DETERMINATION REPORT
SIA "VIDZEME EKO"

DETERMINATION OF THE
WASTE PRODUCTS UTILIZATION OF COAL BENEFICATION PROCESS WITH THE AIM OF DECREASING GREENHOUSE GASES EMISSIONS INTO THE ATMOSPHERE AT THE SLUDGE DEPOSITORY OF MEP SLAVIANOSERBSKA

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DETERMINATION REPORT: WASTE PRODUCTS UTILIZATION OF COAL BENEFICATION PROCESS WITH THE AIM OF DECREASING GREENHOUSE GASES EMISSIONS INTO THE ATMOSPHERE AT THE SLUDGE DEPOSITORY OF MEP SLAVIANOSERBSKA

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Client:	Client ref.:
SIA “Vidzeme Eko”	Victor Tkachenko

Summary:
Bureau Veritas Certification has made the determination of the “Waste products utilization of coal benefication process with the aim of decreasing greenhouse gases emissions into the atmosphere at the sludge depository of MEP Slavianoserbska” project of SIA “Vidzeme Eko” located in Rodakovske village, Slov’yanoserbskyi district, Luhansk Region, Ukraine on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

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

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

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

Report No.:	Subject Group:
UKRAINE-det/0734/2012	JI
Project title:	
Waste products utilization of coal benefication process with the aim of decreasing greenhouse gases emissions into the atmosphere at the sludge depository of MEP Slavianoserbska	
Work carried out by:	
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Work reviewed by:	
Ivan Sokolov - Internal Technical Reviewer Nikolay Chekhmestrenko – technical specialist	
Work approved by:	
Ivan Sokolov - Operational Manager	

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Table of Contents *Page*

1 INTRODUCTION 3
1.1 Objective 3
1.2 Scope 3
1.3 Determination team 3

2 METHODOLOGY 4
2.1 Review of Documents 4
2.2 Follow-up Interviews 5
2.3 Resolution of Clarification and Corrective Action Requests 5

3 PROJECT DESCRIPTION 6

4 DETERMINATION CONCLUSIONS 7
4.1 Project approvals by Parties involved (19-20) 8
4.2 Authorization of project participants by Parties involved (21) 8
4.3 Baseline setting (22-26) 8
4.4 Additionality (27-31) 12
4.5 Project boundary (32-33) 13
4.6 Crediting period (34) 14
4.7 Monitoring plan (35-39) 14
4.8 Leakage (40-41) 19
4.9 Estimation of emission reductions or enhancements of net removals (42-47) 20
4.10 Environmental impacts (48) 22
4.11 Stakeholder consultation (49) 22
4.12 Determination regarding small scale projects (50-57) 23
4.13 Determination regarding land use, land-use change and forestry (LULUCF) projects (58-64) 23
4.14 Determination regarding programmes of activities (65-73) 23

5 SUMMARY AND REPORT OF HOW DUE ACCOUNT WAS TAKEN OF COMMENTS RECEIVED PURSUANT TO PARAGRAPH 32 OF THE JI GUIDELINES 23

6 DETERMINATION OPINION 23

7 REFERENCES 25

APPENDIX A: DETERMINATION PROTOCOL 28

1 INTRODUCTION

SIA "Vidzeme Eko" has commissioned Bureau Veritas Certification to determine its JI project "Waste products utilization of coal benefication process with the aim of decreasing greenhouse gases emissions into the atmosphere at the sludge depository of MEP Slavianoserbska" (hereafter called "the project") at Rodakivske village, Slov'yanoserbskyi district, Luhansk Region, Ukraine.

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

1.1 Objective

The determination serves as project design verification and is a requirement of all projects. The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and 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

Volodymyr Kulish

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 25/09/2012.

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

2.2 Follow-up Interviews

On 24/09/2012 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 "Spetsmontazh FC" 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 "SPETSMONTAZH FC"	➢ 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"	➢ 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 foresees extraction and enrichment of coal slurry from slurry pond of State Enterprise “Group Enrichment Plant Slovyanoserbska”.

Project technology may be described as follow:
Bulldozers plan one of the slurry pond’s slopes to give it an inclination for natural flow of water contained in the slurry as it fills in the storage. Access roads are filled with rocks not to get technique into sinking in the slurry. Burned rocks of the dump are used to cover the roads. The thickness of the rock layer must be 50 cm at least. While filling, bulldozer flattens rocks according to the technique movement.
Excavators loads slurry into trucks and transports it to the primary storage, where it is evenly filled along the edge. Bulldozer flattens it in even layers with the bulldozer blade. As the result of such activities raw material partially loses its moisture. Frontal loader loads dried slurry into tracks and transport it to the place of complete machining.
Slurry, shipped on the industrial site, is transported to the enrichment plant, where the enrichment process is carried out. Slurry through the receiving hopper is shipped by the feeding conveyer to the scrubber-sizing trammel, where the previous disintegration and classification of source material is carried out before the enrichment process. When slurry gets into the sizing trammel, it crumbles and fall on the sieve, where water, which is supplied under pressure out of nozzles, wash it away as a coal pulp to the under sieve part of the sizing trammel with the set-up size

of the upper class. Undersize product – is the rock mass, pieces of clay, reed, branches; all other things move away through the discharge section of the sizing trammel and by feeding conveyer is sent to waste. Pulp by gravity is transmitted to the shaking grizzle equipped with two sieves, where it is separated into three products; two-are oversize products and one is undersize product. Oversize product (concentrate) with humidity 18-22% by feeding conveyer is transported to the sedimentation centrifuge, and from the centrifuge, with humidity 11-12%, to the pile for drying.
End product can be used for making a charge and be transported to power plants for burning in boilers. It can be used without blending at TPP if it is equipped by boilers that can use for burning coal with high ash content.
Machinery involved in the slurry removal: 4 loaders, 4 bulldozers, 12 excavator, 75 trucks.

Sludge depository was put out operation in 1994 year
SE “MEP Slovyanoserbska” was a long time at reorganization, which not encourage of anti-firing and monitoring measures at slurry pond.

