DETERMINATION REPORT

CARBON MARKETING AND TRADING LTD

DETERMINATION OF THE ABANDONED COAL MINE METHANE UTILIZATION AT "NPK-KONTAKT" LTD

REPORT NO.UKRAINE/175/2010

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

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17/12/2010	Bureau Veritas Certification Holding SAS
Client:	**Client ref.:**
Carbon Marketing and Trading Ltd	Tahir Musayev

Summary:

Bureau Veritas Certification has made the determination of the "Abandoned Coal Mine Methane Utilization at "NPK-Kontakt" Ltd" project of Carbon Marketing and Trading Ltd located in the city of Lysychansk, 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 Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies 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/175/2010	JI

Project title:

Abandoned Coal Mine Methane Utilization at "NPK-Kontakt" Ltd

Work carried out by:

Team Leader, Lead Verifier: Oleg Skoblyk
Team Member, Technical Specialist : Igor Antipko
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Work verified by:

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Bureau Veritas Certification Holding SAS

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Indexing terms

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

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Abbreviations

AIE	Accredited Independent Entity
CAR	Corrective Action Request
CBM	Coal Bed Methane
CDM	Clean Development Mechanism
CL	Clarification Request
CMM	Coal Mine Methane
CO_2	Carbon Dioxide
DFP	Designated Focal Point
DVM	Determination and Verification Manual
ERU	Emission Reduction Unit
GHG	Green House Gas(es)
GWP	Global Warming Potential
I	Interview
IPCC	Intergovernmental Panel on Climate Change
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MP	Monitoring Plan
MoV	Means of Verification
NGO	Non Government Organization
NMHC	Non-methane Hydrocarbons
PDD	Project Design Document
UNFCCC	United Nations Framework Convention for Climate Change

1 INTRODUCTION

Carbon Marketing and Trading Ltd has commissioned Bureau Veritas Certification to determine its JI project “Abandoned Coal Mine Methane Utilization at “NPK-Kontakt” Ltd” (hereafter called “the project”) at Lysychansk, 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 validated 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 emissions reductions 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:

Oleg Skoblyk
Team Leader, Bureau Veritas Certification Climate Change Lead Verifier

Igor Antipko
Team Member, Bureau Veritas Certification Technical Specialist

Denis Pishchalov
Team Member, Bureau Veritas Certification Financial Specialist

This determination report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification Internal Technical Reviewer

2 METHODOLOGY

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

In order to ensure transparency, a determination protocol was customized for the project, according to the 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 Carbon Marketing and Trading Ltd 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 a Accredited Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, Carbon Marketing and Trading Ltd revised the PDD and

resubmitted it as version 1.2 of 09/12/2010, version 1.2.1 of 10/12/2010 and final version 1.2.2 of 14/12/2010.

The determination findings presented in this report relate to the project as described in the PDD versions 1.1, 1.2, 1.2.1 and 1.2.2.

2.2 Follow-up Interviews

On 24/11/2010 Bureau Veritas Certification conducted a visit to the project site ("Tomashivska South" and "Tomashivska North" mines) and performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Carbon Marketing and Trading Ltd and NPK-Kontakt Ltd. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

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

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the determination is to raise the requests for corrective actions and clarification and any other outstanding issues

that needed to be clarified for Bureau Veritas Certification positive conclusion on the project design.

Corrective Action Requests (CAR) is issued, where:

(a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
(b) The JI requirements have not been met;
(c) There is a risk that emission reductions cannot be monitored or calculated.

The determination team may also use the term Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable JI requirements have been met.

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

3 PROJECT DESCRIPTION

The proposed project aims to utilise and/or destroy the coal mine methane (CMM) currently being vented to atmosphere from the “Tomashivska South” and “Tomashivska North” abandoned mines, located in the Lysychansk, Luhansk region. CMM will be used for displacing natural gas in a pipeline, and being destroyed in flares (2 units). The utilisation and destruction of methane and conversion of methane to CO_2 significantly reduces greenhouse gas emissions.

The equipment will be installed by NPK-Kontakt LLC (the developer of the project) at two abandoned mines, where coal production was carried out from 1955 to 1972. To ensure safe working conditions in the mines of the Tomashivska fields many wells with surface decontamination were drilled during this period. The total volume of gas from the “Tomashivska South” mine between 1955 and 1964 was 61.3 million m3, and between 1965 and 1972 it was 92.2 million m^3. In 1978, 6 years after the mines were closed down, CMM emissions to the surface through the unsealed wells, mining workings and tectonic violation began, and continues up to date.

Prior to the implementation of the project activity, the CMM was released into the atmosphere, natural gas was used from the gas pipeline and electricity was generated by the plant connected to the grid. Without the implementation of the project, this scenario would have continued and is considered the baseline scenario.

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 25 Corrective Action Requests and 6 Clarification Requests.

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

4.1 Project approvals by Parties involved (19-20)

The project has already been supported by the Government of the host Party (Ukraine), namely by the National Environmental Investment Agency of Ukraine, which has issued a Letter of Endorsement for the JI Project (Letter of Endorsement №1902/23/7 dated 16/11/2010). Bureau Veritas Certification received this letter from the project participants and does not doubt its authenticity.
As for the time being no written approvals of the project by Parties involved are available. After receiving Determination Report from the Accredited Independent Entity the project documentation will be submitted to the Ukrainian Designated Focal Point (DFP) which is National Environmental Investment Agency of Ukraine, for receiving a Letter of Approval. The written approval by another Party involved, United Kingdom of Great Britain and Northern Ireland, will be obtained later on.

As the project has no approvals by the Parties involved, CAR 01 remains pending and will be closed after report finalizing (refer to the Appendix A).

4.2 Authorization of project participants by Parties involved (21)

The official authorization of each legal entity listed as project participant in the PDD by Parties involved will be provided in the written project approvals (refer to 3.1 above).

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. Due to the fact that there is no approved CDM baseline and monitoring methodology which is applicable in its totality and without any revisions to abandoned mines, the JI specific approach is applied.

The project participants use a baseline approach previously applied to the number of projects implying utilization of coal mine methane (CMM) from closed mine, which were approved for use under various climate change frameworks and initiatives (e.g., ERUPT frameworks, Voluntary Carbon Standard) with one receiving official approval as JI project by the Germany.

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

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

   a. Situation before the project was installed without any plant for destruction and/or utilization of CMM – status quo;
   b. Destruction of CMM through flaring;
   c. Utilization of CMM through heat generation, e.g., in boilers;
   d. Utilization of CMM through power and/or heat generation, e.g., in cogeneration units;
   e. Utilization of CMM through feeding into CMM pipeline;
   f. A combination of any of the above options, for example the JI project activity not implemented as a JI project which includes feeding into a CMM pipeline and flaring.

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

   a. There are no state regulations in Ukraine mandating the capture and/or utilisation/destruction of CMM from the closed mines, even though specific permissions and licenses may be required;

b. Implied by the project CMM burning in flare unit (flaring) generates no income except from emission reductions, while there are both investment costs and operational and maintenance costs. Therefore, flaring faces an investment barrier and is not economically viable. While the supply of CMM will generate income, the operation and maintenance costs for the cleaning of the CMM prior to feeding into a gas pipeline result in high costs. Therefore, the supply of CMM into a gas pipeline is not economically viable as well. Equipment for power generation from CMM is not available in Ukraine and needs to be imported, thus resulted into high investment and O&M cost;

c. The generation of heat (e.g. in boilers) requires that the heat can be supplied to consumers nearby. However, the project is located away from any centre of heat demand. Therefore, generation of heat faces a technological barrier, as there is a lack of infrastructure for implementation;

d. Skilled and properly trained personnel to operate and maintain the project technology is not available in the region, which leads to an unacceptably high risk of equipment disrepair and malfunctioning or other under performance;

e. Operational risks for CMM utilisation are high. It is difficult to predict quality and quantity of the CMM. Concentrations often vary, and may be below the minimum required for utilization. Volumes are variable, and in the case of abandoned mine methane are declining over time. Fouling substances like dust are included in CMM, and have a detrimental impact on the equipment. The experience in Ukraine has only been through JI projects with active participation of technology providers and consultants.

4.4 Additionality (27-31)

The most recent version of the “Tool for the demonstration and assessment of additionality” approved by the CDM Executive Board was used, in accordance with the JI specific approach, defined in paragraph 2 (c) of the annex I to the “Guidance on criteria for baseline setting and monitoring”. All explanations, descriptions and analyses are made in accordance with the selected tool.

The PDD provides a justification of the applicability of the approach. Due to the fact that there is no approved CDM baseline and monitoring methodology which is applicable without any revisions to abandoned

mines, the Additionality Tool is applied which is considered as a good practice for additionality justification.

Additionality proofs are provided. Six realistic and credible alternative scenarios to the project activity which are in compliance with mandatory legislation and regulations were identified. The credible barriers such as investment, technological barriers and barrier due to prevailing practice would credibly prevent the implementation of the proposed project activity undertaken without being registered as a JI activity. The proposed project is the first abandoned mine methane utilization project in Ukraine, therefore it faces barrier due to prevailing practice. Registration as a JI project activity generates significant additional revenues and involvement of international expertise, thus JI would alleviate the barriers due to prevailing practice. All alternatives except of status quo are eliminated by the barriers. No barriers exist to the baseline alternative, the continuation of the situation prior to the implementation of the project activity. The proposed project type has been demonstrated to be first-of-its-kind, therefore, it has been shown that the proposed project type (e.g. technology or practice) has not diffused in the relevant sector and region and is not common practice. Thus, the proposed project is not the baseline scenario and is additional.

