



DETERMINATION REPORT SIA "VIDZEME EKO"

DETERMINATION OF THE DISMANTLING OF WASTE HEAP AT FORMER ENRICHMENT PLANT "SERDYTYANSKA"

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DETERMINATION REPORT: "DISMANTLING OF WASTE HEAP AT FORMER ENRICHMENT PLANT "SERDYTYANSKA"™"

Date of first issue: 23/07/2012	Organizational unit: Bureau Veritas Certification Holding SAS
Client: SIA "Vidzeme Eko"	Client ref.: Victor Tkachenko

Summary:
Bureau Veritas Certification has made the determination of the "Dismantling of waste heap at former enrichment plant "Serdytyanska"™" project of SIA "Vidzeme Eko" located in Serdyte Village, Shakhtarsk District, Donetsk Region, Ukraine on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI 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: UKRAINE-det/0580/2012	Subject Group: JI
Project title: Dismantling of waste heap at former enrichment plant "Serdytyanska"	
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Work reviewed by: Ivan Sokolov - Internal Technical Reviewer Nikolay Chekhmestrenko - technical specialist <i>[Signature]</i> Bureau Veritas Certification Holding SAS	
Work approved by: Ivan Sokolov - Operational Manager <i>[Signature]</i>	
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1 INTRODUCTION

SIA "Vidzeme Eko" has commissioned Bureau Veritas Certification to determine its JI project "Dismantling of waste heap at former enrichment plant "Serdytyanska"" (hereafter called "the project") at Serdyte village, Shakhtarsk District, Donetsk Region, Ukraine.

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

1.1 Objective

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

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

1.2 Scope

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

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

1.3 Determination team

The determination team consists of the following personnel:

Vyacheslav Yeriomin
Bureau Veritas Certification Team Leader, Climate Change Verifier

Sergii Verteletskyi
Bureau Veritas Certification Climate Change Verifier



This determination report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification, Internal reviewer

Nikolay Chekhmestrenko
Bureau Veritas Certification, technical specialist

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 SIA "Vidzeme Eko" 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, SIA "Vidzeme Eko" revised the PDD and resubmitted it on 24.07.2012.

The determination findings presented in this report relate to the project as described in the PDD version 2.0.

2.2 Follow-up Interviews

On 23/07/2012 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 PCF "ALTAIR 2007" and SIA "Vidzeme Eko" were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
PE PCF "ALTAIR 2007"	<ul style="list-style-type: none"> ➤ Project History ➤ Project Approach ➤ Project boundary ➤ Implementation Schedule ➤ Organization structure ➤ Authorities and responsibilities ➤ Training of personnel ➤ Quality management procedures and technologies ➤ Records on rehabilitation/implementation of equipment ➤ Metering equipment control ➤ Metering record keeping system, database ➤ Technical documentation ➤ Monitoring plan and procedures ➤ Permits and licenses
CONSULTANT SIA "Vidzeme Eko"	<ul style="list-style-type: none"> ➤ Baseline methodology ➤ Monitoring plan ➤ Additionality proofs ➤ Calculation of emission reductions

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 verification process, the concerns raised are documented in more detail in the determination protocol in Appendix A.

3 PROJECT DESCRIPTION

Proposed project provides complete dismantling of the dump at the former enrichment plant "Serdytyanska" with further reclamation of the area by restoring its fertile layer. During dismantling of the dump, the rocks will be divided into fractions, which will be used for blending with steam coal and subsequently supplied to heat power plants and boiler houses for burning as fuel. After sorting, the large fractions will be used for building and repairing of roads. As the result, rock mass of the dump will be fully utilized, and the received coal will replace coal, which otherwise would have had to be mined. As the result of the project, the opportunity of self-ignition of heap will be eliminated. An important component of the project is its second phase – complex reclamation of the area by restoring its fertile layer and full restoration of natural ecological community. This part of the project is required, but totally expensive, due to this mechanism of joint implementation was one of the prominent factors of the project from the beginning, and financial benefits as part of this mechanism considered one of the reasons of the project implementation.

The project provides the assemblage and installation of sorting rock mass complex of dump of former enrichment plant "Serdytyanska" consisting of :

- Point of loading rock mass on Conveyor SP-202MS;
- -Point of sorting rock mass in classes 0-30 mm and 30 mm (vibrating inertial sifter GIL-52);
- Point of storage class 0-30 mm (sheds).

Class +30 mm is expected (as required under discharging tray of sifter) to be loaded in transports and delivered to customers for building and repairing of category 4-5 roads. Class 0-30 mm is expected to be loaded in transports, undergoes a mandatory procedure of weighting and is sent



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to the consumer (SPC "Oblpalyvo") for blending and subsequent combustion in the thermal power plants or boiler houses. Blending of fraction (0-30) with a steam coal allows realizing the fine finishing of quality the energy coal to the requirements of Standart 4083-2002, without compromising the quality of fuel on the one hand, but resulting in saving valuable energy coal on the other hand.

Technological scheme of the complex is as follows:

The rock mass of disassembly dump is delivered to the feeding scraper conveyor SP-202MS by Loader TO-28A with a bucket capacity of 2.5 m³. Humidification is applied (if the humidity of material doesn't exceed 8%) with sprinklers before the rock mass is delivered on the conveyor belt.

From the scraper conveyor through the handling unit the rock mass is fed to the sifter GIL-52 for the sorting into two classes - 0-30 mm and +30 mm. Productivity of the sifter on the original product is up to 200 tons / hour. Product of sifter screens +30 mm through the discharge tray, equipped with built-in nozzles for humidification, filled on the intermediate platform without significant accumulation. From the intermediate platform this fraction by the loader Amkodor-342V loaded into trucks and transported to the consumer (for building and repairing of category 4-5 roads).

Product of sorting class 0-30 through handling unit of sifter supplied on belt conveyor KLS. From the belt conveyor rock mass of class 0-30 mm through the handling unit of conveyor with built-in nozzles for humidification, emptied on the intermediate platform without significant accumulation, where loader ZL-50F loaded it in trucks or on a platform (warehouse) for storage. Warehouse is used if necessary without long-term storage. From storage the rock mass 0-30 mm by loader is loaded into trucks.

The project capacity of the complex allows to produce from 300 000 to 400 000 tons of sorted rock mass 0-30 mm per year.

Identified problem areas for project description, project participants' responses and conclusions of Bureau Veritas Certification are described in Annex A (CAR 01, CAR 02, CL01-CL03).

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 10 Corrective Action Requests and 7 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 #1934/23/7 dated 23/07/2012 issued by State Environmental Investment Agency.

The Bureau Veritas Certification obtained Letter of Endorsement from SIA "Vidzeme-Eko" and doesn't doubt in its authenticity.

As for this time no written project approvals of the project from the Parties Involved are available (see CAR03 pending till the Host Party LoA received). After receiving Determination Report from the Accredited Independent Entity (AIE) project documentation will be submitted to the Ukrainian Designated Focal Point (DFP) which is State Environment Investment Agency for receiving the Letter of Approval.

The written approvals from the other Party will be obtained later on.

4.2 Authorization of project participants by Parties involved (21)

In accordance with paragraph 21 of the DVM the assessment of this area focuses on whether each of the legal entities listed as project participants in the PDD is authorized by a Party involved, which is also listed in the PDD.

Authorisation of the project participants by Parties involved is expected through a written project approval, see CAR03 that is pending.