Private Enterprise “Spetsmontazh FC” uses lawfully the slurry pond. Relevant contract documentation are mentioned in the Table 2 of this Report.
Complex for the enrichment “Shidno-Ukrainska Zbagachuvalna kompaniya” is sub-contract of PE “Spetsmontazh FC” and situated about 26 km near the pond

The proposed project is aimed at reducing anthropogenic emissions. Emission reductions created by:
- Elimination of greenhouse gases sources associated with slurry ponds burning, by extracting coal from them;
- Reduction of uncontrolled methane emissions due to replacement of coal that would have been extracted through mining;
- Reduction of electricity consumption during slurry pond dismantling in comparison to electricity consumption at coal mine.

Identified problem areas for written project approvals, project participants’ responses and conclusions of Bureau Veritas Certification are described in Annex A (CAR01-CAR07, CL01)

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 30 Corrective Action Requests and 1 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 #2562/23/7 dated 12/09/2012 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 CAR01 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.

Identified problem areas for written project approvals, project participants' responses and conclusions of Bureau Veritas Certification are described in Annex A (CAR08)

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 CAR09 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. Microbiological steam coal extraction from slurry ponds-waste products from enrichment plants

Technological barrier: Experimental studies have shown that, according to this method, additional coal amount may be obtained compared to traditional methods of waste products utilization after coal benefication process. However, this method is at the stage of research, besides the volume of waste products processing is much lesser compared to gravitational and other traditional methods.

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 is less likely to attract investors than other opportunities in the energy sector with higher returns.

Scenario 3. Slurry ponds exploitation with the aim of construction material production

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 slurry ponds as its content 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 slurry pond for processing. A large scale deep exploration of the slurry pond has to be performed before the project can start. As for today, these waste products are used for dams of slurry ponds filling.

Scenario 4. Waste products utilization of coal benefication process to obtain steam coal without JI incentives.

Investment barrier: This scenario is financially unattractive and faces barriers. Please refer to section B.2 for details.

Scenario 5. Systematic monitoring of slurry ponds condition and regular fire prevention and extinguishing measures

Investment barrier: This scenario does not represent any revenues, but anticipates additional costs for slurry pond owners. Monitoring of the slurry pond status is not done systematically and, in general, actions are left to the discretion of the individual owners. Slurry ponds are mostly owned by enrichment plants. They suffer from limited investment resulting

often in safety problems due to complicated slurry ponds condition and financial constraints, with miner's salaries often being delayed by few months. Slurry ponds in this situation are considered as additional burdens and enrichment plants often do not even perform minimum required maintenance. Spontaneous self-heating and subsequent burning of slurry ponds are common, exact data are not always available. From a commercial point of view, the fines that are usually levied by the authorities are considerably lower than costs of all the measures outlined by this scenario.

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

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

- A comprehensive analysis and an in-depth description of the reform policies and legislation concerning the development and reforming of the Ukrainian coal industry. At this time effective united complex state program for prevention of waste heaps burning and reclamation with extraction of coal is absent. Fines paid by pollution costs much less than money spent on measures to prevent ignition or burning.

- Describing economic situation. Inner coal market in Ukraine is significantly controlled by Ukrainian government, which is owner of number of mines and significantly influencing on coal costs. Level of coal content in waste heap is difficultly predicted, and "Spetsmontazh" LLC is a small company which cannot supply coal in big quantities in long range time.
- As far as availability of capital there is a summary of key indicators of business practices in Ukraine as well as a comparison country risk premiums for Ukraine, and Russia are provided by the PP's vividly demonstrating that Ukraine has been always considered a high-risk country for investments and doing business, which extremely limits the opportunities of the project as for its access to financial resources at the international level.
- It is stated by the project participants that modern technologies and best practices existing in the developed countries are unavailable due to their high cost and necessity of the

knowledgeable personnel able to introduce and operate the equipment.

- As far as the fuel prices and its availability, the PDD states that electricity and diesel fuel are widely used in Ukrainian industry. Prices for diesel fuel that is mostly imported from the Russian Federation are regulated by Ukrainian Government. Electric energy in Ukraine is produced at the thermal and nuclear power stations mainly by use of fossil fuel. Wholesale Electricity Market of Ukraine is managed by the state enterprise “Energorynok”; the level of prices for electric energy ranges greatly for different types of consumers.

(c) In such a way that emission reduction units (ERUs) cannot be earned for decreases in activity levels outside the project activity or due to force majeure. According to the proposed approach emission reductions will be earned only when project activity will generate coal concentrate, so no emission reductions can be earned due to any changes outside the project activity.

(d) Taking into account uncertainties and using conservative assumptions such as the following:

- Lower range of parameters is used for calculation of baseline emissions and higher range of parameters is used for calculation of project activity emissions;

- Default values were used to the extent possible in order to reduce uncertainty and provide conservative data for emission calculations.

- The emissions of nitrous oxide have not taken into consideration for conservatism

For more details, please, refer to Section B.1. of the PDD.

Emissions in the baseline scenario are calculated as follows:

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

Where:
$BE_{WHB,y}$ - baseline emissions due to burning of the slurry pond in the year y (tCO2 equivalent),

Baseline emissions due to burning of the slurry pond in year y calculated by the formula:

$BE_{WHB,y} = FC_{BE,Coal,y}/1000 \cdot \rho_{WHB} \cdot \rho_{RB} \cdot NCV_{Coal} \cdot OXID_{Coal} \cdot K_{Coal}^{c} \cdot 44/12$ (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 slurry pond because of the project activity in the year *y,* t;

ρ_{WHB} - probability of the slurry pond burning , d/l;

ρ_{RB}- probability of the slurry pond burning out, 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.

Identified problem areas for baseline setting, project participants' responses and conclusions of Bureau Veritas Certification are described in Annex A (refer to CAR10-CAR18)

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4.4 Additionality (27-31)

For demonstration of additionality approach (b) Comparing with the project obtained positive determination conclusion. Project "Waste Heap Dismantling in the Rebrykove Town of Luhansk Region of Ukraine with the Aim of Reducing Greenhouse Gases Emissions into the Atmosphere" registration number UA1000392 was used for comparing with proposed project

http://ji.unfccc.int/JIITLProject/DB/XVX9ELI01AGMGKLB08FLJMB3K1X8MM/details

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

Additionality proofs are provided.

a) Both project foresees identical measures for reaction of GHG emissions into the atmosphere, coal extraction from anthropogenic deposits. Virtual boundaries and encompassed GHG sources are identical.

b) Both projects are implemented in Ukraine, starting dates for ERUs generation are divided by two months.

c) Both Projects uses similar technology and has similar scale. Description of project technologies and comparing of generated ERUs are provided in the section B.2 Step 2 of the PDD.

d) There are no significant changes in actual Ukraine Legislation applicable to anthropogenic coal depositories between the projects starting dates

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

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:
- Slurry pond burning 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 fossil fuel (diesel fuel) due to extracting coal from pond;
- 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)
- Consumption of electricity due to enrichment coal from slurry pond;

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 13 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 6-7 in section B.3 of the PDD.

