DETERMINATION REPORT

LLC "GREEN GAS KRASNODON"

DETERMINATION OF THE POWER GENERATION FROM THE COAL MINE METHANE AT THE SUKHODOLSKAYA-VOSTOCHNAYA MINE

REPORT NO. UKRAINE-DET/0139/2010

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BUREAU VERITAS CERTIFICATION

Report No: UKRAINE-det/0139/2010

DETERMINATION REPORT "POWER GENERATION FROM THE COAL MINE METHANE AT THE SUKHODOLSKAYA-VOSTOCHNAYA MINE"

Date of first issue: 24/12/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: LLC "Green Gas Krasnodon"	Client ref.: Elena Ostrovskaya

Summary:

Bureau Veritas Certification has made the determination of the "Power generation from the coal mine methane at the Sukhodolskaya-Vostochnaya Mine" project of LLC "Green Gas Krasnodon" located in Lugansk 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 the JI specific approach on the basis of the 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", version 07, and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.: UKRAINE-det/0139/2010	Subject Group: JI
Project title: "Power generation from the coal mine methane at the Sukhodolskaya-Vostochnaya Mine"	
Work carried out by: Ivan Sokolov – Team Leader, Lead Veifier Igor Antipko - Team Member, Verifier Olena Manziuk – Team Member, Verifier Denis Pishchalov - Team Member, Financial Specialist	
Work verified by: Leonid Yaskin- Internal Technical Reviewer	
Work approved by: Flavio Gomes – Operational Manager	

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Indexing terms

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Table of Contents *Page*

1 INTRODUCTION

LLC "Green Gas Krasnodon" has commissioned Bureau Veritas Certification to determine its JI project "Power generation from the coal mine methane at the Sukhodolskaya-Vostochnaya Mine" (hereafter called "the project") at Lugansk 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:

Ivan G. Sokolov
Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Igor Antipko

Bureau Veritas Certification Team Member, Climate Change Verifier

Olena Manziuk

Bureau Veritas Certification Team Member, Climate Change Verifier

Denis Pishchalov

Bureau Veritas Certification Team Member, Financial Specialist

This determination report was reviewed by:

Leonid Yaskin

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 validation 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 LLC "Green Gas Krasnodon" 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, LLC "Green Gas Krasnodon" revised the PDD and resubmitted it on 17/01/2011.

The determination findings presented in this report relate to the project as described in the PDD version 02 dated 20/10/2010, PDD version 02.1 dated 26/10/2010, PDD version 03 dated 26/11/2010, PDD version 04 dated 06/12/2010, PDD version 05 dated 17/01/2011, and PDD version 06 dated 25/04/2011.

2.2 Follow-up Interviews

On 04/10/2010 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of LLC "Green Gas Krasnodon", OJSC "Krasnodonvuhillya", the Sukhodolskaya-Vostochnaya Mine were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
LLC "Green Gas Krasnodon", OJSC "Krasnodonvuhillya", the Sukhodolskaya-Vostochnaya Mine	➢ Implementation schedule ➢ Project management organisation ➢ Environmental Impact Assessment ➢ Project monitoring responsibilities ➢ Measurement equipment ➢ Quality control and quality assurance procedures ➢ Environmental impacts affected ➢ Local authorities and public opinion
CONSULTANT Green Gas Germany GmbH	➢ Applicability of methodology ➢ Baseline and Project scenarios ➢ Barriers analysis ➢ Additionality justification ➢ Common practice analysis ➢ Monitoring plan ➢ Conformity of PDD to JI requirements

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

3 PROJECT DESCRIPTION

As described in the PDD, Coal Mine Methane (CMM), defined as the methane component of gases released from the strata and coal seams in a working mine. CMM is either captured as pre-mining CMM (also known as pre drainage) prior to the mining process from underground boreholes or as post-mining CMM (also known as post drainage) during or after completion of the mining process from vertical surface goaf wells, underground inclined or horizontal boreholes, gas drainage galleries or other goaf gas capture techniques, including drainage of sealed areas, in the mine. Both pre- and post-mining CMM is drained in parallel to Ventilation Air Methane (VAM), which is defined as methane mixed with ventilation air in the mine that is circulated in sufficient quantity to dilute the methane to low concentrations for safety reasons.

Currently in most of the active mines in the Ukraine, CMM is partially or in total released to the atmosphere, despite the fact that it is well-known as harmful greenhouse gas with a global warming potential (GWP) of 21 t CO2e / t CH4.

Currently only a small portion of the total amount of coal mine gas is utilised within two CMM-fired steam boilers for the production of steam, used for the generation of hot water and other heating purposes of the Mine. Both CMM-fired steam boilers belong to a separate registered JI-project under the project identification UA1000031 ("Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna"). As both CMM-fired steam boilers have a set capacity which is 50% of the technical capacity, the main portion of the extracted coal mine gas is vented into the atmosphere via several cold stacks.

Thus, the project will reduce methane emissions by utilizing the CMM which would be otherwise vented into the atmosphere in the absence of

this project. Methane-fuelled power generators will be installed to satisfy the electrical consumption of the Mine, which will reduce electricity off take from the national grid. Flares will be installed as a methane destruction scheme for surplus CMM due to inherent fluctuations in CMM production. The project shall be phased to maximize emission reductions. The first phase (Phase 1) of the project is the installation of flaring facility to begin reducing emission as quickly as possible. The second phase (Phase 2) is the installation of methane-fuelled power generators to satisfy the mine's electrical base load consumption.

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 34 Corrective Action Requests and 10 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)

A letter of approval has been received from NL Agency Ministry of Economic Affairs, Agriculture and Innovation dated 29/11/2010.

Bureau Veritas Certification received this letter from the project participants and does not doubt its authenticity.

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

The project "Power generation from the coal mine methane at the Sukhodolskaya-Vostochnaya Mine" has already been supported by the Government of Ukraine, namely by the National Environmental Investment Agency of Ukraine, which has issued a Letter of Endorsement (LoE) for the JI Project (LoE №577/23/7 dated 03.06.2009).

After receiving Determination Report from the Accredited Independent Entity the project documentation will be submitted by the project participants to the National Environmental Investment Agency of Ukraine for receiving a Letter of Approval.

4.2 Authorization of project participants by Parties involved (21)

The participation of each of the legal entities listed as project participants in the PDD will be authorized by State Entity of Ukraine through Letter of Approval that should be issued after determination process.

