DETERMINATION REPORT
GLOBAL CARBON B.V.

DETERMINATION OF THE WASTE HEAP DISMANTLING IN LUHANSK REGION OF UKRAINE BY PE "SNABTEHMONTAZH" WITH THE AIM OF REDUCTION GREENHOUSE GASES EMISSIONS TO ATMOSPHERE

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Global Carbon B.V.	Lennard de Klerk

Summary:

Bureau Veritas Certification has made the determination of the "Waste Heap Dismantling in Luhansk Region of Ukraine by PE "SNABTEHMONTAZH" with the Aim of Reduction Greenhouse Gases Emissions to Atmosphere" project of PE "SNABTEHMONTAZH" located in Volodarsk village, Luhansk Region, Ukraine on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

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

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

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

Report No.:	Subject Group:
Ukraine-det/0380/2011	JI

Project title:
"Waste Heap Dismantling in Luhansk Region of Ukraine by PE "SNABTEHMONTAZH" with the Aim of Reduction Greenhouse Gases Emissions to Atmosphere"

Work carried out by:

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1 INTRODUCTION

Global Carbon B.V. has commissioned Bureau Veritas Certification to determine its JI project “Waste Heap Dismantling in Luhansk Region of Ukraine by PE “SNABTEHMONTAZH” with the Aim of Reduction Greenhouse Gases Emissions to Atmosphere” (hereafter called “the project”) at Volodarsk village, Luhansk Region, Ukraine.

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

1.1 Objective

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

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

1.2 Scope

The determination scope is defined as an independent and objective review of the project design document, the project’s baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

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

1.3 Determination team

The determination team consists of the following personnel:

Kateryna Zinevych
Bureau Veritas Certification Team Leader, Climate Change Verifier

Olena Manziuk
Bureau Veritas Certification, Climate Change Verifier

Vladimir Lukin
Bureau Veritas Certification Climate Change Verifier

Vladimir Kulish
Bureau Veritas Certification Climate Change Verifier Trainee

This determination report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification, Internal reviewer

2 METHODOLOGY

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

In order to ensure transparency, a determination protocol was customized for the project, according to the version 01 of the Joint Implementation Determination and Verification Manual, issued by the Joint Implementation Supervisory Committee at its 19 meeting on 04/12/2009. The protocol shows, in a transparent manner, criteria (requirements), means of determination and the results from determining the identified criteria. The determination protocol serves the following purposes:

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

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

2.1 Review of Documents

The Project Design Document (PDD) submitted by Global Carbon B.V. and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for users of the joint implementation project design document form, Approved CDM methodology and/or Guidance on criteria for baseline setting and monitoring, Kyoto Protocol, Clarifications on Determination Requirements to be Checked by an Accredited Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, Global Carbon B.V. revised the PDD and resubmitted it on 21/02/2012.

The determination findings presented in this report relate to the project as described in the PDD version(s) 1.0, 3.1, 3.2 and 3.3.

2.2 Follow-up Interviews

On 26/10/2011 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of PE "SNABTEHMONTAZH" and Global Carbon B.V. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
PE "SNABTEHMONTAZH"	➢ Project history, ➢ Project approach, ➢ Project boundary, ➢ Implementation schedule, ➢ Organizational structure, ➢ Responsibilities and authorities, ➢ Training of personnel, ➢ Quality management procedures and technology, ➢ Rehabilitation/Implementation of equipment (records), ➢ Metering equipment control, ➢ Metering record keeping system, database, ➢ Technical documentation, ➢ Monitoring plan and procedures, ➢ Permits and licenses, ➢ Local stakeholder's response.
Consultant: Global Carbon B.V.	➢ Baseline methodology, ➢ Monitoring plan, ➢ Additionality proofs, ➢ Calculation of emission reduction.

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the determination is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the project design.

If the determination team, in assessing the PDD and supporting documents, identifies issues that need to be corrected, clarified or

improved with regard to JI project requirements, it will raise these issues and inform the project participants of these issues in the form of:

(a) Corrective action request (CAR), requesting the project participants to correct a mistake in the published PDD that is not in accordance with the (technical) process used for the project or relevant JI project requirement or that shows any other logical flaw;

(b) Clarification request (CL), requesting the project participants to provide additional information for the determination team to assess compliance with the JI project requirement in question;

(c) Forward action request (FAR), informing the project participants of an issue, relating to project implementation but not project design, that needs to be reviewed during the first verification of the project.

The determination team will make an objective assessment as to whether the actions taken by the project participants, if any, satisfactorily resolve the issues raised, if any, and should conclude its findings of the determination.

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

3 PROJECT DESCRIPTION

The project “Waste Heap Dismantling in Luhansk Region of Ukraine by PE “SNABTEHMONTAZH” with the Aim of Reduction Greenhouse Gases Emissions to Atmosphere” is aimed at achieving GHG emission reductions through processing waste heaps of old coal mines in Luhansk region of Ukraine.

Ukraine is the largest coal mining country in Europe and is among top eight in the world. The centre of coal mining in Ukraine is Donbas, an area located in the eastern part of Ukraine and spreading from the North of Donetsk region to the South of Luhansk region. The coal mining industry is one of the major polluters of the environment in Ukraine. The damage to ecology during the process of coal extraction is caused presumably by corruption of the underground layers, formation of huge spoil areas for waste rock storage, and uncontrolled combustion of coal in the waste heaps.

The main idea of the project is to process waste heaps originated due to coal extraction from mines. This activity will prevent significant amount of greenhouse gas emissions into the atmosphere, generate considerable amount of coal by use of technology different from mining, and

rehabilitate spoiled land to make it suitable for further utilization and afforestation.

The Project activities include installation of the coal extraction facilities near the waste heaps and application of special machinery that will perform preparation, loading and transportation of the rock mass from the waste heaps to the beneficiation factory.

As a result, beneficiation plant processes waste heaps with effective separation of the material into bare rock mass and high quality anthracite coal suitable for further utilization for energy generation purposes. The rock mass is stored into heaps and can be used for in various ways: construction of dams; filling of open pits and deep basins of river channels and reservoirs; earthworks and road construction. Technological process is environmentally sound and does not require any use of hazardous materials.

All technologies used for coal extraction from the waste heaps are typical and used in the other plants, hence no weaknesses are expected.

The activities implemented within the project reflect current good practice: the installed equipment is modern and efficient; it maintains continuous and accurate process of coal beneficiation. However since the working conditions of the equipment are hard, it can be replaced by analogues if damaged or worn-out.

The project objective is to reduce anthropogenic greenhouse gas emissions into the atmosphere. Moreover, the project will contribute to improvement of ecological situation at the enterprise.

The mentioned above objective to be achieved by coal extraction from coal containing waste heaps in order to prevent CO_2eq emissions into the atmosphere which are occurring as the result of waste heaps spontaneous burning and also to obtain additional quantities of coal. An important result of waste heaps coal extraction with further processing of the waste heaps mass is the exclusion of unfavourable ecological impacts of the waste heaps (dust emissions, greenhouse gas emissions, harmful gases and pollutants emissions, polluted waste water discharge from the surface of the waste heaps into the environment). Waste heaps coal extraction and the usage of the rock mass enables further reclamation of the renewed land from the waste heaps and efficient economical use of the area, which is restored for construction needs.

Decision making about the project implementation was done in 2008. Project development, purchase of equipment, construction and mounting works, and commissioning works were held from January 2009 to September 2009. On 24th of September, 2009 the order for preparation of

the plant to commissioning has been issued. Since then the beneficiation complex has been extracting anthracite coal and contributing to reduction of greenhouse gas emissions into the atmosphere.

Coal extracted from the waste heaps will substitute the coal from the mines and will be used mainly for energy production purposes at coal-fired power plants. Coal mining is a source of the fugitive emissions of methane; therefore, the project activity will reduce methane emissions by reducing the amount of coal required to be mined.

Emission reductions due to the implementation of this project will come from two major sources:

- Removing the source of green-house gas emissions from the combustion of waste heaps by the extraction of coal from the waste-heaps;
- Negative leakage through reduced fugitive emissions of methane due to the replacement of coal that would have been mined, by the project.

Waste heaps are sources of uncontrolled green-house gas emissions, hazardous substances emissions, particle emissions, ground water contamination. Addressing problems of waste heaps is costly and is not addressed in a systematic way in Ukraine. Efforts to stop burning waste heaps and break them down completely are in line with the existing environmental legislation of Ukraine. The proposed project is positively evaluated by local authorities.

CAR's (CAR01-CAR06), CL's (CL01 - CL04, CL 14 - CL15) and their resolutions/conclusions applicable to project description are listed in the Appendix A: Determination protocol (Table 2) below.

4 DETERMINATION CONCLUSIONS

In the following sections, the conclusions of the determination are stated.

The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are described in the Determination Protocol in Appendix A.

The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 19 Corrective Action Requests and 15 Clarification Requests.

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

4.1 Project approvals by Parties involved (19-20)

The project has already received Letter of Endorsement № 3541/23/7 on the JI project "Waste Heap Dismantling in Luhansk Region of Ukraine by PE "SNABTEHMONTAZH" with the Aim of Reduction Greenhouse Gases Emissions to Atmosphere" dated 01/12/2011 issued by the State Environmental Investment Agency of Ukraine. Declaration of Approval with the number 2011JI43 was issued by the DFP of the Netherlands (State NL Agency Ministry of Economic Affairs, Agriculture and Innovation) on 19/01/2012.

Bureau Veritas Certification received these letters from the project participants and does not doubt their authenticity.

As for the time being no written approval for the project was issued by Ukrainian Party. After receiving Determination Report from the Accredited Independent Entity the project documentation will be submitted to the Ukrainian Designated Focal Point (DFP) which is State Environmental Investment Agency of Ukraine, for receiving a Letter of Approval.

Bureau Veritas Certification considers the letters to be unconditional in accordance with paragraphs 19-20 of the DVM.

CARs (CAR 07, CAR 08) and their resolutions/conclusions applicable to project approvals are listed in the Appendix A: Determination Protocol (Table 2) below.

4.2 Authorization of project participants by Parties involved (21)

The official authorization of each legal entity listed as project participant in the PDD by Parties involved will be provided in the written project approvals (refer to 4.1 above).

No outstanding issues were raised.

4.3 Baseline setting (22-26)

The PDD explicitly indicates that using a methodology for baseline setting and monitoring developed in accordance with appendix B of the JI guidelines (hereinafter referred to as JI specific approach) was the selected approach for identifying the baseline.