Identified problem areas for project boundaries, project participants' responses and conclusions of Bureau Veritas Certification are described in Annex A (CAR19).

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 01/10/2008, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 6 years and 3 months.

The PDD states the length of the crediting period in years and months, which is 4 years and 3 months, and its starting date as 01/10/2008, which is on the date the first emission reductions or enhancements of net removals 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 issues applicable to the project crediting period, project participants responses, Bureau Veritas Certification conclusions are listed in the Annex A to this Determination Report (refer to CAR20)

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:

$$ER_y = BE_y – PE_y - LE_y, \quad (3)$$

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).

Emissions in the baseline scenario are calculated as follows:

$$BE_y = BE_{WHB,y}\ , \quad (4)$$

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:

$$BE_{WHB,y} = FC_{BE,Coal,y}/1000 \cdot \rho_{WHB} \cdot \rho_{RB} \cdot NCV_{Coal} \cdot OXID_{Coal} \cdot K_{Coal}^{c} \cdot 44/12 \quad (5)$$

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 sludge depository because of the project activity in the year *y,* t;
ρ_{WHB} - probability of sludge depository burning , d/l;
ρ_{RB} - probability of the slurry pond burning out, 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.

Emissions from the project activity are calculated as follows:

$$PE_y = PE_{Diesel,y} \quad (6)$$

where:

PE_y - project emissions due to 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).

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

$$PE_{Diesel,y} = FC_{BE,Diesel,y}/1000 \cdot NCV_{Diesel} \cdot OXID_{Diesel} \cdot K_{Diesel}^{c} \cdot 44/12 \quad (7)$$

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:

$$LE_y = LE_{B,y} + LE_{P,y} \quad (8)$$

where::
LE_y - leakages in year y, (t CO2e);
$LE_{B,y}$ - leakages in the baseline scenario in the year *y*, (t CO2e);
$LE_{P,y}$ - leakages in project scenario in a year y,(t CO2e);

Leakages in the baseline scenario in the year y are calculated as follow

$$LE_{B,y} = LE_{CH4,y} + LE_{EL,y} \quad (9)$$

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

$$LE_{CH4,y} = - FC_{BE,Coal,y} \cdot EF_{CH4} \cdot \rho_{CH4} \cdot GWP_{CH4} , \quad (10)$$

$FC_{BE,Coal,y}$ - 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 sludge depository because of the project activity in the year *y,* t;
EF_{CH4} - emission factor for fugitive methane emissions from coal mining, m3/t;
ρ_{CH4} - methane density at standard conditions t/m3;
GWP_{CH4} - 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:

$$LE_{B,EL,y} = - FC_{BE,Coal,y} \cdot N_{Coal,y}^{E} \cdot EF_{CO2,EL,y} \quad (11)$$

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;
$N_{Coal,y}^{E}$ - Average electricity consumption per tonne of coal, produced in Ukraine in the year y, MWh/t;
$EF_{CO2,EL,y}$ - Specific carbon dioxide emissions due to production of electricity at TPP and by its consumption, tCO2/MWh

Leakages in project scenario in a year *y* are calculated as follow:

$$LE_{P,y} = LE_{P,EL,y} \quad (12)$$

Where
$LE_{P,EL,y}$ - leakages due to consumption of electricity from a grid at benefication plant in a year y,(t CO2e)

$$LE_{P,EL,y} = - FC_{BE,Coal,y} \cdot N_{P,Coal,y}^{E} \cdot EF_{CO2,EL,y} \quad (13)$$

Де
$FC_{BE,Coal,y}$ - 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;
$N_{P,Coal,y}^{E}$ - average electricity consumption per tonne of coal for the processing technology of rock on the benefication plant, MW/t;
$EF_{CO2,EL,y}$ - 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.

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 CAR21-28)

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

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 81 585 tonnes of CO2eq for period 01/10/2008-31/12/2012; i 39 734 tonnes of CO2eq for period 01/01/2013-31/12/2014

(b) Leakage, as applicable, which are -2 598 891 tonnes of CO2eq for period 01/10/2008-31/12/2012; -1 241 496 and tonnes of CO2eq for period 01/01/2013-31/12/2014

(c) Emissions or net removals for the baseline scenario (within the project boundary), which are 4 140 167 tonnes of CO2eq for period 01/10/2008-31/12/2012; and 2 626 322 tonnes of CO2eq for period 01/01/2013-31/12/2014

(d) Emission reductions or enhancements of net removals adjusted by leakage (based on (a)-(c) above), which are 7 970 634 tonnes of CO2eq for period 01/10/2008-31/12/2012. and 3 828 084 tonnes of CO2eq for period 01/01/2013-31/12/2014

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 31/12/2014, 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 (CAR29, CAR30)

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 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.

4.13 Determination regarding small scale projects (50-57)

"Not applicable"

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

"Not applicable"

4.15 Determination regarding programmes of activities (65-73) (write

"Not applicable"

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

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

6 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the "Waste products utilization of coal benefication process with the aim of decreasing greenhouse gases emissions into the atmosphere at the sludge depository of MEP Slavianoserbska" Project in Rodakovske village, Slov'yanoserbskyi district, Luhansk 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 investment 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 "Waste products utilization of coal benefication process with the aim of decreasing greenhouse gases emissions into the atmosphere at the sludge depository of MEP Slavianoserbska" version 1.0 dated
/2/ Project design document "Waste products utilization of coal benefication process with the aim of decreasing greenhouse gases emissions into the atmosphere at the sludge depository of MEP Slavianoserbska" version 1.0 dated
/3/ ERUs calculation Excel-file "Calculation_Rodakivske2.xls"
/4/ Letter of Endorsement #2562/23/7 dated 12/09/2012 issued by State Environment Investment Agency of Ukraine