As a fact, JI project has already been supported by the National Environmental Investment Agency of Ukraine through issuing Letter of Endorsement №577/23/7 dated 03.06.2009.

4.3 Baseline setting (22-26)

The PDD explicitly indicates that the JI specific approach on the basis of the 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" (version 07) was the selected methodology for identifying the baseline.

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

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

a. i. Venting of CMM
b. ii. Using/destroying ventilation air methane rather than venting it
c. iii. Flaring of CMM
d. iv. Use for additional grid power generation
e. v. Use for additional captive power generation
f. vi. Use for additional heat generation
g. vii. Feed into gas pipeline (to be used as fuel for vehicles or heat/power generation)
h. viii. Possible combinations of options i to vii with the relative shares of gas treated under each option specified

Thus, according to the information from the PDD, there is only one realistic option for the baseline scenario, which is the continuation of the current situation: venting of the CMM into the atmosphere, heat generation with the existing coal fired boilers, and the full purchase of electricity from the grid; without additional income from emissions trading, the project is economically not viable and faces prohibitive barriers.

(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. Flaring of CMM is not required by existing national regulations;
   b. There no skilled and properly trained personnel for the operation and maintenance of the specific modern kind of technology;
   c. The concentration of methane within VAM is too low;
   d. Present technology is only available for the gases with high calorific value, and CMM has low calorific value, etc.

JI specific approach on the basis of the approved CDM Methodology approach ACM0008 (version 07), this methodology applies to CMM and VAM capture, utilisation and destruction project activities at a working coal mine, where the baseline is the partial or total atmospheric release of the methane.

The PDD uses the JI specific approach on the basis of the approved 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" (version 07), which is the most recent valid version when the PDD was submitted for publication on the UNFCCC JI website, allowing for a grace period of two months.

The PDD provides a description of why the referenced approved CDM methodology is applicable to the project.

Applicability conditions that stated in the PDD presented below:
- The mine is not an open cast mine;
- The mine is not an abandoned/decommissioned coal mine;
- There is no capture of virgin coal-bed methane;
- There is no usage of CO2 or any other fluid/gas to enhance CMM drainage (the method of extraction is described more in detail in the PDD).

The AIE hereby confirms that the selected the JI specific approach on the basis of the approved consolidated baseline and monitoring methodology ACM0008 (version 07) is previously approved by the CDM Executive Board, and is applicable to the project activity, which, complies with all the applicability conditions therein.

All explanations, descriptions and analyses pertaining to the baseline in the PDD are made in accordance with the JI specific approach on the basis of the referenced approved CDM methodology and the baseline is identified appropriately.

4.4 Additionality (27-31)

Traceable and transparent information showing that the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to greenhouse gas emission reductions.

The most recent version of the "Tool for the demonstration and assessment of additionality" (version 05.2) approved by the CDM Executive Board was used. All explanations, descriptions and analyses are made in accordance with the selected tool and method.

The following additionality proofs are provided:

1. there are eight alternative scenarios to the project activity identified;
2. the investment analyses conducted by the project participants determines that the proposed project activity is not economically and financially feasible;
3. the identified financial and barrier analysis would credibly prevent the implementation of the proposed project activity undertaken without being registered as a JI activity;
4. the common practice analyses carried out by the PP's, complementing the financial analysis.

The PDD provides the title, reference number and version of the baseline and monitoring methodology used; also it provides a description of why and how the referenced approved CDM methodology is applicable to the project, as per item 3.3 above.

All explanations, descriptions and analyses with regard to additionality are made in accordance with the selected JI specific approach on the basis of the approved methodology (ACM0008, version 07).

Additionality is demonstrated appropriately as a result of the analysis using the JI specific approach on the basis of the approved CDM methodology approach chosen (approved CDM methodology ACM0008, version 07).

4.5 Project boundary (32-33)

The project boundary defined in the PDD as sated in the developed JI specific approach on the basis of the approved CDM 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" (version 07), encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs) that are:

(i) Under the control of the project participants the following emissions:
- ⇨ CH4 - Emissions of methane as a result of venting
- ⇨ CO2 - Grid electricity generation (electricity provided to the grid)
- ⇨ CO2 - Emissions from methane destruction
- ⇨ CO2 - Emissions from NMHC destruction
- ⇨ CH4 - Fugitive emissions of unburned methane

(ii) Reasonably attributable to the project (such as N2O); 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 CO2 equivalent, whichever is lower.

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

The AIE validated the project boundary by:
a) Detail the documentation assessed (e.g., a commissioning report).
b) Describe observations during any site visit undertaken (i.e., observations of the physical site or equipment used in the process).

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

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 05/03/2007, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 10 years.

The PDD states the length of the crediting period in years and months, which is 2 years and 2 months or 26 months (first stage obligation crediting under Kyoto Protocol of 2010-2012) and 7 years and 10 months or 94 months (late crediting of 2013-2020), and its starting date as

November, which is the date of commissioning of the flare facility and 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 to the 2020 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 on the basis of the approved CDM methodology (ACM0008, version 07) was selected.

The monitoring plan describes all relevant factors and key characteristics that will be monitored, and the period in which they will be monitored, in particular also all decisive factors for the control and reporting of project performance, such as concentration of coal mine methane in, amount of methane sent to the flare, 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:

1. Additional electricity consumption by project activity by power meter y
2. Methane sent to flare
3. Flare/combustion efficiency, determined by the operation hours and the methane content in the exhaust gas
4. Methane sent to power plant
5. Efficiency of methane destruction / oxidation in power plant
6. Carbon emission factor for combusted methane
7. Carbon emission factor for combusted non methane hydrocarbons (various)
8. Concentration of methane in extracted gas
9. NMHC concentration in coal mine gas
10. Global warming potential of methane
11. Post-mining CMM captured and destroyed in the project activity in year y

12. Post -mining CMM that would have been captured, sent and destroyed by use i in the baseline scenario in the year y
13. Power generated during phase 2 of the project activity
14. CO2 emission factor from the grid
15. Concentration of methane in extracted gas
16. NMHC concentration in coal mine gas

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 PEy, BEy, EFCO2 ELEC,y, GWPCH4, ηflare.

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 CEFCH4, GWPCH4, EffELEC, and EFELEC. The last one (parameter EFELEC) will be revised annually in order to keep it in compliance with up to date Ukrainian official data.