The PDD provides a detailed theoretical description in a complete and transparent manner, as well as justification, that the baseline is established:

(a) By listing and describing the following plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one:

a. Scenario 1. *Continuation of existing situation*
In the current situation waste heaps are not utilised. Coal contained in the waste heaps is not a subject of extraction and; as a result, spontaneous self-heating and subsequent burning of waste heaps leading to uncontrolled GHG emissions is very common. Coal is produced by underground mines, which causes fugitive emissions of methane as well as the formation of new waste heaps.

b. Scenario 2. *Direct energy production from the heat energy of burning waste heap*
Waste heaps are not extinguished and not monitored properly. Some burning heaps are used to produce energy by direct insertion of heat exchangers into the waste heap. This captures a certain amount of heat energy for direct use or conversion into electricity. Coal for industrial use is not extracted from the waste heaps under this scenario. Coal is produced by underground mines of the region and used for energy production or other purposes. Mining activities result in fugitive gas release, and the formation of more waste heaps.

c. Scenario 3. *Production of construction materials from waste heap matter*
Waste heaps are being processed in order to produce construction materials (bricks, panels, etc.). Coal in the waste heap matter is burnt during the agglomeration process. Coal is produced by underground mines of the region and used for energy production or other purposes. Mining activities result in fugitive gas release, and the formation of more waste heaps.

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

e. Scenario 5. *Systematic monitoring of waste heaps condition, regular fire prevention and application of extinguishing measures*
Waste heaps are systematically monitored and its thermal condition is observed. Regular fire prevention measures are taken. Coal is not extracted from the waste heaps, but is produced by underground mines and used for energy production or other purposes. Mining activities result in fugitive gas release and formation of more waste heaps.

(b) Taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector. In this context, the following key factors that affect a baseline are taken into account:

a. Although efforts to stop burning waste heaps and break them down are completely in line with the existing environmental legislation of Ukraine, the solution of these problems is rather costly, requires significant efforts and, actually, is not addressed in a systematic way in Ukraine. The main reason is deficiency of necessary financial resources and lack of political will. The situation is deteriorated by the fact that coal mining itself has decreased over the last 10-12 years as a result of the lack of financing and high net cost of coal extraction;

b. Key factors that affect the baseline such as sectoral reform policies and legislation, economic situation/growth and socio-demographic factors as well as decreasing and/or increasing demand to be met by the project, availability of capital, technologies/techniques, skills and know-how, availability of best available technologies/techniques in the future, fluctuations in fuel prices, national expansion plans for the energy;

c. Describe any availability of capital (including investment barriers) Ukraine is considered to be a high risk country for doing business and investing in. Almost no private capital is available from domestic or international capital markets for mid to long term investments, and any capital that is available has high cost. In table 5 the PDD Version 3.3 dated 21/02/2012 represents risks of doing business in Ukraine according to various international indexes and studies;

d. The most plausible future scenario identified by performing a barrier analysis. Key factors that affect the baseline such as sectoral reform policies and legislation, economic situation/growth and socio-demographic factors as well as decreasing and/or increasing demand to be met by the project, availability of capital, technologies/techniques, skills and know-how, availability of best available technologies/techniques in the future, fluctuations in fuel prices, national and/or subnational expansion plans for the energy sector taken into account while formulating the plausible feature scenarios;

e. Ukrainian coal sector is largely state-controlled. Energy and Coal Ministry of Ukraine decides production level of state mines, based on their performance. After this, state controlled mines sell their coal to the state Trading Company "Coal of

Ukraine". This company also buys coal from private mines and arranges supply of coal to thermal electricity companies. Prices for coal mines differ significantly for public and private mines. In general, prices of state mines are more than 60% higher than the prices for private enterprises;

f. The role of energy sector is absolute and crucial for Ukraine. Power sector is a political factor of sovereignty in Ukraine. Ukrainian economy is considered to be one of the most energy intensive in the world in terms of the consumption of primary energy per a gross domestic product unit. On March 15, 2006 the Cabinet of Ministers of Ukraine adopted “Energy Strategy of Ukraine till 2030”. The Energy strategy considers exploration of alternative and renewable energy sources as a significant factor in increasing the level of energy safety, decrease of energy anthropogenic impact on the environment and counteractions against global climate change.

The alternatives have been identified based on national practice and reasonable assumptions with regard to the sectoral legislation and reform, economic situation in the country, availability of raw materials and fuel as well as technologies and logistics etc.

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

In such circumstances it is safe to say that all scenarios do not contradict existing laws and regulations.

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

The project “Processing of waste heaps at Monolith-Ukraine” is selected as the comparable JI project. Accredited independent entity has already positively determined that it would result in a reduction of anthropogenic emissions by sources or an enhancement of net anthropogenic removals by sinks that is additional to any that would otherwise occur. This determination has already been deemed final by the JISC. Appropriate documentation such as PDD and Determination Report regarding this

project is available traceably and transparently on the UNFCCC JI Website:
http://ji.unfccc.int/JI_Projects/DB/IPT7L3CLGIZTGGX27T2101W7XCUCW/Determination/DNV-CUK1315829182.27/viewDeterminationReport.html

CARs (CAR 09), CLs (CL05 – CL06) and their resolutions/conclusions applicable to baseline setting are listed in the Appendix A: Determination protocol (Table 2) below.

4.4 Additionality (27-31)

The PDD provides a justification of the applicability of the approach with a clear and transparent description, as per item 4.3 above.

The developer of the project proved that anthropogenic emissions under the project are lower than the emissions that would take place in the absence of the project activity.

Additionality proofs are provided. Five plausible and realistic alternative scenarios were identified for each type of modernization identified in the project:

- Continuation of existing situation
- Direct energy production from the heat energy of burning waste heap
- Production of construction materials from waste heap matter
- Coal extraction from waste heaps without JI incentives
- Systematic monitoring of waste heaps condition, regular fire prevention and application of extinguishing measures

Additionality is demonstrated appropriately as a result of the analysis using the approach chosen.

The identified areas of concern as to additionality, project participants response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination report (refer to CAR 10 – CAR 12; CL 07).

4.5 Project boundary (32-33)

The project boundary defined in the PDD, which in accordance with the specific approach is delineated by the physical site of the entire technological complex, encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs) that are:

(i) Under the control of the project participants, such as:
- Carbon dioxide emissions from the use of fuel to run part of the project equipment (motor cars),
- Carbon dioxide emissions associated with the electricity consumption by the project equipment.

(ii) Reasonably attributable to the project; and

(iii) Significant, i.e., as a rule of thumb, would by each source account on average per year over the crediting period for more than 1 percent of the annual average anthropogenic emissions by sources of GHGs, or exceed an amount of 2,000 tonnes of CO_2 equivalent, whichever is lower.

The delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD.

Based on the above assessment, the AIE hereby confirms that the identified boundary and the selected sources and gases are justified for the project activity.

No outstanding issues were raised.

4.6 Crediting period (34)

The PDD states the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began, and the starting date is 12/01/2009, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 15 years or 180 months.

The PDD states the length of the crediting period in years and months, that is 3 years and 3 months, and the date on which the first emission reductions are generated by the project that is 01/10/2009.

The PDD states that the crediting period for the issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project.

The PDD states that the extension of its crediting period beyond 2012 is subject to the host Party approval, and the estimates of emission reductions are presented separately for those until 2012 and those after 2012 in all relevant sections of the PDD.

The identified areas of concern as to crediting period, project participants response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination report (refer to CL 08 – CL 12).

4.7 Monitoring plan (35-39)

The PDD, in its monitoring plan section, explicitly indicates that JI specific approach was the selected.

The monitoring plan describes all the necessary factors and key characteristics that will be monitored, and the period during which they will be monitored, particularly all the critical factors for controlling and reporting on project activities, such as reporting forms, the operating structure and management structure of the enterprise, that will be applied when implementing the monitoring plan.

The monitoring plan specifies the parameters, constant values and variables that are reliable (i.e. consistent and accurate values), dependable (i.e. that is clearly related to results that are measured) and provide a clear picture of emission reductions that are subject to monitoring, such as: total amount of diesel fuel, coal and electricity consumed.

The monitoring plan has properly given a list of standard variables that are contained in Annex B to the "Guidance on criteria for baseline setting and monitoring," developed by the JISC, including: baseline emissions (BE_y, $BE_{XX,y}$), project emissions (PE_y, $PE_{XX,y}$), electricity consumption (EC_y), CO_2 emission factor ($EF_{CO2,XX}$, $EF_{CH4,XX}$, $EF_{CO2,ELEC,y}$), leakages in year - LE_y, $LE_{XX,y}$, global warming potential - GWP_{XX}, density - ρ_x, net calorific value - NCV_{XX}, fuel quantity combusted - FC_{XX}, oxidation factor for fuel combustion $OXID_{XX}$.

The monitoring plan explicitly and clearly distinguishes:

(i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination, such as:

GWP_{CH4}	Global Warming Potential of Methane
ρ_{CH4}	Methane density
p_{WHB}	Correction factor for the uncertainty of the waste heaps burning process

(ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination: none.

(iii) Data and parameters that are monitored throughout the crediting period, such as:

$EC_{PJ,y}$	Additional electricity consumed in year *y* as a result of the implementation of the project activity

$FC_{PJ,Diesel,y}$	Amount of diesel fuel that has been used for the project activity in year *y*
$EF_{CO2,EL,y}$	CO_2 emission factor for electricity consumed by the project activity in year *y*
$FC_{BE,Coal,y}$	Amount of coal that has been mined in the baseline scenario and combusted for energy use, equivalent to the amount of coal extracted from the waste heaps in the project activity in year *y*
$NCV_{Coal,y}$	Net Calorific Value of coal in year *y*
$NCV_{Diesel,y}$	Net Calorific Value of diesel fuel in year *y*
$OXID_{Coal,y}$	Carbon Oxidation factor of coal in year *y*
$OXID_{Diesel,y}$	Carbon Oxidation factor of diesel fuel in year *y*
$k^{C}_{Diesel,y}$	Carbon content of diesel fuel in year *y*
$k^{C}_{Coal,y}$	Carbon content of coal in year *y*
$EF_{CH_4,CM,y}$	Emission factor for fugitive methane emissions from coal mining in year *y*

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording. For any monitoring period the following parameters have to be collected and registered:

- additional electricity consumed in the relevant period as a result of the implementation of the project activity;
- amount of diesel fuel that has been used for the project activity in the relevant period;
- 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.

The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions, leakage and project emissions.

Emissions in the baseline scenario are calculated as follows:

$$BE_{y} = BE_{WHB,y}, \quad \text{(Equation 1)}$$

Where:

BE_{y} - Baseline Emissions in year *y*, (t CO_2eq);

$BE_{WHB,y}$ - Baseline Emissions due to burning of the waste heaps in year *y* (t CO_2eq).