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:

Scenario 1. Continuation of existing situation

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

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

Technological barrier:

This scenario is based on the highly experimental technology, which has not been implemented even in a pilot project. It is also not suitable for all waste heaps as the project owner will have to balance the energy resource availability (i.e. waste heap location) and the location of the energy user. On-site generation of electricity addresses this problem but requires additional interconnection engineering. In general this technology has yet to prove its viability. In addition it does not allow the control and management of the emitted gases. This technology can be applied only in the presence of dumps with developed combustion centre. Even if the probability of burning rock dump is very high, it is currently impossible to predict the time of its outbreak and therefore predict the start of the use of thermal energy released during its combustion.

Investment barrier:

Investment into unproven technology carries a high risk. In case of Ukraine, which carries a high country risk, investment into such unproven energy projects are less likely to attract investors than some other opportunities in the energy sector with higher returns. The pioneering character of the project may appeal to development programmes and governmental incentives but cost of the produced energy is likely to be much higher than alternatives.

Scenario 3. Production of construction materials from waste heap matter

Technological barrier:

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

Scenario 4. Coal extraction from waste heaps without JI incentives

Investment barrier: This scenario is financially unattractive and faces barriers. Detailed description of proposed scenario barriers is provided in the section B.2 of the PDD version 2.0.



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

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

In this context, the Bureau Veritas Certification assessed whether the key factors that affect a baseline were taken into account. The project participants established the baseline taking into account the following key factors:

- sectoral reform initiatives;
- local fuel availability;
- power sector expansion plans;
- economic situation in the project sector.

The project participants applied the selected approach with transparency. Necessary information on approaches, assumptions, parameters, data sources and key factors is available in the PDD

Project participants used default values to the extent possible in order to reduce uncertainty and provide conservative data for emission calculations.

Also, conservative approach is the calculation of energy consumption, as the maximum possible consumption by 2-shift work of the main and auxiliary equipment throughout the year without exception.

According to the proposed approach emission reductions will be earned only within the project activity, so no emission reductions can be earned due to any changes outside the project activity or due to force majeure.

According to the described approach, emission reduction units shall be obtained only when due to the project boundaries coal will be extracted from the dump

Emissions in the baseline scenario are calculated as follows:

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

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Where:

$BE_{WHB,y}$ - baseline emissions due to burning of the waste heap in the year y (tCO₂ equivalent),

Baseline emissions due to burning dumps in year y calculated by the formula:

$$BE_{WHB,y} = FC_{BE,Coal,y} / 1000 \cdot \rho_{WHB} \cdot NCV_{Coal} \cdot OXID_{Coal} \cdot K_{Coal}^c \cdot 44/12 \quad (2)$$

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 heap because of the project activity in the year y , t;

ρ_{WHB} - probability of waste heap burning , d/l;

NCV_{Coal} - net Calorific Value of coal, TJ/kt;

$OXID_{Coal}$ - carbon Oxidation factor of coal, d/l;

K_{Coal}^c - carbon content of coal, tC/TJ;

1/1000 - conversion factor from tons in kilotonnes, d / l

44/12 - stoichiometric relationship between the molecular weight of carbon dioxide and carbon.

The amount of coal produced in mines in the baseline scenario is calculated by the formula:

$$FC_{BE,Coal,y} = FR_{Coal,y} \cdot (1 - A_{rock,y} / 100 - W_{rock,y} / 100) \cdot (1 - A_{Coal} / 100 - W_{Coal} / 100) \quad (3)$$

where:

$FR_{Coal,y}$ - amount of sorted fraction (0-30mm), which is extracted from the dumps because of the project in a year y , that came to blending with further combustion in thermal power plants, t;

$A_{rock,y}$ - the average ash content of sorted fractions (0-30mm), which is extracted from dump in year y , %

$W_{rock,y}$ - the average humidity of sorted fractions (0-30mm), which is extracted from dump in year y , %;

A_{Coal} - the average ash content of coal, mined in Donetsk region of Ukraine, %;

W_{Coal} - the average humidity of coal, mined in Donetsk region of Ukraine, %;

100 - conversion factor from percent to fraction, d/l.

Identified problem areas for baseline for baseline setting, project participants' responses and conclusions of Bureau Veritas Certification are described in Annex A (CAR 04, CAR 05, CL 04, CL05).

4.4 Additionality (27-31)

The project "Dismantling of waste heap at former mine "ROZSYPNYANSKA-1" 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/JIITLProject/DB/0RQXGLUAS7ETAGMUQZWFQPJLN1SIAW/details>

Additionality of the project was demonstrated adequately by demonstrating that the indicated project is implemented under comparable circumstances:

- a) Both projects propose **same GHG mitigation measure**: The proposed GHG mitigation measure under both projects is coal extraction from the mine's waste heaps. This will prevent greenhouse gas emissions into the atmosphere during combustion of the heaps and will contribute an additional amount of coal, without the need for mining.
- b) Both projects are implemented within the **same country and the same time**: The proposed project and identified comparable project are both located in Ukraine, Donetsk Region, both projects crediting period starts 01/10/2008.
- c) **Scale**. The difference between the proposed project and the other project(s) is less than 50 per cent in terms of the projects output (i.e. power output, capacity increase, etc.) or service provided; and The projects envisage production of the same product (rock mass sorting), average rock mass outputs for both projects differ by merely 25%. Criteria is satisfied.
- d) There were no significant changes in **regulatory framework** between the starting dates of two projects. Criteria is satisfied.

The desk review of provided information and follow-up interviews enabled Bureau Veritas Certification Holding SAS to assess that all explanations, descriptions and analyses in the demonstration of additionality were made in accordance with criteria of "Guidance on criteria for baseline setting and monitoring ",version 03" and this projects is indeed comparable project, implemented under comparable circumstances. The proposed JI activity provides the reductions in emissions by sources that are additional to any that would otherwise occur.



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Identified problem areas for project additionality, project participants' responses and conclusions of Bureau Veritas Certification are described in Annex A (CL 06).

4.5 Project boundary (32-33)

The details on the project boundary were provided in section B.3 of the PDD. The desk review of submitted documentation enabled Bureau Veritas Certification to assess that the project boundary defined in the PDD encompasses all anthropogenic emissions by sources of GHGs that are:

- Under the control of the project participants;
- Reasonably attributable to the project; and
- Significant.

The baseline emission sources of GHGs that are included in the project boundaries are listed below. Emissions of carbon dioxide due to:

- Waste heap burning;
- Consumption of coal for energy production (excluded, does not take into the consideration in calculation).

The project emission sources of GHGs that were included in the project boundaries are listed below. Emissions of carbon dioxide due to:

- Consumption of electricity due to extracting coal from dump;
- Consumption of fossil fuel (diesel fuel) due to extracting coal from dump;
- Consumption of coal for energy production (excluded, does not take into the consideration in calculation).

Leakages:

- Fugitive emissions of methane in the mining activities;
- Consumption of electricity from a grid at coal mine.
- Use of other types of energy sources due to mining (excluded).

All gases and sources included in the project boundary were explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified and provided in Table 20 of the PDD.

The delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD by using Figures 7-8 in section B.3 of the PDD.

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 03/01/2008, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 4 years and 2 months.

The PDD states the length of the crediting period in years and months, which is 4 years and 2 months, and its starting date as 01/02/2008, which is on the date the first emission reductions are generated by the project.

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.

Identified problem areas for project crediting period, project participants' responses and conclusions of Bureau Veritas Certification are described in Annex A (CL07).

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 relevant factors and key characteristics that will be monitored, and the period in which they will be monitored, in particular also all decisive factors for the control and reporting of project performance, such as value of extracted coal, values of consumed electricity, diesel fuel.