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

1. Additional electricity consumption by project activity by power meter y
2. Methane sent to flare
3. Flare/combustion efficiency, determined by the operation hours and the methane content in the exhaust gas
4. Methane sent to power plant
5. Carbon emission factor for combusted non methane hydrocarbons (various)
6. Concentration of methane in extracted gas
7. NMHC concentration in coal mine gas
8. Post-mining CMM captured and destroyed in the project activity in year y
9. Post -mining CMM that would have been captured, sent and destroyed by use i in the baseline scenario in the year y
10. Power generated during phase 2 of the project activity
11. Concentration of methane in extracted gas
12. NMHC concentration in coal mine gas

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording depending on its kind. It is provided in comprehensive manner in Tables for the project and baseline parameters in Section D of the project design document.

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:

⇨ Project emissions

Formulae (1) Project emissions

$PE_y = PE_{ME} + PE_{MD} + PE_{UM}$

where,

PE_y = Project emissions in year *y* (tCO_2e)
PE_{ME} = Project emissions from energy use to capture and use methane (tCO_2e)
PE_{MD} = Project emissions from methane destroyed (tCO_2e)
PE_{UM} = Project emissions from un-combusted methane (tCO_2e)

Formulae (2) Project emissions from energy use to capture and use methane (PE_{ME})

$PE_{ME} = CONS_{ELEC} \times CEF_{ELEC,PJ}$

where,

PE_{ME} = Project emissions from energy use to capture and use methane (tCO_2e)
$CONS_{ELEC}$ = Additional electricity consumption for capture and use or destruction of methane measured on site *x* and power meter *y* (MWh)
$CEF_{ELEC,PJ}$ =Carbon emissions factor of electricity used by the private power distribution system (0.896 tCO_2e/MWh)

Formulae (3) Project emissions from methane destroyed (PE_{MD}) and formulae (4) Relative proportion of NMHC compared to methane ®

$PE_{MD} = (MD_{FL} + MD_{ELEC}) \times (CEF_{CH4} + r \times CEF_{NMHC})$
with,
$r = PC_{NMHC} / PC_{CH4}$

where,

PE_{MD} = Project emissions from methane destroyed (tCO_2e)
MD_{FL} = Methane destroyed through flaring (tCH_4)
MD_{ELEC} = Methane destroyed through power generation (tCH_4)
CEF_{CH4} = Carbon emission factor for combusted methane (2.75 tCO_2e/tCH_4)
CEF_{NMHC} = Carbon emission factor for combusted non methane hydrocarbons (the concentration varies and, therefore, to be obtained through periodical analysis of captured methane

($tCO_2e/tNMHC$)
r = Relative proportion of NMHC compared to methane
PC_{CH4} = Concentration (in mass) of methane in extracted gas (% w/w), measured on wet basis
PC_{NMHC} = NMHC concentration (in mass) in extracted gas (% w/w)

Formulae (3a) Project emissions from methane destroyed if the lab analysis will result a fraction lower than 1% of NMHC in the extracted gas

$PE_{MD} = (MD_{FL} + MD_{ELEC}) \times CEF_{CH4}$
where,
PE_{MD} = Project emissions from methane destroyed (tCO_2e)
MD_{FL} = Methane destroyed through flaring (tCH_4)
MD_{ELEC} = Methane destroyed through power generation (tCH_4)
CEF_{CH4} = Carbon emission factor for combusted methane (2.75 tCO_2e/tCH_4)

Formulae (5) Methane destroyed through flaring (MD_{FL})

$MD_{FL} = MM_{FL} - (PE_{flare} / GWP_{CH4})$
where,
MD_{FL} = Methane destroyed through flaring (tCH_4)
MM_{FL} = Methane measured sent to flare (tCH_4)
PE_{flare} = Project emissions of non-combusted CH_4 expressed in terms of CO_2e from flaring of the residual gas stream (tCO_2e)
GWP_{CH4} = Global warming potential of methane (21 tCO_2e/tCH_4)

Formulae (7) Methane destroyed through power generation (MD_{ELEC})

$MD_{ELEC} = MM_{ELEC} \times Eff_{ELEC}$

where,
MD_{ELEC} = Methane destroyed through power generation
MM_{ELEC} = Methane measured sent to power plant (tCH_4)
Eff_{ELEC} = Efficiency of methane destruction / oxidation in power plant (99.5% according to IPCC)

Formulae (10) Project emissions from un-combusted methane (PE_{UM})

$PE_{UM} = [GWP_{CH4} \times MM_{ELEC} \times (1 - Eff_{ELEC})] + PE_{flare}$

where,
PE_{UM} = Project emissions from un-combusted methane (tCO_2e)
GWP_{CH4} = Global warming potential of methane (21 tCO_2e/tCH_4)
MM_{ELEC} = Methane measured sent to power plant (tCH_4)
Eff_{ELEC} = Efficiency of methane destruction in power plant (99.5 % according to IPCC)

PE_{flare} = Project emissions of non-combusted CH_4 expressed in terms of CO_2e from flaring of the residual gas stream (tCO_2e)

Formulae (15) Project emissions from flaring of the residual gas stream in year *y* ($PE_{flare,y}$)

$$PE_{flare,y} = \sum TM_{RG,h} \times (1- \eta_{flare,h}) \times GWP_{CH4}/1000$$

where,

$PE_{flare,y}$ = Project emissions from flaring of the residual gas stream in year *y* (tCO_2e)

$TM_{RG,h}$ = Mass flow rate of methane in the residual gas in the hour *h* (kg/h)

$\eta_{flare,h}$ = Flare efficiency in hour *h*

GWP_{CH4} = Global Warming Potential of methane valid for the commitment period (21 tCO_2e/tCH_4)

⇨ Baseline emissions

Formulae (11) Baseline emissions (BE_y)

$$BE_y = BE_{MD,y} + BE_{MR,y} + BE_{USE,y}$$

where,

BE_y = Baseline emissions in year *y* (tCO_2e)

$BE_{MD,y}$ = Baseline emissions from destruction of methane in the baseline scenario in year *y* (tCO_2e)

$BE_{MR,y}$ = Baseline emissions from release of methane into the atmosphere in year *y* that is avoided by the project activity (tCO_2e)

$BE_{Use,y}$ = Baseline emissions from the production of power, heat of supply to gas grid replaced by the project activity in year *y* (tCO_2e)