These, in turn, are calculated as:

$$BE_{WHB} = \frac{FC_{BE,Coal,y}}{1000} \cdot p_{WHB} \cdot NCV_{Coal,y} \cdot OXID_{Coal,y} \cdot k^{C}_{Coal,y} \cdot 44/12, \quad \text{(Equation 2)}$$

Where:

$FC_{BE,Coal,y}$ - Amount of coal that has been mined in the baseline scenario and combusted for energy use, equivalent to the amount of coal extracted from the waste heaps in the project activity in year *y*, (t);

p_{WHB} - Correction factor for the uncertainty of the waste heap burning process. This factor is defined on the basis of the survey of all the waste heaps in the area that provides a ratio of waste heaps that are or have been burning at any point in time to all existing waste heaps, (ratio).

$$LE_{y} = -LE_{CH_4,y} \quad \text{(Equation 3)}$$

Where:

LE_{y} - Leakages in year *y*, (t CO_2eq).

$LE_{CH_4,y}$ - Leakages due to fugitive emissions of methane in the mining activities in year *y* (t CO_2eq).

Leakages due to fugitive emissions of methane in the mining activities are calculated as follows):

$$LE_{CH_4,y} = FC_{BE,Coal,y} \cdot EF_{CH_4,CM,y} \cdot \rho_{CH_4} \cdot GWP_{CH_4}, \quad \text{(Equation 4)}$$

Where:

$FC_{BE,Coal,y}$ - Amount of coal that has been mined in the baseline scenario and combusted for energy use, equivalent to the amount of coal extracted from the waste heaps in the project activity in year *y*, (t).

Emissions from the project activity are calculated as follows:

$$PE_{y} = PE_{EL,y} + PE_{Diesel,y}, \quad \text{(Equation 5)}$$

Where:

PE_{y}, - Project Emissions due to project activity in year *y* (t CO_2eq),

$PE_{EL,y}$ - Project Emissions due to consumption of electricity from the grid by the project activity in year *y* (t CO_2eq),

$PE_{Diesel,y}$ - Project Emissions due to consumption of diesel fuel by the project activity in year *y* (t CO_2eq).

These, in turn, are calculated as:

$$PE_{EL,y} = EC_{PJ,y} \cdot EF_{CO2,EL,y}, \quad \text{(Equation 6)}$$

where:

$EC_{PJ,y}$ - Additional electricity consumed in year *y* as a result of the implementation of the project activity (MWh),

$EF_{CO2,EL,y}$ - CO_2 emission factor for electricity consumed by the project activity in year *y* equal to emission factor of Ukrainian grid for reducing projects (t CO_2/MWh). The latest emission factor for Ukraine is stated in Order No.75 dated 13/05/2011 issued by National Environmental Investment Agency of Ukraine. In this project additional electricity consumption is a part of the project scenario. Calculation of the project scenario emissions due to additional electricity consumption must take grid losses and associated emissions into account. The selected emission factor is conservative.

$$PE_{Diesel,y} = \frac{FC_{PJ,Diesel,y}}{1000} \cdot NCV_{Diesel,y} \cdot OXID_{Diesel,y} \cdot k^{C}_{Diesel,y} \cdot 44/12, \quad \text{(Equation 7)}$$

where:

$FC_{PJ,Diesel,y}$ - Amount of diesel fuel that has been used for the project activity in year *y*, t.

The annual emission reductions are calculated as follows:

$$ER_y = BE_y - LE_y - PE_y \quad \text{(Equation 8)}$$

where:

ER_y - Emissions reductions of the JI project in year *y* (t CO_2eq)
LE_y - Leakages in year *y* (t CO_2eq);
BE_y - Baseline Emission in year *y* (t CO_2eq);
PE_y - Project Emission in year *y* (t CO_2eq).

The monitoring plan presents the quality assurance and control procedures for the monitoring process, which are sufficiently described in tabular form in sections of the PDD D.1.1.1., D.1.1.3. and D.2. This includes, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available on request.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities:

- Electricity Consumption — Production Manager, Chief Energy Officer, Accounting Office
- Coal production and delivery — Production Manager
- Diesel fuel consumption — Procurement Office, Accounting Office

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. A detailed structure of the team and team members will be established in the Monitoring Manual prior to initial and first verification.

On the whole, the monitoring report reflects good monitoring practices appropriate to the project type.

The monitoring plan provides, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources (e.g. official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature etc.) but not including data that are calculated with equations.

The monitoring plan indicates that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project.

The identified areas of concern as to the monitoring plan, project participants' response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination Report (refer to CAR 13 – CAR 17 and Cl09 – CL10).

4.8 Leakage (40-41)

The PDD appropriately describes an assessment of the potential leakage of the project and appropriately explains which sources of leakage are to be calculated, and which can be neglected.

This project will result in a net change in fugitive methane emissions due to the mining activities. As coal in the baseline scenario is only coming from mines it causes fugitive emissions of methane. These are calculated as standard country specific emission factor applied to the amount of coal that is extracted from the waste heaps in the project scenario (which is the same as the amount of coal that would have been mined in the baseline scenario). Source of the leakage is the fugitive methane emissions due to coal mining. These emissions are specific to the coal that is being mined. Coal produced by the project activity is not mined but extracted from the waste heap through the advanced beneficiation process. Therefore, coal produced by the project activity substitutes the coal would have been otherwise mined in the baseline. Coal that is mined in the baseline has fugitive methane emissions associated with it and the coal produced by the project activity does not have such emissions associated with it.

The PDD provides a procedure for estimation of leakage.

No outstanding issues were raised.

4.9 Estimation of emission reductions or enhancements of net removals (42-47)

The PDD indicates assessment of emissions in the baseline scenario and in the project scenario as the approach chosen to estimate the emission reductions generated by the project.

The PDD provides estimates of:

(a) Emissions in the project scenario (within the project boundary), which are:

- 15 737 tonnes of CO2eq in 2009-2012;
- 66 528 tonnes of CO_2eq in 2013-2024.

(b) Leakage, which is:

- - 100 398 tonnes of CO_2eq in 2009-2012;
- - 424 386 tonnes of CO_2eq in 2013-2024.

(c) Emissions in the baseline scenario (within the project boundary), which are:

- 474 243 tonnes of CO_2eq in 2009-2012;
- 2 184 149 tonnes of CO_2eq in 2013-2024.

(d) Emission reductions adjusted by leakage (based on (a)-(c) above), which are:

- 558 904 tonnes of CO_2eq in 2009-2012;
- 2 542 007 tonnes of CO_2eq in 2013-2024.

The estimates referred to above are given:

(a) On an annual basis;

(b) From 01/10/2009 to 30/09/2024, covering the whole crediting period;

(c) Based on primary sources;

(d) For each GHG gas, such as CO_2;

(e) In tonnes of CO_2 equivalent, using global warming potentials defined by decision 2/CP.3 or amended in accordance with Article 5 of the Kyoto Protocol.

Formulae for calculating the above estimations are given in section 4.7. All formulae are in the correct sequence and compliance across the PDD.

For calculating the estimates referred to above, key factors, e.g. energy prices and availability, market development influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account, as appropriate.

Data sources used for calculating the estimates referred to above, such as feasibility studies, production forecasts, actual historical monitored data are clearly identified, reliable and transparent.

Emission factors, such as emission factor for electricity consumption, emission factor for heavy fuel oil, were selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.

The estimation referred to above is based on conservative assumptions and the most plausible scenarios in a transparent manner.

The estimates referred to above are consistent throughout the PDD.

The average annual emission reduction estimations over the crediting period are calculated by dividing the total estimated emission reductions over the crediting period by the total number of months of the crediting period, and multiplying by twelve.

Detailed algorithms of calculations and their results are described in section D, E and supporting documents to the PDD.

The identified areas of concern as to the evaluation of emission reductions, project participants' response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination Report (refer to CAR 18 and CI 13).

4.10 Environmental impacts (48)

Sections F.1. and F.2. of the PDD provide information about the documentation that contains the analysis of environmental impacts caused by the project, including the transboundary impact, in accordance with procedures defined by the Host Party.

The Host Party for this project is Ukraine. Environmental Impact Assessment (EIA) is the part of the Ukrainian project planning and permitting procedures. Implementation regulations for EIA are included in the Ukrainian State Construction Standard DBN A.2.2.-1-95 (amended 2003) (Title: "Structure and Contents of the Environmental Impact Assessment Report (EIR) for Designing and Construction of Production Facilities, Buildings and Structures").

First EIA activity was completed in 2008 by SPE "Firma Priroda". This study tackled environmental impacts by waste hips dismantling. However, upon completion of project documentation in 2009 the scope of the EIA has to be widened to include waste heap processing complex. The full scope EIA in accordance with the Ukrainian legislation has been conducted for the proposed project by Donbass State Technical University in 2010. The EIA has gone through Environmental Expertise and on 2nd of June 2011 received positive conclusion No. 12/21.04.2011-092 by Environmental Expertise Department of State Committee of Environmental Protection in Luhansk Oblast. The environmental impact of the project has not been considered significant or prohibitive. Completion of Environmental Impact Assessment reports and positive findings of the competent state authority finalise the procedure of the environmental impact assessment according to the Ukrainian laws and regulations. Key findings of this EIA are summarized in section F.1 of the PDD.

The PDD provides conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party, if the analysis referred to above indicates that the environmental impacts are considered significant by the project participants or the host Party.

The identified areas of concern as to the environmental impacts, project participants' response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination Report (refer to CAR 19).

4.11 Stakeholder consultation (49)

Since the project activities do not imply any negative environmental impact and negative social effect, special public discussions were not necessary. Consultations with stakeholders were held in meetings of local authorities.

Public has been informed about the planned economic activities with the goal to identify public attitudes and take opinion in account during environmental impact assessment process. Public was informed about the project, especially about the following information:

- project name, goals and site;
- legal name and address of project owner and its representative;
- approximate dates of EIAs procedures;
- deadline and formats of submission of public comments;
- when and where EIA documents can be retrieved.

All comments relating to the project implementation were positive. No negative comments were received.

The identified areas of concern as to the Stakeholder consultation, project participants' response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination Report (refer to CL 11).

4.12 Determination regarding small scale projects (50-57)

Not applicable.

4.13 Determination regarding land use, land-use change and forestry (LULUCF) projects (58-64)

Not applicable.

4.14 Determination regarding programmes of activities (65-73)

Not applicable.

5 SUMMARY AND REPORT OF HOW DUE ACCOUNT WAS TAKEN OF COMMENTS RECEIVED PURSUANT TO PARAGRAPH 32 OF THE JI GUIDELINES

No comments, pursuant to paragraph 32 of the JI Guidelines, were received.