The monitoring plan specifies the indicators, constants and variables that are reliable (i.e. provide consistent and accurate values), valid (i.e. are clearly connected with the effect to be measured), and that provide a transparent picture of the emission reductions or enhancements of net removals to be monitored such as Net Calorific Value of Coal, Net calorific value of Diesel fuel, Carbon Oxidation Factor of Coal, Carbon Oxidation Factor of Diesel Fuel, Carbon content of coal, Carbon content of diesel fuel, Emission factor for fugitive methane emissions from coal mining, Specific carbon dioxide emissions due to production of electricity at TPP and by its consumptions, The average ash content of coal produced in Donetsk region, the average moisture of coal produced in Donetsk Region, probability of waste heap burning, average electricity consumption per tonne of coal, produced in Ukraine.

The monitoring plan draws on the list of standard variables indicated in appendix B of "Guidance on criteria for baseline setting and monitoring" developed by the JISC.



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 Global Warming potential of the Methane, Methane Density, Net Calorific Value of Coal, Net calorific value of Diesel fuel, Carbon Oxidation Factor of Coal, Carbon Oxidation Factor of Diesel Fuel, Carbon content of coal, Carbon content of diesel fuel, Emission factor for fugitive methane emissions from coal mining, Specific carbon dioxide emissions due to production of electricity at TPP and by its consumptions, The average ash content of coal produced in Donetsk region, the average moisture of coal produced in Donetsk Region, probability of waste heap burning, average electricity consumption per tonne of coal, produced in Ukraine

(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, such as absent.

(iii) Data and parameters that are monitored throughout the crediting period, such as Additional amount of electricity consumed in project, amount of diesel fuel consumed in project year, value of produced coal.

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording, such as direct monitoring of electricity consumption by meters, sampling of produced coal, etc. Description of employed methods is provided in the section D.1 of the PDD.

The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate, such as described below

The annual emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y, \quad (4)$$

where:

ER_y - emissions reductions of the JI project in year y (tCO₂ equivalent);

BE_y - baseline emission in year y (tCO₂ equivalent);

PE_y - project emission in year y (tCO₂ equivalent);

LE_y - leakages in year y, (tCO₂ equivalent).

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Emissions in the baseline scenario are calculated as follows:

$$BE_y = BE_{WHB,y} , \quad (5)$$

Where:

$BE_{WHB,y}$ - baseline emissions due to burning of the waste heap in the year y (tCO₂ equivalent),

Baseline emissions due to burning dumps in year y calculated by the formula:

$$BE_{WHB,y} = FC_{BE,Coal,y}/1000 \cdot \rho_{WHB} \cdot NCV_{Coal} \cdot OXID_{Coal} \cdot K_{Coal}^c \cdot 44/12 \quad (6)$$

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 heap because of the project activity in the year y , t;

ρ_{WHB} - probability of waste heap burning , d/l;

NCV_{Coal} - net Calorific Value of coal, TJ/kt;

$OXID_{Coal}$ - carbon Oxidation factor of coal, d/l;

K_{Coal}^c - carbon content of coal, tC/TJ;

1/1000 - conversion factor from tons in kilotonnes, d / l

44/12 - stoichiometric relationship between the molecular weight of carbon dioxide and carbon.

The amount of coal produced in mines in the baseline scenario is calculated by the formula:

$$FC_{BE,Coal,y} = FR_{Coal,y} \cdot (1 - A_{rock,y}/100 - W_{rock,y}/100) \cdot (1 - A_{Coal}/100 - W_{Coal}/100) \quad (7)$$

where:

$FR_{Coal,y}$ - amount of sorted fraction (0-30mm), which is extracted from the dumps because of the project in a year y , that came to blending with further combustion in thermal power plants, t;

$A_{rock,y}$ - the average ash content of sorted fractions (0-30mm), which is extracted from dump in year y , %

$W_{rock,y}$ - the average humidity of sorted fractions (0-30mm), which is extracted from dump in year y , %;

A_{Coal} - the average ash content of coal, mined in Donetsk region of Ukraine, %;

W_{Coal} - the average humidity of coal, mined in Donetsk region of Ukraine, %;

100 - conversion factor from percent to fraction, d/l.

Emissions from the project activity are calculated as follows:

$$PE_y = PE_{EL,y} + PE_{Diesel,y} \quad (8)$$

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where:

PE_y - project emissions due to project activity in the year y (tCO₂ equivalent),

$PE_{EL,y}$ - project emissions due to consumption of electricity from the grid by the project activity in the year y (tCO₂ equivalent),

$PE_{Diesel,y}$ - project emissions due to consumption of diesel fuel by the project activity in the year y (tCO₂ equivalent).

The Project emissions due to consumption of electricity from a grid in a year y are calculated as follows:

$$PE_{EL,y} = EC_{PE,y} \cdot EF_{CO_2,EL} \quad (9)$$

where:

$EC_{PE,y}$ - additional amount of electricity, consumed in project in year y , MWh;

$EF_{CO_2,EL}$ - Specific carbon dioxide emissions due to production of electricity at TPP and by its consumption, tCO₂/MWh;

Project emissions due to consumption of diesel fuel by the project activity in the year y are calculated as follows:

$$PE_{Diesel,y} = FC_{BE,Diesel,y}/1000 \cdot NCV_{Diesel} \cdot OXID_{Diesel} \cdot K_{Diesel}^C \cdot 44/12 \quad (10)$$

where:

$FC_{BE,Diesel,y}$ - amount of diesel fuel, consumed in project in year y , t;

NCV_{Diesel} - Net Calorific Value of diesel fuel, TJ/kt;

$OXID_{Diesel}$ - carbon Oxidation factor of diesel fuel, d/l;

K_{Diesel}^C - carbon content of diesel, tC/TJ;

44/12 - stoichiometric relationship between the molecular weight of carbon dioxide and carbon.

1/1000 - conversion factor from tons in kilotonnes, d / l

Leakages in year y are calculated as follows:

$$LE_y = LE_{CH_4,y} + LE_{EL,y} \quad (11)$$

where::

LE_y - leakages in year y , (t CO₂e);

$LE_{CH_4,y}$ - leakages due to fugitive emissions of methane in the mining activities in the year y , (t CO₂e);

$LE_{EL,y}$ - leakages due to consumption of electricity from a grid at coal mine in a year y , (t CO₂e);

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

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$$LE_{CH_4,y} = - FC_{BE,Coal,y} \cdot EF_{CH_4} \cdot \rho_{CH_4} \cdot GWP_{CH_4} , \quad (12)$$

$FC_{BE,Coal,y}$ - 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 because of the project activity in the year y , t, calculated as (4);

EF_{CH_4} - emission factor for fugitive methane emissions from coal mining, m³/t;

ρ_{CH_4} - methane density at standard conditions t/m³;

GWP_{CH_4} - Global Warming Potential of Methane, tCO₂/ tCH₄.

Leakages due to consumption of electricity from a grid at coal mine in a year y are calculated as follows:

$$LE_{EL,y} = - FC_{BE,Coal,y} \cdot N_{Coal,y}^E \cdot EF_{CO_2,EL,y} \quad (13)$$

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 because of the project activity in the year y , t, calculated as (2);

$N_{Coal,y}^E$ - Average electricity consumption per tonne of coal, produced in Ukraine in the year y , MWh/t;

$EF_{CO_2,EL,y}$ - Specific carbon dioxide emissions due to production of electricity at TPP and by its consumption, tCO₂/MWh

The monitoring plan presents the quality assurance and control procedures for the monitoring process described in the section D.2 of the PDD. 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. Clear and transparent scheme of monitoring data flow is provided in the section D.3 of the PDD.

On the whole, the monitoring plan 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.



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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.

Identified problem areas for project monitoring plan, project participants' responses and conclusions of Bureau Veritas Certification are described in Annex A to the Determination Report (refer to CAR 06- CAR 08).

