



**VERIFICATION REPORT  
GLOBAL CARBON B.V.**

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

(Initial and for the period 01/01/2008 – 31/12/2009)

**REPORT No. UKRAINE/0122/2010**

REVISION No. 02

**BUREAU VERITAS CERTIFICATION**

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 VERIFICATION REPORT «WASTE HEAPS DISMANTLING WITH THE AIM OF DECREASING THE GREENHOUSE GASES EMISSIONS INTO THE ATMOSPHERE»
 

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Date of first issue: 03/06/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: Global Carbon B.V.	Client ref.: Lennard de Klerk

## Summary:

Bureau Veritas Certification has made the verification of the "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere" project of Global Carbon B.V., 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, as well as the host country criteria.

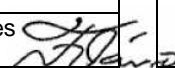
The verification scope is defined as a periodic independent review and post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions during defined verification period, and consisted of the following three phases: i) desk review of the Monitoring Report, Project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

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

The verification is based on the Monitoring Report (covers the period from the 1<sup>st</sup> of January 2008 to 31<sup>st</sup> of December 2009), the Monitoring Plan, the determined PDD, version 2.5 and supporting documents made available to Bureau Veritas Certification by the project participant.

In summary, Bureau Veritas Certification confirms that the project is implemented according to determined and registered project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reduction is calculated without material misstatements.

Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents. Based on information seen and evaluated we confirm that the implementation of the project has resulted in 174411 t CO<sub>2</sub>e reductions during period from 01/01/2008 up to 31/12/2009.

Report No.: REPORT NO. UKRAINE/0122/2010	Subject Group: JI
Project title: Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere	
Work was signed by: Climate change Global Manager: Flavio Gomes 	
Work carried out by: Team leader, lead verifier: Ivan Sokolov Team member, verifier: Igor Kachan	
Work verified by: Leonid Yaskin – Internal Technical Reviewer	
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## Indexing terms

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

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## Abbreviations

AIE	Accrediting Independent Entity
BVCH	Bureau Veritas Certification Holding SAS
CAR	Corrective Action Request
CL	Clarification Request
CO <sub>2</sub>	Carbon Dioxide
ERU	Emission Reduction Unit
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GHG	Green House Gas(es)
IETA	International Emissions Trading Association
JI	Joint Implementation
JISC	JI Supervisory Committee
LLC	Limited Liability Company
MoV	Means of Verification
MP	Monitoring Plan
MR	Monitoring Report
PCF	Prototype Carbon Fund
PDD	Project Design Document
UNFCCC	United Nations Framework Convention on Climate Change

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## 1 INTRODUCTION

Global Carbon B.V. has commissioned Bureau Veritas Certification to verify the emissions reductions of JI project “Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere” (hereafter called “the project”) located in the town of Snizhne, Donetsk Region, Ukraine, JI Registration Number 0214.

This report summarizes findings of the verification of the project, performed on the basis of criteria given to provide for consistent project operations, monitoring and reporting, and contains a statement for the verified emission reductions. The order includes the initial verification and verification for the period 01/01/08 – 31.12.09 of the project.

This report summarizes findings of the initial and periodic verification. It is based on the Initial Verification Report Template Version 3.0, December 2003 and on the Periodic Verification Report Template Version 3.0, December 2003, both part of the Validation and Verification Manual (VVM) published by International Emission Trading Association (IETA).

Initial and periodic verification has been performed as one integrated activity. It consists of a desk review of the project documents including PDD, monitoring plan, determination report, monitoring report and further documentation.

The results of the determination were documented by Bureau Veritas Certification in the report: “Determination of The Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere” No. UKRAINE/0070/2009 dated 29<sup>th</sup> of March, 2010.

Project is approved by the Ministry of Economic Affairs of the Netherland and registered under Track 2.

### 1.1 Objective

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

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

**Initial Verification:** The objective of an initial verification is to verify that the project is implemented as planned, to confirm that the monitoring system is in place and fully functional, and to assure that the project will generate verifiable emission reductions. A separate initial verification prior to the project entering into regular operations is not a mandatory requirement.

**Periodic Verification:** The objective of the periodic verification is to verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan; furthermore the periodic verification evaluates the GHG emission reduction data and express a conclusion with a high, but not absolute, level of assurance about whether the reported GHG emission reduction

data is free of material misstatements; and verifies that the reported GHG emission data is sufficiently supported by evidence, i.e. monitoring records. If no prior initial verification has been carried out, the objective of the first periodic verification also includes the objectives of the initial verification.

The verification follows UNFCCC criteria referring to the Kyoto Protocol criteria, the JI/CDM rules and modalities, and the subsequent decisions by the JISC, as well as the host country criteria.

## **1.2 Scope**

Verification scope is defined as an independent and objective review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions. The verification is based on the submitted monitoring report and the determined project design document including the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. Bureau Veritas Certification has, based on the recommendations in the Validation and Verification Manual employed a risk-based approach in the verification, focusing on the identification of significant risks of the project implementation and the generation of ERUs.

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

The audit team has been provided with the Monitoring Report version 1.0 dated 09/04/2010 and underlying data records, covering the period from 01 of January 2008 to 31 of December 2009 inclusive.

## **1.3 GHG Project Description**

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.

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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 s includes the construction of the “Snizhnyans’ka-2” unit.

## 2 METHODOLOGY

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

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

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

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

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification procedures. The completed verification protocol is enclosed in Appendix A to this report.

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

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

<b>Periodic Verification Protocol Table 3: GHG calculation procedures and management control testing</b>		
<b>Identification of potential reporting risk</b>	<b>Identification, assessment and testing of management controls</b>	<b>Areas of residual risks</b>
<p>Identify and list potential reporting risks based on an assessment of the emission estimation procedures, i.e.</p> <ul style="list-style-type: none"> <li>➤ the calculation methods,</li> <li>➤ raw data collection and sources of supporting documentation,</li> <li>➤ reports/databases/information systems from which data is obtained.</li> </ul> <p>Identify key source data. Examples of source data include metering records, process monitors, operational logs, laboratory/analytical data, accounting records, utility data and vendor data. Check appropriate calibration and maintenance of equipment, and assess the likely accuracy of data supplied.</p> <p>Focus on those risks that impact the accuracy, completeness and consistency of the reported data. Risks are weakness in the GHG calculation systems and may include:</p> <ul style="list-style-type: none"> <li>➤ manual transfer of data/manual calculations,</li> </ul>	<p>Identify the key controls for each area with potential reporting risks. Assess the adequacy of the key controls and eventually test that the key controls are actually in operation.</p> <p>Internal controls include (not exhaustive):</p> <ul style="list-style-type: none"> <li>➤ Understanding of responsibilities and roles</li> <li>➤ Reporting, reviewing and formal management approval of data;</li> <li>➤ Procedures for ensuring data completeness, conformance with reporting guidelines, maintenance of data trails etc.</li> <li>➤ Controls to ensure the arithmetical accuracy of the GHG data generated and accounting records e.g. internal audits, and checking/ review procedures;</li> <li>➤ Controls over the computer information systems;</li> <li>➤ Review processes for identification and understanding of key process parameters and implementation of calibration maintenance regimes</li> <li>➤ Comparing and analysing the</li> </ul>	<p>Identify areas of residual risks, i.e. areas of potential reporting risks where there are no adequate management controls to mitigate potential reporting risks</p> <p>Areas where data accuracy, completeness and consistency could be improved are highlighted.</p>



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<ul style="list-style-type: none"> <li>➤ unclear origins of data,</li> <li>➤ accuracy due to technological limitations,</li> <li>➤ lack of appropriate data protection measures? For example, protected calculation cells in spreadsheets and/or password restrictions.</li> </ul>	<p>GHG data with previous periods, targets and benchmarks.</p> <p>When testing the specific internal controls, the following questions are considered:</p> <ol style="list-style-type: none"> <li>1. Is the control designed properly to ensure that it would either prevent or detect and correct any significant misstatements?</li> <li>2. To what extent have the internal controls been implemented according to their design;</li> <li>3. To what extent have the internal controls (if existing) functioned properly (policies and procedures have been followed) throughout the period?</li> <li>4. How does management assess the internal control as reliable?</li> </ol>	
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<b>Periodic Verification Protocol Table 4: Detailed audit testing of residual risk areas and random testing</b>		
<b>Areas of residual risks</b>	<b>Additional verification testing performed</b>	<b>Conclusions and Areas Requiring Improvement (including Forward Action Requests)</b>
<p>List the residual areas of risks (Table 2 where detailed audit testing is necessary.</p> <p>In addition, other material areas may be selected for detailed audit testing.</p>	<p>The additional verification testing performed is described. Testing may include:</p> <ol style="list-style-type: none"> <li>1. Sample cross checking of manual transfers of data</li> <li>2. Recalculation</li> <li>3. Spreadsheet 'walk throughs' to check links and equations</li> <li>4. Inspection of calibration and maintenance records for key equipment</li> </ol> <ul style="list-style-type: none"> <li>➤ Check sampling analysis results</li> <li>➤ Discussions with process engineers who have detailed knowledge of process uncertainty/error bands.</li> </ul>	<p>Having investigated the residual risks, the conclusions should be noted here. Errors and uncertainties should be highlighted.</p> <p>Errors and uncertainty can be due to a number of reasons:</p> <ul style="list-style-type: none"> <li>➤ Calculation errors. These may be due to inaccurate manual transposition, use of inappropriate emission factors or assumptions etc.</li> <li>➤ Lack of clarity in the monitoring plan. This could lead to inconsistent approaches to calculations or scope of reported data.</li> <li>➤ Technological limitations. There may be inherent uncertainties (error bands) associated with the methods used to measure emissions e.g. use of particular equipment such as meters.</li> <li>➤ Lack of source data. Data for some sources may not be cost effective or practical to collect. This may result in the use of default data which has been derived based on certain assumptions/conditions and which will therefore have varying applicability in different situations.</li> </ul> <p>The second two categories are explored with</p>