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

4.5 Project boundary (32-33)

The project boundary defined in the PDD encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs) that are:

(i) Under the control of the project participants, such as CO_2 emissions due to on-site electricity and fuel consumption due to the project activity, including treatment of the gas, CO_2 emissions from the combustion of methane in a flare, CO_2 emission from the combustion of methane supplied to the gas pipeline, CO_2 emissions from NMHC destruction;

(ii) Reasonably attributable to the project such as methane emissions as a result of venting in baseline; and

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

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

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 08/09/2003, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 20 years and 0 months.

The PDD states the length of the crediting period in years and months, which is 14 years and zero months: 4 years for the period before the first commitment period (2004-2007), 5 year for the 1st commitment period (2008-2012) and 5 years for the period following the 1st commitment period (2013-2017), and its starting date as 01/01/2004, which is after 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.

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

4.7 Monitoring plan (35-39)

The PDD, in its monitoring plan section, explicitly indicates that JI specific approach was the selected. There is no approved CDM baseline and monitoring methodology which is applicable – without revisions being applied – to abandoned mines. Therefore, a JI specific approach is applied in accordance with appendix B of the JI Guidelines and following the Guidance on criteria for baseline setting and monitoring. However, some elements of the approved CDM methodology ACM0008, ver.7, are used which is the closest to the project type.

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 amount of CMM captured, CMM quality, methane concentration, availability of gas consumers etc.

The monitoring plan specifies the indicators, constants and variables that are reliable (i.e. provide consistent and accurate values), valid (i.e. be 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 amount of methane sent to use i (flare unit, gas pipeline), methane destroyed by use i, destruction efficiency of use i (flare and gas pipeline), methane Global Warming Potential, CO_2 emission factor for methane combustion, emission factor for NMHC combustion, additional electricity consumption due to the implementation of the project, carbon emission factor for grid electricity, methane and NMHC concentration.

The monitoring plan draws on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring" developed by the JISC, such as BEy, PEy, GWP_CH_4, EF_CH_4, EF_NMHC.

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 methane density (0.717 kg/m3), GWP of methane (21 tCO2e/tCH4), CO2 emission factor for methane combustion (2.75 tCO2e/tCH4), grid emission factor for electricity consumption (0.896 tCO2e/MWh), efficiency of combustion in flare (99.5%), efficiency of destruction through the supply to the gas pipeline (98.5%).

(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, which are absent.

(iii) Data and parameters that are monitored throughout the crediting period, such as methane sent to flare and methane sent to gas pipeline which are determined based on measured mixture flow, gas composition, gas pressure and gas temperature, electricity consumption by the project, concentration of non-methane hydrocarbons.

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording, such as direct measurement, laboratory analysis, infrared measurements, calculations with different recording frequency such as daily, monthly, continuously, annually etc.

The respective information for each monitoring parameter is sufficiently described in the section D 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:

Baseline emissions:

$BE_y = \Sigma i (MD_{i,y} – MD_{BL}) * GWP_{CH4}$
With:
$MD_{i,y}$ is the amount of methane destroyed by use i in year y (tCH4)
i is the various uses of the methane (flare, gas pipeline)
MD_{BL} is the amount of methane destroyed in the baseline (tCH4) (assumed to be equal zero as there is no use or destruction prior to the implementation of the project activity)
GWP_{CH4} is the 100 year global warming potential of methane (21 tCO2e/tCH4)

The amount of methane destroyed by use i is calculated using the following formula:

$MD_{i,y} = MM_{i,y} * Eff_i$
With:
$MM_{i,y}$ is the amount of methane sent to use i in year y (tCH4)
Eff_i is the destruction efficiency of use i (set to 99.5% for the flare, assuming the manufacturer's combustion temperature specifications are met, 98.5% for gas pipeline)

Project emissions:

$PE_y = \Sigma i (MD_{i,y} – MD_{BL}) * (EF_{CH4} + r * EF_{NMHC}) + CONS_{ELEC,y} * CEF_{ELEC}$

With:
$r = PC_{CH4} / PC_{NMHC}$

Where:
$MD_{i,y}$ is the amount of methane destroyed by use i in year y (tCH4)
i is the various uses of the methane (flare, gas pipeline)
MD_{BL} is the amount of methane destroyed in the baseline (tCH4) (assumed to be equal zero as there is no use or destruction prior to the implementation of the project activity)
EF_{CH4} is the CO2 emission factor for methane combustion (2.75 tCO2e/tCH4)

r is the relative proportion of NMHC compared to methane
EF_NMHC is the CO2 emission factor for combusted non methane hydrocarbons (the concentration varies and, therefore, to be obtained through periodical analysis of captured methane) (tCO2/tNMHC)
PC_CH4 is concentration (in mass) of methane in extracted gas (%), measured on wet basis
PC_NMHC is NMHC concentration (in mass) in extracted gas (%)
CONS_ELEC,y is the additional electricity consumption due to the implementation of the project in year y (MWh)
CEF_ELEC is the grid emission factor for electricity consumption (using the Standardized emission factors for the Ukrainian electricity grid at 0.896 tCO2e/MWh electricity use)

The amount of methane destroyed by use i is calculated using the following formula:

MD_i,y = MM_i,y * Eff_i
With:
MM_i,y is the amount of methane sent to use i in year y (tCH4)
Eff_i is the destruction efficiency of use i (set to 99.5% for the flare, assuming the manufacturer's combustion temperature specifications are met, 98.5% for gas pipeline)

Emission reduction

ER_y = BE_y – PE_y, where BE_y – baseline emissions, PE_y – project emissions.

Compiled equation for emission reduction calculation (with assumption that NMHC concentration is less that 1%) is presented as:

ER_y = Σi (MM_i,y * Eff_i – MD_BL) * (GWP_CH4 – EF_CH4) – CONS_ELEC,y * CEF_ELEC = (MM_flare,y * 99.5% + MM_gaspipeline,y * 98.5%) * 18.25 – CONS_ELEC,y * 0.896

The monitoring plan presents the quality assurance and control procedures for the monitoring process which are 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.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities. The monitoring procedures, assigned roles and responsibilities and JI project management structure is sufficiently described in the section D.3 of the PDD as well as Annex 3. The project operational and management structure is presented on the respective scheme in the section D.3.

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.

4.8 Leakage (40-41)

The PDD appropriately describes an assessment of the potential leakage of the project and appropriately explains which sources of leakage are to be calculated, and which can be neglected.
In accordance with approved CDM methodology ACM0008 the following leakages would need to be considered: displacement of baseline thermal energy uses; CBM drainage from outside the de-stressed zone; impact of the project on coal production; and impact of the project on coal prices. None of such leakages apply to the project activity: there is no CMM being used for thermal demand in the baseline scenario, there is no CBM involved, and as the project is implemented at an abandoned mine there is neither impact on coal production nor on coal prices.

The project activity displaces natural gas use from the gas grid, therefore displaces the emissions from the natural gas use as well as any upstream emissions associated with the production of natural gas. These sources of leakage would result in additional emission reductions when quantified, however the project participants chose to conservatively ignore these additional reductions.

Therefore, leakage emissions are considered zero.

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 for the project scenario (within the project boundary), which are 26660 tons of CO2eq for the period from 2004-2007, 66941 tons of CO2eq for 2008-2012 and 199715 tons of CO2eq for 2013-2017;

(b) Leakage, which is considered equal zero tons of CO2eq;

(c) Emissions or net removals for the baseline scenario (within the project boundary), which are 203573 tons of CO2eq for the period from 2004 to 2007, 501272 tons of CO2eq for 2008-2012 and 1492120 tons of CO2eq for 2013-2017;

(d) Emission reductions or enhancements of net removals adjusted by leakage (based on (a)-(c) above), which are 176913 tons of CO2eq for the period from 2004 to 2007, 434331 tons of CO2eq for 2008-2012 and 1292405 tons of CO2eq for 2013-2017.

The estimates referred to above are given:

(a) On an annual basis;

(b) From 01/01/2004 to 31/12/2017, covering the whole crediting period;

(c) On a source-by-source/sink-by-sink basis;

(d) For each GHG gas, which are CO_2 and CH_4;

(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 formulas used for calculating the estimates referred above are the same as those used for project monitoring and described in the section 3.7 above. All formulas are consistent throughout the PDD.

Data sources used for calculating the estimates referred to above, such as feasibility studies based on test drilling, flaring equipment passports, IPCC etc. are clearly identified, reliable and transparent.

Emission factors, such as CO2 emission factor for methane combustion, grid emission factor for electricity consumption, CO2 emission factor for combusted non methane hydrocarbons, 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.