4.8 Leakage (40-41)

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 are 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.

As reliable and accurate national data on fugitive CH₄ emissions associated with the production of coal are available, project participants used this data to calculate the amount of fugitive CH₄ emission as described below.

This leakage is measurable: through the same procedure as used in 2006 IPCC Guidelines (See Volume 2, Chapter 4, Page 4-11) and also used in CDM approved methodology ACM009, Version 03.2 (Page 8). Activity data (in our case amount of coal extracted from the waste heap which is monitored directly) is multiplied by the emission factor (which is sourced from the relevant national study – National Inventory Report of Ukraine under the Kyoto Protocol) and any conversion coefficients.

Electricity consumption and related greenhouse gas emissions due to dismantling of waste heap to be taken into account in calculating the project emissions. Carbon dioxide emissions due to electricity consumption in the coal mine way in an amount, equivalent to the design of coal - a leakage that can be taken into account at base of the State Statistics Committee data, concerning unit costs of electricity at coal mines in Ukraine in the relevant year.

This leakage is directly attributable to the JI project activity according to the following assumption: the coal produced by the project activity from



the waste heap will substitute the coal produced by underground mines of the region in the baseline scenario. This assumption is explained by the following logic: 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 some 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, the coal supplied by the project in the project scenario will have to substitute the coal mined in the baseline scenario. According to this approach equivalent product supplied by the project activity (with lower associated specific green-house gas emissions) will substitute the baseline product (with higher associated specific green-house gas emissions). This methodological approach is very common and is applied in all renewable energy projects (substitution of grid electricity with renewable-source electricity), projects in cement sector (e.g. JI0144 Slag usage and switch from wet to semi-dry process at JSC "Volyn-Cement", Ukraine), projects in metallurgy sector (e.g. UA1000181 Implementation of Arc Furnace Steelmaking Plant "Electrostal" at Kurakhovo, Donetsk Region) and others.

Identified problem areas for project leakages, project participants' responses and conclusions of Bureau Veritas Certification are described in Annex A (CAR 14).

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

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

The PDD provides the ex ante estimates of:

- (a) Emissions or net removals for the project scenario (within the project boundary), which are 51 354 tonnes of CO₂eq for period 01/02/2008-31/03/2012;
- (b) Leakage, as applicable, which are -489 425 tonnes of CO₂eq for period 01/02/2008-31/03/2012;
- (c) Emissions or net removals for the baseline scenario (within the project boundary), which are 1 563 307 tonnes of CO₂eq for period 01/02/2008-31/03/2012;



(d) Emission reductions or enhancements of net removals adjusted by leakage (based on (a)-(c) above), which are 2 001 377 tonnes of CO₂eq for period 01/02/2008-31/03/2012.

The PDD provides the ex ante estimates of:

The estimates referred to above are given:

- (a) On a yearly basis;
- (b) From 01/10/2008 to 31/03/2012, covering the whole crediting period;
- (c) On a source-by-source/sink-by-sink basis;
- (d) For each GHG gas, which is CO₂, CH₄
- (e) In tonnes of CO₂ equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol;

The formula used for calculating the estimates referred above, which are described in the section 4.7 of this Determination Report, are consistent throughout the PDD.

For calculating the estimates referred to above, key factors, e.g. local prices for electricity, coal and diesel fuel, available production resources, 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 were taken into account, as appropriate.

Data sources used for calculating the estimates referred to above, such as work and laboratory logbooks, work and laboratory monthly and yearly reports, production sailing invoices are clearly identified, reliable and transparent.

Emission factors, such as emission factor for electricity consumption, Carbon Oxidation Factor of Coal, Carbon Oxidation Factor of Diesel Fuel, etc, 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 annual average of estimated emission reductions or enhancements of net removals over the crediting period is 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.

Identified problem areas for project estimations, project participants' responses and conclusions of Bureau Veritas Certification are described in Annex A (CAR 09-CAR 10).

4.10 Environmental impacts (48)

The PDD lists and attaches documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party, such as permit on pollutant by stationary sources, analysis of the environmental impacts, a part of separation fabric work project which is mentioned in 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 problem areas for environmental impacts of the project were not identified

4.11 Stakeholder consultation (49)

The host Party for the project is Ukraine. The project meets the applicable standards and requirements, set forth in Ukraine. The Host Party does not put forward the requirement to consult with stakeholders to JI projects. The project was presented to the local authorities, and was approved (approval on building, etc).

Any comments from local authorities or stakeholders were not obtained.

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 "Dismantling of waste heap at former enrichment plant "Serdytyanska"" Project in Serdyte village, Shakhtarsk district, Donetsk Region, Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

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

Project participant/s used the latest tool for demonstration of the additionality. In line with this tool, the PDD provides barrier analysis and common practice analysis, to determine that the project activity itself is not the baseline scenario.

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

The determination revealed two pending issues related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party. If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Version 2.0 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

The review of the project design documentation (version 2.0) 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 SIA "Vidzeme Eko" that relate directly to the GHG components of the project.

- /1/ Project design document "Dismantling of waste heap at former enrichment plant "Serdytyanska"" version 1.0 dated 18/07/2012
- /2/ Project design document "Dismantling of waste heap at former enrichment plant "Serdytyanska"" version 2.0 dated 24/07/2012
- /3/ ERUs calculation Excel file "CalculationSerdyt_.xls"
- /4/ Letter of Endorsement #1934/23/7 issued by State Environment Investment Agency of Ukraine 23/07/2012

Category 2 Documents:

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

- /1/ Passport of the dump under dismantling
- /2/ Passport. Automobile scales electronic tensometric VTA-60
- /3/ Delivery contract of Carbonaceous fraction between "Trading Company "TEHPROM" Ltd and "Trading Company "Antares" Ltd # 3118 from 03/01/2008 (in Russian).
- /4/ Act of admission and transmission of the waste heap from 03/01/2008 between Trading Company "Kaustic" Ltd and PE PCF "ALTAIR 2007"
- /5/ Agreement # 03/01/08-1 from 03/01/2008 between Trading Company "Kaustic" Ltd and PE PCF "ALTAIR 2007"
- /6/ Agreement of subcontract # 3189 from 03/01/2008 between "Trading Company "TEHPROM" Ltd and PE "COMMERCIAL COMPANY" TRUST "Ltd on the works of the dump dismantling.
- /7/ Agreement of subcontract # 1191 from 01/01/2009 between "Trading Company "TEHPROM" Ltd and "Plastmontazh" Ltd on the works of the dump dismantling
- /8/ Agreement of subcontract # 30182 from 03/01/2008 between PE PCF "ALTAIR 2007" (Customer) and "Trading Company "TEHPROM" Ltd (Performer) on the works of the dump dismantling.
- /9/ Certificate of metrological certification #156 from 014/11/2008, the scales automobile electronic tenzometric VTA-60 № 091200795
- /10/ Certificate of metrological certification # 169 from 21/10/2009 the scales automobile electronic tenzometric VTA-60 № 091200795
- /11/ Certificate of metrological certification #132 from 18/11/2010 the scales automobile electronic tenzometric VTA-60 № 091200795
- /12/ Certificate of metrological certification # 146 from 25/10/2011. the scales automobile electronic tenzometric VTA-60 № 091200795.
- /13/ Registration certificate MB.2.844.000 ПС on Hygrometer psychrometric issued JSK «Steclopribor» (in Russian).
- /14/ Order Derjspojivstandart Ukraine "Donetskstandartmetrolohiya" SC # 283 of