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

/1/ Passport. Automobile scales electronic tensometric VTA-60
/2/ Delivery contract of Carbonaceous fraction between "MERIDIAN 2008" Ltd and "AMG DEVELOPMENT" Ltd #204 from 26/08/2008 (in Russian).
/3/ Delivery contract of Carbonaceous fraction between "MIRTA-LUX" Ltd. and "TH ICC REGION-STAL" Ltd # 54 from 03/01/2012 (in Russian)..
/4/ Agreement of subcontract # 268 from 26/08/2008 between "MERIDIAN 2008" Ltd and "ASKANIYA 2008" Ltd on the works of the dump dismantling
/5/ Agreement of subcontract # 72 from 03/01/2012 between "MIRTA-LUX" Ltd. and "FINANS-MEDIA" Ltd on the works of the dump dismantling
/6/ Agreement of subcontract # 126 from 26/08/2008 between CE "Vtormet" Ltd.(Customer) and ""MERIDIAN 2008" Ltd.(Performer) on the works of the dump dismantling
/7/ Agreement of subcontract # 191 from 03/01/2008 between CE "Vtormet" Ltd.(Customer) and "MIRTA-LUX" Ltd. (Performer) on the works of the dump dismantling
/8/ Act of performed work of weighing from 01/11/09 of 296083 tons of carbonaceous rocks
/9/ Act of admission and transmission of performed work from 01/11/09 for 27100241,92 UAH. and calculation of the costs for the act of performed works.
/10/ Sales invoice# 61 for 109551tons of Carbonaceous rocks
/11/ Act of performed work of weighing from 01/04/10 of 298161 tons of carbonaceous rocks

/12/ Act of admission and transmission of performed work from 01/04/10 for 27300199,93 UAH. and calculation of the costs for the act of performed works.
/13/ Sales invoice# 43 for 110320 tons of Carbonaceous rocks
/14/ Act of performed work of weighing from 01/10/10 of 305523 tons of carbonaceous rocks
/15/ Act of admission and transmission of performed work from 01/10/10 for 27974278,80 UAH. and calculation of the costs for the act of performed works.
/16/ Sales invoice#102 for 113044 tons of Carbonaceous rocks
/17/ Act of performed work of weighing from 01/02/11 of 295758 tons of carbonaceous rocks
/18/ Act of admission and transmission of performed work from 01/02/11 for 27052313,40 UAH. and calculation of the costs for the act of performed works
/19/ Sales invoice# 24 for 109431 tons of Carbonaceous rocks
/20/ Act of performed work of weighing from 01/11/11 of 299455 tons of carbonaceous rocks
/21/ Act of admission and transmission of performed work from 01/11/11 for 27390471,47 UAH. and calculation of the costs for the act of performed works.
/22/ Sales invoice# 99 for 110798 tons of Carbonaceous rocks
/23/ Act of performed work of weighing from 01/05/12 of 324000 tons of carbonaceous rocks
/24/ Act of admission and transmission of performed work from 01/05/12 for 30091086,82 UAH. and calculation of the costs for the act of performed works.
/25/ Sales invoice# 60 for 119880 tons of Carbonaceous rocks
/26/ Results on mine surveyor measures of MEP Slovyanoserbska slurry pond
/27/ Technological scheme of “Skhidnoukrainska zbagachuvalna kompaniya” plant

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/ Olena Mykolaivna Petrenko - PE "Tandem 2006" Ltd. Head of Laboratory
/5/ Petro Hryhorovych Sydelnykov - "FINANS-MEDIA" Ltd. Production Manager
/6/ Lyudmyla Fedorivna Morozova - "MIRTA-LUX" Ltd. manager of TCD
/7/ Andriy Folts – head of PE "SPETSMONTAZH FC"

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APPENDIX A: DETERMINATION PROTOCOL

DETERMINATION PROTOCOL

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

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
General description of the project				
Title of the project				
-	Is the title of the project presented?	The title of project is: "Waste products utilization of coal benefication process with the aim of decreasing greenhouse gases emissions into the atmosphere at the sludge depository of MEP Slavianoserbska"	OK	OK
-	Is the sectoral scope to which the project pertains presented?	The sectoral scope is 8. Mining/mineral production	OK	OK
-	Is the current version number of the document presented?	The current version number is 1.0	OK	OK
-	Is the date when the document was completed presented?	The date when the document is completed is 03/09/2012	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)?	*Situation existing prior to the starting date of the project* Very often is not economically feasible to extract 100% of coal during the enrichment process. So, slurry keeps in the slurry ponds contains large amount of coal which is self-ignited *Baseline Scenario* – foresees that slurry pond may be self-ignited. Burning process is accompanied with emissions of GHG into the athmosphere	CAR01	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Project scenario foresees dismantling of slurry depository with sludge enrichment and drying. Obtained coal concentrate will be mixed with steam coal for energy demands. As a result, sources of GHG emissions will be eliminated *CAR01* Please provide data on sludge pond legal owners and data on "Spetsmontazh FC" subcontractors.		
-	Is the history of the project (incl. its JI component) briefly summarized?	The history of project including its JI component is briefly summarise	OK	OK
Project participants				
-	Are project participants and Party(ies) involved in the project listed?	PE "Spetsmontazh FC" from Ukraine and SIA "Vidzeme Eko" from Republic Latvia are listed in the section A.3 *CAR02* PDD indicates "Shidno-Ukrainska Zbagachuvalna kompaniya" as enterprise operating in the project frames. Please add explanation on "Shidno-Ukrainska Zbagachuvalna kompaniya" participation in project	CAR02	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 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?	The Party involved – Ukraine is a Host Party	OK	OK
Technical description of the project				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Location of the project				
-	Host Party(ies)	Ukraine	OK	OK
-	Region/State/Province etc.	Luhansk Region, Slovyanoserbskyi District *CAR03* Please correct location of proposed Project (name of district)	CAR03	OK
-	City/Town/Community etc.	Rodakove village	OK	OK
-	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	*CAR04* Please indicate separately coordinates of sludge pond near Rodakove village and coordinates of "Shidno-Ukrainska Zbagachuvalna kompaniya" enrichment complex. Also please provide photos of enrichment plant that will provide clear identification of mentioned enrichment plant and place of its location	CAR04	OK
Technologies to be employed, or measures, operations or actions to be implemented by the project				
-	Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation schedule described?	Technologies used in project activity may be described as follow: Raw material from sludge pond is transported by bulldozers and excavators to the transitional depository, where sludge is partially wet out. Dried sludge by frontal loaders is loaded to the tracks and transported to the enrichment plant. Sludge is beneficated by the washing drums and dried by the centrifuge separator at the enrichment plant. Dried product of enrichment is used for mixing with steam coal for burning at TPPs and boiler-houses *CAR05* Coal sludge from the ore-dressing plant contains large	CAR05 CAR06 CL01	OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		amount of water. Please add information on project measures provided by sludge pond dehydration or describe events, which results are sludge pond dehydration *CAR06* Please remove photos 2, 3, 4. This photos are not related to the proposed project *CL01* Please provide data on quantities of vehicles (bulldozers, excavators, trucks). Also please correctly indicate capacity of trucks KRAZ 65055		
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)	The GHG emission reductions will be achieved in the next ways: - elimination of GHG sources related to the sludge ponds burning by coal extraction of waste heaps - reduction of CH4 fugitive emissions from mines by replaced of obtained from mines coal - reduction of electricity consumption by coal extraction from the sludge comparing with coal extraction from mines	OK	OK
-	Is it provided the estimation of emission reductions over the crediting period?	The estimation of emission reduction over the crediting period (from 01/10/2008-31/12/2012) is 7 790 634 tonnes of CO2 equivalent	OK	OK
-	Is it provided the estimated annual	The estimated annual reduction for chosen crediting	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	reduction for the chosen credit period in tCO2e?	period is 1 875 443 tonnes of CO2 equivalent		
-	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?	The length of crediting period is 4 years 3 months (51 months) from 01/10/2008 till 31/12/2012	OK	OK
-	Are estimates of total as well as annual and average annual emission reductions in tonnes of CO2 equivalent provided?	The estimates of total as well as annual and average annual emission reductions are provided in tonnes of CO2	OK	OK
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	*CAR07* Please provide written approvals from the both Parties Involved	CAR07	Pending
19	Does the PDD identify at least the host Party as a "Party involved"?	The PDD identifies Host Party Ukraine as a Party Involved	OK	OK
19	Has the DFP of the host Party issued a written project approval?	Letter of Endorsement #2562/23/7 has been issued by State environment Investment Agency of Ukraine 12/09/2012	OK	OK
20	Are all the written project approvals by Parties involved unconditional?	See CAR07	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	*CAR08* Please indicate authorisation by Parties involved way for legal entities indicated as project participants	CAR08	Pending