Formulae (12) Baseline emissions from destruction of methane in the baseline scenario in year ($BE_{MD,y}$)

$$BE_{MD,y} = (CEF_{CH4} + r \times CEF_{NMHC}) \times \sum PMM_{BLi,y}$$

where,

$BE_{MD,y}$ = Baseline emissions from destruction of methane in the baseline scenario in year *y* (tCO_2e)

CEF_{CH4} = Carbon emission factor for combusted methane (2.75 tCO_2e/tCH_4)

CEF_{NMHC} = Carbon emission factor for combusted non methane hydrocarbons (the concentration varies and, therefore, to be obtained through periodical analysis of captured methane

($tCO_2e/tNMHC$)

$PMM_{BLi,y}$ = Post-mining CMM that would have been captured, sent and destroyed by use i in the baseline scenario in the year y (tCH4)

r = Relative proportion of NMHC compared to methane

Formulae (12a) Baseline emissions from destruction of methane in the baseline scenario in year *y* ($BE_{MD,y}$)

$$BE_{MD,y} = CEF_{CH4} \times (\sum PMM_{BLi,y})$$

where,

$BE_{MD,y}$ = Baseline emissions from destruction of methane in the baseline scenario in year *y* (tCO_2e)

$BE_{MD,y}$ = Baseline emissions from destruction of methane in the baseline scenario in year *y* (tCO_2e)

CEF_{CH4} = Carbon emission factor for combusted methane (2.75 tCO_2e/tCH_4)

$PMM_{BLi,y}$ = Post-mining CMM that would have been captured, sent and destroyed by use i in the baseline scenario in the year y (tCH4)

Formulae (16) Baseline emissions from release of methane into the atmosphere in year *y* that is avoided by the project activity

$$BE_{MR,y} = GWP_{CH4} \times [\sum (PMM_{PJi,y} - PMM_{BLi,y})]$$

where,

$BE_{MR,y}$ = Baseline emissions from release of methane into the atmosphere in year *y* that is avoided by the project activity

i = Use of methane (flaring, power generation, supply to gas grid to various combustion end use)

$PMM_{PJ,i,y}$ = Post-mining CMM captured, sent to and destroyed by use *i* in the project activity in year *y* (tCH_4)

$PMM_{BLi,y}$ = Post-mining CMM that would have been captured, sent and destroyed by use i in the baseline scenario in the year y (tCH4)

GWP_{CH4} = Global warming potential of methane (21 tCO_2e/tCH_4)

Formulae (24)

$$BE_{Use,y} = ED_{CPMM,y}$$

where,

$BE_{Use,y}$ = Total baseline emissions from the production of power, heat of supply to gas grid replaced by the project activity in year *y* (tCO_2e)

$ED_{CPMM,y}$ = Emissions from displacement of end uses by use of coal mine methane, VAM and post-mining methane (tCO_2e)

Formulae (25)

$CBMM_{tot,y} = PMM_{PJ,y}$

where,

$CBMM_{tot,y}$ = Total CBM, CMM and VAM captured and utilised by the project activity (tCH_4)

$PMM_{PJ,y}$ = Post-mining CMM captured by the project activity in year *y* (tCH_4)

Formulae (26) Potential total baseline emissions from the production of power or heat replaced by the project activity in year

$PBE_{Use,y} = GEN_y \times EF_{ELEC}$

where,

$PBE_{Use,y}$ = Potential total baseline emissions from the production of power or heat replaced by the project activity in year *y* (tCO2e)

GEN_y = Electricity generated by project activity in year *y* (MWh)

EF_{ELEC} = Emission factor of electricity (grid, captive or a combination) replaced by the project (0.896 tCO_2/MWh)

Formulae (28) Emissions from displacement of end uses by use of coal mine methane, VAM and post-mining methan ($ED_{CPMM,y}$)

$ED_{CPMM,y} = [PMM_{PJ,\ y} / CBMM_{tot,y}] \times PBE_{Use,y}$

where,

$ED_{CPMM,y}$ = Emissions from displacement of end uses by use of coal mine methane, VAM and post-mining methane (tCO_2e)

$PMM_{PJ,y}$ = Post-mining CMM captured by the project activity in year *y* (tCH_4)

$CBMM_{tot,y}$ = Total CBM, CMM and VAM captured and utilised by the project activity (tCH_4)

$PBE_{Use,y}$ = Potential total baseline emissions from the production of power or heat replaced by the project activity in year *y* (tCO2e)

⇨ Emission reductions

Formulae (40) Emissions reductions of the project activity (ER)

$ER_y = BE_y - PE_y$

where,

ER_y = Emissions reductions of the project activity during the year *y* (tCO_2e)

BE_y = Baseline emissions during the year *y* (tCO_2e)
PE_y = Project emissions during the year *y* (tCO_2e)

The monitoring plan presents the quality assurance and control procedures for the monitoring process. In the PDD section D.2 and D.3 there are described in detail information on calibration and on data logging. Also, such information represented in the documents that were provided for review. For instance, operation and maintenance manual: Data logging and transfer procedure, version V2.4 dated 23.08.2010.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities. The roles and responsibilities of the persons involved to monitoring process of the current project activity are described in full in section D of the PDD and clearly demonstrated on the Figure D.3.2 Plant management and Figure D.3.3 General overview of data flow.

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

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

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

The PDD provides the title, reference number and version of the baseline and monitoring methodology used; also it provides a description of why and how the referenced approved CDM methodology is applicable to the project, as per section 3.3 of this document.

All explanations, descriptions and analyses pertaining to monitoring in the PDD are made in accordance with the selected the JI specific approach on the basis of the approved CDM methodology ACM0008 (version 07).

Thus, the monitoring plan is established appropriately as a result.

4.8 Leakage (40-41)

According to the information presented in the PDD, there is no leakage in the current project as no displacement of any CMM will occur.