- 15/04/2011, the appointing committee to check the conditions for certification of Coal Laboratory.
- /15/ Certificate attestation of Coal Chemical Laboratory PE "Industrial - Commercial Firm" UKRHYMVUHLEKACHESTVO" # VL-089/2011 issued 4/22/2011 was in force prior to 22/04/2014.
 - /16/ Certificate number 361 and the protocol number 361 of 28/05/2008, the screening laboratory certification number 347 for grain size and purity sifter loose types of materials to form a square cell that belongs to JSC "Rodnik".
 - /17/ Certificate # 00732 and the protocol # 00732 from 15/08/2010, the certification of sieves with mesh metal square cells, type SL-200, pl. # 26047.
 - /18/ Certificate # 362 and the protocol # 362 from 28/05/2008, the screening laboratory certification # 348 for grain size and purity sifter loose kinds of materials with a round shape cell
 - /19/ Certificate # 334 and the protocol # 334 from 01/10/2008 certification of electric laboratory SNOL 7,2/1100 pl. # 06174
 - /20/ Certificate # 72 dated 05/05/2011, at Electric laboratory SNOL 67/350, pl. # 11928.
 - /21/ Certificate # 71 dated 05/05/2011, at Electric SNOL 7,2/1100 pl. # 05793.
 - /22/ Certificate # 10 and protocol # 10 dated 25/01/2011, the certification # 347 sieve control type SLM, pl. # 26047 to determine the grain size and purity sifter loose types of materials to form a square cell..
 - /23/ Certificate # 9 and protocol # 9 dated 25/01/2011, the certification # 347 sieve control type SLM, pl. # 347 to determine the grain size and purity sifter loose types of materials to form a square cell.
 - /24/ Certificate # 8 and protocol # 8 dated 25/01/2011, the screening laboratory certification # 347, pl. # 348 to determine the grain size and purity sifter loose kinds of materials with a round shape cell.
 - /25/ Certificate # 7 dated 20/01/2011, at Electric laboratory furnace SNOL 7,2/1100 pl. # 103426
 - /26/ Certificate # 330 and the protocol # 330 dated 23/09/2008, the certification of the drying box SNOL 67/350, pl. # 12357
 - /27/ Act dated 20/04/201 on the execution of the "Donetskstandartmetrolohiya" SC , coal laboratory tests on PE "VFK" UKRHYMUHLEKACHESTVO " certification criteria.
 - /28/ Act # 26/70190 of the state weights laboratory calibration of general purpose and standard of all types, certified screens of all types, metrological certification muffle furnaces, electric resistance furnaces.
 - /29/ Guarantee tickets to the electronic scales A 6000, # 759, electronic scales XAS 100/C # 479, # 759, furnace SNOL 67/350, pl. # 12 357 , laboratory electric furnace SNOL 7.2/1100 № 06174
 - /30/ Expert opinion dated 31/03/2011, with the results of examination of documents submitted Coal Laboratory PE "TCF" UKRHYMUHLEKACHESTVO "which examined on measurements in in the state metrological supervision.
 - /31/ Journal of weighing equipment and technology for coal laboratoriesfirm "Ukrhimuglekachestvo" (in Russian).
 - /32/ Passport # 9. Electric Laboratory, pl. # 05793, inv. # 9, the type -SNOL 7.2/1100 (in Russian).



- /33/ Passport # 7. Electric Laboratory furnace, pl. # 11928, inv. # 7, the type - SNOL 67/350 (in Russian).
- /34/ Passport # 6. Sieve Laboratory, pl. # 347, inv. # 6 (in Russian).
- /35/ Passport # 5. Sieve Laboratory, pl # 348, inv. # 5 (in Russian).
- /36/ Passport # 4. Stopwatch pl. # 7095, inv. # 4, type SOPpr 2a-2-010(in Russian)
- /37/ Passport # 3. Electronic Scales, pl. # 209 807, inv. # 3, the type of XAS 100/1 (in Russian).
- /38/ Passport # 2. Electronic Scales, pl. # 214295, inv. # 2, the type of XAS 100/1 (in Russian).
- /39/ Passport # 1. Scales pl. # 759, inv. # 1, type A-6000 ((in Russian).
- /40/ Plan for coal laboratory firm "Ukrhimuglekachestvo" (in Russian).
- /41/ Guide of maintenance. Electric water distiller pharmacy, DE-4-02"EMO" OKP 94 5243, model 737 (in Russian).
- /42/ Certificate of verification of the working measuring instrument from 15/03/2012 # 02/08-245 - mechanical stopwatch JOP pr-2a-2-000pl. # 7095.
- /43/ Passport. Mechanical Stopwatch SOPpr-2a-2-010 (in Russian).
- /44/ Quality Certificate # 005 dated 25/04/2008, the chopper vibrating 75T - DRM, pl. # 1087 (in Russian)
- /45/ Passport-75T DrM.000PS. Chopper vibrating 75T-DRM .
- /46/ Act of performed work of weighing from 01/10/08 of 42083.80 tons of carbonaceous rocks
- /47/ Act of admission and transmission of performed work from 01/10/08 for 24 924 862.61 UAH. and calculation of the costs for the act of performed works
- /48/ Sales invoice# 83 for 42083.80 tons of Carbonaceous rocks
- /49/ Certificate # 81 on the quality of coal from 30/09/2008
- /50/ Act of performed work of weighing from 01/07/10 of 40253.15 tons of carbonaceous rocks
- /51/ Act of admission and transmission of performed work from 01/07/10 for 3 979 370.87 UAH. and calculation of the costs for the act of performed works
- /52/ Sales invoice# 75 for 40253.15 tons of Carbonaceous rocks
- /53/ Certificate # 59 on the quality of coal from 30/06/2010
- /54/ Act of performed work of weighing from 01/02/12 of 473479.65 tons of carbonaceous rocks
- /55/ Act of admission and transmission of performed work from 01/02/12 for 4 906 139.24 UAH. and calculation of the costs for the act of performed works
- /56/ Sales invoice# 12 for 473479.65 tons of Carbonaceous rocks
- /57/ Certificate # 9 on the quality of coal from 31/01/2012



Persons interviewed:

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

- /1/ Gints Klavinsh - SIA "Vidzeme Eko" JI Project Manager
- /2/ Tymofeev Sergiy Petrovych - SIA "Vidzeme Eko" JI Consultant
- /3/ Stah Yuri Mykhailovych - SIA "Vidzeme Eko" JI Consultant
- /4/ Berestova Irina Ivanivna – subcontractor of PE PCF "Altair-2007"
PE "ICC Ukrhimuglekachestvo" Head of Laboratory, subcontractor
of PE PCF "ALTAIR 2007"
- /5/ Volodymyr Anatoliyovych Yaroviy - subcontractor of PE PCF
"ALTAIR 2007", "Plastmontazh" Ltd Production Manager,
- /6/ Mikhail Alexandrovich Gorbenko - subcontractor of PE PCF "ALTAIR
2007", TK "TEHPROM" Ltd manager of industrial department,

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APPENDIX A: 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?	The title of project is DISMANTLING OF WASTE HEAP AT FORMER ENRICHMENT PLANT "SERDYTYANSKA"	OK	OK
-	Is the sectoral scope to which the project pertains presented?	The sectoral scope of proposed project is 8. Mining/mineral production	OK	OK
-	Is the current version number of the document presented?	The current version number of proposed PDD is 1.0	OK	OK
-	Is the date when the document was completed presented?	The date when the PDD version 1.0 is completed is 18/07/2012	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)?	<p><u>The situation existing prior to the starting date of the project</u> Very often it was not economically feasible to extract all 100% of coal from the rock mass. Therefore, waste heaps of Donbas contains a large amount of coal, which is self-ignited later on. All the waste heaps that were self-ignited or the ones that are close to self-ignition are the centre of uncontrolled pollutants and greenhouse gas emissions</p> <p><u>The baseline scenario assumed</u> that the common practice will be continued – heap can be spontaneously ignited with a certain probability, and the process of burning will continue till all coal, contained there, will be burned. The process of combustion is accompanied by release the carbon dioxide into atmosphere.</p> <p><u>Project scenario</u>-provides complete dismantling of the dump.</p>	CL01	OK