6 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the "Waste Heap Dismantling in Luhansk Region of Ukraine by PE "SNABTEHMONTAZH" with the Aim of Reduction Greenhouse Gases Emissions to Atmosphere " Project in Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The determination consisted of the following three phases:

i) a desk review of the project design and the baseline and monitoring plan;
ii) follow-up interviews with project stakeholders;
iii) the resolution of outstanding issues and the issuance of the final determination report and opinion.

The additionality of the project has been assessed through provision of traceable and transparent information showing that the same approach for

additionality demonstration has already been taken in cases for which determination is deemed final and which can be regarded as comparable, as suggested in item “b)“ of Paragraph 44 of “Guidance on criteria for baseline setting and monitoring” version 03. The PDD identifies a comparable project, demonstrates that the identified project is a comparable project (to be) implemented under comparable circumstances, and provides justification, that determination for a comparable project is relevant for the project at hand.

Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

Emission reductions that occur due to the project are therefore additional to those that would have occurred without the project activity. On condition of the introduction and implementation of the project according to the design decision, the project is likely to reach the estimated amount of emission reductions.

The review of the project design documentation and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

The determination revealed one pending issue related to the current determination stage of the project: the written approval of the project by the host Country (Ukraine) wasn’t obtained. If the written approval by the host Country is provided, it is our opinion that the project as described in the Project Design Document, version 3.3 dated 21/02/2012 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Country criteria as well as expectations of the stakeholders.

The review of the project design documentation (version 3.3 dated 21/02/2012) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

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

7 REFERENCES

Category 1 Documents:
Documents provided by Global Carbon B.V. that relate directly to the GHG components of the project.

/1/ Project Design Document "Waste Heap Dismantling in Luhansk Region of Ukraine by PE "SNABTEHMONTAZH" with the Aim of Reduction Greenhouse Gases Emissions to Atmosphere" version 1.0 dated 04/10/2011
/2/ Emission Reductions Calculation version 1.0 excel file dated 04/10/2011
/3/ Project Design Document "Waste Heap Dismantling in Luhansk Region of Ukraine by PE "SNABTEHMONTAZH" with the Aim of Reduction Greenhouse Gases Emissions to Atmosphere" version 3.1 dated 23/01/2012
/4/ Emission Reductions Calculation version 3.1 excel file dated 23/01/2012
/5/ Project Design Document "Waste Heap Dismantling in Luhansk Region of Ukraine by PE "SNABTEHMONTAZH" with the Aim of Reduction Greenhouse Gases Emissions to Atmosphere" version 3.2 dated 30/01/2012
/6/ Emission Reductions Calculation version 3.2 excel file dated 30/01/2012
/7/ LoE No 3541/23/7 dated 01/12/2011 issued by the State environmental Investment Agency of Ukraine
/8/ Declaration of Approval #2011JI43 dated 19/01/2012 issued by the State NL Agency Ministry of Economic Affairs, Agriculture and Innovation
/9/ Project Design Document "Waste Heap Dismantling in Luhansk Region of Ukraine by PE "SNABTEHMONTAZH" with the Aim of Reduction Greenhouse Gases Emissions to Atmosphere" version 3.3 dated 21/02/2012
/10/ Emission Reductions Calculation version 3.3 excel file dated 17/02/2012

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

/1/ Work project "Waste heap concentrating plant at mine # 40 in Sverdlovsk town"
Environmental impact assessment
/2/ "Waste heap concentrating plant at mine # 40 in Sverdlovsk town"
Intention announcement
/3/ Task on preparing of environmental impact assessment materials. SAV-PLAST LLC 2010

/4/ State ecology expertise conclusion # 12/21.04.2011-092 dated 02/06/2011
/5/ Permit on special water use # Укр 1.3.15 Луг dated 28/07/2011
/6/ Work project "Coal production waste heap design at former Volodarskyi Sverdlovantratsyt State Enterprise, Volodarsk, Luhansk region", Krasnyi Luch–2011
/7/ Luhansk branch of Regional Electricity Grids State Enterprise. Invoice # 124 dated 30 April 2011, consumer: SAV-PLAST LLC
/8/ Luhansk branch of Regional Electricity Grids State Enterprise. Invoice # 124P dated 30 April 2011, consumer: SAV-PLAST LLC
/9/ SAV-PLAST LLC. Statement on consumed active energy for April 2011. (Agreement # 124 dated 14 July 2008)
/10/ SAV-PLAST LLC. Statement on consumed reactive energy for April 2011. (Agreement # 124 dated 14 July 2008)
/11/ SAV-PLAST LLC. Statement on generated reactive energy for April 2011. (Agreement # 124 dated 14 July 2008)
/12/ Luhansk branch of Regional Electricity Grids State Enterprise. Invoice # 124P dated March 31, 2011, consumer: SAV-PLAST LLC
/13/ Lease agreement # 15/08/08 dated 15 August 2008, Alchevsk
/14/ Lease acceptance-transmitting statement dated 01 September 2008, Sverdlovsk
/15/ Acceptance-transmitting statement on vehicles according to the agreement # 15/08/08 dated 15 August 2008
/16/ Additional agreement # 1 dated 01/09/2009 to the lease agreement # 15/08/08
/17/ Sale and purchase contract dated 21 August 2011, Luhansk
/18/ Certificate on sampling and research services, registration # UA4251/2011/2.1 dated 12/07/2011, customer: Quick Done Company LLC
/19/ Certificate on sampling and research services, registration # UA4943/2011/2.1 dated 19/08/2011, customer: Quick Done Company LLC
/20/ Certificate on sampling and research services, registration # UA5537/2011/2.1 dated 15/09/2011, customer: Quick Done Company LLC
/21/ PE "SNABTEHMONTAZH". Order # 21 – 09 dated September 21, 2009 "On preparation to commissioning of concentrating unit for mine # 40 waste heap concentration
/22/ PE "SNABTEHMONTAZH". Order # 21 – 09/1 dated September 21, 2009 "On Instructions approval of the enterprise activity main parameters monitoring within JI project implementation according to the Kyoto Protocol"
/23/ PE "SNABTEHMONTAZH". "Instructions on the enterprise activity main parameters monitoring within JI project implementation according to the Kyoto Protocol" dated September 21, 2009
/24/ Annex 1. Responsibilities on monitoring
/25/ PE "SNABTEHMONTAZH". Order # 21 – 09/2 dated September 21,

2009 “On terms of documents storage”
/26/ Operational report for September 30, 2011
/27/ Operational report for August 31, 2011
/28/ Operational report for July 31, 2011
/29/ Operational report for June 30, 2011
/30/ Operational report for May 31, 2011
/31/ Operational report for April 30, 2011
/32/ Operational report for March 31, 2011
/33/ Operational report for February 28, 2011
/34/ Operational report for January 31, 2011
/35/ Operational report for December 31, 2010
/36/ Operational report for November 30, 2010
/37/ Operational report for October 31, 2010
/38/ Operational report for September 30, 2010
/39/ Operational report for August 31, 2010
/40/ Operational report for July 31, 2010
/41/ Operational report for June 30, 2010
/42/ Operational report for May 31, 2010
/43/ Operational report for April 30, 2010
/44/ Operational report for March 31, 2010
/45/ Operational report for February 28, 2010
/46/ Operational report for January 31, 2010
/47/ Operational report for December 31, 2009
/48/ Operational report for November 30, 2009
/49/ Operational report for October 31, 2009
/50/ Static truck scales КОДА-А, Module A. Operational manual КОДА 04.002.PE
/51/ Marking and sealing of Module A-60-18, fabrication # 4301107, manufactured in 2011
/52/ Calibration certificate on static truck scales КОДА-А, Module A-60-18 modification, fabrication # 4301107 dated 27/11/2011
/53/ Static wagon scales КОДА-В ТВС. Operational manual КОДА 06.002.PE
/54/ Acceptance certificate dated 10/12/2010 on static wagon scales КОДА-В, ТВС-150-5,0-2 modification, fabrication # 7371210
/55/ Calibration certificate dated 19/01/2011 on static wagon scales КОДА-В, ТВС-150-5,0-2 modification, fabrication # 7371210
/56/ Statement dated August 27, 2010, on technical examination (replacement) of billing power meters. SAV-PLAST LLC
/57/ Statement dated October 08, 2010, on technical examination (replacement) of billing power meters. SAV-PLAST LLC
/58/ Invoice # 19 dated 01/03/2011. PE “SNABTEHMONTAZH”.
/59/ Invoice # 58 dated 21/04/2011. PE “SNABTEHMONTAZH”.
/60/ Invoice # 65 dated 17/05/2011. PE “SNABTEHMONTAZH”.
/61/ Invoice # 68 dated 02/06/2011. PE “SNABTEHMONTAZH”.
/62/ Passport # 94 on diesel fuel of high quality, mark F type II, produced on 27/02/2011

/63/ Passport # 104 on diesel fuel of high quality, mark F type II, produced on 06/03/2011
/64/ Sverdlovantratsyt State Enterprise. Protocol # 116 dated 04/10/2010
/65/ Certificate on working profession qualification level conferment. Issued to Oleksandr Shurlov as of 04/10/2010
/66/ Certificate on working profession qualification level conferment. Issued to Oleksandr Shelestov as of 04/10/2010
/67/ Photo–Waste heap general view, PE “SNABTEHMONTAZH”.
/68/ Photo–Processing complex cribble general view, PE “SNABTEHMONTAZH”.
/69/ Photo–Processing complex separator magnet general view, PE “SNABTEHMONTAZH”.
/70/ Photo–Processing complex cyclones general view, PE “SNABTEHMONTAZH”.
/71/ Photo–Truck scales data on computer monitor. Scales #1
/72/ Photo–Electric display BILANCIAI type D400 ISET 170422 WK27/10
/73/ Photo–Electric display BILANCIAI type D400 ISET 170422 WK27/10, general view
/74/ Photo–Processing complex control panel general view, PE “SNABTEHMONTAZH”.
/75/ АСУ-ТС-128 Coal concentration in heavy environment process scheme
/76/ АСУ-ТС-128 Coal concentration in heavy environment schedule
/77/ АСУ-ТС-128 Suspension level change schedule
/78/ АСУ-ТС-128 Concentration hydrocyclone operation chart for 26/10/2011
/79/ Coal concentration in heavy environment schedule dated 24/10/2011
/80/ Photo–Meter cabinet ЩО90-2604УЗ # 1, general view
/81/ Photo–Meter cabinet ЩО90-1103УЗ # 74, general view
/82/ Photo–Power meter, fabrication # 6N845120
/83/ Passport on energy commercial recording unit ПКУЭ-6(10)
/84/ Acceptance certificate dated May 17, 2011, energy commercial recording unit ПКУЭ-6, fabrication # 110146
/85/ Passport on multifunctional active and reactive energy meter LZQM 321.02.534, date of sale–March 22, 2011
/86/ Acceptance certificate dated 10/09/2010 on multifunctional active and reactive energy meter LZQM 321.02.534, fabrication # 859719