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

The PDD provides the ex ante estimates of:

(a) Emissions for the project scenario (within the project boundary), which provided below:

Table. Project emissions during the crediting period

Year	Project emissions (tCO2 equivalent)
2010	6.642
2011	39.851
2012	52.286
Sum	**98.779**

Table. Project emissions (2013 until end of operational lifetime)

Year	Project emissions (tCO2 equivalent)
2013	52.286
2014	52.300
2015	52.284
2016	52.284
2017	52.284
2018	52.284
2019	52.284
2020	47.930
Sum	**413.936**

(b) No leakage is expected during the project activity;

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

Table. Baseline emissions during the crediting period

Year	Baseline emissions (tCO2 equivalent)
2010	45.753
2011	274.523
2012	383.506
Sum	**703.782**

Table. Baseline emissions (2013 until end of operational lifetime)

Year	Baseline emissions (tCO2 equivalent)
2013	383.506

2014	383.506
2015	383.506
2016	383.506
2017	383.506
2018	383.506
2019	383.506
2020	353.409
Sum	**3.037.951**

(d) Emission reductions (based on (a)-(c) above), which provided in the tables below:

Year	Estimate of annual emission reductions over the crediting period (tCO2 equivalent)
2010 (1st November – 31st December)	39.111
2011	234.672
2012	331.220
Total estimated ER	**605.003**
Annual average of estimated ER	**279.232**

Table. Estimated emission reductions post 2012 until end of operational lifetime

Year	Estimate of annual emission reductions (tCO2 equivalent)
2013	331.220
2014	331.206
2015	331.222
2016	331.222
2017	331.222
2018	331.222
2019	331.222
2020 (01 January - 31 October)	305.479
Total estimated ER	**2.624.015**

The estimates referred to above are given:

(a) On a periodic basis;

(b) From 01/11/2010 to 31/12/2012, covering the whole crediting period;

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

(d) For greenhouse gas - CO_2

(e) In tonnes of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol;

The formula used for calculating the estimates referred above and provided in the PDD and are consistent throughout the document.

For calculation of emission reductions PPs used the following formulae:

$ER_y = BE_y – PE_y$

where,
ER_y = Emissions reductions of the project activity during the year *y* (tCO_2e)
BE_y = Baseline emissions during the year *y* (tCO_2e)
PE_y = Project emissions during the year *y* (tCO_2e)

The estimation of emission reductions is made in accordance with the JI specific approach on the basis of the approved CDM 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" (version 07).

Data sources used for calculating the estimates referred to above, such as Intergovernmental Panel on Climate Change (IPCC), Guidance "Standardized emission factors for Ukrainian electrical grid"; (version 5, February 02 2007), executed by Global Carbon B.V., etc., are clearly identified, reliable and transparent.

Emission factors, such as EF (carbon emission factor for Ukrainian electrical grid) and CEF (carbon emission factor for combusted methane) were selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.

Section E of the PDD and provided, as supporting document to the PDD, excel spreadsheet include an illustrative ex ante emissions calculations.

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)

The PDD lists and attaches documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party, such as the Environmental Impact Assessment (EIA) carried out by the Ukrainian Institute LuganskGIPROshakht (Order No. 7302, Archive No. 249/2010).

The whole EIA was completed according to following requirements:

- ⇨ DBN (Ukranian national construction regulations) A.2.2-1-2003 "Structure and content of materials of environmental impact assessment (EIA) at design and construction of the enterprises, buildings and facilities" approved by the order of Gosstroy of Ukraine No.214 dd. 15.12.2003 and put into effect 01.04.2004;
- ⇨ DBN A.2.2-3-2004 "Structure, order of development, agreement and approvement of the project construction documentation" approved by the order of Gosstroy of Ukraine No.8 dd. 20.01.2004 and put into effect 01.07.2004.

Based on the PDD, PPs developed the project according to effective standards, rules and instructions. Project solutions ensure safety operation and meet fire and explosion safety requirements. This project does not contain deviations from effective regulatory requirements. In fact, used flare facility causes no harmful environmental impacts as no resources as water or round are required. Moreover, the utilization of otherwise vented CMG reduces in an active manner the amount of CMG 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.

Due to implementation of this project solves not only ecological problems but also social problems. For instance, there are solved the problems such as:

- ⇨ Lowering of emissions of methane which falls into greenhouse gases and its air emission is restricted;
- ⇨ Lowering of gas pollution of active mine workings;
- ⇨ Lowering of environmental pollution level and improvement of living conditions of miners and local population, because pollution of adjoining cities by such dangerous substances as sulphur dioxide (SO2) and gas borne ash will be prevented due to use of methane as alternative fuel for a mine boiler station during implementation of the project;
- ⇨ Job creation.

The PDD provides conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party, if the

analysis referred to above indicates that the environmental impacts are considered significant by the project participants or the host Party.

4.11 Stakeholder consultation (49)

Stakeholder consultation was not undertaken as it is not required by the host party.

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 from the stakeholders.

6 DETERMINATION OPINION

Bureau Veritas Certification has performed a validation of the "Power generation from the coal mine methane at the Sukhodolskaya-Vostochnaya Mine" JI Project in Lugansk region. The project correctly applies the JI specific approach on the basis of the 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", version 07. The validation 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 validation 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 during site visit; iii) the resolution of outstanding issues and the issuance of the final validation report and opinion.

Project participant/s used the latest tool for demonstration and assessment of the additionality. In line with this tool, the PDD provides investment analysis, benchmark analysis, sensitivity analysis and other analysis of barriers to determine that the project activity itself is not the baseline scenario.

By synthetic description of the project, the project is likely to result in reductions of GHG emissions partially. An analysis of the investment and 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 06) and the subsequent follow-up interviews during the site visit 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 Joint Implementation and the relevant host country criteria.

The validation 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 LLC "Green Gas Krasnodon" that relate directly to the GHG components of the project.

/1/ Project Design Document of the JI Project "Power generation from the coal mine methane at the Sukhodolskaya-Vostochnay Mine" version 02 dated 20/10/2010.
/2/ Project Design Document of the JI Project "Power generation from the coal mine methane at the Sukhodolskaya-Vostochnaya Mine" version 02.1 dated 26/10/2010.
/3/ Project Design Document of the JI Project "Power generation from the coal mine methane at the Sukhodolskaya-Vostochnaya Mine" version 03 dated 26/11/2010.
/4/ Project Design Document of the JI Project "Power generation from the coal mine methane at the Sukhodolskaya-Vostochnaya Mine" version 04 dated 06/12/2010.
/5/ Project Design Document of the JI Project "Power generation from the coal mine methane at the Sukhodolskaya-Vostochnaya Mine" version 05 dated 17/01/2011.
/6/ Project Design Document of the JI Project "Power generation from the coal mine methane at the Sukhodolskaya-Vostochnaya Mine" version 06 dated 25/04/2011.
/7/ 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", version 07.
/8/ Tool for demonstration and assessment of additionality, version 05.2.
/9/ Glossary of Joint Implementation Terms, Version 02.
/10/ Guidelines for Users of the Joint Implementation Project Design Document Form/Version 04, JISC.
/11/ Letter of Endorsement of the Joint Implementation Project "Power generation from the coal mine methane at the Sukhodolskaya-Vostochnaya Mine" #577/23/7 dated 03/06/2009 issued by National Environmental Investment Agency of Ukraine.
/12/ Letter of approval dated 29/11/2010 issued by NL Agency Ministry of Economic Affairs, Agriculture and Innovation referring to "Power generation from the coal mine methane at the Sukhodolskaya-Vostochnaya Mine".