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DETERMINATION REPORT: "DISMANTLING OF WASTE HEAP AT FORMER ENRICHMENT PLANT "SERDYTYANSKA""

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		During dismantling of the dump, the rocks will be divided into fractions, which will be used for blending with steam coal and subsequently supplied to heat power plants and boiler houses for burning as fuel. After sorting, the large fractions will be used for building and repairing of roads. As the result, rock mass of the dump will be fully utilized, and the received coal will replace coal, which otherwise would have had to be mined. As the result of the project, the opportunity of self-ignition of heap will be eliminated. <u>CL01</u> Please explain current status of dismantled waste heap, and add data for its formation		
-	Is the history of the project (incl. its JI component) briefly summarized?	The history of the project is summarized in the section A.2 <u>CAR01</u> Please add JI component in the project history	CAR01	OK
Project participants				
-	Are project participants and Party(ies) involved in the project listed?	The PDD indicates as project participants SIA "Vidzeme Eko" (Latvia) and PE PCF "ALTAIR 2007" (Ukraine)	OK	OK
-	Is the data of the project participants presented in tabular format?	The data of the project participants are presented in tabular format	OK	OK
-	Is contact information provided in Annex 1 of the PDD?	The contact information of project participants is provided in the Annex 1 of the PDD	OK	OK
-	Is it indicated, if it is the case, if the Party involved is a host Party?	Ukraine (Party Involved) is indicated as the Host party	OK	OK
Technical description of the project				
Location of the project				
-	Host Party(ies)	Ukraine	OK	OK
-	Region/State/Province etc.	Donetsk Region	OK	OK
-	City/Town/Community etc.	Serdyte 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 geographical coordinates of the sorting complex is 48° 03' 23" N. Lt. and 38° 23' 14" E. Lg. <u>CL02</u> Please indicate source of project geographical coordinates	CL02	OK



DETERMINATION REPORT: "DISMANTLING OF WASTE HEAP AT FORMER ENRICHMENT PLANT "SERDYTYANSKA""

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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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 proposed technology is described in the section A.4.2. Proposed project propose installation of sorting unit, which divides rock mass on fractions 0-30 mm and +30 mm. Fraction 0-30 mm burns for energy purposes, fraction +30 mm uses for building and repairing 4-5 class roads <u>CL03</u> Please add information on coal content in the fraction +30 mm	CL03	OK
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)	Emission reductions created by: - Elimination of greenhouse gases sources associated with burning waste heaps, by extracting coal from the rock dumps; - Reduction of uncontrolled methane emissions due to replacement of coal that would have been extracted through mining; - Reduction of electricity consumption at waste heap dismantling in comparison to electricity consumption at coal mine.	OK	OK
-	Is it provided the estimation of emission reductions over the crediting period?	PDD indicates estimation of emission reductions over crediting period. Estimations for 2008-2012 are 2 001 377 tonnes of CO2 equivalent	OK	OK
-	Is it provided the estimated annual reduction for the chosen credit period in tCO2e?	Annual estimated reduction for chosen crediting period is 480 330 tonnes of CO2	OK	OK
-	Are the data from questions above presented in tabular format?	The data from questions above is presented in tabular format	OK	OK
Estimated amount of emission reductions over the crediting period				
-	Is the length of the crediting period Indicated?	<u>CAR02</u> Please indicate length of crediting period in YY years MM months	CAR02	OK



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DETERMINATION REPORT: "DISMANTLING OF WASTE HEAP AT FORMER ENRICHMENT PLANT "SERDYTYANSKA""