Persons interviewed:

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

/1/ Oleynikova Natalia - Chief Financial Officer
/2/ Khlyakin Denis - Technical Director
/3/ Bazanov Igor - Chief Power Engineer

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APPENDIX A: COMPANY PROJECT DETERMINATION PROTOCOL

DETERMINATION PROTOCOL

Check list for determination, according JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 01)

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
General description of the project				
Title of the project				
-	Is the title of the project presented?	Yes, the title of the project is presented	OK	OK
-	Is the sectoral scope to which the project pertains presented?	Sectoral scope was set for the project: 8. Mining/mineral production	OK	OK
-	Is the current version number of the document presented?	Current version of the PDD: 3.3	OK	OK
-	Is the date when the document was completed presented?	Date of the completed PDD: 21/02/2012	OK	OK
Description of the project				
-	Is the purpose of the project included with a concise, summarizing explanation (max. 1-2 pages) of the: a) Situation existing prior to the starting date of the project; b) Baseline scenario; and c) Project scenario (expected outcome, including a technical description)?	The main objective of the project is aimed at achieving GHG emission reductions through processing waste heaps of old coal mines in Luhansk region of Ukraine. *Corrective Action Request 01* Please briefly summarize the chosen baseline scenario in section A.2 of the PDD. *Clarification Request 14* Project scenario envisages that the waste heaps extracted coal will substitute mine coal for energy generation. No further evidence that this will take place. Used model does not take it into account.	CAR 01 CL 14 CL 15	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Clarification Request 15 CH_4 emission factor is chosen for the mine extraction. Open pit coal extraction option is not regarded; justification of the chosen emission factor is not provided either.		
-	Is the history of the project (incl. its JI component) briefly summarized?	Brief history of the project including its JI component is presented in the PDD	OK	OK
Project participants				
-	Are project participants and Party(ies) involved in the project listed?	The project participants and Party(ies) involved are listed	OK	OK
-	Is the data of the project participants presented in tabular format?	The data on project participants is presented in tabular format	OK	OK
-	Is contact information provided in Annex 1 of the PDD?	The contact information about project participants is provided in Annex 1 of the PDD	OK	OK
-	Is it indicated, if it is the case, if the Party involved is a host Party?	The Host Party (Ukraine) is not a Party involved	OK	OK
Technical description of the project				
Location of the project				
-	Host Party(ies)	Ukraine	OK	OK
-	Region/State/Province etc.	Luhansk region	OK	OK
-	City/Town/Community etc.	Volodarsk village	OK	OK
-	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	The project located in Luhansk Region. Its coordinates are 39°35′20 E and 48°06′19 N. *Corrective Action Request 02* Please provide the section A.4.1.4 that doesn't exceed one page.	CAR 02	OK
Technologies to be employed, or measures, operations or actions to be implemented by the project				
-	Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation schedule described?	The measures which will be implemented are detailed describes in section A.4.2 of the PDD. *Corrective Action Request 03* Figure 3 which shows the dense medium cyclone separation is referenced incorrectly.	CAR 03 CAR 04 CAR 05 CAR 06	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Corrective Action Request 04 Please indicate the types of equipment used. *Corrective Action Request 05* Please provide the schedule for the project implementation and commissioning of the equipment installed. *Corrective Action Request 06* Please provide a brief description of the processing complex.		
Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances				
-	Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	Anthropogenic GHG emissions reductions are to be achieved by coal extraction from coal containing waste heaps in order to prevent CO_2e emissions into the atmosphere which are occurring as the result of waste heaps spontaneous burning and also to obtain additional quantities of coal. Coal extracted from the waste heaps will substitute the coal from the mines and will be used mainly for energy production purposes at coal-fired power plants. Coal mining is a source of the fugitive emissions of methane, therefore, the project activity will reduce methane emissions by reducing the amount of coal required to be mined *Clarification Request 01* Please clarify, why methane fugitive emissions described in this section are not considered further.	CL 01	OK
-	Is it provided the estimation of emission reductions over the crediting period?	The estimation of emission reductions over the crediting period is provided by developer in the PDD	OK	OK
-	Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	The estimated annual reduction for period 2009-2024 is provided in tonnes CO_2e	OK	OK
-	Are the data from questions above presented in tabular format?	The estimation of emission reductions is provided in tabular format in section A.4.3.1 of the PDD *Clarification Request 02*	CL 02 CL 03	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Please explain the increased reductions in 2012 compared with 2011 and subsequent decline reductions in 2013 to the level of reductions in 2011. *Clarification Request 03* Please clarify why the annual average of estimated emission reductions over the indicated period (table 3) is not correct.		
Estimated amount of emission reductions over the crediting period				
-	Is the length of the crediting period Indicated?	The length of the crediting period is 15 years (180 month) *Clarification Request 04* Please clarify why 15 years were chosen as the length of the crediting period	CL 04	OK
-	Are estimates of total as well as annual and average annual emission reductions in tonnes of CO_2 equivalent provided?	Estimated emission reduction is provided in tonnes of CO_2 equivalent	OK	OK
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	No provided information from DFPs of all Parties listed as "Parties involved" that the PDD or PIN approvals *Corrective Action Request 07* Please provide the Letter of Endorsement in the section A.5 of the PDD.	CAR 07	OK
19	Does the PDD identify at least the host Party as a "Party involved"?	The PDD identify Ukraine as a Host Party. See also CAR 07	OK	OK
19	Has the DFP of the host Party issued a written project approval?	*Corrective Action Request 08* Please provide the Letter of Approval of the Host Party.	CAR 08	OK
20	Are all the written project approvals by Parties involved unconditional?	See paragraph 19 above	OK	OK
Authorization of project participants by Parties involved				
21	Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through: − A written project approval by a Party	After finishing the project determination report, the PDD with supporting documents and Determination Report will be presented to National Environmental Investment Agency of Ukraine for receiving the Letter of Approval that will authorize project participants.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	involved, explicitly indicating the name of the legal entity? or − Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity?	Also, see section 19 and section 20 of this protocol above.		
Baseline setting				
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? − JI specific approach − Approved CDM methodology approach	The PDD provides a detailed theoretical description of five plausible future scenarios in a complete and transparent manner. First plausible future scenario was chosen as baseline.	OK	OK
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	The PDD provides a detailed theoretical description of five plausible future scenarios in a complete and transparent manner. First plausible future scenario was chosen as baseline.	OK	OK
23	Does the PDD provide justification that the baseline is established: (a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one? (b) Taking into account relevant national and/or sectoral policies and circumstance? − Are key factors that affect a baseline taken into account? (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors? (d) Taking into account of uncertainties and using conservative assumptions?	According to the information presented in the PDD, five plausible future scenarios are presented in a complete and transparent manner. First plausible future scenario was chosen as baseline. Identified possible scenarios were analysed taking into account key factors of national and/or sectoral policies that affect the implementation of the regarded scenarios. In section B.1 all baseline data and parameters are presented in a tabular format with detailed explanation of each. *Clarification Request 05* Please, provide more detailed description of the project "Waste heaps dismantling in Luhansk Region of Ukraine by PE "SNABTEHMONTAZH" with the aim of decreasing the greenhouse gases emissions into the atmosphere". *Clarification Request 06*	CL 05 CL 06	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	(e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure? (f) By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring", as appropriate?	Please clarify why the information about "the fugitive methane emissions" is mentioned in section B1.		
24	If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above?	As indicated in the PDD no CDM methodologies or methodological tools are used for baseline choice, justification and setting, because among the methodologies approved by the CDM Executive Board there is none fully matching the proposed JI project.	OK	OK
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	*Corrective Action Request 10* Multi-project Carbon Emission Factor for fugitive methane emissions from coal mining, which is assessed by "National GHG inventory of Ukraine, period 1990-2008" for JI projects developed in Ukraine, is used for this project. Please change section B.1 of the PDD.	CAR 09	OK
Approved CDM methodology approach only				
26 (a)	Does the PDD provide the title, reference number and version of the approved CDM methodology used?	Not applicable	Not applicable	Not applicable
26 (a)	Is the approved CDM methodology the most recent valid version when the PDD is submitted for publication? If not, is the methodology still within the grace period (was the methodology revised to a newer version in the past two months)?	Not applicable	Not applicable	Not applicable
26 (b)	Does the PDD provide a description of why the approved CDM methodology is applicable to	Not applicable	Not applicable	Not applicable