4.10 Environmental impacts (48)

According to the Ukrainian law "On the ecological examination" all projects that can result in violation of ecological norms and/or negative influence on the state of natural environment are subject to ecological examination. In order to comply with regulation the project was submitted to the Ukrainian Ministry of Environmental Protection for state environmental examination and obtained positive conclusion about its compliance with ecological requirements.
There are no significant environmental impacts expected. The environmental impact assessment of the project has been prepared and was approved appropriately ("Environment Impact Assessment /EIA/ During the Construction of Exploratory Wells number 1,2,3,4,5,6,7,8,9,10,11 and 12 for Methane Gas and Degassing of Coal Deposits in the Northern and Southern Tomashevsky Domes of the Lysychansk-Tomashevska area of the Lysychansk Mine Fields of the Donbass region.", prepared by Geoindustriya NTC LLC, Approved by the Head of Leninskaya GRE VO "Ukrvuglegeologiya" Vsevolodskij K. Harkiv, 2003)

All necessary permits from the Ukrainian Mining Authorities were also received.

The combustion units used under the project cause no harmful environmental impacts. The equipment is designed to comply with the German emissions limits (German "TA-Luft") which are rather rigorous, especially for NOx, CO and CnHm, sometime stricter than the Ukrainian limits.

The utilisation of otherwise unused CMM reduces in an active manner the amount of CMM which is released to the atmosphere and provides significant benefits for the global climate production by converting the harmful methane into the less harmful carbon dioxide. Furthermore the operation of the plants reduces the uncontrollable migration of CMM to the surface in the surrounding area and reduces consequently the accident hazard by fire and explosions caused through methane which would otherwise uncontrollable discharge to the atmosphere. Beside the positive effect on the global climate protection, no transboundary impacts occur.

4.11 Stakeholder consultation (49)

The information about project implementation was published in the local newspaper. Consultations were conducted at the meetings with local authorities.
All comments received by the developer were positive towards implementation of the project. No negative comments in respect of current project were gained.

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 "Abandoned Coal Mine Methane Utilization at "NPK-Kontakt" Ltd" JI Project in Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

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

Project participants used the latest Tool for demonstration of the additionality. In line with this tool, the PDD provides analysis of investment, technological and other barriers to determine that the project activity itself is not the baseline scenario.

By capturing and utilizing the coal mine methane (CMM), which would have been released to the atmosphere in the absence of the project activity, through displacing natural gas in a pipeline and destruction in flares to less harmful CO_2, the project is likely to result in reductions of GHG emissions partially. An analysis of barriers demonstrates that the proposed project activity is not a likely 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 review of the project design documentation (version 1.2.2) 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 the Carbon Marketing and Trading Ltd that relate directly to the GHG components of the project.

/1/ PDD "Abandoned Coal Mine Methane Utilization at "NPK-Kontakt" Ltd", version 1.1 dated 01/11/2010
/2/ PDD "Abandoned Coal Mine Methane Utilization at "NPK-Kontakt" Ltd", version 1.2 dated 09/12/2010
/3/ PDD "Abandoned Coal Mine Methane Utilization at "NPK-Kontakt" Ltd", version 1.2.1 dated 10/12/2010
/4/ PDD "Abandoned Coal Mine Methane Utilization at "NPK-Kontakt" Ltd", version 1.2.2 dated 14/12/2010
/5/ Decree of Cabinet of Ministers of Ukraine #206, dated 22/02/2006
/6/ Guidelines for Users of the Join Implementation Project Design Document Form, version 04, JISC
/7/ Joint Implementation Project Design Document Form, version 01
/8/ Glossary of JI terms, version 03, JISC.
/9/ Guidance on Criteria for Baseline Setting and Monitoring, version 02, JISC.
/10/ Approved consolidated baseline and monitoring methodology ACM0008 "Consolidated methodology for coal bed methane, coal mine methane and ventilation air methane capture and use for power (electrical or motive) and heat and/or destruction through flaring or flameless oxidation", Ver.07
/11/ Tool for the demonstration and assessment of additionality, Version 05.2
/12/ JISC "Clarification regarding the public availability of documents under the verification procedure under the Joint Implementation Supervisory Committee." Version 03
/13/ Letter of Endorsement № 1902/23/7 on the JI project "Abandoned Coal Mine Methane Utilization at "NPK-Kontakt" Ltd" dated November 16, 2010 issued by National Environmental 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/ Group work project for the the Construction of Exploratory Wells number 1,2,3,4,5,6,7,8,9,10,11 and 12 for Methane Gas and Degassing of Coal Deposits in the Northern and Southern Tomashevsky Domes of the Lysychansk-Tomashevska area of the Lysychansk Mine Fields of the Donbass region.", prepared by Geoindustriya NTC LLC, approved 15.12.2003

/2/ "Environment Impact Assessment /EIA/ During the Construction of Exploratory Wells number 1,2,3,4,5,6,7,8,9,10,11 and 12 for Methane Gas and Degassing of Coal Deposits in the Northern and Southern Tomashevsky Domes of the Lysychansk-Tomashevska area of the Lysychansk Mine Fields of the Donbass region.", prepared by Geoindustriya NTC LLC, Approved by the Head of Leninskaya GRE VO "Ukrvuglegeologiya" Vsevolodskij K. Harkiv, 2003

/3/ Conclusion on conducted state ecological examination, dated 9.02.2004

/4/ Ecological card of extension the term of special permit on ecological research with research and industrial development of gas (methane) the coal mines within Lisichansk-Tomashivsk area, Popasnyanskiy and Slovyanoserbskiy areas, Lisichansk town. Approved on 17.04.2008

/5/ Passport of group work project for construction of exploratory wells №1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 of gas-methane and decontamination of coal mine on Tomashivsk North and South domes of Lisichansk-Tomashevsk area of Lisichansk mining region of Dobass

/6/ General geological map of coal deposits of Lisichansk and north-west parts of Almaz-Maryivsk geological and industrial regions of Donbass

/7/ Special permission for subsoil use №2424 dated 8.09.2003, issued by the Ministry of ecology and natural resources. Object of licensing Lysychnaksko-Tochkivska area

/8/ Special permission for subsoil use №2424 dated 8.09.2003, (prolongation of the terms), protocol №7 dated 20.08.2008, order, dated 04.09.2009, issued by the Ministry of environmental protection of Ukraine

/9/ Report of Scientific Research "To develop methane recovery technology at abandoned mines and waste horizons on the anticline and dome structures" E610201020, SE "Center for Alternative Fuel

Types" (SE CAFT), Kiev 2002.

/10/ SRW (Scientific Research Work) "To develop a method of degassing of abandoned mines, preventing the release of methane on the Earth's surface", Report of the Makiivskiy Scientific Research Institute (MakSRI), number 17050704000, 2010.

/11/ The Law of Ukraine "On gas (methane) of coal deposits" (№ 1392-17), final revision of 13.10.2010

/12/ Deutsche Montan Technologie, 2004, Statement. The contribution of the extraction of mine gas to the reduction of CH4 emissions in terms of the NRW Klimaschutzkonzept, climate protection concept

/13/ Global Overview of CMM Opportunities, Methane to Markets Partnership, January 2009, Chapter 30: Ukraine

/14/ Best Practice Guidance for Effective Methane Drainage and Use in Coal Mines, United Nations Economic Commission for Europe, 2010 (ECE Energy Series No. 31)

/15/ 1996 IPCC Guidelines for National Greenhouse Gas Inventories)

/16/ Journal "Geolog Ukrainy", issue #3, the article "Main direction features of`providing the decontamination works on the Tomashivsk area of Lisichask geological-industrial region of Donbass"

/17/ Newspaper "Nash zavod", the article "Tomashevsk metan reserves are virtually endless"

/18/ Schematic geological map of Tomashivskiy domical structures (Tomashivska South and Tomashivska North closed mines). Geological section along the line I-I' (Tomashivska south mine)

/19/ Guidance document of the Ministry of fuel and energy of Ukraine № КД 12.01.03.07-2001. Building protection from methane penetration. Regulations. Makiivka 2001

/20/ Geological section along the line II-II' (Tomashivska south mine)

/21/ Results of natural gas analysis dated 22.06.2004, performed by chemical and analytical laboratory of Severodonetsk production administration of underground gas conservation, location of sampling: LLC "Lispromgas"

/22/ Results of natural gas analysis dated 25.06.2005, performed by chemical and analytical laboratory of Severodonetsk production administration of underground gas conservation, location of sampling: LLC "Lispromgas"

/23/ Results of natural gas analysis dated 26.06.2006, performed by chemical and analytical laboratory of Severodonetsk production administration of underground gas conservation, location of sampling: LLC "Lispromgas"

/24/ Results of natural gas analysis dated 20.06.2007, performed by "Vostok GRGP", sampling location: Tomashivske UPG-1

/25/ Results of natural gas analysis dated 23.06.2008, performed by "Vostok GRGP", sampling location: Tomashivske UPG-1

/26/ Results of natural gas analysis dated 20.06.2009, performed by "Vostok GRGP", sampling location: Tomashivske UPG-1

/27/ Results of natural gas analysis dated 22.06.2010, performed by "Vostok GRGP", sampling location: Tomashivske UPG-1

/28/ Contract #14 of making (transfer) the scientific and technical products dated 28.08.2006

/29/ Certificate №429070 of State geological department dated 01.08.2008

/30/ Contract # 48 on delivery of coal bed methane gas from 01/03/2005

/31/ Additional agreement # 2 from 01/11/2005 to contract # 48 from 01/03/2005 on delivery of coal bed methane gas

/32/ Registry log of pressure, density and gas flow by HRP-15, gas pressure of the plant gas network control points.