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

/1/ Feasibility study of mine degasification and gas utilisation project at Sukhodolskaya-Vostochnaya Mine, Kraznodonvuhillya, Ukraine dated 02.08.2007.

/2/ Technical documents of planning of land boudaries (on site) of LLC "Green Gas Krasnodon". Contract #98 dated 19.10.2009. Explanatory note.

/3/ Order of Head of the regional state administration #658 dated 30.09.2009 of permit to the OJSC "Krasnodonvuhillya" on sublease contract land.

/4/ Technical design specification on development of technical documents of planning of land boudaries (on site) dated 19.10.2009.

/5/ Certificate A01 #431959 of the state registration of legal entity LLC "Green Gas Krasnodon".

/6/ Information letter AA #051391from a single state register of enterprises and organizations of Ukraine of LLC "Green Gas Krasnodon".

/7/ Certificate #100236809 of registration of VAT payer dated 22.07.2009.

/8/ Charter of Green Gas Krasnodon LLC dated 2009.

/9/ Certificate AA#07964. It is valid from 30.08.2010 to 29.08.2011.

/10/ Positive conclusion of the complex state expertise # 13-00434-10. Working draft "Installation of high temperature flare at the central industrial site of the mine "Sukhodolskaya-Vostochnaya" dated 13.10.2010.

/11/ Expert opinion #2010 B 12 - - 0334 of facility compliance with the legislation on energy saving dated 06.07.2010. Working draft "Installation of high temperature flare at the central industrial site of the mine "Sukhodolskaya-Vostochnaya" of LLC "Green Gas Krasnodon".

/12/ Conclusion of sanitary and epidemiological expertise dated 17.06.2010 #4/275.

/13/ Conclusion of labour safety expertise # 44.05.1696 C.10 of working draft "Installation of high temperature flare at the central industrial site of the mine "Sukhodolskaya-Vostochnaya" of LLC "Green Gas Krasnodon".

/14/ Information #182 dated 06.08.2010 of results of high-risk facility identification. Installation of high temperature flares at the central industrial site of the mine "Sukhodolskaya-Vostochnaya" of LLC "Green Gas Krasnodon".

/15/ Expert opinion #162/1879 dated 20.09.2010. Office of monitoring and prevention activities of the Main Directorate of Ministry of Emergency situation of Ukraine in Lugansk region.

/16/ Expert opinion #06-3724/15 dated 30.08.2010 of Department of State Inspection of Civil Protection and Technical Safety Directorate Ministry of Emergency situation of Ukraine in Lugansk region.

/17/ Information of the start of building work that is not required specific permit #7/12-1629к dated 06.10.2010.
/18/ Land plots sublease agreement #778-У/10-9 КУО dated 20.10.2009.
/19/ Agreement #0019 for construction of a high-temperature mine gas flaring device on the Sukhodolska-Vostochnaya Mine dated 12.07.2010. Phase 1 - General construction work.
/20/ Agreement #0020 for construction and installation of a high-temperature mine gas flaring device on the Sukhodilska-Vostochnaya Mine dated 12.07.2010. Phase 2 - Installation of Flare, pipework and associated services.
/21/ Flare installation import contract #0015, dated 20.05.2010.
/22/ Cheack list calibration of measurement equipments dated 15.10.2010.
/23/ Calibration certificate, analyzer Binos 100 ser. #1203002582538, analyzer Oxynos 100 ser. #1203002582539 dated 08.03.2010.
/24/ Servicing instructions, analyzer Binos 100 ser. #1203002582538, analyzer Oxynos 100 ser. #1203002582539.
/25/ Calibration certificate, analyzer Binos 100 ser. #1203002582540 dated 08.03.2010.
/26/ Servicing instructions, analyzer Binos 100 ser. #1203002582540.
/27/ Final check report, flowmeter ser. #10218543 dated 25.06.2010.
/28/ Inspection certificate EN 10204-3.1 #3049.
/29/ Test and inspection plan #102497-1-11, ser. #10218543.
/30/ Instrument data sheet for ultrasonic gas flow meter, ser. #10218543.
/31/ Final inspection report, ser. #D303F001020.
/32/ Factory calibration dated 29.03.2010, ser. #D3052914152.
/33/ Technical information Omnigrad M TR10.
/34/ Certificate of conformity, meter ser. #53078983 dated 02.07.2010.
/35/ Approval certificate of device type of measuring equipment #UA-M1/1-1566-2004 dated 04.11.2004 Series A #003027.
/36/ Passport of electrical energy meter SL7000 Smart.
/37/ Verification certificate, ser. #4.623 dated 20.05.2010.
/38/ Verification certificate, ser. #4.622 dated 20.05.2010.
/39/ Verification certificate, ser. #4.601 dated 20.05.2010.
/40/ Operation and maintenance schedule, version V1.2 dated 03.08.2010. Power production from the coal mine methane at the Sukhodolskaya-Vostochnaya Mine, Krasnodon, Ukraine.
/41/ Operation and maintenance manual. Data logging and transfer procedure, version V2.4 dated 23.08.2010. Standard operating Procedure 181. Quality management for plant operation and maintenance Sukhodolskaya-Vostochnaya Coal Mine, Krasnodon, Ukraine.
/42/ Environmental Impact Assessment. Order #7302. Archive #249/2010. "Green Gas Krasnodon" LLC Contractor design "Installation of a high temperature flare device in the main site of

"Sukhodolskaya-Vostochnaya" coal mine". Volume I. Explanatory notes. Book 2.

/43/ Assessment of new calculation of CEF of Ukraine dated 17.08.2007 (TUV sud).

/44/ Independent Technical Review of Sukhodolskaya-Vostochnaya Coal Mine Methane (CMM) Project at Lugansk, Ukraine DMT-No. 341 099 10 dated 2010-07-08.