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	the project?			
26 (c)	Are all explanations, descriptions and analyses pertaining to the baseline in the PDD made in accordance with the referenced approved CDM methodology?	Not applicable	Not applicable	Not applicable
26 (d)	Is the baseline identified appropriately as a result?	Not applicable	Not applicable	Not applicable
Additionality				
JI specific approach only				
28	Does the PDD indicate which of the following approaches for demonstrating additionality is used? (a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals; (b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality; (c) Application of the most recent version of the "Tool for the demonstration and assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board".	Consideration that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions were performed by project developer and provided in section B.2 of the PDD. *Clarification Request 07* Please specify applicable version of used "Tool for demonstration and assessment of additionality" *Corrective Action Request 10* Please bring the section B2 in accordance with the requirements of "Tool for the demonstration and assessment of additionality". *Corrective Action Request 11* Please shorten the description of "the investment climate of Ukraine" in section B2.	CL 07 CAR 10 CAR 11	OK
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and	The PDD provides the justification of the applicability of the approach referred to in "Waste heaps dismantling with the	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	transparent description?	aim of decreasing the greenhouse gases emissions into the atmosphere" Global Carbon B.V. project which was successfully implemented.		
29 (b)	Are additionality proofs provided?	*Corrective Action Request 12* According to the PDD the most important barriers for project activity are financial and technological barriers. Please provide financial analysis of the project.	CAR 12	OK
29 (c)	Is the additionality demonstrated appropriately as a result?	See section 29(b) of this protocol	OK	OK
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	See section 29(b) of this protocol	OK	OK
Approved CDM methodology approach only				
31 (a)	Does the PDD provide the title, reference number and version of the approved CDM methodology used?	Not applicable	Not applicable	Not applicable
31 (b)	Does the PDD provide a description of why and how the referenced approved CDM methodology is applicable to the project?	Not applicable	Not applicable	Not applicable
31 (c)	Are all explanations, descriptions and analyses with regard to additionality made in accordance with the selected methodology?	Not applicable	Not applicable	Not applicable
31 (d)	Are additionality proofs provided?	Not applicable	Not applicable	Not applicable
31 (e)	Is the additionality demonstrated appropriately as a result?	Not applicable	Not applicable	Not applicable
Project boundary (applicable except for JI LULUCF projects				
JI specific approach only				
32 (a)	Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are:	The project boundary defined in the PDD encompasses all anthropogenic emissions by sources of GHGs under control of the project participants, reasonably attributable to the	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	(i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	project and significant, such as GHG emissions from electricity consumed during project activity, coal consumption, diesel fuel consumption.		
32 (b)	Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above?	See section 32(a) of this protocol	OK	OK
32 (c)	Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart as appropriate?	The delineation of the project boundary and sources included are described in the PDD by using figure 5 Emission sources located within the project boundary.	OK	OK
32 (d)	Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?	In section B.3 of the PDD all gases and sources included are explicitly stated; the information presented in table B.3.1.	OK	OK
Approved CDM methodology approach only				
33	Is the project boundary defined in accordance with the approved CDM methodology?	Not applicable	Not applicable	Not applicable
Crediting period				
34 (a)	Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?	The PDD indicates that the starting day of the project is 12th of January 2009	OK	OK
34 (a)	Is the starting date after the beginning of 2000?	The starting date of the project is 2009 year	OK	OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	The expected operational lifetime of the project is 15 years or 180 months	OK	OK
34 (c)	Does the PDD state the length of the crediting period in years and months?	The PDD states the length of the crediting period in 15 years (180 months) from 01/10/2009 till 31/09/2024 *Clarification Request 08* Please clarify why 01/10/2009 was chosen as the beginning of the crediting period. *Clarification Request 12*	CL 08 CL 12	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Please, clarify the end date of operation period		
34 (c)	Is the starting date of the crediting period on or after the date of the first emission reductions or enhancements of net removals generated by the project?	In the PDD there is no information that the starting date of the crediting period is before the date of the first emission reductions generated by the JI project.	OK	OK
34 (d)	Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?	The crediting period starts after the beginning of 2008 (01/01/2008) and doesn't extend beyond the operational lifetime of the project	OK	OK
34 (d)	If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012?	The estimation of emission reduction due to the JI project is provided for the period 2009-2024. In the PDD the values of emission reductions during the period 2009-2012 are presented in table 2. The values of emission reductions after 2012 for the period 2013-2024 are presented separately in table 3 of the PDD.	OK	OK
Monitoring plan				
35	Does the PDD explicitly indicate which of the following approaches is used? − JI specific approach − Approved CDM methodology approach	The PDD explicitly indicates that JI specific approach was used for monitoring plan in accordance with "Guidance on criteria for baseline setting and monitoring", (Version 03).	OK	OK
JI specific approach only				
36 (a)	Does the monitoring plan describe: − All relevant factors and key characteristics that will be monitored? − The period in which they will be monitored? − All decisive factors for the control and reporting of project performance?	The project developer uses JI specific approach for monitoring plan establishing in accordance with "Guidance on criteria for baseline settings and monitoring". Monitoring plan for project was elaborated by specific approach of JI with application of methodology "Waste heaps dismantling with the aim of decreasing the greenhouse gases emissions into the atmosphere".	OK	OK
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the	The monitoring plan describes relevant indicators, constants and variables such as amount of produced coal, amount of consumed electricity, emission factors of Ukraine national	CAR 13	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	emission reductions or enhancements of net removals to be monitored?	grid, for fugitive methane emissions of coal mining etc. *Corrective Action Request 13* Constant density of methane was used for emission reductions monitoring. Please indicate the source of this value in the section D of the PDD.		
36 (b)	If default values are used: − Are accuracy and reasonableness carefully balanced in their selection? − Do the default values originate from recognized sources? − Are the default values supported by statistical analyses providing reasonable confidence levels? − Are the default values presented in a transparent manner?	In monitoring plan global warming potential of methane, net calorific values of diesel fuel and coal, oxidation factors, carbon factor of diesel fuel and coal are used as default value. The source of this value is clarified in table 7. *Clarification Request 09* Please explain why while calculating Net Calorific Value of coal the data from laboratory studies performed by CCI were not used.	CL 09	OK
36 (b) (i)	For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified?	The monitoring plan indicates how the values are to be selected and justified.	OK	OK
36 (b) (ii)	For other values, − Does the monitoring plan clearly indicate the precise references from which these values are taken? − Is the conservativeness of the values provided justified?	The monitoring plan clearly indicates references from which these values are taken.	OK	OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	Corrective Action Request 14 Please specify the procedures to be followed if expected monitoring data are unavailable.	CAR 14	OK
36 (b) (iv)	Are International System Unit (SI units) used?	International System Units are used.	OK	OK
36 (b) (v)	Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals	The monitoring plan doesn't note any parameters, coefficients, variables, etc that are to be obtained though monitoring in order to calculate baseline emissions.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	but are obtained through monitoring?			
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	According to the monitoring plan and the PDD, the use of parameters and variables are consistent between the baseline and monitoring plan.	OK	OK
36 (c)	Does the monitoring plan draw on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"?	The monitoring plan is established taking into account the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring". *Clarification Request 10* Please clarify the need to use the parameter "Carbon dioxide emission factor for grid electricity consumption in 2008» in calculations of emissions, while starting date of the project is 2009.	CL 10	OK
36 (d)	Does the monitoring plan explicitly and clearly distinguish: (i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination? (ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination? (iii) Data and parameters that are monitored throughout the crediting period?	See the PDD section D.1. The data and parameters that are monitored throughout the crediting period are clearly indicated in the PDD (section D.1). Corrective Action Request 15 Please add Emission Factor to the table D1.1.1.	CAR 15	OK
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	The section D.1 of the PDD describes the methods employed for data monitoring including its frequency and recording	OK	OK
36 (f)	Does the monitoring plan elaborate all algorithms and formulae used for the	All algorithms and formulae used for the estimation of baseline and project emissions are indicated and explained	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate?	in the PDD.		
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	The underlying rationale for the formulae is presented	OK	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	All variables and equation formats are consistent and used in appropriately way.	OK	OK
36 (f) (iii)	Are all equations numbered?	Equations needed for calculations described in section B and section D of the PDD. All equations are numbered.	OK	OK
36 (f) (iv)	Are all variables, with units indicated defined?	All variables with units indicated are defined	OK	OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	The conservativeness of the procedures is justified	OK	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	Uncertainty level in key parameters identified as low in table D.2 “Quality control and quality assurance procedures undertaken for data monitored”.	OK	OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured?	There is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions of the baseline scenario.	OK	OK
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	Used algorithms and formulae are explained	OK	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	It is justified in the PDD that the technical procedures applied at PE “SNABTEHMONTAZH” are consistent with standard technical procedures in the relevant sector	OK	OK
36 (f) (vii)	Are references provided as necessary?	References for documents required for ERUs calculation are provided	OK	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	Key assumptions presented a transparent manner and are explained in the PDD	OK	OK
36 (f) (vii)	Is it clearly stated which assumptions and procedures have significant uncertainty	In the PDD there is no information about significant uncertainty level of assumptions and procedures. All	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	associated with them, and how such uncertainty is to be addressed?	assumptions and procedures are employed with a high level of confidence.		
36 (f) (vii)	Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided?	In the PDD project developer described the uncertainty level of key parameters. Uncertainty level of concerned data was assessed as low. Measuring devices for monitoring of key parameters are calibrated/verified in compliance with the state regulation, PE "SNABTEHMONTAZH" procedures and approved methodologies in order to assure quality control of monitoring data.	OK	OK
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project? Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?	No national or international monitoring standard are used for monitoring of the JI project implementation.	OK	OK
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	Not applicable for given JI project.	OK	OK
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request?	The quality assurance and control procedures, including information about calibration and how monitoring data are to be recorded and collected are provided for in the monitoring plan, and described in sections D.2 and D.3 of the PDD. *Corrective Action Request 16* Please provide the Calibration plan of JI project measurement equipment.	CAR 16	OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	Responsible departments and persons to support monitoring activities of the JI project are clearly identified in the monitoring plan. *Corrective Action Request 17* Please bring Figure 5 "Monitoring flowchart" into compliance with the approved scheme of order.	CAR 17	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
36 (k)	Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type? If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?	The monitoring will be performed in accordance to the plant policies and existing good practices, considering all necessary requirements to ensure accurate monitoring of the project activity.	OK	OK
36 (l)	Does the monitoring plan provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations?	Presented in the PDD monitoring plan provides a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources. Data connected with baseline scenario and emission reduction calculation are stated in tabular format in section D of the PDD.	OK	OK
36 (m)	Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project?	The monitoring plan indicates that the data monitored and required for emission reduction calculation will be kept for two years after the last transfer of ERUs	OK	OK
37	If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above?	There is not any selected elements or combinations of approved CDM methodologies	OK	OK
Approved CDM methodology approach only				
38 (a)	Does the PDD provide the title, reference number and version of the approved CDM methodology used?	Not applicable	Not applicable	Not applicable
38 (a)	Is the approved CDM methodology the most recent valid version when the PDD is submitted for publication? If not, is the methodology still within the grace period (was the methodology revised to a newer version in the past two	Not applicable	Not applicable	Not applicable

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	months)?			
38 (b)	Does the PDD provide a description of why the approved CDM methodology is applicable to the project?	Not applicable	Not applicable	Not applicable
38 (c)	Are all explanations, descriptions and analyses pertaining to monitoring in the PDD made in accordance with the referenced approved CDM methodology?	Not applicable	Not applicable	Not applicable
38 (d)	Is the monitoring plan established appropriately as a result?	Not applicable	Not applicable	Not applicable
Applicable to both JI specific approach and approved CDM methodology approach				
39	If the monitoring plan indicates overlapping monitoring periods during the crediting period: (a) Is the underlying project composed of clearly identifiable components for which emission reductions or enhancements of removals can be calculated independently? (b) Can monitoring be performed independently for each of these components (i.e. the data/parameters monitored for one component are not dependent on/effect data/parameters to be monitored for another component)? (c) Does the monitoring plan ensure that monitoring is performed for all components and that in these cases all the requirements of the JI guidelines and further guidance by the JISC regarding monitoring are met? (d) Does the monitoring plan explicitly provide for overlapping monitoring periods of clearly defined project components, justify its need and state how the conditions mentioned in (a)-(c) are met?	The monitoring plan doesn't indicate overlapping monitoring periods during the crediting period	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Leakage				
JI specific approach only				
40 (a)	Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?	The PDD appropriately describes an assessment of the potential leakage of the project and appropriately explains which sources of leakage are to be calculated, and which can be neglected.	OK	OK
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	According to the information and justification stated in the PDD, an ex ante estimation of the leakage is provided accurately. Please, refer to section B.3 of the PDD.	OK	OK
Approved CDM methodology approach only				
41	Are the leakage and the procedure for its estimation defined in accordance with the approved CDM methodology?	Not applicable	Not applicable	Not applicable
Estimation of emission reductions or enhancements of net removals				
42	Does the PDD indicate which of the following approaches it chooses? (a) Assessment of emissions or net removals in the baseline scenario and in the project scenario (b) Direct assessment of emission reductions	The PDD indicates that the approach implying the assessment of emissions in the baseline scenario and in the project scenario was chosen	OK	OK
43	If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	The PDD provides ex ante estimates for project and baseline scenario and leakages. Ex ante estimates of emission reductions are adjusted by leakage.	OK	OK
44	If the approach (b) in 42 is chosen, does the	Not applicable	Not	Not