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		the site personnel, based on their knowledge and experience of the processes. High risk process parameters or source data (i.e. those with a significant influence on the reported data, such as meters) are reviewed for these uncertainties.
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<b>Verification Protocol Table 5: Resolution of Corrective Action and Clarification Requests</b>			
<b>Report clarifications and corrective action requests</b>	<b>Ref. to checklist question in tables</b>	<b>Summary of project owner response</b>	<b>Verification conclusion</b>
If the conclusions from the Verification are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Tables 2, 3 and 4 where the Corrective Action Request or Clarification Request is explained.	The responses given by the Client or other project participants during the communications with the verification team should be summarized in this section.	This section should summarize the verification team's responses and final conclusions. The conclusions should also be included in Tables 2, 3 and 4, under "Final Conclusion".

**Figure 1 Verification protocol tables**

## 2.1 Review of Documents

The Monitoring Report (MR) version 1.0 dated 09/04/2010 submitted by Global Carbon B.V. and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), applied methodology, Kyoto Protocol, Clarifications on Verification Requirements to be checked were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, Global Carbon B.V. revised the MR and resubmitted it as final version 1.1 on 26<sup>th</sup> of May 2010.

The verification findings presented in this report relate to the project as described in the Monitoring Report version 1.0 and 1.1.

## 2.2 Follow-up Interviews

On 27/04/2010 during the site-visit 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 B.V. and "Anthracite" LLC were interviewed (see References). The main topics of the interviews are summarized in the Table 1.

**Table 1 Interview topics**

Interviewed organization	Interview topics
“Anthracite” LLC	Organizational structure. Responsibilities and authorities. Training of personnel. Quality management procedures and technology. Implementation of equipment (records). Metering equipment control. Metering record keeping system, database.
Consultant: Global Carbon B.V.	Baseline methodology. Monitoring plan. Monitoring report.

### 2.3 Resolution of Clarification, Corrective and Forward Action Requests

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

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

Corrective Action Requests (CAR) are issued, where:

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

The verification team may also use the term Clarification Request (CL), which would be where:

- vi) additional information is needed to fully clarify an issue.

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

### 3 PERIODIC VERIFICATION FINDINGS

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

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

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

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

One task of the verification is to check the remaining issues from the previous determination and verification or issues which are clearly defined for assessment in the PDD. The determination report prepared by Bureau Veritas Certification Holding SAS notes following open issues:

#### **Outstanding Issue No. 1:**

There is no evidence of written project approvals by the Host Party (Ukraine).

#### **Conclusion of the verification team**

This issue remains open until the written project approval by the Host Party will be submitted.

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 Project Implementation**

The JI project at "Anthracite" LLC" located in the town of Snizhne, Donetsk Region, Ukraine envisaged implementation of the technology of semi-steep separators. Technological process 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 than other technologies. This is one of the first applications of this technology in Ukraine. 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.

The project will implement the technological scheme which consists of the following steps:

- The selected waste heaps are prepared for dismantlement. Access roads are prepared and access to the top is organized.
- The top of the waste heap is degraded layer-by-layer with the bulldozers. This job is done only during daylight hours and layers are not

larger than 10 m thick counting from the top. Bulldozers slide the rock to the slope, from where it goes all the way down by gravity. Excavators can be used instead of the bulldozers to dismantle the waste heap. In this case the dismantling is done by arranging terraces not higher than 6-10m.

- The slopes of the waste heaps are fitted with chutes in order to transport the rock from the dismantling area to the bottom of the waste heap. Dismantling of the waste heaps results in the high volume of dust emission. Dust is settled by regular water sprinkling.

- The loading area is organized at the bottom of the waste heap. Here the rock is loaded by the excavators into the lorry trucks. Trucks take the rock to the coal extraction unit by existing public roads.

- The coal extraction unit is located close to one of the waste heaps. The rock is delivered here by trucks and is fed into the unit for the extraction process.

- The extraction process consists of several operations: separation of the coal containing rock into the classes by size and extraction of the "below 80 mm" class by the receiving bin grates; beneficiation of the "0-80 mm" class on a semi-steep (also known as steeply inclined) separator KNS-138 (1st stage of beneficiation); dehydration of the obtained concentrate on a separation screen with extraction of "0-1 mm" class, "1-13 mm" class and "13-80 mm" class; "13-80 mm" class concentrate is the end product and is transported to the storage facility; beneficiation of the "1-13 mm" class by a semi-steep separator KNS-60/75 (2nd stage beneficiation); dehydration of the obtained concentrate on a separation screen with extraction of "0-13 mm" class and transporting this concentrate to storage. Other classes of concentrate produced by first two stages of beneficiation undergo further beneficiation, are condensed and processed in cyclone separators, separation screens and dehydrators and are returned to earlier stages of beneficiation. Water is purified and returned into the cycle.

- The processed rock is loaded into the trucks and transported to:

a) Existing waste heap of a nearby mine. This waste heap is under control of the operating mine and can receive extra rock. Storing the processed rock in this waste heap will not lead to possible fires as virtually all of the combustible matter has been extracted.

b) Abandoned clay open-pit extraction operation. Processed rock is transported to the pit and used to fill the open pit. Filling the open pit will require preparation of temporary roads. The rock will be stored here in compressed layers of 1 m thick. After the open pit is filled the upper layer is tilled and grass is planted.

The first stage of the project implementation which is the construction of "Snizhnyans'ka-1" unit was completed in 2004. Initial number of waste heaps will be processed by this unit. The second stage, which includes construction of "Snizhnyans'ka-2" unit and the processing of another wave of waste heaps, is scheduled to commence operation in 2010 pending to possibility to obtain incentives from the JI mechanism.

The identified areas of concern as to Project Implementation, project participants' response and BV Certification's conclusion are described in Appendix A.

### **3.3 Internal and External Data**

The monitoring approach in the monitoring plan of the PDD requires monitoring and measurement of variables and parameters necessary to quantify the baseline emissions and project emissions in a conservative and transparent way.

For the monitoring period stated the following parameters have to be collected and registered:

1. Additional electricity consumed in the relevant period as a result of the implementation of the project activity.

This parameter is metered with specialized electricity meters. The meters are situated next to the current transformers. These meters register all electric energy consumed by the project activity as they are located on the only electrical input available on site. Readings are used in the commercial dealings with the energy supply company. Monthly bills for electricity are available. Regular cross-checks with the energy supply company are performed. The monthly and annual reports are based on the monthly bills data.

2. Amount of diesel fuel that has been used for the project activity in the relevant period.

For the metering of this parameter the commercial data of the company are used. Receipts and acceptance certificates are used in order to confirm the amount of fuel consumed. All fuel consumption is taken into account and is attributed to the project activity. Regular cross-checks with the suppliers are performed. The monthly and annual reports are based on these data.

3. Amount of coal that has been extracted from the waste heaps and combusted for energy use in the project activity in the relevant period which is equal to the amount of coal that has been mined in the baseline scenario and combusted for energy use.

For the metering of this parameter the commercial data of the company are used. Railroad bill of lading, receipts and acceptance certificates from the customers are used in order to confirm the amount of coal restored. Only shipped coal is taken into account and is attributed to the project activity. Weighting of the coal is done on the railroad station by the special scales or by the automobile scales depending on the shipment method. Regular cross-checks with the customers are performed. The monthly and annual reports are based on these shipment data.

The list of default data and their values are included in the MR, the relevant references to data sources and justification of applied estimates

of default data are provided. All data sources were checked and were found to be clear and correct.