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	involved, explicitly indicating the name of the legal entity? or − Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity?			
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 identification	OK	OK
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	The PDD contains detailed theoretical description of proposed baseline	OK	OK
23	Does the PDD provide justification that the baseline is established: (a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one? (b) Taking into account relevant national and/or sectoral policies and circumstance? − Are key factors that affect a baseline taken into account? (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources	The PDD provides justification of established baseline: (a) by listing and describing six plausible future scenarios (b) taking into account relevant national and sectoral policies and circumstances (c) In a transparent manner with regard to the choice of approaches, assumptions (d) Taking into account of uncertainties and using conservative assumptions (e) ERUs cannot be earned for decreasing the activity level of the project, outside the project and force majeure (f) By drawing on the list of standard variables	CAR10 CAR11 CAR12 CAR13 CAR14 CAR15 CAR16 CAR17	OK OK OK OK OK OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	and key factors? (d) Taking into account of uncertainties and using conservative assumptions? (e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure? (f) By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring", as appropriate?	contained in appendix B of the "Guidance on criteria for baseline setting and monitoring" *CAR09* Proposed scenario 2 foresees extraction of earth-metals and transitional metals. Accordingly the mentioned source concentration of mentioned elements is well below that concentration of coal. So, extraction of mentioned metals appears not economically feasible without coal extraction. Please eliminate proposed alternative or provide explanations *CAR11* Please add clarifications on choice of one of the proposed scenarios as baseline *CAR12* Please add information on values of penalty charges for sludge pond owners and costs of fire-prevention measures *CAR13* Please add references on state rules regulates anti-firing measures at sludge ponds *CAR14* Respirator's report on probability of self-ignition of sludge from "South-East Enrichment company" was used in the PDD. Please add clarification on mentioned report applicability or correct this misamendment. *CAR15* Please provide correct measuring units in the description of formulae 5		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CAR16 Please provide data on chemical analysis of residues obtained after the enrichment plant to prove that there are not self-ignited. *CAR17* Please add data on coal concentrate chemical analysis		
24	If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above?	The selected elements of approved CDM methodology ACM0009 was used for leakages assessment *CAR18* Please use the latest version 4.0.0 of CDM methodology ACM0009	CAR18	OK
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	The emission factors for electricity consumption, fugitive methane emissions due mining, is used in line within National GHG Inventory report for 1990-2010 years, which is approved by SEIA	OK	OK
Approved CDM methodology approach only_Paragraphs 26(a) – 26(d)_Not applicable				
Additionality				
JI specific approach only				
28	Does the PDD indicate which of the following approaches for demonstrating additionality is used? (a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario	The approach (c) Application of the most recent version of the "Tool for the demonstration and assessment of additionality version 06.0.0 was chosen for baseline demonstration	OK	OK

<table>
<tr><th>DVM Paragraph</th><th>Check Item</th><th>Initial finding</th><th>Draft Conclusion</th><th>Final Conclusion</th></tr>
<tr><td></td><td>and that the project will lead to emission reductions or enhancements of removals;
(b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality;
(c) Application of the most recent version of the “Tool for the demonstration and assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board”.</td><td></td><td></td><td></td></tr>
<tr><td>29 (a)</td><td>Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?</td><td></td><td></td><td></td></tr>
<tr><td>29 (b)</td><td>Are additionality proofs provided?</td><td>latest.