/33/ The list of documents that must be included into the well case during its transfer to the Customer from the Contractor, LLC “NPK-Kontakt”

/34/ Order №154 "about the appointment of committee and implementation of fixed assets" dated 24.11.2006

/35/ State metrological attestation certificate №22 of automised consumption accounting unit using the corrector B25 dated 1.03.2005

/36/ Metrological attestation certificate №17 of automized consumption accounting unit using the corrector B25 dated 6.03.2007

/37/ Calibration certificate №47/84 of meter complex Floinek (Reg.№301365) acting until 17.02.2011

/38/ Technological registry – LLC Lispromgas. Dated from 14.06.2010

/39/ Daily report on November 23, 2010. Flow meter’s characteristics on meter (gas).

/40/ Monthly report on November, 2010. Flow meter’s characteristics on meter (gas).

/41/ Gas passport №535

/42/ Gas passport №537

/43/ Calibration certificate №124 of automized accounting device FLOUTEK (Reg.№1-142) dated 02.09.04

/44/ Calibration certificate №214 of automized accounting device FLOUTEK (Reg.№1-142) dated 21.09.06

/45/ Calibration certificate №123 of automized accounting device FLOUTEK (Reg.№1-142) dated 17.09.09

/46/ Calibration certificate №47/142 of automized accounting device FLOUTEK (Reg.№1-142) dated 23.09.2010

/47/ Calibration certificate №47/198 of automized accounting device FLOUTEK (Reg.№1-142) dated 17.09.2011

/48/ Act on investigation of well A 3335 in Tomashevskiy Southern area for its establishing on balance of "NPK-Kontact" LLC

/49/ Examination certificate №22 of gas accounting unit with the type of meter GMS-G160-80 №064558 dated 01.03.2005

/50/ Examination certificate №17 of gas accounting unit with the type of meter GMS-G160-80 №064558 dated 06.03.2007

/51/ Examination certificate №49 of gas accounting unit with the type of meter Kurs-01 G250 Б dated 28.02.2009

/52/ Contract # 321040/0Г7 on delivery of coal bed methane gas from 01/12/2003

/53/ Statement of job acceptance of well A3364(1-Г) of Tomashevskiy Southern area dated 29.12.2005

/54/ Contract for renting of the well #6, A3364(1-Г) dated 19.12.2003

/55/ Additional agreement dated 02.02.2004 to the lease contract №6 dated 19.12.2003

/56/ Contract for renting of well №15 A3364(1-Г) dated 31.12.2004

/57/ Statement of job acceptance of equipment from lease dated 29/12/2005, related to the lease contract №15 dated 31.12.2004

/58/ A sale and purchase agreement №11/05 on well A3364(1-Г) dated 28.12.2005

/59/ Statement of job acceptance of well 7К(Б4933), that is located in sector "Tomashovsky Northern And Southern Tops"

/60/ Statement of job acceptance of well 8К(Б4932), that is located in sector "Tomashovsky Northern And Southern Tops"

/61/ Analysis of natural gas. Results of analysis according to ГОСТ 23781-87 ''Natural fuel gases. Chromatographic method of component composition definition''.

/62/ Contract # 01/06 on delivery of coal bed methane gas from 21/12/2005

/63/ Contract # 01/07 on delivery of coalbed methane gas from 20/12/2006

/64/ Additional agreement # 1 from 11/01/2007 to contract # 01/07 from 20/12/2006 on delivery of coal bed methane gas

/65/ Additional agreement # 2 from 01/07/2007 to contract # 01/07 from 20/12/2006 on delivery of coal bed methane gas

/66/ Additional agreement # 3 from 02/01/2008 to contract # 01/07 from 20/12/2006 on delivery of coal bed methane gas

/67/ Additional agreement # 4 of 08/01/2008 to contract # 01/07 from 20/12/2006 on delivery of coal bed methane gas

/68/ Additional agreement # 5 of 02/06/2008 to contract # 01/07 from 20/12/2006 on delivery of coal bed methane gas

/69/ Additional agreement # 6 of 01/12/2008 to contract # 01/07 from 20/12/2006 on delivery of coal bed methane gas

/70/ Additional agreement # 7 of 02/01/2009 to contract # 01/07 from 20/12/2006 on delivery of coal bed methane gas

/71/ Additional agreement # 8 of 08/01/2009 to contract # 01/07 from 20/12/2006 on delivery of coal bed methane gas

/72/ Contract # 01/10 on delivery of coal bed methane gas from 28/12/2009

/73/ Additional agreement # 1 from 16/05/2010 to contract # 01/10 from 28/12/2009 on delivery of coal bed methane gas

/74/ Additional agreement # 2 from 16/09/2010 to contract # 01/10 from 28/12/2009 on delivery of coal bed methane gas

/75/ Contract # 321040/0Г7 on delivery of coal bed methane gas from 01/12/2003

/76/ Contract # 520087/0Г7 on delivery of coal bed methane gas from 28/12/2004

/77/ Photo - Complex Flowteck - ТМб, Calculator ВР-1, №1-142

/78/ Photo - ultrasonic gas meter. Works number #02103

/79/ Photo - multi-attribute measurement converter МП - 3, № 144

/80/ Photo -measuring pressure transducer ПД-1-АО-400КПА №635

/81/ Photo - device ТР-ПТ №1861

/82/ Photo - Tomashevsk gas installation

/83/ Photo - device Flowteck #1-142

/84/ Photo - temperature transmitter, measuring Pitts - 01-ПА

Persons interviewed:

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

/1/ Andrey Pavelkov – General Director of “NPK-Kontakt” Ltd

/2/ Yuliya Monogarova – Chief Geologist of “NPK-Kontakt” Ltd

/3/ Igor Monogarov – Deputy Chief Geologists of “NPK-Kontakt” Ltd

/4/ Gennadiy Butkov – measuring equipment Engineer of “Lispromgas” Ltd.

/5/ Vasyl Voynichenko – Chief power engineer CJSC “Lisichanskiy glass plant “Proletariy”

/6/ Ivan Verbitskiy – Head of steam and boiler shop CJSC “Lispi”

/7/ Christiaan Vrolijk – Principal Carbon Emission Specialist of Carbon Resource Management Ltd

/8/ Tahir Musayev – Project Manager of Carbon Marketing and Trading Ltd

/9/ Vladimir Kasyanov – Director of “Eco-Aliance” Ltd.

/10/ Pavel Shelegeda – Deputy Director “Eco-Aliance” Ltd.

APPENDIX A: JI PROJECT DETERMINATION PROTOCOL

BUREAU VERITAS CERTIFICATION HOLDING SAS

DETERMINATION PROTOCOL

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

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
General description of the project					
Title of the project					
-	Is the title of the project presented?	The title of the project is presented in the section A.1 of the PDD. The project title is "Abandoned Coal Mine Methane Utilization at "NPK-Kontakt" Ltd"	N/A	N/A	OK
-	Is the current version number of the document presented?	The current version number of the PDD is ver.1.2.2 as stated	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		in the section A.1.			
-	Is the date when the document was completed presented?	The PDD v.1.2.2 states that the document completion date is 14/12/2010	N/A	N/A	OK
Description of the project					
-	Is the purpose of the project included?	The purpose of the project is stated in the section A.2 of the PDD and it implies utilisation and/or destruction of the coal mine methane (CMM) currently being vented to atmosphere from the "Tomashivska South" and "Tomashivska North" mines.	N/A	N/A	OK
-	Is it explained how the proposed project reduces greenhouse gas emissions?	CMM will be used for displacing natural gas in a pipeline, and being destroyed in flares.	CAR 01: Changed all to CMM	CAR 01: The issue is closed based on correction made to the 1st version of the PDD.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		The utilisation and destruction of methane and conversion of methane to CO_2 significantly reduces greenhouse gas emissions. **CAR 01**. The unique abbreviation for the gas captured must be used (CMM vs. both CMM and AMM in the PDD). Please correct.			
Project participants					
-	Are project participants and Party(ies) involved in the project listed?	Yes, the respective information is presented in the section A.3 of the PDD. The Parties involved are	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		Ukraine (Host Party) and United Kingdom of Great Britain and Northern Ireland. Legal entity project participant of Ukraine is "NPK-Kontakt" LLC and project participant of UK is Carbon Resource Management S.A.			
-	Is the data of the project participants presented in tabular format?	Yes, the data are presented in the tabular format prescribed by the Guidelines for JI PDD for users.	N/A	N/A	OK
-	Is contact information provided in Annex 1 of the PDD?	The contact information of project participants is provided in the tables of Annex 1 of the PDD.	N/A	N/A	OK
-	Is it indicated, if it is the case, if the Party involved is a host Party?	Yes, it is indicated in the section A.3	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		of the PDD that Ukraine is a host Party.			
Technical description of the project					
Location of the project					
-	Host Party(ies)	Ukraine	N/A	N/A	OK
-	Region/State/Province etc.	Luhansk region	N/A	N/A	OK
-	City/Town/Community etc.	Lysychansk	N/A	N/A	OK
-	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	The project is located at the abandoned coal mines "Tomashivska South" and "Tomashivska North". The geographic coordinates of the mines are provided in the section A.4.1.4 of the PDD. **CAR 02**. The figure 2 in the section A.4.1.2 of the PDD ver.1.1 is	CAR 02: Maps are obsolete, thus deleted.	CAR 02: The obsolete and faulty maps were removed from the PDD. The issue is closed based due corrections made to the 1st version of the PDD.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		damaged, the name of the Lysychansk city is faulty. The map on the figure 3 presents much bigger territory that just project location in Lysychansk and is very hard to read. The details of physical location of the project activity on the map at the figure 4 are not identified. Besides, the maps are obsolete. Please provide adequate maps in the PDD.			
Technologies to be employed, or measures, operations or actions to be implemented by the project					
-	Does the project design engineering reflect current good practices?	The project design engineering reflects current good practices. Projects directed	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		at utilization of CMM from closed mines are being widely implemented in many European countries such as Germany, the Netherlands, UK, etc. The combustion units used are designed in accordance with high operational, safety and environmental standards.			
-	Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	The project uses state of the art technology. The utilization units used in the project provide high efficiency of methane utilization and are of high safety and	CAR 03: As to the flare units more detailed information was presented under the section A.4.2. In respect of electricity generating units, these units would only be installed after some years of successful operation of the flares, if the CMM is of	CAR 03: The required information was presented in the revised PDD ver.1.2.2. It was reviewed and found to be sufficient. The issue is closed.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		operational standards. The utilisation of otherwise unused CMM through burning in the flares and supply to gas pipeline reduces in an active manner the uncontrollable migration of CMM to the surface in the surrounding area and reduces consequently the accident hazard by fire and explosions caused by methane. The proposed project type has been demonstrated to be first-of-its-kind therefore, it has been shown that the proposed	high enough quality. Therefore, any such decision is years away. Therefore, details about this equipment can not be presented. If electricity generating equipment is installed, a request for project change will be submitted to the UNFCCC.		