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

The identified areas of concern as to internal and external data, project participants response and BV Certification's conclusion are described in Appendix A.

### **3.4 Environmental and Social Indicators**

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".

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 contaminants 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.

Project has positive impacts on land use. 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.

No issues of concern applicable to environmental and social indicators were found. Thus the project completely complies with the requirements.

### **3.5 Management and Operational System**

The verification team was ensured that the project has a well defined

management and operational system therefore successful operation of the project, credibility and verifiability of the emissions reductions are achieved.

The procedures of receiving data for monitoring and responsibility for its realization at “Anthracite” LLC are regulated by the normative documents of the company in accordance with project documentation and monitoring plan described in the PDD. The management and operational system supporting GHG emission monitoring is a part of the company’s quality management system.

The procedures available on-site secure required level of accuracy by using monitoring equipment and by the possibility to crosscheck the data compliance; the error is calculated and confirmed by device certificates. All monitoring equipment is covered by the detailed verification (calibration) plan and is verified with established periodicity. The verification and calibration process is under strict control.

The monitoring at “Anthracite” LLC is conducted on monthly basis according to monitoring plan described in the PDD. Director of the company reviews monthly and yearly reports and conducts selective cross-checks with the raw documents. The project developer is responsible for MR preparation.

The responsibilities for data collection are described in the MR (section B.2.) The management of “Anthracite” LLC has organized appropriate staff training to operate the project equipment. Quality assurance and quality control training was conducted as well. Practical training programs will continue on-the-job during project operation.

The identified areas of concern as to management and operational system, project participants response and BV Certification’s conclusion are described in Appendix A.

### **3.6 Completeness of Monitoring**

The monitoring of the project is complete, effective, reliable and generally in accordance with monitoring plan contained in the determined PDD. All relevant emission sources are covered by the monitoring plan and the boundaries of the project are defined correctly and transparently. All pertinent parameters were monitored and determined as prescribed. The collected data were stored during the whole monitoring period. The monitoring methodologies and sustaining records were sufficient to enable verification of emission reductions. During the verification process, no significant lacks of evidence were detected. The reporting procedures, which were described in the final MR and examined during the on-site visit, were found to reflect the ones defined by the monitoring plan.

The identified areas of concern as Completeness of Monitoring, project participants’ response and BV Certification’s conclusion are described in Appendix A.



### **3.7 Accuracy of Emission Reduction Calculations**

It is evidenced that the whole monitoring system was fully operational during the entire monitoring period. The verification team confirms that emission reduction calculations have been performed according to the monitoring plan and to the calculation methodology reported in the final MR in accordance with the PDD. The verification team checked the transfer of monitored data, correctness of the formulae versus the PDD as well as calculations of emission reductions. No inaccuracies in calculations were detected by the verifiers. Finally, our own calculations have shown the same results as given in the final Monitoring Report.

At “Anthracite” LLC the best available techniques are used in order to minimize uncertainties. Uncertainties are generally low. All monitoring equipment that used for monitoring purposes is in compliance with national legislative requirements and standards; this ensures that uncertainties are accounted in data collected.

Three parameters used in the calculation of the baseline and project emissions are measured directly with the use of special equipment while others are estimated with the use of appropriate coefficients. The verification team obtained access to all relevant documentation needed to verify the emission reduction calculation. All used information was traceable and appropriately archived.

The identified areas of concern as to Accuracy of Emission Reduction Calculations, project participants response and BV Certification’s conclusion are described in Appendix A.

### **3.8 Quality Evidence to Determine Emissions Reductions**

The origin of the data concerning the calculation of emission reductions is based on internal and external data which were explicitly checked. Inspection of calibration and maintenance records for key equipment was performed for all relevant meters. Necessary procedures have been defined in internal procedures and additional internal documents relevant for the determination of the various parameters.

The excel sheet submitted to AIE was checked. It contains algorithms compute the annual value of the emission reductions. All equations and algorithms used in the different workbook sheets were checked.

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

- Internal orders of “Anthracite” LLC on JI project implementation and GHG emission monitoring
- Duly maintained installation and operation of duly calibrated equipment
- Procedures for protection and back up of electronic and paper data
- Clear allocation of responsibilities and authorities

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- Competence and commitments of personnel
- Implementation of data traceability
- A detail review for adequacy of any excel spreadsheet
- Collation of spot manual calculations with excel results
- Check for consistency of calculations and data in the final MR
- Appropriate archiving system
- IPCC data
- All used parameters were of sufficient and appropriate quality to assure an accurate monitoring.

### **3.9 Management System and Quality Assurance**

The Management and operational system supporting GHG emission monitoring is a part of the company's management system. The procedures of receiving data for monitoring and responsibilities for its realization at "Anthracite" LLC are regulated by the special normative documents of the company.

Data are collected and stored in electronic database and in paper format. The data is reported in the monthly report of "Anthracite" LLC which are compiled into an annual monitoring report for verification process. The measurements are conducted constantly in accordance with national standards.

All measuring equipment is included in the verification schedule and verified with established periodicity. According to the schedule of verification, all devices are in satisfactory condition. The documented instructions to operate the facilities are stored at the working places.

Monitoring Report provide sufficient information about the elements of the system related to assigning roles, responsibilities and authorities for implementation and maintenance of monitoring procedures including control of data. The verification team confirms effectiveness of this management system. The personnel responsible for monitoring are trained in appropriate manner.

## 4 PROJECT SCORECARD

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

## 5 PERIODIC VERIFICATION STATEMENT

Bureau Veritas Certification has performed a verification of the JI project “Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere”. The verification is based on the currently valid documentation of the United Nations Framework Convention on the Climate Change (UNFCCC).

The management of the “Anthracite” LLC is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the monitoring plan presented in the PDD v. 2.5 which was determined by Bureau Veritas Certification. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project is the responsibility of the management of the project and the project developer – Global Carbon B.V.

Bureau Veritas Certification confirms that the project is implemented as planned and described in determined and registered project design documents and monitoring plan. Installed equipment being essential for generating emission reduction runs reliably and is calibrated

appropriately. The monitoring system is in place and the project is generating GHG emission reductions.

Bureau Veritas Certification confirms that the GHG emission reduction is calculated without material misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated we confirm the following statement:

Reporting period: from 01/01/2008 to 31/12/2009  
Baseline emissions : 370 731 t CO2 equivalents.  
Project emissions : 196 320 t CO2 equivalents.  
Emission Reductions : 174 411 t CO2 equivalents.

## 6 REFERENCES

### Category 1 Documents:

Documents that are related directly to the GHG components of the project.

- /1/ Project Design Document "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere", ver. 2.5
- /2/ Monitoring Report "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere" ver. 1.0 dated 09/04/2010
- /3/ Monitoring Report "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere" ver. 1.1 dated 20/05/2010
- /4/ Determination Report by Bureau Veritas Certification Holding SAS No UKRAINE/0070/2009 dated 09/04/2010
- /5/ Letter of Approval issued by Ministry of Economic Affairs of the Netherlands 2010JI10 dated 22/04/2010

### Category 2 Documents:

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

- /6/ Documents checked during the verification onsite are presented in Annex C

### Persons interviewed:

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List of persons interviewed during the verification 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/ Savenko Andrey – chief engineer of perspective development department, Scientific Production Association “Mekhanik”
- /4/ Kapustin Ivan – chef engineer of “Snizhnyans’ka-1”, “Anthracite” LLC
- /5/ Prusakov Denis – developer representative, JI consultant, Global Carbon BV



## APPENDIX A: COMPANY JI PROJECT VERIFICATION PROTOCOL

Initial Verification Protocol Table 1

Objective	Reference	Comments	Conclusion (CARs/FARs)
<b>1. Opening Session</b>			
<b>1.1. Introduction to audits</b>	6	<p>The intention and the target of the audit were illustrated to the participants of the audit. Participants of the audit were the following persons:</p> <p>Verification team:            Ivan Sokolov – Team Leader, Lead Verifier, Bureau Veritas Ukraine;            Igor Kachan – Team Member, Verifier, Bureau Veritas Ukraine</p> <p>Interviewed persons:            Gogolev Andrey – director of “Anthracite” LLC;            Fartushny Anrey – deputy director in production, “Anthracite” LLC            Savenko Andrey – chief engineer of perspective development department, Scientific Production Association “Mekhanik”;            Kapustin Ivan – chef engineer of “Snizhnyans’ka-1”, “Anthracite” LLC            Prusakov Denis – developer representative, JI consultant, Global Carbon BV</p>	OK