Sensitivity analysis results represented on page 24 of the PDD do not correspond the values which are available from financial model. Please correct. In addition representation of the sensitivity analysis is rather confusing. I would suggest to modify this table in the following way:

<table><tr><td></td><td>Benefication costs</td><td>Coal price</td></tr><tr><td>+10%</td><td></td><td></td></tr><tr><td>0%</td><td></td><td></td></tr></table></td><td></td><td></td></tr>
</table>

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		-10%		
29 (c)	Is the additionality demonstrated appropriately as a result?			
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made 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 are defined in the PDD encompass all anthropogenic emissions by sources of GHG, that are: - under the control of the project participants (emissions from the consumed diesel fuel,) - reasonably attributable to the project (emissions from sludge depository burning, emissions from electricity usage at the mines, etc) - 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 boundaries are defined on the basis of case-by case assessment with regard to the criteria referred to 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	*CAR19* Please add evidences that coal concentrate obtained in the project will be burned in Ukraine	CAR19	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	PDD by using a figure or flow chart as appropriate?			
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 included are explicitly stated and the exclusions of GHG sources are appropriately justified	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?	*CAR20* The PDD indicates that project starting date is 01/10/2008, the date when the sludge depository dismantling was begun. Please add evidences	CAR20	OK
34 (a)	Is the starting date after the beginning of 2000?	01/10/2008 is the date after beginning of 2000	OK	OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	The expected operational lifetime is indicated as 6 years 3 months	OK	OK
34 (c)	Does the PDD state the length of the crediting period in years and months?	The length of crediting period is 4 years and 3 months (51 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 PDD indicates that starting date of crediting periods is 01/10/2008, the date when the sludge depository was begun and first emission reductions were generated	OK	OK
34 (d)	Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?	The 01/10/2008 is after 2008 beginning	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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 PDD states that crediting period may be extended after 2012 in case of Host Party approval. The estimates are presented separately for 2008-2012 and 2013-2014 periods	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 states that JI specific approach was used for monitoring plan establishing	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 clearly describe: - relevant factors and key characteristics - project data are monitored on monthly basis - decisive factors for the control and reporting of the project performance, such as quantities of extracted coal concentrate, consumed diesel fuel and electricity	OK	OK
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored?	The monitoring plan specifies the indicators, constants and variables that are reliable, valid and provide transparent picture of the emission to be monitored	OK	OK
36 (b)	If default values are used:	The default values, such as diesel fuel and coal net	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	− 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?	calorific values, oxidation factors, carbon content are used carefully balanced in their selection, obtained from recognised sources, supported by statistical technique and presented in transparent manner		
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?	*CAR21* PDD indicates value of coal obtained in project activity. Please add procedures used for calculation of coal amount contained in coal concentrate. *CAR22* Please explain coefficient 0.34 in the formulae, calculating specific electricity consumption in the Annex 4 of the PDD *CAR23* Please indicate parameter "specific electricity consumption due sludge enrichment" as monitored	CAR21 CAR22 CAR23	OK OK OK
36 (b) (ii)	For other values, − Does the monitoring plan clearly indicate the precise references from which these values are taken? − Is the conservativeness of the values provided justified?	*CAR24* Please correct reference on source of next parameters: - probability of sludge depository burning - probability of coal burning in the sludge depository	CAR24	OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed	*CAR25* Please provide description of procedures that be	CAR25	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	if expected data are unavailable?	followed if expected data are unavailable		
36 (b) (iv)	Are International System Unit (SI units) used?	The international system units are used	OK	OK
36 (b) (v)	Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals but are obtained through monitoring?	The value of obtained coal is used for baseline calculation and is obtained through monitoring	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 is drawn in line within the 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 remain fixed throughout the crediting period), but that are not already available	The monitoring plan explicitly and clearly distinguish: (i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination? (ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination? (iii) Data and parameters that are monitored throughout the crediting period	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	at the stage of determination? (iii) Data and parameters that are monitored throughout the crediting period?			
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	The monitoring plan describes the methods employed for data monitoring 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 algorithms and formulae used for calculation on baseline emissions, project emissions and leakages applicable to the project in appropriate way	OK	OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	The underlying rationale for the formulae are explained	OK	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	The variables, equation formats, subscripts are used consistent	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?	*CAR26* Please provide units of carbon emission factors in the table 22 and D.1.3.1 in line within “Guidance on criteria for baseline setting and monitoring”	CAR26	OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	The conservativeness of the proposed procedures are justified	OK	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	The monitoring plan in the section D.2 indicates		
36 (f) (vi)	Is consistency between the elaboration of	Elaboration procedure of baseline scenario and	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	the baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured?	procedure for calculating the emissions in the baseline scenario is ensured		
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	All the algorithms and formulae are explained	OK	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	The monitoring procedures is standard and similar with project for waste heap dismantling	OK	OK
36 (f) (vii)	Are references provided as necessary?	*CAR27* Please provide reference on "МЕТОД ЭФФЕКТИВНОГО УПРАВЛЕНИЯ ЭЛЕКТРОПОТРЕБЛЕНИЕМ УГОЛЬНЫХ ШАХТ. Б.А. Грядущий, доктор техн. наук, ДонУГИ, Г.Н.Лисовой, В.И.Мялковский, Чехлатый Н.А., кандидаты техн. наук, НИИГМ имени М.М.Федорова, г. Донецк, Украина" throughout all PDD	CAR27	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	The implicit and explicit key assumptions are explained in a 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?			
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			