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	PDD provide ex ante estimates of: (a) Emission reductions or enhancements of net removals (within the project boundary)? (b) Leakage, as applicable? (c) Emission reductions or enhancements of net removals adjusted by leakage?		applicable	applicable
45	For both approaches in 42 (a) Are the estimates in 43 or 44 given: (i) On a periodic basis? (ii) At least from the beginning until the end of the crediting period? (iii) On a source-by-source/sink-by-sink basis? (iv) For each GHG? (v) In tones of CO_2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? (b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate? (d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent? (e) Are emission factors (including default emission factors) if used for calculating the	The estimation of baseline and project emissions, leakage and emission reduction are made on a periodic basis from beginning to the end of the crediting period for each year. Estimations of emission reductions are carried out for CO_2 as greenhouse gas. Calculations are regarded in t CO_2 equivalent. Formulae used for calculating the estimates concerning in section D and section E are consistent throughout the PDD. Data sources used for calculating the estimates are clearly identified. Among key factors influencing the baseline emissions or the activity level of the project as well as risks associated with the project is taken into account. Conservative assumptions are taken into account while estimating emission reduction. In the PDD there are provided tables with calculation results of CO_2 emission reductions. As a fact, estimated total value of CO_2 emission reductions for the first crediting period is 581 413 tCO_2 equivalent; moreover, estimated total value of CO_2 emission reductions for the period 2013-2024 2 651 669 tCO_2 equivalent. *Corrective Action Request 18* Please provide the annual average value of CO_2 emission reductions in table E-6 and table E-7. *Clarification request 13* There seem to be a mistake in values of additional electricity consumed as a result of the implementation and amount of	CAR 18 CL 13	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice? (f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner? (g) Are the estimates in 43 or 44 consistent throughout the PDD? (h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?	diesel fuel that has been used for the project activity used for forecasting emissions after 2012. Please, correct the calculation file and PDD accordingly.		
46	If the calculation of the baseline emissions or net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation?	The calculation of baseline emissions is to be performed ex post. Ex ante calculation of emissions are provided in the PDD. All estimated values are presented in the section E of the PDD and Excel spreadsheets.	OK	OK
Approved CDM methodology approach only				
47 (a)	Is the estimation of emission reductions or enhancements of net removals made in accordance with the approved CDM methodology?	Not applicable	Not applicable	Not applicable
47 (b)	Is the estimation of emission reductions or enhancements of net removals presented in the PDD: − On a periodic basis? − At least from the beginning until the end of the crediting period? − On a source-by-source/sink-by-sink basis? − For each GHG? − In tones of CO_2 equivalent, using global	Not applicable	Not applicable	Not applicable

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? − Are the formula used for calculating the estimates consistent throughout the PDD? − Are the estimates consistent throughout the PDD? − Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?			
Environmental impacts				
48 (a)	Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	The PDD provides detailed description on environmental impacts in the section F.1. Transboundary impacts are not observed for this project. The full environmental analysis in accordance with the Ukrainian legislation is provided by the local developer SPE "Firma Pryroda". *Corrective Action Request 19* Please specify the period for which the environmental impacts was carried out, their number and date.	CAR 19	OK
48 (b)	If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party?	The PDD provides conclusion and references to supporting documentation of an environmental impact assessment in accordance with the procedures required by Ukrainian legislation	OK	OK
Environmental impacts				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
49	If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide: (a) A list of stakeholders from whom comments on the projects have been received, if any? (b) The nature of the comments? (c) A description on whether and how the comments have been addressed?	The Host Party doesn't require stakeholder consultation process for the JI project. No stakeholders comments connected with JI project were obtained. Also, stakeholder's comments will be collected during the determination procedure *Clarification Request 11* Please specify information to disclose information about the project through the local newspaper.	CL 11	OK
Determination regarding small-scale projects (additional elements for assessment)				
Applicable to bundled JI SSC projects only				
Applicable to all JI SSC projects				
Determination regarding land use, land-use change and forestry projects (additional/alternative elements for assessment)				
Determination regarding programmes of activities (additional/alternative elements for assessment)				

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project participant response	Determination team conclusion
Corrective Action Request 01 Please briefly summarize the chosen baseline scenario in section A.2 of the PDD.	-	The brief summary of the baseline initially provided in the section A.2 of the PDD was rephrased in PDD version 3.1. Now it is as follows: "In the baseline scenario it is assumed that this common practice will continue and waste heaps will be burning and emitting GHG into the atmosphere until the coal is consumed. The equivalent amount of coal, which under project scenario is reclaimed from the waste heap, under baseline scenario would be mined, causing fugitive emissions of methane during the mining process."	Issue is closed.

Corrective Action Request 02 Please provide the section A.4.1.4 that doesn't exceed one page.	-	Information in section A.4.1.4 was shortened to fit into one page in PDD version 3.1.	Issue is closed.
Corrective Action Request 03 Figure 3 which shows the dense medium cyclone separation is referenced incorrectly.	-	Numeration of the figures was corrected throughout the PDD version 3.1.	Issue is closed.
Corrective Action Request 04 Please indicate the types of equipment used.	-	Types of equipment used were added to section A.4.2 of the PDD version 3.1	Issue is closed.
Corrective Action Request 05 Please provide the schedule for the project implementation and commissioning of the equipment installed.	-	The schedule for the project implementation with most important milestones of the project was added to section A.4.2 of the PDD version 3.1.	Issue is closed.
Corrective Action Request 06 Please provide a brief description of the processing complex.	-	The following brief description was added to the beginning of section A.4.2 of the PDD version 3.1: "Coal beneficiation plant is a four-floored construction which includes such equipment as separators, thickeners, hydrocyclones, cribbles, bend conveyors, pumps, feeders, sieves, centrifuges, tanks and sump basins. The equipment is interconnected by pipes and wiring. The beneficiation process is controlled from the control room".	Issue is closed.
Corrective Action Request 07 Please provide the Letter of Endorsement in the section A.5 of the PDD.	19	Letter of Endorsement No. 3541/23/7 was issued on 1/12/2011 by State Environmental Investment Agency.	Issue is closed.
Corrective Action Request 08 Please provide the Letter of Approval of the Host Party.	19	In accordance with Ukrainian rules, LoA application package of documents includes determination report with positive conclusion. Thus, copy of Host country LoA can be provided only after determination of the JI project. It will be done immediately upon the issuance of LoA. Letter of Approval 2011JI43 by Ministry of Economic	Issue is closed.

		Affairs, Agriculture and Innovation of the Netherlands was received on 19th of January 2012.	
Corrective Action Request 09 Multi-project Carbon Emission Factor for fugitive methane emissions from coal mining, which is assessed by "National GHG inventory of Ukraine, period 1990-2008" for JI projects developed in Ukraine, is used for this project. Please change section B.1 of the PDD.	25	Section B.1 of the PDD version 3.1 was changed. No multi-project emission factors are used in the project. Carbon Emission Factor for fugitive methane emissions from coal mining was assessed by "National GHG inventory of Ukraine, period 1990-2008".	Issue is closed.
Corrective Action Request 10 Please bring the section B2 in accordance with the requirements of "Tool for the demonstration and assessment of additionality".	28	In accordance with paragraph 44 of the Annex 1 to Guidance on criteria for baseline setting and monitoring, Version 03 approach for additionality demonstration already taken in comparable cases was used. «Tool for the demonstration and assessment of additionality» is not applied to this project directly, but it is referenced in relation to additionality justification provided in a comparable project "Processing of waste heaps at Monolith-Ukraine". The relevant changes were made throughout the Section B.2 of PDD version 3.1.	Issue is closed.
Corrective Action Request 11 Please shorten the description "the investment climate of Ukraine" in section B2.	28	Extended description of "the investment climate of Ukraine" was provided to show in explicit and transparent manner the economic conditions under which the project has been considered in 2008. Shortening this part may lead to obscurity of information. Consequently, it was decided to leave the description as it was. Some hyperlinks were updated.	Issue is closed.
Corrective Action Request 12 According to the PDD the most important barriers for project activity are financial and technological barriers. Please provide the financial analysis of the project.	29 (b)	«Tool for the demonstration and assessment of additionality» is not applied to this project directly, but it is referenced in relation to additionality justification provided in a comparable project "Processing of waste heaps at Monolith-Ukraine". The relevant changes were made throughout the Section B.2 of PDD version 3.1.	Issue is closed.