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Objective	Reference	Comments	Conclusion (CARs/FARs)
<b>1.2. Clarification of access to data archives, records, plans, drawings etc.</b>	6	The verification team got open access to the required plans, data, records and all relevant facilities. <b>CL1</b> Please indicate sectoral scope for the project.	<b>CL1</b>
<b>1.3. Contractors for equipment and installation works</b>	1, 2, 6	Project has been implemented as defined in the PDD version 2.5 and the implementation is evidenced by statements of work completion. <b>CAR1</b> Please add to MR (section B.1.4.) information about contractors involved in the land reclamation.	<b>CAR1</b>
<b>1.4. Actual status of installation works</b>	1, 2, 6	The first stage of the project (the construction of the “Snizhnyans’ka-1”) unit was finished in 2004. The second stage of the project (the construction of the “Snizhnyans’ka-2”) unit is currently under construction. There are no deviations form the PDD published at UNFCCC website <a href="http://ji.unfccc.int/JI_Projects/DB/VOZK3HERSNQGFLCY0YZ3AX5W676M5R/PublicPDD/MQHGWIQPQHUKCDPVQZPXVJ9SG39K05/view.html">http://ji.unfccc.int/JI_Projects/DB/VOZK3HERSNQGFLCY0YZ3AX5W676M5R/PublicPDD/MQHGWIQPQHUKCDPVQZPXVJ9SG39K05/view.html</a> <b>CAR2</b> Please add/correct in section A.6. of the MR information about the actual starting date of construction of the “Snizhnyans’ka-1” and “Snizhnyans’ka-2” units and provide any documentary evidence (for “Snizhnyans’ka-2 unit).	<b>CAR2</b>
<b>2. Open issues indicated in</b>			


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Objective	Reference	Comments	Conclusion (CARs/FARs)
<i>determination report</i>			
<b>2.1. Missing steps to final approval</b>	5, 6	<b>CAR3</b> There is no evidence of the project approval by both NFPs. Please provide.	<b>CAR3</b>
<b>3. Implementation of the project</b>			
<b>3.1. Physical components</b>	1, 2, 6	The first stage of the project (the construction of the “Snizhnyans’ka-1”) unit was finished in 2004. The second stage of the project (the construction of the “Snizhnyans’ka-2”) unit is currently under construction.	OK
<b>3.2. Project boundaries</b>	1, 2, 6	The project boundaries are as defined in the PDD version 2.5. No deviations form the estimated project boundaries were identified.	OK
<b>3.3. Monitoring and metering systems</b>	1, 2, 6	The monitoring at “Anthracite” LLC is conducted on daily and monthly basis according to PDD and the monitoring plan. The procedures of receiving data for monitoring and responsibility for its realization at “Anthracite” LLC are regulated by the normative documents of the company. All measuring equipment is verified with established periodicity; monitoring equipment is in satisfactory condition. Director of “Anthracite” LLC is in charge for monitoring of all project indicators. <b>CAR4</b> The type of electricity meters and railroad scales in section the MR does not correspond to the type of equipment in technical passport. Please correct. <b>CAR5</b> Date of electricity meter “NIK-Electronika” installation	<b>CAR4</b> <b>CAR5</b>




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Objective	Reference	Comments	Conclusion (CARs/FARs)
		(Table B.1.2) does not correspond with the data stated in installation act. Please correct/clarify.	
<b>3.4. Data uncertainty</b>	1, 2, 6	The best available techniques are used in order to minimize uncertainties. Uncertainties are generally low as all monitoring equipment used for monitoring purposes is in line with national legislative requirements and standards; this ensures that uncertainties are accounted in data collected. The uncertainty level of each parameter monitored is indicated in section B.1.2. of the MR.	OK
<b>3.5. Calibration and quality assurance</b>	1, 2, 6	<p>Quality control and quality assurance procedures undertaken for data monitored as indicated in the PDD ver. 2.5. The verification and calibration process is under strict control.</p> <p><b>CAR6</b> The characteristics and the date of calibration of automobile scales "Kokchetau" indicated in the MR (section B.1.2) does not comply with the technical passport. Please correct/clarify.</p> <p><b>CAR7</b> Information in the column «Date of next calibration» (section B.1.2, ID W1 and W2) is incorrect. Please correct/clarify.</p> <p><b>CAR8</b> Please provide certificate of calibration/verification for transformers used for electricity consumption monitoring.</p>	<b>CAR6</b> <b>CAR7</b> <b>CAR8</b>


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Objective	Reference	Comments	Conclusion (CARs/FARs)
<b>3.6. Data acquisition and data processing systems</b>	1, 2, 6	<p>Data are collected and stored in paper as well as in electronic format (this was checked during site-visit). The responsibility for data acquisition and data processing is described in section B.2. and section C.1.1 of the MR.</p> <p><b>CAR9</b> Please include in section B.3. of the MR description of data acquisition and processing for each parameter monitored including frequency and type of archiving (electronic/paper).</p>	<b>CAR9</b>
<b>3.7. Reporting procedures</b>	1, 2, 6	<p>The data concerning the amount of coal that has been extracted from the waste heaps and combusted for energy use in the project are aggregated daily and monthly and annual reports are prepared.</p> <p>The data concerning the additional electricity consumed as a result of the implementation of the project activity and the amount of diesel fuel that has been used for the project activity are aggregated monthly and annual reports are prepared. All the reports are presented on-site and were checked during verification.</p>	OK
<b>3.8. Documented instructions</b>	1, 2, 6	<p>MR provides with the necessary information relating the procedures for the monitoring and measurements. These were verified onsite and found satisfactory. The documented instructions to operate the facilities are stored at the working places. The documented instruction for monitoring of the data used to calculate ERUs has been developed and included into the organizational and quality management structure of «Anthracite» LLC (please see list of documents</p>	<b>CAR10</b>


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Objective	Reference	Comments	Conclusion (CARs/FARs)
		checked during verification) <b>CAR10</b> Please submit any documented instruction which indicates that the data monitored and required for verification are to be kept for two years after the crediting period as per <i>JI determination and verification manual, v. 01</i> .	
<b>3.9. Qualification and training</b>	1, 2, 6	It was checked on-site that the management of «Anthracite» LLC has organized appropriate staff training to operate the project equipment <b>CAR11</b> Please provide evidence of the conducted trainings and protocols of qualification testing. Please add appropriate information to the MR.	<b>CAR11</b>
<b>3.10. Responsibilities</b>	1, 2, 6	“Anthracite” LLC has implemented provisions of the monitoring plan into its organizational and quality management structure. For monitoring, collection, registration, visualization, archiving, reporting of the monitored data and periodical checking of the measurement devices the management team headed by the Director of the company is responsible. The structure of the team responsible for data collection is established in the MR. Please see section B.2. The general project management is implemented by the Director: Gogolev A.B.. through the supervision and coordination of the activities of his subordinates, such as the Chief Energy Officer; Production Manager and Chief Engineer. On-site day-to-day management is implemented by the Production Manager and Chief Engineer. Chief Energy	OK


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Objective	Reference	Comments	Conclusion (CARs/FARs)
		Officer is responsible for maintaining the energy equipment, electrical meters and transformers. A specialised technician teams are responsible for preventive measures and maintenance of all technological equipment. The raw reporting documents are collected and compiled on-site. Data are entered into the computer system, and raw documents are transferred to the company archive	
<b>3.11. Troubleshooting procedures</b>	1, 2, 6	All exceptional and troubleshooting events are documented by internal notes. As the data monitored to calculate emission reductions are also used in the commercial dealings of the company and correlate to the coal restored during the operation of the facility no emission reductions can be earned if the unit is not in operation.	OK
<b>4. Internal Data</b>			
<b>4.1. Type and sources of internal data</b>	1, 2, 6	The internal parameters are obtained according to the monitoring plan form the PDD. Table 6 and Table 7 of the MR contain internal parameters that are monitored. All sources of monitored internal data are also indicated in the tables. <b>CL2</b> Please add information about the type of metering device used to measure electricity consumed and the amount of coal that has been extracted from the waste heaps (Table 6 and 7).	<b>CL2</b>


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Objective	Reference	Comments	Conclusion (CARs/FARs)
<b>4.2. Data collection</b>	1, 2, 6	The data and parameters monitored are measured, collected, and recorded at the designated frequency described in the PDD and revised monitoring plan. Data are collected and stored in electronic database as well as in paper format. The data is reported in monthly and annual technical reports of "Anthracite" LLC which are compiled into a monitoring report for the defined period (2005-2007) for verification process. <b>CAR12</b> The measurement units of amount of diesel fuel that has been used for the project activity specified in liters in technical report. Please include formulae for conversion of amount of diesel fuel in tonnes in section B.2.3 of the MR.	<b>CAR12</b>
<b>4.3. Quality assurance</b>	1, 2, 3, 4, 6	MR specifies procedure for data collection and processing, and also reflects monitoring, metering and reporting procedures. This information was verified during the visit to «Anthracite» LLC and is found satisfactory.	OK
<b>4.4. Significance and reporting risks</b>	1, 2, 3, 4, 6	In case of defect, discovered in the monitoring equipment, the actions of the staff are determined in Guiding Metrological Instructions. The measurements are conducted constantly in accordance with national standards.	OK
<b>5. External Data</b>			
<b>5.1. Type and sources of external data</b>	1, 2, 3, 4, 6	The external data are obtained according to the monitoring plan included in the PDD. Table 5 of the Monitoring Report contains external data including data sources.	OK
<b>5.2. Access to external data</b>	1, 2, 3, 4, 6	The external data are obtained according to the monitoring plan included in the PDD. All documents that confirmed the external data were available for the verification team.	OK