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	net removals provided?			
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 indicates next standards: - GOST 11022-95 and GOST 11014-2001 for fuel sampling analysis - GOST 305-82 Diesel fuel. Technical Characteristics. The reference is provided and data are used in conservative way	OK	OK
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	The monitoring plan used statistical reports of SEC "Respirator" for data on sludge depository burning in conservative way	OK	OK
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request?	The monitoring plan presents the quality assurance and quality control procedures for the monitoring process in the section D.2. Data on project measuring equipment is provided in the section D.1.	OK	OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	Section D of the PDD contains adequate flow-chart, describing responsibilities and authorities regarding the monitoring activities	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?	This project is first of its kind, but some elements of monitoring plan is identical with relevant in waste heap dismantling projects	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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 a complete compilation of data that need to be collected in tabular form	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 data required and monitored for verification will be kept two years after the last ERUs transfer *CAR28* Please add reference on relevant order describing data processing for JI project	CAR28	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?	The selected elements of approved CDM methodology ACM0009 with elements supplied by the project participants are used in line with section 36 of this Protocol	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				
40 (a)	Does the PDD appropriately describe an assessment of the potential leakage of the	The PDD appropriately describes an assessment of leakages related to the project	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	project and appropriately explain which sources of leakage are to be calculated and which can be neglected?			
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	Procedure for ex-ante estimates of leakages is provided in the section B.1 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 emission reductions in the baseline scenario and in the project scenario was chosen	OK	OK
43	If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	The PDD provides ex ante estimates of: (a) Emissions for the project scenario, which is 81 585 tonnes of CO2 equivalent for 01/10/2008-31/12/2012 and 39 734 tonnes of CO2 equivalent for 01/01/2013-31/12/2014 (b) Leakages, which is – 2 598 891 tonnes of CO2 equivalent for 01/10/2008-31/12/2012 and – 1 241 496 tonnes of CO2 equivalent for 01/01/2013-31/12/2014 (c) Emissions in the baseline scenario, which is 4 140 167 tonnes of CO2 equivalent for 01/10/2008-31/12/2012 and 2 626 322 tonnes of CO2 equivalent for 01/01/2013-31/12/2014 (d) Emission reductions, which is 7 790 634 tonnes	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		of CO2 equivalent for 01/10/2008-31/12/2012 and 3 828 084 tonnes of CO2 equivalent for 01/01/2013-31/12/2014		
44	If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emission reductions or enhancements of net removals (within the project boundary)? (b) Leakage, as applicable? (c) Emission reductions or enhancements of net removals adjusted by leakage?	See section 42 of this protocol	OK	OK
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,	(a) The estimates in 43 are given (i) on yearly basis (ii) from 01/10/2008 till 31/12/2014 (iii) on source-by source/sink-by-sink basis (iv) for CO2 and CH4 (v) in tonnes of CO2 equivalent (b) The formula used for calculation in 43 are consistent throughout the PDD (c) Key factors influencing the baseline emissions and activity level of the project and the risks associated with the project are taken into account in appropriate way (d) The data sources used for calculating the estimates in the 43 are clearly identified. (e) The emission factors used for calculation the estimates in 43 are clearly identified. (f) The estimates in 43 are based on conservative assumptions and the most plausible scenarios in a	CAR29 CAR30	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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 appropriately justified of the choice? (f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner? (g) Are the estimates in 43 or 44 consistent throughout the PDD? (h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?	transparent manner (g) The estimates in 43 are consistent through all PDD (h) The annual average 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 *CAR29* Please check head in the sub-section E.3 *CAR30* Please provide adequate documents on monthly values of sludge extraction		
46	If the calculation of the baseline emissions	The calculation is performed ex-post for 01/10/2008-	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	or net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation?	31/12/2011. PDD includes illustrative calculations for 01/01/2013-31/12/2014		
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 describes project environment impacts in line within actual Ukraine legislation. Environment impact assessment is analyzed in work project on enrichment plant building		
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?		OK	OK
Stakeholder consultation				
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	Actual Ukrainian legislation doesn't require stakeholders' consultation for JI projects. This project was presented to the local authorities and obtained positive conclusion (permit on works). Comments will be collected during the determination process	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?			
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
CAR01 Please provide data on sludge pond legal owners and data on "Spetsmontazh FC" subcontractors.	-	Added in Section A.2. : PE "SPETSMONTAZH FC" uses slurry pond of MEP Slavianoserbska on legitimate basis (according to the Agreement #16/08 from 26/08/2008 with the customer- "Luhanskvuhletehpostavka" Ltd.; according to the Agreement, the performer of works on mine technical reclamation PE "SPETSMONTAZH FC" leaves the rock, which was obtained during implementation of works, as the payment for work, and has the right to use and dispose of it at their own discretion. "Merydian" Ltd. is a contractor of slurry pond dismantling and sorting; PE "SPETSMONTAZH FC" has signed a Contract of work completion # 126 from 26/08/2008 with "Merydian" Ltd.	The issue is closed

CAR02 PDD indicates "Shidno-Ukrainska Zbagachuvalna kompaniya" as enterprise operating in the project frames. Please add explanation on "Shidno-Ukrainska Zbagachuvalna kompaniya" participation in project	-	Added in Section A.2.: Enrichment plant "Shidno-Ukrainska Zbagachuvalna kompaniya" is involved in the process of carbonaceous waste enrichment; carbonaceous waste is obtained during dismantling under the tolling (according to the Agreement # 32/08/08-1 from 26/08/08), and receives payment from PE "SPETSMONTAZH FC" foe each ton of recycled carbonaceous waste (see accompanying materials).	The issue is closed based on information, provided by project developer
CAR03 Please correct location of proposed Project (name of district)	-	The proposed project is located in Slovianoserbskyi distrect, Luhansk region Slovyanoserbskiy (see Wikipedia http://uk.wikipedia.org/wiki/Родакове)	The issue is closed
CAR04 Please indicate separately coordinates of sludge pond near Rodakove village and coordinates of "Shidno-Ukrainska Zbagachuvalna kompaniya" enrichment complex. Also please provide photos of enrichment plant that will provide clear identification of mentioned enrichment plant and place of its location	-	Added: Geographic coordinates of the plant 48° 27'56.88" N. Lt and 39°02'47.86" E.Ln., photo of the enrichment plant is presented in Section A.4.2.	The issue is closed based on information, provided by project developer

CAR05 Coal sludge from the ore-dressing plant contains large amount of water. Please add information on project measures provided by sludge pond dehydration or describe events, which results are sludge pond dehydration	-	Slurry pond is located on a hill in the form of bulk dams. During the work, CEP was filled with water from the pumping station of the plant. In connection with the liquidation of the CEP in 1994, the water supply to the slurry pond has been stopped. Under the influence of natural drainage and high temperature in the summer humidity in the tailings pond sludge decreased to 3-4%.	The issue is closed
CAR06 Please remove photos 2, 3, 4. This photos are not related to the proposed project		Photo is changed	The issue is closed
CAR07 Please provide written approvals from the both Parties Involved	-	Letter of approval from Latvia # 12.2-02/12395 was received 04/09/12. Letter of approval from SEIA will be received after determination process.	Pending
CAR08 Please indicate authorisation by Parties involved way for legal entities indicated as project participants	19	Added in Section A.5 : Letter of endorsement #2562/23/7 was received on 12/09/2012. Letter of approval from foreign country # 12.2-02/12395 was received 04/09/12. Parties involved authorize "SPETSMONTAZH FC" (Ukraine) and SIA "Vidzeme Eko" (Latvia) to be parties involved in the project.	Pending. Waiting for the letters of approval by Both Parties Involved