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		project type (e.g. technology or practice) has not diffused in the relevant sector and region and is not common practice for Ukraine. **CAR 03**. Please provide more detailed information (including technical characteristics) on the flares to be installed under the project and on the electricity generating units which could be installed under the project as they are considered as part of overall project			

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		design.			
-	Is the project technology likely to be substituted by other or more efficient technologies within the project period?	The project reflects current good practice and uses state of the art technology. The project equipment used is of high efficiency. The proposed project type has been demonstrated to be first-of-its-kind for Ukraine. Thus, it is unlikely that the project technology is to be substituted the other or more efficient technology with the project period. **CL 01**. Please provide more detailed	CL 01: Methane deposits estimation is done in the Report of Scientific Research "To develop methane recovery technology at abandoned mines and waste horizons on the anticline and dome structures" E610201020, SE "Center for Alternative Fuel Types" (SE Caft) Kiev, 2002 (attached as A1). Reference included. The geological map and quality of the gas captured analysis in the attachments A2 and A3 respectively.	CL 01: The data and supporting documentation provided were found sufficient. The issue is closed based on clarification made and additional confirming materials provided.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		information as well as supporting documentation as to the undertaken researches of the area and amount of gas available , underground location of the gas (depth, concentration, strata map and gas deposits etc.), quality of the gas captured			
-	Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	**CAR 04**. Please clarify if the project requires extensive initial training and maintenance efforts in order to work as presumed during the project period and supplement the section A.4.2 of the PDD with the	CAR 04: The project does not require extensive initial training and maintenance efforts in order to work as presumed during the project period. The information regarding training and maintenance is added to the PDD. Training will be provided by the flare equipment provider, and the maintenance of the	CAR 04: The provided information regarding training and maintenance efforts provided in the PDD ver.1.2.2 is found sufficient. The issue is closed.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		information on training and technical maintenance to be performed in respect of the project at hand as required by Guidelines for JI PDD users.	flares is also carried out by the equipment provider.		
-	Does the project make provisions for meeting training and maintenance needs?	Pending on response to CAR 04.	See response above. The responsible personnel of the project developer are experienced with the gas extraction and supply into the gas pipeline and will receive on the job training from Eco-Alliance once the flares are being installed. The maintenance and operation of the general project equipment will be provided by the project developer personnel. The maintenance of the flares will be carried out by Eco-Alliance.	Based on information provided, it is assumed that the project makes provision for meeting training and maintenance needs.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
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 emission reductions are achieved through the capture of CMM which would have been released to the atmosphere in the absence of the project activity, and oxidation of the high-GWP methane through combustion in utilisation equipment or flare. In absence of the project the CMM would be released to the atmosphere. In the project scenario, CO_2 is emitted after combustion of the	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		CMM in flares or combustion of the CMM from the gas pipeline.			
-	Is it provided the estimation of emission reductions over the crediting period?	Yes, the estimation of the emission reductions is presented for the crediting period before (2004-2007), during (2008-2012) and after (2013-2017) the 1st commitment period and it is equal to 176913 tCO2e, 434331 tCO2e and 1292405 tCO2e respectively.	N/A	N/A	OK
-	Is it provided the estimated annual reduction for the chosen credit period in tCO2e?	The estimated annual average reductions are provided and these are 44228 tCO2e for 2004-	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		2007 (period prior the 1st commitment period), 86866 tCO2e for 2008-2012 (the 1st commitment period) and 258481 tCO2e for 2013-2017 (after the 1st commitment period).			
-	Are the data from questions above presented in tabular format?	Yes, all estimations are provided in the tabular format in table 3, 4 and 5, section A.4.3.1 of the PDD.	N/A	N/A	OK
Project approvals by Parties					
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	**CAR 05.** The written approvals neither by host Party (Ukraine) no by other Party involved (UK) were provided.	CAR 05. A letter of endorsement from Ukraine has been received. The letters of approval will be provided as soon as received.	The conclusion on CAR is pending the written project approvals by the Parties involved.	Pending

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		CAR 06. Please indicate in the PDD the information regarding receiving of the Letter of endorsement from Ukrainian DFP which is required by national procedure for JI project approval.	CAR 06. The requested information was included. A letter of endorsement has been received for the proposed project, dated 16 November 2010.	The Letter of Endorsement for the project was checked. The information provided in the section A.5 of the PDD was found appropriate. The issue is closed.	OK
19	Does the PDD identify at least the host Party as a "Party involved"?	Ukraine, which is the host Party, and United Kingdom of Great Britain and Northern Ireland are indicated as the Parties involved.	N/A	N/A	OK
19	Has the DFP of the host Party issued a written project approval?	No written project approval by the host Party is available. Refer to CAR 05.	Refer to CAR 05 above.	Refer to CAR 05 above.	Pending

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
20	Are all the written project approvals by Parties involved unconditional?	No written project approvals by the Parties involved are available. Refer to CAR 05.	Refer to CAR 05 above.	Refer to CAR 05 above.	Pending
Authorization of project participants by Parties involved					
21	Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through: − A written project approval by a Party involved, explicitly indicating the name of the legal entity? or − Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity?	The project received the Letter of endorsement from Ukraine (Host party). Still, a formal authorization of each legal entity listed as project participant in the PDD by Parties involved will be provided in the written project approvals, which have not been issued yet. Refer to CAR 05.	Refer to CAR 05 above.	Refer to CAR 05 above.	Pending
Baseline setting					
22	Does the PDD explicitly indicate which of the following approaches is used for	Yes, the PDD clearly indicates	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	identifying the baseline? − JI specific approach − Approved CDM methodology approach	that the JI specific approach is used for baseline setting.			
JI specific approach only					
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	Yes, the detailed theoretical description in provided in a complete and transparent manner.	N/A	N/A	OK
23	Does the PDD provide justification that the baseline is established: (a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one? (b) Taking into account relevant national and/or sectoral policies and circumstance? − Are key factors that affect a baseline taken into account? (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key	**CAR 07.** As to the information about baseline methodology approval contained in the section B.1 of the PDD, clear and precise references must be provided to: 1) the first 2 projects using methodology for CMM from closed mines; 2) other German	CAR 07: 1) First two projects are ERUPT projects ERU04/12 and ERU06/06 as was included in the PDD. JI project references are DE1000014 and DE1000015. Details can be accessed from the German JI and CDM Project Data Base (http://www.dehst.de/nn_682916/EN/Climate__protection__projects/JI__CDM__DataBase/JI__CDM__DataBase__node.html?__nnn=tru	CAR 07: In the revised PDD ver.1.2.2 the information on baseline methodology usage in other Kyoto projects is sufficiently supported by the clear references. The information provided was found appropriate. The issue is	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	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?	projects which were officially registered as JI project (link to the project at UNFCCC web-site); 3) other VCS projects using the mentioned methodology; 4) the methodology developed by DMT per se (as appropriate). **CAR 08**. Clear references must be provided to the documentation/stu	e). 2) JI project DE1000050 also includes gas from abandoned parts of an operating coal mine, another is still applying for approval. 3) A list of VCS registered projects in Germany is enclosed. The database can be accessed via "Registered Projects" on http://www.vcsprojectdatabase.org/resources/AccessReports.asp. This database allows for searching on host country. 4) The three referenced documents from DMT are enclosed. The methodology is based on this information, but adjusted to be more like ACM0008. CAR 08: Required references were added, including to the DMT documents, report	closed. CAR 08: The fact that the deliberate pumping of mine gas does not lead	 OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		dies confirming that the deliberate pumping of mine gas does not lead to the increase in production of methane as stated in the section B.1 of the PDD. The same applies to the information regarding the necessity of pumping in coal mining areas, especially in respect of the confirmation of this fact by Ukrainian experts (Center of Alternative Fuels and MakNDI) (PDD section B.1, pg.13).	referenced in A.1, and the following report: SRW (Scientific Research Work) "To develop a method of degassing of abandoned mines, preventing the release of methane on the Earth's surface". Report of the Makiivskiy Scientific Research Institute (MakSRI) number 17050704000, 2010.	to the increase in production of methane and the information regarding the necessity of pumping in coal mining areas was confirmed by supporting documentation and clear references. The information was found adequate. The issue is closed.	