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Objective	Reference	Comments	Conclusion (CARs/FARs)
<b>5.3. Quality assurance</b>	1, 2, 6	The management and operational system supporting GHG emission monitoring is a part of the company's quality management system. <b>CAR13</b> Please describe in the MR quality assurance procedures for data collection and processing of external parameters.	<b>CAR13</b>
<b>5.4. Data uncertainty</b>	1, 2, 6	<b>CL3</b> Please clarify in the MR data uncertainty level for external parameters.	<b>CL3</b>
<b>5.5. Emergency procedures</b>	-	Not applicable for the present project.	OK
<b>6. Environmental and Social Indicators</b>			
<b>6.1. Implementation of measures</b>	1, 2, 3, 4, 6	An environmental impact assessment 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": "Snizhnyans'ka-1" unit – EIA developed in 2004. The report has been reviewed by the expert ecologist's commission of the State Authority of Environment and Natural Resources in the Donetsk Region. This commission has issued an official Finding # C 04.08.186 of the compliance of the project documentation with the laws and regulations on environmental protection. The conclusion of this report states that: "The State Authority after studying the project of technogenically fractured land re-cultivation in the town of	OK


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<b>Objective</b>	<b>Reference</b>	<b>Comments</b>	<b>Conclusion (CARs/FARs)</b>
		<p>Snizhne considers the impact of project activity on environment as allowable and positively evaluates the project.”</p> <p>“Snizhnyans'ka-2” unit – EIA developed in 2005. The findings of this report are close to the ones provided in the report for “Snizhnyans'ka-1” unit and integral evaluation of the environmental impact is acceptable. The report has been reviewed by the expert ecologist’s commission of the State Authority of Environment and Natural Resources in the Donetsk Region. This commission has issued an official Finding # C 05.02.035 of the compliance of the project documentation with the laws and regulations on environmental protection. The conclusion of this report states that: “The State Authority after studying the project of breaking down the waste heaps #1 of the mine #32 “Podyomnaya”, #2 of the mine “Severnaya-1”, #3 of the mine “Severnaya-2” and re-cultivation of land in the town of Snizhne considers the impact of project activity on environment as allowable and positively evaluates the project.”</p>	
<b>6.2. Monitoring equipment</b>	-	Not applicable for the project.	OK
<b>6.3. Quality assurance procedures</b>	1, 2, 3, 4, 6	Collection and archiving of the information on the environmental impacts of the project was done based on the approved EIA in accordance with the Host Party legislation -	OK


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Objective	Reference	Comments	Conclusion (CARs/FARs)
		State Construction Standard DBN A.2.2.-1-2003 : "Structure and Contents of the Environmental Impact Assessment Report for Designing and Construction of Production Facilities, Buildings and Structures" State Committee Of Ukraine On Construction And Architecture, 2004.	
<b>6.4. External data</b>	1, 2, 3, 4, 6	The relevant documents on environmental external data were provided for the verification team and listed in the PDD. The information was found satisfactory.	OK
<b>7. Management and Operational System</b>			
<b>7.1. Documentation</b>	1, 2, 3, 6	The company complies with all legal and statutory requirements of the Ukraine and the same were made available to the verification team. «Anthracite» LLC has all the necessary permissions and licenses, issued by the Legal State Authorities. The order concerning organization of production activity key parameters monitoring and appropriate administrative duties were checked during site-visit and found satisfactory.	OK
<b>7.2. Qualification and training</b>	1, 2, 3, 6	See chapter 3.9 of this protocol.	OK
<b>7.3. Allocation of responsibilities</b>		The responsibilities and authorities are described for each individual in job descriptions as required statutorily. Persons working at sites are aware of their responsibilities, and relative records are maintained.	OK
<b>7.4. Emergency procedures</b>	1, 2, 3, 6	See section 3.11 of the present protocol.	OK




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Objective	Reference	Comments	Conclusion (CARs/FARs)
<b>7.5. Data archiving</b>	1, 2, 3, 6	See CAR form section 3.8. of the present protocol.	OK
<b>7.6. Monitoring report</b>	1, 2, 3, 6	Global Carbon B.V. (director Lennard de Klerk) is responsible for MR preparation. The responsibilities for data collection are described in the MR (section B.2.) <b>CL4</b> Please clarify why the value of ERUs calculated in MR does not correspond to the ones stated in the PDD.	<b>CL4</b>
<b>7.7. Internal audits and management review</b>	1, 2, 3, 6	Internal cross-checks and audits are performed for all of the data monitored as the raw documents used for monitoring are also used in the commercial dealings of the company. Director of the company reviews monthly and yearly reports and conducts selective cross-checks with the raw documents.	OK


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

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
<b>1. Defined organizational structure, responsibilities and competencies</b>		
<b>1.1. Position and roles</b>	Full	Position and role of each person in the GHG data management process is clearly defined and implemented from raw data generation to submission of the final data. Internal orders of assignment are available. The operational manager of the “Anthracite” LLC is in charge for monitoring of all project indicators.
<b>1.2. Responsibilities</b>	Full	The general project management is implemented by the Director: Gogolev A. through the supervision and coordination of the activities of his subordinates, such as the Chief Energy Officer; Production Manager and Chief Engineer. On-site day-to-day management is implemented by the Production Manager and Chief Engineer. Chief Energy Officer is responsible for maintaining the energy equipment, electrical meters and transformers. A specialised technician teams are responsible for preventive measures and maintenance of all technological equipment. The raw reporting documents are collected and compiled on-site. Data are entered into the computer system, and


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Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
		raw documents are transferred to the company archive.
<b>1.3. Competencies needed</b>	Partial	The competencies, responsibilities and authorities are described for each individual in job descriptions as required statutorily. Training needs were identified in advance and training was delivered that was checked onsite. Also please refer to CAR11 from the Table 1 above.
<b>2. Conformance with monitoring plan</b>		
<b>2.1. Reporting procedures</b>	Full	Reporting procedures used reflects the monitoring methodology content.
<b>2.2. Necessary Changes</b>	Full	It is confirmed that the monitoring report fully complies with the monitoring methodology described in the PDD. No deviations from the MP in the PDD were identified. The Management and Operational Systems are eligible for reliable project monitoring according to the monitoring plan.
<b>3. Application of GHG determination methods</b>		
<b>3.1. Methods used</b>	Full	The reporting procedures reflect the monitoring plan and PDD content. The calculation of the emission reduction is correct.


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Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
<b>3.2. Information/process flow</b>	Partial	<p>Data are collected and stored in paper format as well as in electronic database. The data is reported in the monthly report of the “Anthracite” LLC which are compiled into a monitoring report for the defined period for verification process.</p> <p>Additional electricity consumed in the relevant period as a result of the implementation of the project activity is documented in the monthly invoices for the electric energy, internal technical reports. The documents are collected every month by the responsible person. The documents obtained are collected by the accounting and economics department on a monthly basis. The paper originals are bound into the special folder. Data on the electricity and identification parameter of each individual document are logged into the electronic register that is maintained at the head office of the company. The IT and data storage system containing this information at the head office has back-ups and allows for reliable data storage with virtually no chance of data loss.</p> <p>Receipts, invoices and acceptance certificates are used in order to confirm the amount of fuel consumed. The documents obtained are collected by the accounting and economics department on a monthly basis. The paper originals are bound into the special folder. Data on fuel usage and identification parameter of each individual document are logged into the electronic register that is maintained at the head office of the company. The IT and data storage system containing this information at the head office has back-ups and allows for reliable</p>


