on the sheet Input with correct one.	Table 2, checklist question B.2.1	Corrected. See 20100315_ER_Anthracite_ver.2.3_en spreadsheet.	Spreadsheet was checked. Issue is closed.
Corrective Action Request 9 Please provide the details regarding the expenses included in the Salaries and overhead costs, Maintenance and other fixed costs. Please note that depreciation and other non-cash expenses shall not be included in the expenses when calculating cash flow.	Table 2, checklist question B.2.1	Please refer to the SD04_Costs. Depreciation and other non-cash expenses were not included in the expenses for the cash flow calculation as suggested by the Guidance on the Assessment of Investment Analysis (version 2).	Spreadsheet was checked. Issue is closed.
Corrective Action Request 10 Sensitivity analysis provides reasonable and comprehensive review of possible price/costs variations. Please recalculate the values for deviation scenarios taking into account the changes to the model described above.	Table 2, checklist question B.2.1.	Corrected. Figures were updated. Please see 20100315_ER_Anthracite_ver.2.3_en spreadsheet and the Section B.2. of the PDD ver. 2.3.	PDD was checked. Issue is closed.
Corrective Action Request 11 Please present the date of baseline	Table 2, checklist question	Corrected. Following text added to the Section B.4. of the PDD ver. 2.3. "Date of baseline setting: 15/03/2010"	PDD was checked. 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
setting in the DD/MM/YYYY format.	B.4.1		
Corrective Action Request 12 Please indicate in the section B.4. if the person/entity is also a project participant.	Table 2, checklist question B.4.3	Corrected. Following text added to the Section B.4. of the PDD ver. 2.3. "Global Carbon B.V. is the project participant and contact details are available in Annex 1."	PDD was checked. Issue is closed.
Corrective Action Request 13 Please provide any evidence that the project's starting date is the 1st of January 2005.	Table 2, checklist question C.1.1	Please refer to the supporting document SD02_ComissioningDocuments containing protocol of the LLC "Anthracite" management meeting regarding the launch of "Snizhnyans'ka-1" facility into the operation on the 1st of January 2005. Also included are the commissioning certificates for the key equipment dated 2003-2004. These documents show that the production equipment was put into the operation before the 1st of January 2005 and that the launch of the facility in normal operation mode took place on the 1st of January 2005	Supporting document has been provided. Issue is closed.
Corrective Action Request 14 The measurement units in the equations 6 and 8 are not consistent.	Table 2, checklist question D.1.4	Corrected. Equations 6 and 8 changed to $PE_{Coal,y} = \frac{FC_{PJ,Coal,y}}{1000} \cdot NCV_{Coal} \cdot OXID_{Coal} \cdot k^{C}_{Coal} \cdot 44/12$, $PE_{Diesel,y} = \frac{FC_{PJ,Diesel,y}}{1000} \cdot NCV_{Diesel} \cdot OXID_{Diesel} \cdot k^{C}_{Diesel} \cdot 44/12$ respectively. Please refer to the PDD ver. 2.3.	PDD was checked. Issue is closed.
Corrective Action Request 15 The measurement units in the equations	Table 2, checklist	Corrected. Equations 10 and 12 changed	PDD was checked. Issue