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		CAR 09. The list of plausible future scenarios does not include a project activity without JI project, although consideration of this option was envisaged in the baseline approach described in the section B.1 of the PDD. Furthermore, the listed baseline alternatives were not sufficiently described (e.g. for the alternative implying CMM utilization it is not clear whether single utilization activity or their combination is considered, and so on). The alternatives must be explicitly stated as per proposed approach and described.	CAR 09: The project not implemented as JI, is simply a combination of two of the options presented, therefore facing the same barriers as the individual options. The combination has been included as an additional option.	CAR 09: The information on plausible future scenarios (alternatives to the project) was revised and expanded. The issue is closed.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		CAR 10. There is no need to include the information on project emission calculation into the section B.1 of the PDD. Please remove the irrelevant information from the respective section.	CAR 10. The irrelevant information was deleted.	CAR 10: The issue is closed based on due corrections made to the 1st version of the PDD.	OK
		CAR 11. Please provide the key information and data used to establish the baseline in the tabular format in the section B.1 of the PDD as required by the Guidelines for JI PDD users.	CAR 11: The requested information was included.	CAR 11: The information on key data used to establish the baseline in tabular format was included into section B.1 of the PDD and found appropriate. The issue is closed.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		CAR 12. Please include to the Annex 2 of the PDD the summary of the key elements in tabular format as prescribed by the Guidelines for JI PDD user.	CAR 12: The information was provided in the Annex 2 of the PDD ver.1.2.2.	CAR 12: The issue is closed based on made amendments.	OK
		CL 02. Please clarify why if the baseline does not implies CMM use/ destruction and therefore the amount of methane destroyed in the baseline is always zero the parameter MD_BL is included into the formula for baseline emission calculation. The same is applied to the baseline	CL 02: This is correct. However, the methodology as used previously is followed. And by the inclusion of the parameter MD_BL it would be possible for projects which do have some baseline use, to apply the same methodology. Therefore, no correction is needed.	CL 02: The clarification is accepted. The issue is closed.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		emission sources (see section B.3 of the PDD) where emissions from methane destruction in baseline scenario are considered.			
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?	Some elements of CDM methodology ACM0008 are used, however the chosen approach is found to be in appropriate.	N/A	N/A	OK
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	Carbon emission factor for electricity consumption is used, and the PDD provide appropriate justification of this.	N/A	N/A	OK
Approved CDM methodology approach only					
26 (a)	Does the PDD provide the title, reference number and version of the approved CDM methodology used?	The JI specific approach is used, the section is not	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		applicable.			
26 (a)	Is the approved CDM methodology the most recent valid version when the PDD is submitted for publication? If not, is the methodology still within the grace period (was the methodology revised to a newer version in the past two months)?	N/A	N/A	N/A	N/A
26 (b)	Does the PDD provide a description of why the approved CDM methodology is applicable to the project?	N/A	N/A	N/A	N/A
26 (c)	Are all explanations, descriptions and analyses pertaining to the baseline in the PDD made in accordance with the referenced approved CDM methodology?	N/A	N/A	N/A	N/A
26 (d)	Is the baseline identified appropriately as a result?	N/A	N/A	N/A	N/A
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	The PDD indicates that the latest version of the "Tool for the demonstration and assessment of additionality" is used. with a	CAR 13: The step wise approach is applied, but the steps were not separately indicated to avoid confusion with the steps of the additionality tool. However, they are now included (underlined to	CAR 13: The revised PDD ver.1.2.2 was reviewed; the corrections made were found appropriate. The issue is closed.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	identified baseline scenario and that the project will lead to emission reductions or enhancements of removals; (b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality; (c) Application of the most recent version of the "Tool for the demonstration and assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board".	purpose of proving the project's additionality. **CAR 13**. The demonstration of the project's additionality must be presented using step-wise approach prescribed by the Guideline for JI PDD users, namely, step (1) identification and description of the approach applied; step (2) application of the approach chosen. Please correct	distinguish them).		
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	The appropriate justification is provided. The most recent version of the "Tool for the	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		demonstration and assessment of additionality" is used, in accordance with the JI specific approach, defined in paragraph 2 (c) of the annex I to the "Guidance on criteria for baseline setting and monitoring".			
29 (b)	Are additionality proofs provided?	The project's additionality is proved using stepwise approach prescribed by the Tool. Additionality is proved in section B.2 for he PDD.	N/A	N/A	OK
29 (c)	Is the additionality demonstrated appropriately as a result?	Yes, it is demonstrated that the project is additional to those that would	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		otherwise occur.			
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	**CAR 14**. The Additionality Tool chosen for demonstrating of project's additionality is not strictly followed: not all steps and sub-steps are addressed, outcomes of some steps is not clearly stated (e.g., for 1a and 1b), barrier analysis is poor etc. Please make appropriate corrections and provide the information required.	CAR 14: Its' deemed that the Additionality Tool is followed, but in line with approved methodologies, eg ACM0008, because of the similarity of both approaches used to determine the baseline scenario and the additionality tool, Step 1 of the "Tool for the demonstration and assessment of additionality" is ignored. The full step 1 would simply duplicate the information already presented.	CAR 14: The revised PDD was supplemented with appropriate clarification. The issue is closed based on information provided.	OK
Approved CDM methodology approach only					
31 (a)	Does the PDD provide the title, reference number and version of the approved CDM methodology used?	The JI specific approach is used, the section is not applicable.	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
31 (b)	Does the PDD provide a description of why and how the referenced approved CDM methodology is applicable to the project?	N/A	N/A	N/A	N/A
31 (c)	Are all explanations, descriptions and analyses with regard to additionality made in accordance with the selected methodology?	N/A	N/A	N/A	N/A
31 (d)	Are additionality proofs provided?	N/A	N/A	N/A	N/A
31 (e)	Is the additionality demonstrated appropriately as a result?	N/A	N/A	N/A	N/A
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?	Yes, the project boundary is defined in line with all presented requirements. The emission sources for baseline are methane emissions as a result of venting and emission from destruction of methane in the baseline. For the	CL 03: No additional electricity is required, as the gas is under pressure. Therefore, this does not need to be taken into account in the calculations.	CL 03: Clarification is accepted. The issue is closed.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		project activity emission sources included are on-site electricity and fuel consumption due to the project activity, including treatment of the gas, emissions from methane destruction and emissions from NMHC destruction. **CL 03**. Please clarify if the supply of the captured CMM to the end user requires additional electricity consumption and how it was considered in the emission reduction calculations (if applicable).			

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
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?	Yes, the project boundary is defined based on case-by-case assessment according to the criteria stated in cl.32 (a) above.	N/A	N/A	OK
32 (c)	Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart as appropriate?	The delineation of the project boundary and gases and sources are described and justified in a proper manner, although no figure or flow-chart is used.	N/A	N/A	OK
32 (d)	Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?	All gases and sources are stated and exclusions are justified. However, CAR was raised. **CAR 15**. In section B.3 of the PDD there is	CAR 15: Project emission sources listed were consistent. However, the emissions from flare and gas pipeline have now been split into two rows to clarify. NMHC included. Fugitive methane is not included as an emission	CAR 15: The clarification provided and amendments made and presented in the PDD ver.1.2.2 are found appropriate. The issue is closed.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		inconsistency between project emission sources listed at the beginning of the section and in the table 5. Please correct/clarify. Based on the raised CAR regarding NMHC concentration monitoring please include emissions from NMHC destruction in the list emission sources. Please consider as well the fugitive methane emissions from gas supply pipeline as an emission source.	source, as that would lead to double counting. This could only be included in the project emissions, if this same methane is included in the baseline too. It is explained already that any unburned methane is not included in the baseline.		
Approved CDM methodology approach only					