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Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
		<p>data storage with virtually no chance of data loss. Receipts, invoices and acceptance certificates are used in order to confirm the amount of coal extracted. The documents are collected for every shipment or for the group of shipments by the responsible person. The documents obtained are collected by the accounting and economics department on a monthly basis. The paper originals are bound into the special folder. Data on the quantity of coal and identification parameter of each individual document are logged into the electronic register that is maintained at the head office of the company. The IT and data storage system containing this information at the head office has back-ups and allows for reliable data storage with virtually no chance of data loss.</p> <p>Also please refer to CAR1, CAR9 from the Table 1 above.</p>
<b>3.3. Data transfer</b>	Full	<p>Data transfer between or within different areas of responsibilities is highlighted in the internal procedures. The complete data is stored electronically and also the part of Management information system which is controlled by accounts.</p>
<b>3.4. Data trails</b>	Partial	<p>The necessary procedures have been defined in internal procedures and additional internal documents relevant for the determination of the all the parameters listed in the monitoring plan. Requirements for documented data trials are implemented in general as defined in internal procedures.</p> <p>Also please refer to CAR10 from the Table 1 above.</p>


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Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
<b>4. Identification and maintenance of key process parameters</b>		
<b>4.1. Identification of key parameters</b>	Full	The critical parameters for the determination of GHG emissions are the parameters listed in section D of the approved PDD version 2.5. All these key parameters are reflected in the Monitoring Report.
<b>4.2. Calibration/maintenance</b>	Partial	The calibration for each of the equipment is carried out in time and in compliance with the standard specification. The audit team verified the status for all the equipment at the sites sampled for the audit and found them to be in conformity with calibration and verification requirements. Also please refer to CAR4-CAR8 and CL2 from the Table 1 above.
<b>5. GHG Calculations</b>		
<b>5.1. Use of estimates and default data</b>	Partial	The estimates and default data used are indicated in section B.2.2 of the Monitoring Report together with their values. These are periodically evaluated to ensure their ongoing appropriateness and accuracy. Also please refer to CAR13 and CL3 from the Table 1 above.
<b>5.2. Guidance on checks and reviews</b>	Full	The data is cross checked as well as corrective actions are taken in case of any nonconformity is detected. Responsibilities for JI monitoring are indicated in section D.3 of the PDD version 2.5 and B.2 of the Monitoring Report. The Project Developers supervise the


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Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
		implementation of the Monitoring Plan for the project regularly.
5.3. Internal validation and verification	Full	<p>Internal cross-checks and audits are performed for all of the data monitored as the raw documents used for monitoring are also used in the commercial dealings of the company. Director of the company reviews monthly and yearly reports and conducts selective cross-checks with the raw documents.</p> <p>For the fixed data and ex-ante parameters and factors the quality assurance requires to check that the data were acquired from the reliable (i.e. recognised and/or based on research), verifiable (data are open for access, or are available for the project participants) sources. For the external data that are used for the monitoring (as amount of diesel fuel that has been used for the project activity in the year y – when the fuel was used by the third party) the following quality assurance procedure is established: the raw data on fuel usage are available as supplements or are directly mentioned in the invoices of the third party, the data are received by the accounting office of the company and are checked against the time sheets of the equipment that has been operating, the figures in the reports of the third party are checked against the invoices of this third party, periodical on-site checks are conducted by the management of the company to verify the amount of time and quantity of the equipment that was operating. If inconsistencies are found the dispute can be open between two parties and a thorough check of underlying work-</p>


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Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
		orders, receipts and other documentation of the third party can follow.
<b>5.4. Data protection measures</b>	Partial	The necessary procedures relating to Information technology are in place to provide necessary data security, and also prevent the unauthorized use of the same. All data are stored in paper as well as in the electronic format. The IT and data storage system containing this information at the head office has back-ups and allows for reliable data storage with virtually no chance of data loss. Also please refer to CAR9 from the Table 1 above.
<b>5.5. IT systems</b>	Full	The monitored data are collected in electronic database (prepared in Excel format) simultaneously with the origin data in paper format.




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

<b>Identification of potential reporting risk</b>	<b>Identification, assessment and testing of management controls</b>	<b>Areas of residual risks</b>
<p>Potential reporting risks based on an assessment of the emission estimation procedures can be expected in the following fields of action:</p> <ul style="list-style-type: none"> <li>➤ raw data collection and sources of supporting documentation,</li> <li>➤ the calculation methods,</li> <li>➤ reports/databases/information systems from which data is obtained.</li> </ul> <p>Key source data applicable to the project assessed are hereby:</p> <ul style="list-style-type: none"> <li>➤ metering records,</li> <li>➤ process monitors,</li> <li>➤ operational logs (metering records),</li> <li>➤ laboratory/analytical data (for energy content of fuels),</li> <li>➤ utility/vendor data,</li> </ul> <p>Appropriate calibration and maintenance of equipment resulting in high accuracy of data supplied is in place.</p>	<p>Regarding the potential reporting risks identified in the left column the following mitigation measures have been observed during the document review and during site visit:</p> <ul style="list-style-type: none"> <li>• All installed measuring devices are to high industry standard;</li> <li>• Only skilled and trained personnel is allowed to operate the relevant equipment and take metering records;</li> <li>• Regular visual inspection of equipment;</li> <li>• Immediate replacement of dysfunctional equipment;</li> <li>• Proper maintenance of data and document control procedure;</li> <li>• Responsibilities for the raw data collection are established;</li> <li>• Appropriate archiving system established.</li> </ul> <p>The metering equipments are installed appropriately in the enclosure panels and same are of reputed make.</p>	<p>The issue remaining is the way the data obtained is used to calculate the emission reduction in a conservative manner according to the approach prescribed in the PDD version 2.5 and the monitoring plan as well as the way data obtained is used to calculate the emissions reductions.</p>



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Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
<p>It is hereby needed to focus on those risks that impact the accuracy, completeness and consistency of the reported data. Risks are weakness in the GHG calculation systems and include:</p> <ul style="list-style-type: none"> <li>➤ manual transfer of data/manual calculations,</li> <li>➤ unclear origins of data,</li> <li>➤ accuracy due to technological limitations,</li> <li>➤ lack of appropriate data protection measures.</li> </ul>	<p>Calculation methods:</p> <ul style="list-style-type: none"> <li>• Quality of input data is ensured;</li> <li>• Validated methodology and electronic tool for calculation emission reduction;</li> <li>• Detailed review of Excel spreadsheet.</li> </ul>	


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

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


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

Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
<b>CAR1</b> Please add to MR (section B.1.4.) information about contractors involved in the land reclamation.	Table 1, 1.3	Corrected. Following text added to the section B.1.4. of the MR ver. 1.1. "Donugletechinvest" LLC – contractor for land reclamation."	The MR was checked. Issue is closed.
<b>CAR2</b> Please add/correct in section A.6. of the MR information about the actual starting date of construction of the "Snizhnyans'ka-1" and "Snizhnyans'ka-2" units and provide any documentary evidence (for "Snizhnyans'ka-2 unit).	Table 1, 1.4	See supporting document "SD05_S2Construction". This is the internal company order specifying the start of construction of Snizhnyans'ka-2 unit on the 22 <sup>nd</sup> of March 2010.	The supporting document was checked. Issue is closed.
<b>CAR3</b> There is no evidence of the project approval by both NFPs. Please provide.	Table 1, 2.1	The project has received Letter of Approval from the DFP of the Netherlands on the 22 <sup>nd</sup> of April 2010 ref.# 2010JI10. Letter of Approval #882/23/7 issued by	LoA from the Sponsor and Host Parties were submitted.


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Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
		National Environmental Investment Agency of Ukraine (dated 24.06.2010) has been received.	Issue is closed.
<b>CAR4</b> The type of electricity meters and railroad scales in section the MR does not correspond to the type of equipment in technical passport. Please correct.	Table 1, 3.3	Corrected. See MR ver. 1.1. Section B.	The MR was checked. Issue is closed.
<b>CAR5</b> Date of electricity meter "NIK-Electronika" installation (Table B.1.2) does not correspond with the data stated in installation act. Please correct/clarify.	Table 1, 3.3	Corrected. See MR ver. 1.1. Section B.	The MR was checked. Issue is closed.
<b>CAR6</b> The characteristics and the date of calibration of automobile scales "Kokchetau" indicated in the MR (section B.1.2) does not comply with the technical passport. Please correct/clarify	Table 1, 3.5	Corrected see MR ver. 1.1. Section B.1.2	The MR was checked. Issue is closed.
<b>CAR7</b>	Table 1,	Corrected see MR ver. 1.1. Section B.1.2	The MR was


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Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
Information in the column «Date of next calibration» (section B.1.2, ID W1 and W2) is incorrect. Please correct/clarify.	3.5		checked. Issue is closed.
<b>CAR8</b> Please provide certificate of calibration/verification for transformers used for electricity consumption monitoring.	Table 1, 3.5	See supporting document "SD01_Transformers". Initial factory verification certificates and subsequent testing and verification certificates are provided.	The supporting document was checked. Issue is closed.
<b>CAR9</b> Please include in section B.3. of the MR description of data acquisition and processing for each parameter monitored including frequency and type of archiving (electronic/paper).	Table 1, 3.6	Corrected. Following text added to the section B.3. of the MR ver. 1.1. "All data will be archived electronic and paper. Data acquisition and processing procedure for each parameter monitored: 1. Additional electricity consumed in the relevant period as a result of the implementation of the project activity This parameter is documented in the monthly invoices for the electric energy, internal technical reports. The documents are collected every month by the responsible person. The documents obtained are collected by the accounting and economics department on a monthly basis. The paper originals are binded	The MR was checked. The information added was found to be satisfactory and relevant. Issue is closed.