		Since, approach for additionality demonstration already taken in comparable cases was used, no requirements of «Tool for the demonstration and assessment of additionality» are applicable for the project. Analysis of financial and technological barriers is provided for increasing transparency of baseline setting.	
Corrective Action Request 13 Constant density of methane was used for emission reductions monitoring. Please indicate the source of this value in the section D of the PDD.	36 (b)	The source of the value is 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Volume 2: Energy, Chapter 4: Fugitive Emissions, p. 4.12 http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_4_Ch4_Fugitive_Emissions.pdf. It was added to section D of PDD version 3.1.	Issue is closed.
Corrective Action Request 14 Please specify the procedures to be followed if expected monitoring data are unavailable.	36 (b) (iii)	If expected monitoring data on coal production is not available (used for calculation of baseline and leakage emissions), they will not be taken into account and emission reductions will not be claimed. If data will be missing on parameters used for calculating project emissions: electricity or diesel consumption, average specific consumption data for the previous periods will be applied. This is conservative. This note was added to section D.1. of the PDD version 3.1.	Issue is closed.
Corrective Action Request 15 Please add Emission Factor to the table D1.1.1.	36 (d)	Factor of specific indirect emissions of carbon dioxide for consumption of electricity by 2nd-class consumers in accordance with Procedure for determining consumer classes approved by Resolution of National Energy Regulating Commission No 1052 on 13 August 1998 was added to table D1.1.1. of PDD version 3.1.	Issue is closed.
Corrective Action Request 16 Please provide the Calibration plan of JI project measurement equipment.	36 (i)	Copy of calibration plan of JI project measurement equipment was provided to AIE.	Issue is closed.
Corrective Action Request 17 Please bring Figure 5 "Monitoring	36 (j)	Figure 5 "Monitoring flowchart" in the PDD version 3.1	Issue is closed.

flowchart" into compliance with the approved scheme of order.		was corrected in accordance with the monitoring scheme provided in the "Monitoring instruction" approved by the Project Owner.	
Corrective Action Request 18 Please provide the annual average value of CO_2 emission reductions in table E-6 and table E-7.	45	Format of these tables is in accordance with "Guidelines for Users of the Joint Implementation Project Design Document Form" (version 04). No changes were made.	Issue is closed.
Corrective Action Request 19 Please specify the period for which the environmental impacts was carried out, their number and date.	48 (a)	First EIA activity was completed in 2008 by SPE "Firma Priroda". This study tackled environmental impacts by waste hips dismantling. However, upon completion of project documentation in 2009 the scope of the EIA has to be widened to include waste heap processing complex. The full scope EIA in accordance with the Ukrainian legislation has been conducted for the proposed project by Donbass State Technical University in 2010.EIA was carried out for the entire period of construction and operation of the project factory.	Issue is closed.
Clarification Request 01 Please clarify, why methane fugitive emissions described in this section are not considered further.	-	Methane fugitive emissions are regarded as leakages of the project and are considered in sections B.1., B.3., D.1.3.2. and E.2.	Issue is closed.
Clarification Request 02 Please explain the increased reductions in 2012 compared with 2011 and subsequent decline reductions in 2013 to the level of reductions in 2011.	-	Emission reductions achieved by the project are proportional to the quantity of coal processed at the factory. Production forecast in the PDD version 3.1 was changed. It is now expected that coal production will rise till 2012 and then stay at that level. Calculation file was changed accordingly.	Issue is closed.
Clarification Request 03 Please clarify why the annual average of estimated emission reductions over the indicated period (table 3) is not correct.	-	It was calculated in the following way: total emission reductions were divided by number of months of the indicated period and multiplied by twelve to get annual average estimated emission reductions. Values	Issue is closed.

		obtained were filled in table 3. In PDD version 3.1 the estimate of expected emission reductions was changed as more project performance data became available and the production forecast was modified (actual data till October, 2011 were included). Annual average of estimated emission reductions over the indicated period was calculated using the same approach.	
Clarification Request 04 Please clarify why 15 years were chosen as the length of the crediting period	-	The period of 15 years refers to expected operational lifetime of the equipment. According to Glossary of Joint Implementation terms, Version 03, the operational lifetime of the equipment is "the period during which the project is in operation. The crediting period shall not extend beyond the operational lifetime of the project". Regarding the specifics of this particular project there are two crucial factors for the project operation: availability of rock for coal enrichment and lifetime of the equipment. First one cannot be precisely determined at current stage, because there are plans for purchasing new waste heaps, so it is assumed that this factor is not limiting operational lifetime of the project. On the other hand, it's difficult to identify the lifetime of the equipment because the project activity is executed using system of interconnected pieces of equipment, none of which can be considered as most important. Each of the pieces in case of break down can be replaced, and the system will continue its operation. To find out how long operational lifetime of the entire system can be, it was decided to use the approach adopted by Ukrainian legislation for determining depreciation period of the	Issue is closed.

		"structure", which in accordance with article 145 of Ukrainian Tax Code* is 15 years.	
Clarification Request 05 Please provide more detailed description of the project "Waste heaps dismantling in Luhansk Region of Ukraine by PE "SNABTEHMONTAZH" with the aim of decreasing the greenhouse gases emissions into the atmosphere".	23	Section A.4.2. of the PDD version 3.1. was remade and now contains explicit description of the technology, production process and types of equipment used in the realised project activity.	Issue is closed.
Clarification Request 06 Please clarify why the information about "the fugitive methane emissions" is mentioned in section B1.	23	Fugitive methane emissions during coal mining is a source of leakages of the proposed project. They would take place if the baseline scenario of mining the same amount of coal that is produced by the project activity would be realised. Therefore, they refer to baseline and are described in section B.1.	Issue is closed.
Clarification Request 07 Please specify the applicable version of "Tool for demonstration assessment and additionality".	28	«Tool for the demonstration and assessment of additionality» is not applied for the demonstration of additionality of the proposed JI project (see answers to CAR 10 and to CAR 12 for more details).	Issue is closed.
Clarification Request 08 Please clarify why 01/10/2009 was chosen as the beginning of the crediting period.	34 (c)	Commissioning date of the factory is 24th of September 2009. This was the day when coal production started. The quantity of coal produced in September was small and it was neglected to round up the period the emission reductions are claimed for.	Issue is closed.
Clarification Request 09 Please explain why while calculating Net Calorific Value of coal the data from laboratory studies performed by CCI were not used.	36 (b)	In PDD version 1.0 the country specific default value of Net Calorific Value of coal is used for entire project lifetime. However, it became apparent that Project owner has verifiable records of NCV of the produced coal originating from Certificates of sampling and testing provided by a certified laboratory. Therefore, in	Issue is closed.

* http://podatki.org.ua/362

		order to improve accuracy of estimation of expected emission reductions it was decided to switch to plant specific data. Periodic laboratory analysis of the produced coal started only in 2011 as demanded by the buyers of the coal. Analysis of the available data showed that NCV of coal varies insignificantly over the period (average variation is 0.37 GJ/t or 1.3%). Taking into account that NCV of the produced coal depends mainly on production technology (effectiveness of coal washing) which at PE "Snabtehmontazh" is set for achieving high quality of coal, it was assumed that value of NCV of coal produced at PE "Snabtehmontazh" is relatively stable and equals to approximately 29 GJ/t (weighted average over 2011). This value was used for emission reduction calculations in and after 2011. NCV of coal produced is to be monitored on sampling basis over entire project lifetime, it was added to monitoring parameters. For 2009 and 2010 country specific value was left. The relevant changes were made in PDD version 3.1 and calculation file version 3.1. Accreditation certificate of the laboratory, Certificates of sampling and testing and NCV weighted average calculation file were provided to the AIE.	
Clarification Request 10 Please clarify the need to use the parameter "Carbon dioxide emission factor for grid electricity consumption in 2008» in calculations of emissions, while starting date of the project is 2009.	36 (c)	This parameter was not used in calculations of emission reductions. It appeared in PDD version 1.0. by mistake, which was corrected in Table 7 in the Section D of the PDD version 3.1 and calculation file.	Issue is closed.
Clarification Request 11 Please specify information to disclose information about the project through the local newspaper.	49	Declaration of intention to launch the project as a requirement for EIA approval was published in local newspaper "Vostochny Ekspres" No.28 (658) on 14th of July 2010. The copy of the publication was provided to	Issue is closed.

		AIE. This specification was added to section G.1 of PDD version 3.1.	
Clarification Request 12 Please, clarify the end date of operation period (p. 8).	34 (c)	Operation period will last till the end of September 2024. October was corrected to September in the Table 2 of Section A.4.2 in PDD version 3.1. and explanation footnote was added to this date.	Issue is closed.
Clarification request 13 There seem to be a mistake in values of additional electricity consumed as a result of the implementation and amount of diesel fuel that has been used for the project activity used for forecasting emissions after 2012. Please, correct the calculation file and PDD accordingly.	45	Values of additional electricity consumed as a result of the implementation and amount of diesel fuel that has been used for the project activity used for forecasting emissions after 2012 were corrected in the calculation file and PDD version 3.1. (sections A.4.3.1. and E).	Issue is closed.
Clarification Request 14 Project scenario envisages that the waste heaps extracted coal will substitute mine coal for energy generation. No further evidence that this will take place. Used model does not take it into account.	-	The project assumes that the coal produced by the project activity shall be used for energy purpose as well as the other coal of similar characteristics produced by the coal mining sector of Ukraine. This is justified by the fact that the project extracts only anthracite coal, which is not suitable for coke production and thus is used for thermal energy and power generation. This final use of the coal occurs outside of the project boundary and is the same for both project and baseline scenario. The coal produced by the project is supplied to the market of energy coal of Ukraine. Energy coal market is demand driven as it is not feasible to produce coal without demand for it. Coal is a commodity that can be freely transported to the source of demand and coal of identical quality can substitute any other coal easily. The project activity cannot influence demand for coal on the market and supplies coal extracted from the waste heaps. In the baseline scenario demand for coal will stay the same and will be met by the traditional source – underground mines of the region. Therefore,	Issue is closed.

		the coal supplied by the project in the project scenario will have to substitute the coal mined in the baseline scenario. It is also important to mention that Ukraine is a net exporter of energy coal so the coal produced by the project activity will substitute domestically mined coal (in 2010 energy coal production was 40.3 Mt, import was 3 Mt and export was 6.1 Mt - http://www.uaenergy.com.ua/c225758200614cc9/0/d465824d78686a04c225787000542600). Therefore, it can be reasonably assumed that the coal supplied by the project activity will substitute the coal produced in the baseline for any final use and this final use will occur within the territory of Ukraine.	
Clarification Request 15 CH_4 emission factor is chosen for the mine extraction. Open pit coal extraction option is not regarded; justification of the chosen emission factor is not provided either.	-	The emission factor for fugitive methane emissions from the coal mining has been selected based on the structure of the Ukrainian coal mining sector and characteristics of the coal produced by the project activity. The source of the emission factor value provides separate emission factors for underground mining and open cast mining. At present the majority of coal produced in Ukraine comes from underground mines. There are currently only three active surface mines in Ukraine and all of them are located in the western part of the Donetsk Basin. These surface mines produce peat, lignite, and sub-bituminous coals that have low methane content. [p.3 of Triplett J., Filippov A., Paisarenko A. Inventory of methane emissions from coal mines in Ukraine: 1990-2001. Partnership for Energy and Environmental Reform, 2002.] Annual amount of coal produced by an open cast mining method constitutes below 1% of the total amount of coal produced in Ukraine. [p. 90 of National Inventory Report of Ukraine 1990-2009]. The coal produced by the project activity comes from the matter	Issue is closed.

		excavated from the underground mines and therefore has different characteristics than the coal produced by the open-cast mines. Summing up the above, it is reasonable to assume that the emission factor for fugitive methane emissions should be selected as the one provided for underground coal mining.	