/45/ Technical review report of the Sukhodolskaya-Vostochnaya Coal Mine - Historical gas extraction and future gas predictions dated 2010-08-18.

/46/ Memorandum of understanding for coal mine gas management and utilisation at the Sukhodolskaya-Vostochnaya mine of Krasnodonugol dated 05.03.2010.

/47/ Coal mine methane power generation project at the Sukhodolskaya-Vostochnaya Mine, Ukraine. Power purchase agreement dated 16.12.2009.

/48/ Draft of agreement #0022 for Development of Design Products: Utilisation of Captured Methane at the Central Facility of Sukhodilska-Skhidna Mine.

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/ Maria Frolova – Chief miner of supporting of JI projects according to the Kyoto Protocol at "Krasnodonvuhilliya"

/2/ Tetiana Bondareva – Lead engineer of JI projects according to the Kyoto Protocol at the Sukhodolskaya-Vostochnaya Mine

/3/ Oleksandr Angelovskyi – Technical director of "Krasnodonvuhillya"

/4/ Stefan Decker – Head of EPCM and O & M

/5/ Paulo Lourenco Bonanca – Carbon Project Controller of Green Gas Germany GmbH

/6/ Iain Goldsmith - Project Development Manager of Green Gas International Akula Business Centre in Donetsk.

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APPENDIX A: DETERMINATION PROTOCOL OF JI PROJECT

Check list for determination, according JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 02)

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
Guidelines for JI PDD Form Users Section A General description of the project					
A.1. Title of the project					
A.1	Is the title of the project presented? Is the sectoral scope to which project pertains presented? Is the current version number of the document presented? Is the date when the document was completed presented?	The title of the project is "Power generation from the coal mine methane at the Sukhodolskaya-Vostochnaya Mine". There is presented sectoral scope 8 (Mining and Mineral Production). PDD version 02.1 dated 26/10/2010.	N/a	N/a	OK
A.2 Description of the project					
A.2	Is the purpose of the project included with a concise, summarizing explanation (max. 1-2 pages) of the:	Corrective Action Request 01 (CAR01) Section A.2 Description of the project should be maximum 2	**CAR01:** The section A.2 has been amended where only the relevant parts are mentioned.	Conclusion on CAR01. According to the amendments, issue is closed.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	a) Situation existing prior to the starting date of the project; b) Baseline scenario; and c) Project scenario (expected outcome, including a technical description). Is the history of the project (incl. its JI component) briefly summarized?	pages. Please try to summarize information underlined main points in this section. Corrective Action Request 02 (CAR02) Please summarize history of the project including its prior consideration (JI component). Corrective Action Request 29 (CAR29) Please provide the description of the baseline. Corrective Action Request 30 (CAR30) Please provide the description of the JI component history. Clarification Request 10 (CL10) Please make it clear who signed the Memorandum and who negotiated with OJSC Krasnodonvuhillya.	**CAR02:** A table has been inserted (please see table A.2.3) with all relevant stages and milestones (including JI components) **CAR29:** Section A.2 has been revised completely and meets now the requirements as per the Guidelines **CAR30:** Section A.2 has been revised completely and meets now the requirements as per the Guidelines. **CL10:** Green Gas International Ltd. signed the MoU with JSC KNU and negotiated also with JSC. Table A.2.3 has been revised. The additional information as requested has been inserted and some more information were inserted.	Conclusion on CAR02. Requested information was added. Issue is closed. Conclusion on CAR29. The amended information was checked. Issue is closed. Conclusion on CAR30. Appropriate corrections were done. Issue is closed. Conclusion on CL10. Issue is closed.	
A.3 Project participants					
A.3	Are project participants and	Project participants (PPs) are	**CAR03:** The JI PDD guideline	Conclusion on	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	Party (ies) involved in the project listed? Is contact information provided in Annex 1 of the PDD?	OJSC Krasnodonvuhillya and Green Gas Ukraine Holding B.V. Contact information of PPs is provided in Annex 1 of the PDD. Corrective Action Request 03 (CAR03) Please preserve the format of all tables through the PDD as required in the Guidelines for users of the JI PDD form. Clarification Request 01 (CL01) Please explain why one of the Project Participants was changed.	has been followed throughout the PDD. **CL01:** It was a typing error which leads to this particular misunderstanding. Project Participant has been never changed and since the beginning the project participants are OJSC Krasnodonvuhillya (host party) and Green Gas Ukraine Holding B.V (investor party). GG Ukraine Holdings B.V is a subsidiary of Green Gas International B.V	CAR03. Based on corrections, issue is closed. Conclusion on CL01. Issue is closed.	
A.4 Technical description of the project					
A.4.1	Location of the project	Luhansk region, Ukraine	N/a	N/a	OK
A.4.1.1	Host Party(ies)	Ukraine	N/a	N/a	OK
A.4.1.2	Region/State/Province etc.	Luhansk region	N/a	N/a	OK
A.4.1.3	City/Town/Community etc.	The Mine is located near the town of Krasnodon and Sukhodolsk in the eastern part of Luhansk region.	N/a	N/a	OK
A.4.1.4	Detail of the physical location, including	The location of this JI project was identified with following GPS	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	information allowing the unique identification of the project. (This section should not exceed one page)	coordinates: Longitude - 39°47'9'' / Latitude - 48°21'9''.			
A.4.2. Technologies to be employed, or measures, operations or actions to be implemented by the project					
A.4.2	Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation schedule described?	According to the PDD, it is planned installation of the flaring equipment and two electrical power generators. Project activity includes electricity generation due to the utilisation of unutilized CMM which is currently vented into the atmosphere from the subsurface underground boreholes. All technical data and implementation schedule was provided. Clarification Request 02 (CL02) Please clarify whether the flare facility (HOFGAS–CFM4c 25000) need any permit on operation from local authority. Clarification Request 03 (CL03) In the list of documents you provided during site visit there is Agreement #0022 for Development of Design Products:	**CL02:** Local approvals have been already provided at the site audit. The next stage is the operation licence. This in process and soon will be submitted to the validator. **CL03:** The said document is the contract between GGK and Rasvet who are the nominated Design Institute for the second phase of the project. This contract has not been signed yet as still it is in development phase. A copy of the signed page can be sent when the contract will be signed.	Conclusion on CL02. Issue is closed due to additional clarification information. Conclusion on CL03. Issue is closed.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		Utilisation of Captured Methane at the Central Facility of Sukhodilska Skhidna Mine dated 09/11/2010. Mentioned Agreement is not signed. Please clarify it is draft document or it has been already signed.			
A.4.3. 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					
A.4.3	Is it explained briefly how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page.)	The emission reductions are based on the conversion of CMM with its main component methane (GWP 21) into CO_2 in combustion processes. This section is not exceed one page. Corrective Action Request 04 (CAR04) Please in section A.4.3 of the PDD specify anticipated total emission reduction in t CO_2 equivalent.	**CAR04:** The anticipated total emission reductions have been inserted.	Conclusion on CAR04. Issue is closed based on provided amendments.	OK
A.4.3.1. Estimated amount of emission reductions over the crediting period					
A.4.3.1	Is the length of the crediting period Indicated?	The length of the crediting period is 2 years and 3 months.	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	Are estimates of total as well as annual and average annual emission reductions in tonnes of CO2 equivalent provided?	Total estimated emission reduction during the crediting period of the JI project is 624,562 t CO_2 equivalent. Annual and annual average emission reductions are also provided in t CO_2 equivalent.			
A.5. Project approval by the Parties involved					
A.5	Is written project approvals by the Parties involved attached?	After finishing project determination report, the PDD and Determination Report will be presented to National Environmental Investments Agency of Ukraine (NEIA)`for receiving the Letter of Approval. The Letter of Approval from the country – investor has already been issued by NL Agency Ministry of Economic Affairs, Agriculture and Innovation dated 29/11/2010. Corrective Action Request 05 (CAR05) The project has no approval of the host Party Please, provide Letter of Approval.	**CAR05:** This is the next step after finalization of the Determination report. PP will make a request for LOA after receiving the final determination report from the validator. **CAR06:** The name of the issuing authority has been corrected in the PDD. This is NEIA.	Conclusion on CAR05. Issue will be closed after obtained of the Host party and sponsor party approvals. To be pending. Conclusion on CAR06. Issue is closed in accordance with correction action.	Pending