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Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
		<p>into the special folder. Data on the electricity and identification parameter of each individual document are logged into the electronic register that is maintained at the head office of the company. The IT and data storage system containing this information at the head office has back-ups and allows for reliable data storage with virtually no chance of data loss. This log is printed and binded as a reference into the same folder with the original documents. At the same time the responsible person (as per section C.1.1) maintains an independent account of the monitoring data. At the end of the month the summarizing report is prepared containing the information on the monthly monitored data. This report is signed by the responsible person and is submitted to the director of the company. At the end of the year the annual summarizing report is prepared for all monitoring parameters containing monthly and annual figures. This report is submitted to the director of the company. These reports are kept in electronic form in the IT system of the company and in paper form with signatures of the responsible</p>	


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Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
		<p>persons.</p> <p>2. Amount of diesel fuel that has been used for the project activity in the relevant period. Receipts, invoices and acceptance certificates are used in order to confirm the amount of fuel consumed. The documents obtained are collected by the accounting and economics department on a monthly basis. The paper originals are binded into the special folder. Data on fuel usage and identification parameter of each individual document are logged into the electronic register that is maintained at the head office of the company. The IT and data storage system containing this information at the head office has back-ups and allows for reliable data storage with virtually no chance of data loss. This log is printed and binded as a reference into the same folder with the original documents. At the same time the responsible person (as per section C.1.1) maintains an independent account of the monitoring data. At the end of the month the summarizing report is prepared containing the information on the monthly monitored data. This report is signed by the</p>	




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Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
		<p>responsible person and is submitted to the director of the company. At the end of the year the annual summarizing report is prepared for all monitoring parameters containing monthly and annual figures. This report is submitted to the director of the company. These reports are kept in electronic form in the IT system of the company and in paper form with signatures of the responsible persons.</p> <p>3. Amount of coal that has been extracted from the waste heaps and combusted for energy use in the project activity in the relevant period which is equal to the amount of coal that has been mined in the baseline scenario and combusted for energy use. Railroad bill of laden, receipts, invoices and acceptance certificates are used in order to confirm the amount of coal extracted. The documents are collected for every shipment or for the group of shipments by the responsible person. The documents obtained are collected by the accounting and economics department on a monthly basis. The paper originals are binded into the special folder. Data on the quantity of coal and identification parameter of</p>	



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Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
		<p>each individual document are logged into the electronic register that is maintained at the head office of the company. The IT and data storage system containing this information at the head office has back-ups and allows for reliable data storage with virtually no chance of data loss. This log is printed and binded as a reference into the same folder with the original documents. At the same time the responsible person (as per section C.1.1) maintains an independent account of the monitoring data. At the end of the month the summarizing report is prepared containing the information on the monthly monitored data. This report is signed by the responsible person and is submitted to the director of the company. At the end of the year the annual summarizing report is prepared for all monitoring parameters containing monthly and annual figures. This report is submitted to the director of the company. These reports are kept in electronic form in the IT system of the company and in paper form with signatures of the responsible persons.”</p>	


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Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
<b>CAR10</b> Please submit any documented instruction which indicates that the data monitored and required for verification are to be kept for two years after the crediting period as per <i>Jl determination and verification manual, v.01</i> .	Table 1, 3.8	See supporting document “SD02_DataStoring”. This is the company order specifying that the data monitored and required for verification are to be kept for two years after the crediting period.	The supporting document was checked. Issue is closed.
<b>CAR11</b> Please provide evidence of the conducted trainings and protocols of qualification testing. Please add appropriate information to the MR.	Table 1, 3.9	See supporting documents “SD03_SafetyBriefings” and “SD04_TrainingsandTesting”. Employees of the project company get regular safety briefings and trainings. Also following information has been added to the section C.1.2 of the MR ver. 1.1. “Employees of the project company get regular safety briefings and trainings. Training includes safety instructions, fire protection, electric equipment safety, specific safety on coal enrichment facilities, and technology of operations. All those who had the trainings are required to pass an exam. Trainings and testing are provided either by the external training facility or in-house.”	The MR and supporting documents were checked. Issue is closed.
<b>CAR12</b>	Table 1,	Corrected. Following information has been	The MR was


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Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
<p>The measurement units of amount of diesel fuel that has been used for the project activity specified in litters in technical report. Please include formulae for conversion of amount of diesel fuel in tonnes in section B.2.3 of the MR.</p>	4.2	<p>added to the MR ver.1.1. section B.2.3. "In the internal company reports the amount of diesel fuel is reported in litres. To convert this amount into the tones the following formula is used: Diesel Fuel in Tones = (0,85* Diesel Fuel in Litres)/1000 Where 0,85 stands for the density of diesel fuel in kg/l. Data taken from GOST 305-82 Diesel Fuel. Specifications. 0,85 kg/l is taken as an average between two suggested types of diesel: summer and winter <a href="http://elarum.ru/info/standards/gost-305-82/">http://elarum.ru/info/standards/gost-305-82/</a></p>	<p>checked. Clarification was found to be satisfactory. Issue is closed.</p>
<p><b>CAR13</b> Please describe in the MR quality assurance procedures for data collection and processing of external parameters.</p>	Table 1, 5.3	<p>Corrected. Following information has been added to the MR ver.1.1. section B.2.3. C.3. "For the fixed data and ex-ante parameters and factors the quality assurance requires to check that the data were acquired from the reliable (i.e. recognised and/or based on research), verifiable (data are open for access, or are available for the project participants) sources. For the external data that are used for the monitoring (as amount of diesel fuel that has been used for the project activity in the year y – when the fuel was used by the third party) the following quality</p>	<p>The MR was checked. Clarification was found to be satisfactory. Issue is closed.</p>


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Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
		<p>assurance procedure is established: the raw data on fuel usage are available as supplements or are directly mentioned in the invoices of the third party, the data are received by the accounting office of the company and are checked against the time sheets of the equipment that has been operating, the figures in the reports of the third party are checked against the invoices of this third party, periodical on-site checks are conducted by the management of the company to verify the amount of time and quantity of the equipment that was operating. If inconsistencies are found the dispute can be open between two parties and a thorough check of underlying work-orders, receipts and other documentation of the third party can follow.”</p>	
<b>CL1</b> Please indicate sectoral scope for the project.	Table 1, 1.2	Information added to the MR. ver 1.1 Section A.1. “Sectoral scope: 8. Mining/mineral production”	The MR was checked. Issue is closed.
<b>CL2</b> Please add information about the type of metering device	Table 1, 4.1	See MR ver.1.1. Section B.2.2.	The MR was checked. Issue is closed.


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Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
used to measure electricity consumed and the amount of coal that has been extracted from the waste heaps (Table 6 and 7).			
<b>CL3</b> Please clarify in the MR data uncertainty level for external parameters.	Table 1, 5.4	See section B.2.1 of the MR ver. 1.1. Also the following text has been added to the section D.2. of the MR ver. 1.1 "All measurement uncertainties and error propagation of the measured parameters are according to the manuals of equipment manufacturers. Uncertainty level of the fixed values and external data is low as they are taken from reliable and publicly available, verifiable sources."	The MR was checked. Issue is closed.
<b>CL4</b> Please clarify why the value of ERUs calculated in MR does not correspond to the ones stated in the PDD.	Table 1, 7.6	The values of ERUs calculated in the PDD were based on the preliminary assessments of the data and calculation methods. Quality check of the data and underlying documents provided for the purposes of the monitoring a corrected calculation of emission reductions. The actual mismatch of the monitored ERUs with the PDD numbers is less than 0,05%.	Issue is closed.

## APPENDIX B: VERIFICATION TEAM

The verification team consists of the following personnel:

### **Flavio Gomes**

Climate Change Lead Verifier, Bureau Veritas Certification Holding  
SAS Climate Change Global Manager

Flavio Gomes is a Chemical and Safety Engineer graduated from «UNICAMP – Universidade Estadual de Campinas», with a MSc title in Civil Engineer (Sanitation). He spent four years at RIPASA Pulp and Paper as Environmental Process Engineer. Since 2006 Mr. F.Gomes is the Global Manager for Climate Change. Previously and since 1997, he was senior consultant for Bureau Veritas Consulting in fields of Environment, Health, Safety, Social Accountability and Sustainability audit and management systems. He also acted as Clean Development Mechanism verifier, and Social/Environmental Report auditor, in the name of Bureau Veritas Certification. Flavio is pursuing PhD on Energy Management at the Imperial College – London.