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
10 and 12 are not consistent.	question D.1.6	to: $BE_{Coal,y} = \frac{FC_{BE,Coal,y}}{1000} \cdot NCV_{Coal} \cdot OXID_{Coal} \cdot k_{Coal}^{C} \cdot 44/12$ $BE_{WHB} = \frac{FC_{BE,Coal,y}}{1000} \cdot p_{WHB} \cdot NCV_{Coal} \cdot OXID_{Coal} \cdot k_{Coal}^{C} \cdot 44/12$ respectively. Please refer to the PDD ver. 2.3	is closed.
Corrective Action Request 16 Please provide detailed information about archiving of information on environmental impacts in the section D.1.5.	Table 2, checklist question D.1.13	Collection and archiving of the information on the environmental impacts of the project will be done based on the approved EIA in accordance of the host Party legislation (see Section F.1 of the PDD ver. 2.3.).	PDD was checked. Issue is closed.
Corrective Action Request 17 Please provide information about the procedures for calibration of measuring devices calibration.	Table 2, checklist question D.2.1	Corrected. Section D.2. of the PDD ver. 2.3. is updated. Measuring devices calibration will be done according to the procedures of the Host Party. Weights are calibrated annually, Electric meters are calibrated once in 6 years.	PDD was checked. Issue is closed.
Corrective Action Request 18 Please indicate in the section D.4. if the person/entity is also a project participant.	Table 2, checklist question D.4.2	Corrected. Following text added to the Section D.4. of the PDD ver. 2.3. "Global Carbon B.V. is the project participant and contact details are available in Annex 1."	PDD was checked. Issue is closed.
Clarification Request 1 Please clarify in section A.4 of the PDD if the project design engineering reflects current good practices.	Table 2, checklist question A.4.2.1.	Following text added to the Section A.4. of the PDD ver.2.3. "The technological process and equipment used in the project reflect current good engineering practices. The basic technology of semi-steep separators is relatively new as it has been developed in th1990s and has been successfully applied at the number of	PDD was checked. 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
		installations in Russia and Kazakhstan. Technological process is simple, does not require vast amounts of primary and secondary equipment, is reliable and productive. Semi-steep separators contain little to no moving parts, are simple to handle and maintain and require less room then other technologies. This is one of the first applications of this technology in Ukraine."	
Clarification Request 2 Please clarify in the section A.4 of the PDD if the project uses state of the art technology or the technology would result in a significantly better performance than any commonly used technologies in the host country.	Table 2, checklist question A.4.2.2.	Following text added to the Section A.4. of the PDD ver. 2.3. "The technology used in "Snizhnyans'ka-1" unit and technology to be implemented in "Snizhnyans'ka-2" unit are both state-of-the-art technologies and are unlikely to be replaced by any other technology during the lifetime of the project as they offer the best cost-to-benefit ratio among other technologies commonly used in Ukraine such as simple vibration screens, hydro cyclones and spiral separators."	PDD was checked. Issue is closed.
Clarification Request 3 Please clarify in section A.4 of the PDD if the project requires extensive initial training and maintenance efforts.	Table 2, checklist question A.4.2.4.	Following text added to the Section A.4. of the PDD ver. 2.3. "The project does not require extensive initial training. The required workforce can get basic industrial profession training locally. Most of the required personnel such as heavy machinery operators, trucks and excavator drivers, electric and mechanical maintenance workers are locally available. Maintenance needs are covered by the local capacities: in-house maintenance workers and outsourced maintenance and repair subcontractors."	PDD was checked. 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
Clarification Request 4 Please clarify in section A.4 of the PDD if the project makes provisions for meeting training.	Table 2, checklist question A.4.2.5.	Following text added to the Section A.4. of the PDD ver. 2.3. "The project makes provisions for training needs. All workers are required to have a valid professional education certificate and pass periodical safety trainings and exams. Professional education can be obtained locally in the Donetsk region in all of the professional areas covered by the project."	PDD was checked. Issue is closed.

ANNEX 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 Kachan, Ph.D. (chemistry)
Team member, Climate Change Verifier
Bureau Veritas Ukraine, Health, Safety and Environment Project Manager
Igor Kachan has graduated from Kyiv National Taras Shevchenko University and took the Ph.D. degree in the analytical chemistry speciality. He has successfully completed IRCA registered Lead Auditor Training Course for Environment Management Systems and Quality Management Systems. Igor Kachan has undergone a training course on Clean Development Mechanism / Joint Implementation and performed determination/verification of 9 JI projects.

Kateryna Zinevych, M. Sci. (environmental science)
Team member, Climate Change Verifier
Bureau Veritas Ukraine Health, Safety and Environmental Project Manager
She has graduated from National University of Kyiv-Mohyla Academy with the Master Degree in Environmental Science. She is a Lead Auditor of Bureau Veritas Certification for Environment Management System. She has undergone a training course on Clean Development Mechanism /Joint Implementation and involved in the determination/verification of 16 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 Krrzhizhanovsky 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.