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
33	Is the project boundary defined in accordance with the approved CDM methodology?	The JI specific approach is used, the section is not applicable.	N/A	N/A	N/A
Crediting period					
34 (a)	Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?	The starting date of the project indicated in the PDD is 08/09/2003. The starting date of the proposed project activity is the date of issuance of the licence for gas utilisation; the actual start of the installation of equipment was shortly after.	N/A	N/A	OK
34 (a)	Is the starting date after the beginning of 2000?	Yes, refer to 34 (a) above.	N/A	N/A	OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	**CAR 16**. Please indicate the unique project operational lifetime and	CAR 16: The equipment life is corrected to 20y-0m. The expected lifetime of the project is included in C.2.	CAR 16: The information provided and corrections made	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		provide evidences confirming the indicated period.	There are different components to the project, installed at different times, however, C.2. is simplified to just 20y-0m.	are found adequate. The issue is closed.	
34 (c)	Does the PDD state the length of the crediting period in years and months?	The length of the crediting period is indicated for 1st commitment period only. **CAR 17**. Please indicate the length of the crediting period in years and months for periods before (2004 – 2007) and after (2013-2017) the 1st commitment period (see section C.3 of the PDD).	CAR 17: Other periods included. It is assumed the second 5-year commitment period under Kyoto.	CAR 17: The PDD ver.1.2.2 was reviewed. The issue is closed based on due correction made.	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 crediting period commences with the start of operation of the project, so it is after the first	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		emission reduction generated by the project.			
34 (d)	Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?	The crediting period for issuance ERUs starts since 2008. Emission reductions generated before 2008 (2004-2007) are regulated by the host Party decrees. The stated crediting period does not extend beyond the operational lifetime of the project which is 20 assumed to be years.	N/A	N/A	OK
34 (d)	If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the estimates of emission reductions or enhancements of net removals	The estimates of emission reductions are presented separately for 3 different periods:	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	presented separately for those until 2012 and those after 2012?	before the 1st commitment period (2004-2007), during the 1st commitment period (2008-2012) and after the 1st commitment period (2013-2017).			
Monitoring plan					
35	Does the PDD explicitly indicate which of the following approaches is used? − JI specific approach − Approved CDM methodology approach	It is explicitly stated that JI specific approach is used for establishing the monitoring plan.	N/A	N/A	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 in sufficient manner describes all relevant key factors and characteristics that will be monitored and the period in which they will be	CAR 18: NMHC is significantly below 1%, therefore was excluded in the original draft. NMHC now included in the descriptions.	CAR 18: The monitoring plan in the PDD ver.1.2.2 was reviewed. Provided information was found sufficient. The issue is close.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		monitored. **CAR 18**. Please include to the monitoring plan the monitoring of NMHC concentration in the captured CMM.			
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?	All constants and variables used are reliable and valid and transparently described in the section D of the PDD.	N/A	N/A	OK
36 (b)	If default values are used: − Are accuracy and reasonableness carefully balanced in their selection? − Do the default values originate from recognized sources? − Are the default values supported by statistical analyses providing reasonable confidence levels? − Are the default values presented in a transparent manner?	Default values used include emission factor (for methane destruction and carbon emission factor for grid electricity), efficiency of the use i (flare unit or	CL 04: If the temperature is below the manufacturer's specification of 850℃, the following efficiencies are applied: • Temperature is between 500℃ and 850℃, then efficiency is 90%; • Temperature is	CL is accepted, the provided information was found sufficient; the issue is closed.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		gas pipeline), and GWP. The used default values for efficiency of the flare and gas pipeline originated from the IPCC and approved CDM methodology ACM0008. The default values are presented in a transparent manner and their selection is appropriately justified. **CL 04.** Please clarify (and describe in the PDD as appropriate) the value of flare efficiency used for flare temperature less than 850C.	below 500℃, then efficiency is 0%. Relevant information is added to the PDD. Methane destruction efficient for gas pipeline should be 98.5% as per IPCC / ACM0008, it was a typo in PDD. Now corrected.		

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		Please also provide justification of the applied value of the methane destruction efficient for gas pipeline of 98,1%.			
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?	Yes, required information is included in the monitoring plan.	N/A	N/A	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?	Clear references for data sources are indicated in the monitoring plan, mainly there are IPCC materials. The use of the values as well as their conservativeness is justified.	N/A	N/A	Ok
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	Quality assurance and quality control procedures are described in the	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		monitoring plan.			
36 (b) (iv)	Are International System Unit (SI units) used?	Yes, the ISU is used	N/A	N/A	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?	Yes, the baseline emissions are calculated based on actual amount of CMM destructed in the project which is obtained through monitoring.	N/A	N/A	OK
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	All parameter, default coefficients, variables are consistent between baseline and monitoring plan.	N/A	N/A	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 uses some standard variables contained in appendix B of the "Guidance".	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
36 (d)	Does the monitoring plan explicitly and clearly distinguish: (i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination? (ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination? (iii) Data and parameters that are monitored throughout the crediting period?	The monitoring plan clearly indicate the data and parameters which are not monitored during crediting period but are available at the stage of determination (e.g., emission factors, default values of use i efficiency, GWP) and data and parameters that are monitored throughout the crediting period (e.g., methane amount destroyed by use i, additional electricity consumed due to the project, methane concentration in	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		the extracted gas, NMHC concentration etc.). Data and parameter that are not monitored and are determined only once, but are not available at the stage of determination are absent.			
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	The method employed for data monitoring including monitoring frequency and recording is described I sufficient details.	N/A	N/A	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,	All necessary algorithms and formulas are elaborated in the monitoring plan.	CAR 19: The PDD ver.1.1 was corrected.	CAR 19: The issue is closed based on due correction made and presented in the revised PDD	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	leakage, as appropriate?	**CAR 19.** The monitoring under the current project is not direct, thus monitoring Option 1 is applicable, but not Option 2 as indicated in the PDD ver.1.1. Please make appropriate corrections to the section D monitoring plan.		ver.1.2.2.	
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	The justification for all formulas and algorithms are provided.	N/A	N/A	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Mainly, all formulas, variable etc. are consistent. **CAR 20**. Please indicate the symbols for data variables used in formulas in the	CAR 20: The tables in the section D was supplemented with required information	CAR 20: The revised PDD ver.1.2.2 was checked. The provided information ensures better transparency of the monitoring plan.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		tables containing description of the monitored parameters (D.1.1.1, D.1.13)		The issue is closed.	
36 (f) (iii)	Are all equations numbered?	Yes, all formulas are numbered. See section B, D and E of the PDD.	N/A	N/A	OK
36 (f) (iv)	Are all variables, with units indicated defined?	All variables are defined, described and units indicated.	N/A	N/A	OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	The algorithms and procedures are conservative which is justified appropriately.	N/A	N/A	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	The level of uncertainty of the key parameters is indicated in the section D.1.3 of the PDD.	N/A	N/A	OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure for	The consistency between identified baseline scenario	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	calculating the emissions or net removals of the baseline ensured?	and baseline emission calculation procedure is available.			
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	All formulas and algorithms are described in sufficient details.	N/A	N/A	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	**CAR 21**. The information regarding Host Party requirements for collection and archiving of project's environmental impact data stated in the section D.1 of the PDD is false. The information in the section D.1.5 is irrelevant as well. Please correct.	CAR 21: The host Party does not require the collection and archiving of information on environmental impacts for this project activity type. Information corrected in both sections.	CAR 21: The issue is closed base on due amendments made to the 1st version of the PDD.	OK
36 (f) (vii)	Are references provided as necessary?	In most cases references are	CAR 22: Report of Scientific Research "To	CAR 22: The information source	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		provided. Some information left unreferenced. See CARs above. Additionally, the CAR 22 was issued. **CAR 22**. Please provide a reference to the data source for the information on volume of gas from the mines in 1955-1964 and 1965-1972 (see section A.2 of the PDD). Also please provide evidences/proofs of the fact that CMM emission from the closed mines and unsealed wells started in 1978.	develop methane recovery technology at abandoned mines and waste horizons on the anticline and dome structures" E610201020, SE "Center for Alternative Fuel Types" (SE Caft) Kiev, 2002 (confidential). Reference included.	and references presented are found reliable and adequate. The corrections to the PDD were made. The issue is closed.	