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
-	Are estimates of total as well as annual and average annual emission reductions in tonnes of CO2 equivalent provided?	The total estimated value and annual average value of emission reductions are indicated in tonnes of CO2 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?	<u>CAR03</u> Please provide in the PDD Letter of Endorsement issued by DFP of the Host Party and written project approvals from both parties involved	CAR03	Pending
19	Does the PDD identify at least the host Party as a "Party involved"?	The PDD indicates the Host Party (Ukraine) as the party involved	OK	OK
19	Has the DFP of the host Party issued a written project approval?	See section 19 of this protocol	Pending	Pending
20	Are all the written project approvals by Parties involved unconditional?	See section 19 of this protocol	Pending	Pending
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 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?	See section 19 of this protocol	OK	OK
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 explicitly indicates that JI specific approach was used for baseline establishing	OK	OK
JI specific approach only				
23	Does the PDD provide a detailed theoretical	The PDD provides detailed theoretical description of	CAR04	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	description in a complete and transparent manner?	<p>proposed approach and established baseline in complete and transparent manner</p> <p><u>CAR04</u> Please explain why multi-project emission factor can not be used or delete this statement</p> <p><u>VERB</u> Please correct JT-specific approach</p>		
23	<p>Does the PDD provide justification that the baseline is established:</p> <p>(a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one?</p> <p>(b) Taking into account relevant national and/or sectoral policies and circumstance? – Are key factors that affect a baseline taken into account?</p> <p>(c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?</p> <p>(d) Taking into account of uncertainties and using conservative assumptions?</p> <p>(e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure?</p> <p>(f) By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring", as appropriate?</p>	<p>The PDD provides justification of baseline establishing</p> <p>(a) by listing and describing five plausible future scenarios</p> <p>(b) Taking into account national and sectoral policies. Ukrainian policies doesn't require or encourage waste heaps dismantling</p> <p>(c) In transparent manner, with regard to the approaches, methodologies, parameters, data sources and key factors</p> <p>(d) Uncertainties and conservative assumptions are taken into account</p> <p>(e) ERUs cannot be earned for decreasing in activity levels outside the project, because in case of projects stop, generation of emission reduction will be stopped also.</p> <p>(f) Variables used for baseline calculations in line within appendix B to "Guidance on criteria for baseline setting and monitoring"</p> <p><u>CL04</u> PDD indicates that coal obtained from the waste heap used for burning in TPPs and boiler houses. Serdytyanska coal enrichment plant produce energy coal classes. Please note if obtained coal is divided by classes</p>	CL04	OK
24	If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are	Elements of CDM approved methodology ACM009 version 03.2 were used for leakages calculations	OK	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above?			
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	<p>The project uses many multi-project factors for baseline calculations, such</p> <ul style="list-style-type: none"> - oxidation factor of steam coal - carbon content of steam coal - emission factor for electricity consumption <p>Proposed factors is in line within the National GHG Inventory report, approved by Ukraine DFP</p> <p><u>CAR04</u></p> <p>PDD lists in table 5 standard variables, approved by Ukrainian DFP for 2008-2011 years, and these values are used for ERUs estimations in 2012 year. Please mark table 5 as monitored parameters.</p> <p><u>CL05</u></p> <p>Please indicate class of energy consumption of sorting factory in accordance with Order #1052 of NERC</p>	CAR04 CL05	OK OK
Approved CDM methodology approach only_Paragraphs 26(a) – 26(d)_Not applicable				
Additionality				
Jl specific approach only				
28	<p>Does the PDD indicate which of the following approaches for demonstrating additionality is used?</p> <p>(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;</p> <p>(b) Provision of traceable and transparent</p>	<p>The PDD indicates that approach (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" was used for additionality demonstration</p>	OK	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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".			
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	The justification of proposed approach was sound satisfactory	OK	OK
29 (b)	Are additionality proofs provided?	<p>a) <u>GHG mitigation measure</u>. The project boundary is virtually identical, the expected average GHG emission reduction is differ by 37.27%. Criteria is satisfied</p> <p>b) <u>Geography and time</u>. Both projects is implemented in Ukraine, Donetsk Region, starting date are divided by 9 months. Criteria is satisfied</p> <p>c) <u>Scale</u>. The projects envisage production of the same product (coal).</p> <p>d) <u>Regulatory framework</u>. There were no significant changes in regulatory framework between the starting dates of two projects. Criteria is satisfied.</p> <p><u>CL06</u> Please clarify values of project output (coal or rock mass) to comparing with JI project on waste heap of former Rossypnyanska mine</p>	CL06	OK
29 (c)	Is the additionality demonstrated appropriately as a result?	The additionality is demonstrated appropriately as a result	OK	OK
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made	The approach 28 (b) was chosen	OK	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	in accordance with the selected tool or method?			
Approved CDM methodology approach only_ Paragraphs 31(a) – 31(e)_ 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: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	The project boundaries defined in the PDD encompass all anthropogenic emissions by GHG sources that are (i) Under control of the project participants, such as emissions of electricity and diesel fuel consumption during waste heap dismantling (ii) Reasonably attributable to the project, such as emissions from waste heap burning or methane emissions as result of coal industry significant	OK	OK
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?	The project boundary is defined on the basis of a case-by-case assessment with regard to the criteria in 32(a) above	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 project boundaries and gases and sources excluded is clearly described in the PDD, using flow charts.	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?	All gases and sources inclusions are explicitly stated in the project and baseline scenarios	OK	OK
Approved CDM methodology approach only_ Paragraph 33_ 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 starting date of the project is 03/01/2008 – the date when the installation of project equipment was begun	OK	OK
34 (a)	Is the starting date after the beginning of 2000?	01/03/2008 is after beginning of 01/01/2008	OK	OK
34 (b)	Does the PDD state the expected operational	Expected operational lifetime of the project is 4 years and 2	OK	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	lifetime of the project in years and months?	months (50 months)		
34 (c)	Does the PDD state the length of the crediting period in years and months?	Length of crediting period is indicates as 4 years and 11 months (59 months)	OK	OK
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?	The starting date of the crediting period is 01/02/2008, the date when the first emission reductions were generated by the project <u>CL07</u> Please note document demonstrated that sorting plant was put in operation 01/02/2008	CL07	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 01/02/2008 is after 2008 beginning	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 crediting period doesn't extends beyond 2012	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 is used	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 monitoring plan describes all relevant factors and key characteristics that will be monitored, such as: - electricity and fuel consumed in project activity; - value of extracted fraction 0-30 mm, its ash content and moisture. The period in which they will be monitored are indicated, frequency of measuring procedures is identified	OK	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		All decisive factors for the control and reporting of project performance are described		
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored?	The monitoring plan specify the indicators, constants and variables used, that are reliable, valid and provide transparent picture of the emission reductions to be monitored	OK	OK
36 (b)	If default values are used: <ul style="list-style-type: none"> - 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? 	The default values, such as: <ul style="list-style-type: none"> - global warming potential of methane - methane density in standard conditions - carbon emission factors for electricity consumption - carbon oxidation factors for coal and diesel fuel - carbon content of diesel fuel and coal, etc these default values is in line within National GHG inventory Report developed and approved by Ukraine DFP(SEIA) <u>CAR05</u> Please rename table 22 in the section D, these parameters are default but not are constant. Please indicate default values as monitored in the section D.1.1.1 Also please note that default parameters for 2012 years will be used in line with relevant rules of SEIA in 2012 year <u>CAR06</u> Monitoring plan uses "National GHG inventory report for 2008-2010 years" which is not approved by SEIA. Please correct	CAR05 CAR06	OK 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?	For monitored data provided by the project participants monitoring plan identify selection and justification	OK	OK
36 (b) (ii)	For other values, <ul style="list-style-type: none"> - Does the monitoring plan clearly indicate the precise references from which these values are 	References on values obtained from sources another from indicated above is provided. Conservativeness of this value is justified	OK	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	taken? – Is the conservativeness of the values provided justified?			
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	<u>CAR07</u> Please provide description of procedures to be followed if expected data are unavailable	CAR07	OK
36 (b) (iv)	Are International System Unit (SI units) used?	Some units from International System Unit 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 but are obtained through monitoring?	The monitoring plan clearly indicate next parameters that obtained through monitoring but used for baseline calculations: <ul style="list-style-type: none"> - 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 heap because of the project activity - net Calorific Value of coal - carbon Oxidation factor of coal - carbon content of coal - the average ash content of sorted fractions - the average humidity of sorted fractions 	OK	OK
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	The use of parameters, coefficients, variables is consistent between the baseline and the 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 was drawn in accordance with the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"	OK	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	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	OK	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	(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?	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. For more information see also CAR		
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	The monitoring plan clearly describes the methods employed for data monitored, such as direct measuring with metering devices and laboratory samples, account from bookkeeper invoices; frequency of monitoring procedures and recording	OK	OK
36 (f)	Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate?	The monitoring plan elaborates all formulae required to baseline and project emissions adjusted by leakages calculation	OK	OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	The underlying rationale for the formulae is explained	OK	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	All variables, equation formats, subscripts are used in consistent way	OK	OK
36 (f) (iii)	Are all equations numbered?	All equations are numbered	OK	OK
36 (f) (iv)	Are all variables, with units indicated defined?	All variables with units are indentified	OK	OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	The conservativeness of the procedures are 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". Only uncertainty level of value of waste heap ignition burning is indicated as medium	OK	OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure for	Consistency between the elaboration of baseline scenario and the procedure for emission calculation in the baseline	OK	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	calculating the emissions or net removals of the baseline ensured?	are justified		
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	The monitoring plan contains detailed explanation of each part of formulae	OK	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	The proposed monitoring plan is similar with monitoring plans of JI projects implemented at SIA "Antracit", SIA "Monolit", "Temp" LLC etc, determined by Global Carbon B.V.	OK	OK
36 (f) (vii)	Are references provided as necessary?	The references are provided in relevant points	OK	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	The explicit and implicit key assumptions are explained in transparent manner	OK	OK
36 (f) (vii)	Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed?	Uncertainty level in key parameters identified as low in table D.2 "Quality control and quality assurance procedures undertaken for data monitored". Only uncertainty level of value of waste heap ignition burning is indicated as medium	OK	OK
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?	The uncertainty level of parameters monitored is indicated in the section D.2, quality control and quality assurance procedures. The uncertainty level of parameters monitored is indicated as low, only Probability of waste heap burning is indicated as medium	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?	The monitoring plan identifies next state ruling documents: (a) GOST 11022-95 and GOST 11014-2001 for sampling analysis process (b) GOST 305-82 on diesel fuel parameters References on detailed description of mentioned standard are provided	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 this project	OK	OK
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate,	<u>CAR08</u> Please add information on calibration of power meter NIK 2303 ARK1 and scales VTA-60	CAR08	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request?			
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	The monitoring plan clearly identifies the responsibilities and the authorities regarding the monitoring activities, see please section D.3 of the PDD	OK	OK
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 plan is identical to monitoring plans in JI projects implemented at SIA "Antracit", SIA "Monolit", "Temp" LLC etc, determined by Global Carbon B.V.	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?	The monitoring plan provides in tabular form a complete compilation of the data collected and required for emission reduction calculation, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations	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 ERUs calculations will be kept two years after the last ERUs transfer	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?	Selected elements of CDM methodology ACM009,Version 03.2 was used for leakages estimations in line within the section 36 above	OK	OK
Approved CDM methodology approach only_Paragraphs 38(a) – 38(d)_Not applicable				
Applicable to both JI specific approach and approved CDM methodology approach_Paragraph 39_Not applicable				
Leakage				
JI specific approach only				