CAR09 Proposed scenario 2 foresees extraction of earth-metals and transitional metals. Accordingly the mentioned source concentration of mentioned elements is well below that concentration of coal. So, extraction of mentioned metals appears not economically feasible without coal extraction. Please eliminate proposed alternative or provide explanations	23	The proposed alternative scenario 2 was deleted.	The issue is closed
CAR11 Please add clarifications on choice of one of the proposed scenarios as baseline	23	Section B.2., Sub-step 1a: We identified two realistic and credible alternatives to the project activity. Other alternatives are faced with barriers (section B.1) and are not realistic.	The issue is closed
CAR12 Please add information on values of penalty charges for sludge pond owners and costs of fire-prevention measures	23	As stated in the PDD, Fines paid for burning slurry ponds are less than money spent for constant monitoring of its condition and measures to prevent its ignition.	The issue is closed
CAR13 Please add references on state rules regulates anti-firing measures at sludge ponds	23	State program of measures to fire extinguishing does not exist. The instructions NPAOP 10.0-5.21-04 "Instructions to prevent spontaneous ignition, fire extinguishing and waste heaps dismantling" provides some measures of fire extinguishing, but in practice do not provide complete avoidance of ignition. The full guarantee of avoiding ignition provides only slurry pond dismantling.	The issue is closed

CAR14 Respirator's report on probability of self-ignition of sludge from "South-East Enrichment company" was used in the PDD. Please add clarification on mentioned report applicability or correct this misamendment.	23	Respirator's report on probability of self-ignition of sludge from "South-East Enrichment company" was used by mistake in the PDD. Mistake is corrected: "SRI report on mine rescue and fire safty "Respirator" 2012. "Report on the propensity for spontaneous ignition of coal benefication waste products of MEP "Slavianoserbska"	The issue is closed
CAR15 Please provide correct measuring units in the description of formulae 5	23	Measurement Units are corrected: MWh	The issue is closed
CAR16 Please provide data on chemical analysis of residues obtained after the enrichment plant to prove that there are not self-ignited.	23	Added in Section B.1.: Sorted waste products of coal benefication process do not have tendency to spontaneous ignition. Results of chemical analysis of the waste will be provided to the AIE.	The issue is closed
CAR17 Please add data on coal concentrate chemical analysis	23	Added in Section B.1. : The project exploits waste products of coal benefication; waste products contain steam coal that will replace coal of the same amount and type in the baseline scenario; Quality characteristics of coal concentrate produced in the project exceed the average coal characteristics obtained through mining (certificate of quality of coal concentrate will be provided by AIO); according to the principle of conservatism, this change is correct	The issue is closed

CAR18 Please use the latest version 4.0.0 of CDM methodology ACM0009	24	The latest version 4.0.0 of CDM methodology ACM0009 was used	The issue is closed based on PDD corrections
CAR19 Please add evidences that coal concentrate obtained in the project will be burned in Ukraine	32(a)	Coal concentrate, which is the end product of this project, does not meet European standards for coal quality, therefore it is consumed only in the region where the project activities take place.	The issue is closed
CAR20 The PDD indicates that project starting date is 01/10/2008, the date when the sludge depository dismantling was begun. Please add evidences	34(a)	Added in Section C.1. : The date of the project commencement is 01/10/2008. From from this date the slurry pond dismantling starts according to the work ORDER # 4 from 01/10/2008.	The issue is closed
CAR21 PDD indicates value of coal obtained in project activity. Please add procedures used for calculation of coal amount contained in coal concentrate.	36(b)(i)	The exact amount coal concentrate is determined by weighing and confirmed by certificate of work completion. Theoretical calculation of coal concentrate is averaged.	The issue is closed
CAR22 Please explain coefficient 0.34 in the formulae, calculating specific electricity consumption in the Annex 4 of the PDD	36(b)(i)	Averaged 0.34 coefficient is used to calculate the energy consumption in the technological process of slurry enrichment. The calculation is made on the plant by chief technologist and confirmed by the relevant official document provided by the AIE.	The issue is closed

CAR23 Please indicate parameter "specific electricity consumption due sludge enrichment" as monitored	36(b)(i)	The enrichment plant is not legally controlled by the project participants, so the consumption of electricity in the enrichment process is not monitored and is classified as leakages.	The issue is closed
CAR24 Please correct reference on source of next parameters: - probability of sludge depository burning - probability of coal burning in the sludge depository	36 (b) (ii)	References are corrected, the name f the enrichment plant is corrected "Slavianoserbska".	The issue is closed
CAR25 Please provide description of procedures that be followed if expected data are unavailable	36(b)(iii)	Provided in Section D.2. : If the expected data are unavailable or lost, the calculations of emissions will be carried out by the most conservative option.	The issue is closed
CAR26 Please provide units of carbon emission factors in the table 22 and D.1.3.1 in line within "Guidance on criteria for baseline setting and monitoring	36 (f) (iv)	Units of carbon emission factors are provided in line within "Guidance on criteria for baseline setting and monitoring": MWh / t	The issue is closed
CAR27 Please provide reference on "МЕТОД ЭФФЕКТИВНОГО УПРАВЛЕНИЯ ЭЛЕКТРОПОТРЕБЛЕНИЕМ УГОЛЬНЫХ ШАХТ. Б.А. Грядущий, доктор техн. наук, ДонУГИ, Г.Н.Лисовой, В.И.Мялковский, Чехлатый Н.А., кандидаты техн. наук, НИИГМ имени М.М.Федорова, г. Донецк, Украина" throughout all PDD	36 (f) (vii)	Reference is provided, links are added.	The issue is closed

CAR28 Please add reference on relevant order describing data processing for JI project	36 (m)	Added in Section D.1.: Officials responsible for information storage (according to the director (PE "SPETSMONTAZH FC") Order # 32/08 from 02/10/2008) - production manager and chief accountant of PE "SPETSMONTAZH FC".	The issue is closed
CAR29 Please check head in the sub-section E.3	43	The discrepancy is corrected	The issue is closed
CAR30 Please provide adequate documents on monthly values of sludge extraction	43	Sales Invoice of coal concentrate sales will be provided by an Accredited Independent Organization.	The issue is closed
3P01 Please provide data on quantities of vehicles (bulldozers, excavators, trucks). Also please correctly indicate capacity of trucks KRAZ 65055		Number of mining equipment and freight transport is added in Section A.4.2. Engine power KRAZ (243 kW) is specified correctly (see http://www.banga.ua/avtomobili-kraz/samosval-kraz-65055-1.html)	The issue is closed