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

Internal Technical Reviewer, Climate Change Lead Verifier, 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 Course and he was involved in the determination/verification of over 50 JI/CDM projects.

### **Igor Kachan, Ph.D. (chemistry)**

Team member, Climate Change Verifier

Bureau Veritas Ukraine, Health, Safety and Environment Project Manager

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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.

**The verification report was reviewed by:**  
**Leonid Yaskin, PhD (thermal engineering)**

Internal Technical Reviewer

Bureau Veritas Certification Rus General Director, Climate Change Local Manager, Lead Auditor, IRCA Lead Tutor, Climate change Lead Verifier

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



## APPENDIX C: DOCUMENTS CHECKED DURING VERIFICATION

- 1 Service order dated 08.0.09
- 2 Order #7 about accounting of the key parameters of production activity of "Snizhnyanska-1" dated 04.01.2005.
- 3 Acceptance certificate of services rendered dated 31.07.08
- 4 Estimates for works on recultivation of the rock dumps according to the contract #4 dated 03.02.2005 for January 2008
- 5 Report of the diesel fuel consumption for works on the recultivation of the rock dumps according to the contract #4 dated 03.02.2005 for January 2008.
- 6 Expenditure invoice №Д-000165/4 dated 01.09.2009
- 7 Register of receiving reports for fuel for 2009
- 8 Register of documents for transportation services for 2009
- 9 Calculation on transportation services for December 2009 for tractor T-170 and bulldozer №Т9167ДЦ
- 10 Calculation on transportation services for December 2009 for tractor T-170
- 11 Calculation on transportation services for December 2009 for bulldozer T-130M
- 12 Calculation on transportation services for December 2009 for bulldozer T-170
- 13 Calculation on transportation services for December 2009 for loader T-156-K
- 14 Calculation on transportation services for December 2009 for excavator ЭО 1011
- 15 Acceptance certificate of services rendered dated 31.12.09 according to the contract #2008/11/01-1 dated 01.11.2008 for November 2008
- 16 Acceptance certificate of services rendered dated 30.11.09 according to the contract #2008/11/01-1 dated 01.11.2008 for November 2009
- 17 Acceptance certificate of services rendered dated 31.10.09 according to the contract #2008/11/01-1 dated 01.11.2008 for November 2010
- 18 Acceptance certificate of services rendered dated 01.10.09 according to the contract #2008/11/01-1 dated 01.11.2008 for November 2011
- 19 Acceptance certificate of services rendered dated 31.08.09 according to the contract #2008/11/01-1 dated 01.11.2008 for November 2012
- 20 Acceptance certificate of services rendered dated 31.08.09 according to the contract #2008/11/01-1 dated 01.11.2008 for November 2013
- 21 Acceptance certificate of services rendered dated 31.05.09 according to the contract #2008/11/01-1 dated 01.11.2008 for November 2014
- 22 Acceptance certificate of services rendered dated 30.04.09 according to the contract #2008/11/01-1 dated 01.11.2008 for November 2015
- 23 Acceptance certificate of services rendered dated 31.03.09 according to the contract #2008/11/01-1 dated 01.11.2008 for November 2016
- 24 Acceptance certificate of services rendered dated 28.02.09 according to the contract #2008/11/01-1 dated 01.11.2008 for November 2017
- 25 Acceptance certificate of services rendered dated 31.01.09 according to the contract #2008/11/01-1 dated 01.11.2008 for November 2018
- 26 Load acceptance receipt №52190589

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- 27 Technical journal of coal accounting for April-September 2009
- 28 Technical journal of electricity accounting (supplied by "Ukrenergougol") for 2005-2010
- 29 Statement of release and acceptance for electricity №y-21223262 dated 31.12.2009.
- 30 Statement of release and acceptance for electricity №y-21223263 dated 31.12.2009.
- 31 Report for the electricity consumed by "Anthracite" LLC for December 2009
- 32 Statement of release and acceptance for electricity №y-21221643 dated 30.11.2009
- 33 Statement of release and acceptance for electricity №y-21221644 dated 30.11.2010
- 34 Report for the electricity consumed by "Anthracite" LLC for November 2009
- 35 Statement of release and acceptance for electricity №y-21218515 dated 31.10.2009
- 36 Statement of release and acceptance for electricity №y-21218516 dated 31.10.2009
- 37 Report for the electricity consumed by "Anthracite" LLC for October 2009
- 38 Statement of release and acceptance for electricity №y-21216847 dated 30.09.2009
- 39 Report for the electricity consumed by "Anthracite" LLC for September 2009
- 40 Statement of release and acceptance for electricity №y-21215235 dated 31.08.2009
- 41 Report for the electricity consumed by "Anthracite" LLC for August 2009
- 42 Statement of release and acceptance for electricity №y-21212924 dated 31.07.2009
- 43 Report for the electricity consumed by "Anthracite" LLC for July 2009
- 44 Statement of release and acceptance for electricity №y-21210938 dated 30.06.2009
- 45 Report for the electricity consumed by "Anthracite" LLC for June 2009
- 46 Report for the electricity consumed by "Anthracite" LLC for May 2009
- 47 Report for the electricity consumed by "Anthracite" LLC for April 2009
- 48 Report for the electricity consumed by "Anthracite" LLC for March 2009
- 49 Report for the electricity consumed by "Anthracite" LLC for February 2009
- 50 Report for the electricity consumed by "Anthracite" LLC for January 2009
- 51 Register of documents on electricity for 2008 "Anthracite" LLC
- 52 Register of acceptance certificates on electricity for 2009 "Anthracite" LLC
- 53 Statement of release and acceptance of marketable produce "Anthracite" LLC for May 2009
- 54 Statement of release and acceptance of marketable produce "Anthracite" LLC for April 2009
- 55 Statement of release and acceptance of marketable produce "Anthracite" LLC for March 2009
- 56 Statement of release and acceptance of marketable produce "Anthracite" LLC for February 2009
- 57 Statement of release and acceptance of marketable produce "Anthracite" LLC for January 2009

- 58 Register of acceptance certificates on electricity for 2008 "Anthracite" LLC
- 59 Register of coal shipped for 2008
- 60 Register of coal shipped for December 2008
- 61 Register of coal shipped for October 2008
- 62 Register of coal shipped for July 2008
- 63 Register of coal shipped for April 2008
- 64 Register of coal shipped for March 2008
- 65 Register of coal shipped for February 2008
- 66 Register of coal shipped for January 2008
- 67 Statement of release and acceptance for coal production № 30-1 dated 31.03.08
- 68 Statement of weighting for coal production dated 31.08.08
- 69 Statement of weighting for coal production dated 01.04.08
- 70 Statement of release and acceptance for coal production №28-2 dated 27.03.08
- 71 Statement of release and acceptance for coal production №24-4 dated 20.03.08
- 72 Statement of release and acceptance for coal production №24-3 dated 13.03.08
- 73 Statement of release and acceptance for coal production №28-2 dated 27.03.11
- 74 Register of coal shipped for 2009
- 74 Register of coal shipped for December 2009
- 75 Register of coal shipped for December 2009
- 76 Letter of approval dated 22.04.2010.
- 77 Order #7 dated 04.01.2005.
- 78 Employment position instruction of the deputy director for production.
- 79 Employment position instruction of the chief engineer.
- 80 Employment position instruction of the power engineer.
- 81 Instruction of monitoring of controlled parameters of the enterprise production activity for the project implementation under the Kyoto Protocol.
- 82 Order #145 dated 12.12.2008.
- 83 Contract of the accession to the electrical networks #10/252-10 dated 19.03.2010.
- 84 Contract of the electrical energy supply #04-03 dated 14.05.2004.
- 85 Contract #2 of scale rent dated 01.01.2007.
- 86 Supplementary agreement dated 30.12. 2007 to the contract #2 dated 01.01.2007.
- 87 Passport #42 of the auto scale, ser. #5743 dated 20.10.2002. Last verification date 29.12.2008.
- 88 Contract #13/2 dated 01.10.2009.

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- 89 Oder # 2 about estimation of the period of documentation storing dated 27.04.10
- 90 Protocol #4 of the committee meeting on labour protection examination results dated 29.01.08
- 91 Protocol #5 of the committee meeting on labour protection examination results dated 24.06.08
- 92 Protocol #04/09-7 of electrosecurity examination results dated 30.01.09
- 93 Protocol #07/08-7 of electrosecurity examination results dated 04.02.08
- 94 Abstract from the protocol #42 on the fire safety examination results dated 24.01.09
- 95 Abstract from the protocol #51 on the fire safety examination results dated 28.01.09