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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 project leakages, and appropriately explains inclusion or exclusion of leakages	OK	OK
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	Procedure for ex-ante estimations of leakages are described in the section B.2 of the PDD	OK	OK
Approved CDM methodology approach only Paragraph 41 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 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 estimates of: (a) Emissions for the project scenario, which is 51 354 tonnes of CO2 equivalent for 01/02/2008-31/03/2012 (b) Leakages, which is -489 425 tonnes of CO2 equivalent for 01/02/2008-31/03/2012 (c) Emissions for the baseline scenario which is 1 563 307 tonnes of CO2 equivalent for 01/02/2008-31/03/2012 (d) Emission reduction adjusted by leakage, which is 2 001 377 tonnes of CO2 equivalent for 01/02/2008-31/03/2012 <u>CAR09</u> Please check rounding's in the section E <u>CAR10</u> Please check JI PDD form in the head of section E.2	CAR09 CAR10	OK OK
44	If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of:	See section 42		



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	(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?			
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 CO2 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 estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and	(a) The estimates are given on (i) on a yearly basis (ii) from 01/02/2008 till 31/12/2012 (iii) On a source-by-source/sink-by-sink basis - for each GHG, which are CH4 and CO2 - in tonnes of CO2 equivalent - using global warming potentials defined by decision 2/CP.3 (b) The formula used for calculating in 43 is consistent throughout the PDD (c) The key factors 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 for calculating estimates in 43 (d) The data sources used for calculating the estimates in 43 are clearly identified, reliable and transparent. (e) emission factors used for calculations in 43 are in line with National GHG Inventory Report approved by Ukrainian DFP (f) The estimations in 43 are based on conservative assumptions and the most plausible scenarios in a transparent manner (g) the estimates in 43 are consistent throughout the PDD (h) the annual average value of estimated emission reductions is 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.	OK	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	<p>appropriately justified of the choice?</p> <p>(f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner?</p> <p>(g) Are the estimates in 43 or 44 consistent throughout the PDD?</p> <p>(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?</p>			
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 PDD includes illustrative ex ante calculations of emission reductions for 2012 year	OK	OK
Approved CDM methodology approach only Paragraphs 47(a) – 47(b) Not applicable				
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 analysis of environmental impacts in accordance with actual Ukrainian rules. Environmental impact assessment, as a part of work project is note in the section F. Environmental impact assessment was provided to the project in 2008 year	OK	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 on Environmental impact assessment undertaken in accordance with requirements of the Host Party	OK	OK
Stakeholder consultation				



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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 actual Ukraine legislation doesn't require public information for JI projects. Project was presented to local authorities and obtained positive opinion (positive conclusion on work project). Any comments from local communities were not obtained. Comments will be collected during the determination process	OK	OK
Determination regarding small-scale projects (additional elements for assessment) Paragraphs 50 - 57 Not applicable				
Determination regarding land use, land-use change and forestry projects Paragraphs 58 – 64(d) Not applicable				
Determination regarding programmes of activities Paragraphs 66 – 73 Not applicable				

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
<u>CAR01</u> Please add JI component in the project history	-	Added in the Section A.2.: Since 2008 project is considered as JI projects. Project Idea (PIN) was submitted to assigned Coordinating Center (State Agency of Environmental Investments) on 18/07/2012. More information is also provided in Section A.5. " <u>Project approval by the Parties involved</u> "	The issue is closed
<u>CAR02</u> Please indicate length of crediting period in YY years MM months	-	The crediting period was given in the format - XX years YY months, indicating the beginning and end of the period.	The issue is closed


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<u>CAR03</u> Please provide in the PDD Letter of Endorsement issued by DFP of the Host Party and written project approvals from both parties involved	19	Letter of Endorsement from SEIA of Ukraine #1934/23/7 obtained 23/07/2012. It is planned to get a letter of approval from SEIA and a letter of approval from a foreign country in August 2012.	Pending
<u>CAR04</u> PDD lists in table 5 standard variables, approved by Ukrainian DFP for 2008-2011 years, and these values are used for ERUs estimations in 2012 year. Please mark table 5 as monitored parameters.	25	The name of the table 5 is changed. List of constants and parameters in the calculation of baseline emissions. It is mentioned, that during the monitoring period the value can be changed	The issue is closed
<u>CAR05</u> Please explain why multi-project emission factor cannot be used in this project	25	Methodology, which can use multi-project emission factor, is not developed for such type of projects.	The issue is closed
<u>CAR05</u> Please rename table 22 in the section D, these parameters are default but not are constant. Please indicate default values as monitored in the section D.1.1.1 Also please note that default parameters for 2012 years will be used in line with relevant rules of SEIA in 2012 year	36(b)	The name of the table 22 is changed: "List of parameters and constants used in the calculations of emissions". It is mentioned, that during the monitoring period the value can be changed	The issue is closed
<u>CAR07</u> Please provide description of procedures to be followed if expected data are unavailable	36(b)(iii)	This procedure is described in Section D "Procedures identified for corrective actions in order to provide for more accurate future monitoring and reporting" .	The issue is closed
<u>CAR08</u> Please add information on calibration of power meter NIK 2303 ARK1 and scales VTA-60	36(i)	Information about calibration of the meter and scales is added in the Appendix 3.	The issue is closed
<u>CAR09</u> Please check rounding's in the section E	43	Rounding is verified, values are corrected.	The issue is closed



BUREAU
VERITAS

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<u>CAR10</u> Please check JI PDD form in the head of section E.2	43	The form is corrected due to the "Guidelines for users of the joint implementation project design document form".	The issue is closed
<u>CL01</u> Please explain current status of dismantled waste heap, and add data for its formation	-	Currently, 100% of the waste heap is dismantled . The waste heap was formed in the 80s of the 20th century	The issue is closed
<u>CL02</u> Please indicate source of project geographical coordinates	-	Source of the project geographical coordinates - program Google-Earth.	The issue is closed
<u>CL03</u> Please add information on coal content in the fraction +30 mm	-	The content of coal in the fraction (+30) is not a parameter, which is monitored and is not involved in emissions calculating. This fraction goes to the filling-in of local roads, the possibility of her spontaneous combustion is excluded.	The issue is closed
<u>CL04</u> Please indicate class of energy consumption of sorting factory in accordance with Order #1052 of NERC	25	According to the order # 1052 NERC, customers who consume less than 150 MWh per month, are indicated as the 2 class. The sorting complex consumes less electricity, so it belongs to the 2 class of consumers.	The issue is closed
<u>CL05</u> Please clarify values of project output (coal or rock mass) to comparing with JI project on waste heap of former Rossyynyanska mine	29(b)	Clarification is made, according to the data on the number of fractions (0-30mm) in comparable and recent projects: in both projects the amount of sorted small fraction ranges from 300,000 to 400,000 tons per year.	The issue is closed



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<p><u>CL06</u> Please note document demonstrated that sorting plant was put in operation 01/02/2008</p>	<p>34(c)</p>	<p>It is given in the Section C.1 : "The date of commencement of the project is January 3, 2008 (from this date the installation of equipment begins according to the order of installation works implementation # 18-01/08 from 03/01/2008)." The act of the commissioning of the sorting complex, 30/01.2008 # 12-01/08</p>	<p>The issue is closed</p>
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