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	All assumptions are explained in the section D of the PDD.	N/A	N/A	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?	The level of uncertainty of key parameters is identified and described D.1.3 of the PDD.	N/A	N/A	OK
36 (f) (vii)	Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided?	See 36 (f) (vii) above	N/A	N/A	OK
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project? Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?	No special national or international monitoring standard is applied, although project monitoring complies with Ukrainian norms and regulations and specific industry standard	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		in metering equipment calibration, measurements etc.			
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	Statistical techniques are not used in course of current project monitoring.	N/A	N/A	N/A
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 appropriate information regarding quality assurance and control procedures is reflected in the monitoring plan and provided in the section A.2 of the PDD.	N/A	N/A	OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	The responsibilities and authorities regarding the monitoring activities are defined. The	CL 05: The required information was included to the PDD ver.1.2.2.	CL 05: The provided information was reviewed and found sufficient. The issue is closed based on adequate	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		section D.3 of the PDD presents the operational and management structure of the project and main responsibilities of the principals. Ultimate responsibility for the project rests with the JI Project Manager. **CL 05**. Please provide more detailed information and justifications of the project management diagram presented in the PDD.		clarification provided and correction made to the PDD.	
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	The current monitoring plan reflects good monitoring	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	practice guidance developed by IPCC applied?	practices and is appropriate to the project type. The similar monitoring methods were widely used.			
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?	Yes, the compilation in tabular form on monitoring parameters are provided using format of the tables from Guidelines for JI PDD user.	N/A	N/A	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?	**CAR 23**. It should be noted that data monitored and required for verification are to be kept for 2 years after last transfer of ERUs for the project but not after the end of the last crediting	CAR 23: The information was corrected	CAR 23: The issue is closed based in amendments made to the PDD.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		period. Please make respective corrections in the PDD.			
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 elements of CDM methodology ACM0008 are included; however monitoring plan was developed in line the requirements stated in respect of selected elements and combinations.	N/A	N/A	OK
Approved CDM methodology approach only					
38 (a)	Does the PDD provide the title, reference number and version of the approved CDM methodology used?	The JI specific approach is used, the section is not applicable.	N/A	N/A	N/A
38 (a)	Is the approved CDM methodology the most recent valid version when the PDD is submitted for publication? If not, is the methodology still within the grace period (was the methodology revised to a newer version in the past two months)?	N/A	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
38 (b)	Does the PDD provide a description of why the approved CDM methodology is applicable to the project?	N/A	N/A	N/A	N/A
38 (c)	Are all explanations, descriptions and analyses pertaining to monitoring in the PDD made in accordance with the referenced approved CDM methodology?	N/A	N/A	N/A	N/A
38 (d)	Is the monitoring plan established appropriately as a result?	N/A	N/A	N/A	N/A
Applicable to both JI specific approach and approved CDM methodology approach					
39	If the monitoring plan indicates overlapping monitoring periods during the crediting period: (a) Is the underlying project composed of clearly identifiable components for which emission reductions or enhancements of removals can be calculated independently? (b) Can monitoring be performed independently for each of these components (i.e. the data/parameters monitored for one component are not dependent on/effect data/parameters to be monitored for another component)? (c) Does the monitoring plan ensure that monitoring is performed for all components and that in these cases all	The monitoring plan does not indicate overlapping monitoring periods during the crediting period.	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	the requirements of the JI guidelines and further guidance by the JISC regarding monitoring are met? (d) Does the monitoring plan explicitly provide for overlapping monitoring periods of clearly defined project components, justify its need and state how the conditions mentioned in (a)-(c) are met?				
Leakage					
JI specific approach only					
40 (a)	Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?	**CAR 24**. The potential leakage of the project is not assessed nor is explained which of sources of leakage are to be calculated and which can be neglected.	CAR 24: The leakage assessment has been described in the PDD as requested. There is no leakage possible in this project. Further clarified in the text.	CAR 24: The issue is closed based on information provided.	OK
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	Refer to 40 (a) above.	Refer to 40 (a) above.	Refer to 40 (a) above.	OK
Approved CDM methodology approach only					
41	Are the leakage and the procedure for its estimation defined in accordance with the approved CDM methodology?	The JI specific approach is used, the section is not	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		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 assessment of emissions in baseline scenario and in the project scenario is chosen which corresponds to the monitoring Option 1., thus the approach 42 (a) is chosen.	N/A	N/A	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 approach in 42 (a) is chosen for emission reduction calculation. The PDD provides ex ante estimate of emission for the project scenario, for the baseline scenario and emission reduction. The possible leakage was not assessed	Refer to cl. 40 (a)	The undertaken assessment of potential leakage attributable to the project as a response to CAR in the cl.40 (a) of this protocol revealed, that the leakage is considered equal to zero. Thus, no adjustment to leakage is required.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		in the PDD ve.1.1 (see cl.40 (a) of this protocol).			
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?	The approach (a) in 42 is chosen.	N/A	N/A	N/A
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	The estimates are given for each year from the beginning until the end of the crediting period (starting from 2004 ending 2017) on a source-by-source basis for each gas in tones of CO2 eq. The formulas used for estimate calculation and	CL 06. Information about the third consumer is included. The volumes in the PDD include the consumption of this user.	CL 06: The clarification is accepted. The issue is closed based additional information provided in the PDD.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate? (d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent? (e) Are emission factors (including default emission factors) if used for calculating the estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and 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	estimates per se are consistent throughout the PDD. The key factors having impact on baseline and activity level as well as risks were considered appropriately. All data sources are reliable are indicated in transparent manner. The choice of the emission factor (carbon emission factor for grid electricity consumption for Ukraine and emission factors for methane and NMHC destruction) is			

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	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?	justified. The accuracy and reasonable of the factor is ensured. All estimations are made using conservative assumption. The annual average of the estimated emission reductions are calculated in accordance with the JI requirement. **CL 06**. As during site visit it was revealed that previously (during 2004-2005) the captured gas was also supplied to the filling station for vehicle use, please provide			

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		more detailed information regarding this issue as well as clarification whether this amount of gas was accounted for.			
46	If the calculation of the baseline emissions or net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation?	Yes. The baseline emissions are determined based on monitored amount of methane destructed in the project. Thus, the PDD include ex ante emission calculation for baseline.	N/A	N/A	OK
Approved CDM methodology approach only					
47 (a)	Is the estimation of emission reductions or enhancements of net removals made in accordance with the approved CDM methodology?	The JI specific approach is used, the section is not applicable.	N/A	N/A	N/A
47 (b)	Is the estimation of emission reductions or enhancements of net removals	N/A	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	presented in the PDD: − On a periodic basis? − At least from the beginning until the end of the crediting period? − On a source-by-source/sink-by-sink basis? − For each GHG? − In tones of 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? − Are the formula used for calculating the estimates consistent throughout the PDD? − Are the estimates consistent throughout the PDD? − Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?				

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
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 project obtained a positive conclusion of the state environmental examination. There are no significant environmental impacts expected. The environmental impact assessment of the project has been prepared and was approved appropriately. All necessary permits from the Ukrainian Mining Authorities were also received. The utilisation of otherwise unused CMM reduces in an active manner	CAR 25: The information was corrected as required. Information about EIA was added.	CAR 25: The issues is closed based on due amendments made.	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		the amount of CMM which is released to the atmosphere and provides significant benefits for the global climate production by converting the harmful methane into the less harmful carbon dioxide. Beside the positive effect on the global climate protection, no transboundary impacts occur. **CAR 25**. The EIA was checked by verifiers during site-visit, however PDD ver.1.1 states that no EIA was undertaken. Please correct			

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		appropriately.			
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?	See 48 (a) above.	N/A	N/A	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 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?	NPK-Kontakt LLC published information on the project in the local press, coal mines newspaper and geologist magazine. Consultations were conducted at the meetings with local authorities. The project received a lot of positive	N/A	N/A	OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		comments. No negative comments were gained.			

APPENDIX B: VERIFIERS CV'S

Work carried out by:

Oleg Skoblyk, Specialist (Power Management)

Team Leader, Climate Change Lead Verifier
Bureau Veritas Ukraine Health, Safety and Environmental Department Project Manager

Oleg Skoblyk has graduated from National Technical University of Ukraine 'Kyiv Polytechnic University" with specialty Power Management. He has successfully completed IRCA registered Lead Auditor Training Course for Environment Management Systems and Quality Management Systems. Oleg Skoblyk has undergone intensive training on Clean Development Mechanism /Joint Implementation and he is involved in the determination/verification of 19 JI projects.

Igor Antipko (Mining Electro-Mechanics)

Team Member, Bureau Veritas Ukraine Technical Specialist

Mr. Antipko graduated from Stahanov College of Mines, specialist in Mining Electro-Mechanics (Automation processes of production of minerals, development of the circuits of electric supply of mines, management of chisel and explosive works in mines). Completed full course of the Labour protection and Safety, was employed at the position of the Mine mechanic on repair of the equipment, Mine underground electromechanic (service and repair of mechanisms and equipment, lines of transportation of the electric power in mine of extraction stone coal, service and repair of gas analyzer of methane, monitoring and repair mine of air control devices).

Denis Pishchalov (economics)

Team member, Bureau Veritas Ukraine Financial Specialist

Master of foreign trade, he has more than five year of experience in foreign trade and procurement. In particular one year as foreign trade manager in the Engineering Corporation (manufacturer and contractor in the municipal sector) and one year in the NIKO publishing house, one year as sales manager in the

ITALCOM srl. In addition Denis has spent four years working as procurement specialist in Ukrainian Energy Service Company and two years as chief product manager in the Altset JSC. At the moment Denis is deputy director for finance and economy in the SUD of UTEM JSC.

The determination report was reviewed by:

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

Internal Technical Reviewer, Climate Change Lead Verifier
Bureau Veritas Ukraine Acting Chief Executive

Mr. Sokolov has over 25 years of experience in Research Institute in the field of biochemistry, biotechnology, and microbiology. He is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered), Quality Management System (IRCA registered), Occupational Health and Safety Management System, and Food Safety Management System. He performed over 140 audits since 1999. Also he is Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and Lead Tutor of the IRCA registered ISO 9000 QMS Lead Auditor Training Course. He is Lead Tutor of the Clean Development Mechanism /Joint Implementation Lead Verifier Training Cours and he was involved in the determination/verification over 60 JI/CDM projects.