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		Corrective Action Request 06 (CAR06) Provided Letter of Endorsement issued by the NEIA of Ukraine and in PDD stated that LoE issued by the Ukrainian Ministry of Environmental Protection. Please correct. Corrective Action Request 31 (CAR31) Please state if the approval by the Host Party is granted.	**CAR31:** The LoA of the Dutch DNA has been issued on 29/11/2010. A description has been inserted. PP would like to clarify why this statement is anticipated to be inserted in this section. The receipt of the LoA is the final step.	Conclusion on CAR31. Issue is closed due to clarification provided in the PDD.	
DVM					
Project approvals by Parties					
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	See section A.5 of this table above.	N/a	N/a	-
19	Does the PDD identify at least the host Party as a "Party involved"?	Ukraine is the Host Party. Netherlands is Party involved.	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
19	Has the DFP of the host Party issued a written project approval?	See CAR05 in section A.5 above.	N/a	N/a	-
20	Are all the written project approvals by Parties involved unconditional?	Written project approvals available at the time of Determination are unconditional.	N/a	N/a	OK
Authorization of project participants by Parties involved					
21	Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through: − A written project approval by a Party 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?	Parties involved in the current JI project: Ukraine (Host Party) – OJSC Krasnodonvuhillya Netherlands – Green Gas Ukraine Holding B.V.	N/a	N/a	OK
Baseline setting					
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? − JI specific approach − Approved CDM	Approved CDM methodology ACM0008 (version 07) "Consolidated methodology for coal bed methane, coal mine methane and ventilation air methane capture and use for	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	methodology approach	power (electrical or motive) and heat and/or destruction through flaring or flameless oxidation".			
JI specific approach only					
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	N/a	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	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or 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?				
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?	N/a	N/a	N/a	OK
25	If a multi-project emission factor is used, does the PDD	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	provide appropriate justification?				
Approved CDM methodology approach only					
26 (a)	Does the PDD provide the title, reference number and version of the approved CDM methodology used?	It is used CDM methodology ACM0008 (version 07) "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". Corrective Action Request 07 (CAR07) Please preserve the title of the used CDM methodology through the PDD. Corrective Action Request 08 (CAR08) Please in Annex 2 refer to the section B of the PDD or state that this Annex left blank in purpose. Corrective Action Request 32 (CAR32) Please provide the key information and data used to	**CAR07:** The title of the methodology (ACM0008) has been corrected in the PDD as stated in the methodological tool. **CAR08:** Annex 2 is now referring to baseline information under section B of the PDD. **CAR32:** The tables will be inserted as requested. Previously was avoided as a reference has been inserted. Done. **CAR33:** The tables will be inserted as requested. Done. **CAR34:** Within Section E.4 the title of the each particular column has been revised and has now additional information stating 'methane destruction'	Conclusion on CAR07. Required correction was made. Issue is closed. Conclusion on CAR08. According to the appropriate amendment, issue is closed. Conclusion on CAR32. Issue is closed. Conclusion on CAR33. Issue is close based on the amendments. Conclusion on CAR34. Issue is closed.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		establish the baseline (variables, parameters, data sources etc.) in tabular form. Refer to Guidelines for users of PDD Form Version 04 Page 13. <u>Corrective Action Request 33 (CAR33)</u> Annex 2 shall contain a summary of the key elements of the baseline in tabular form as well as additional supporting documentation/information. Refer to Guidelines for users of PDD Form Version 04 Page 11. <u>Corrective Action Request 34 (CAR34)</u>. Please provide consistency as to the following: - According to Section B.1 one of baseline components is CMM "venting". This implies no CMM destruction. - In Section D.1 and excel file this component is titled "destruction of methane". - In Section E.4 the same	through flaring, heat generation, and power generation. Furthermore footmarks have been inserted describing that methane destruction through flaring, heat generation and power generate of the baseline and venting methane (that is avoided by the project activity) has the same meaning**.**		

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		component is titled "flaring" though CMM is not flared. The issue will be closed when only one title is assigned to the same component. Three titles with different meaning for the same component is not appropriate.			
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)?	Approved CDM methodology version 07 that used is the most recent valid version.	N/a	N/a	OK
26 (b)	Does the PDD provide a description of why the approved CDM methodology is applicable to the project?	According to the information in the PDD, chosen approved CDM methodology is applicable to this JI project.	N/a	N/a	OK
26 (c)	Are all explanations, descriptions and analyses pertaining to the baseline in the PDD made in accordance with the referenced approved CDM methodology?	All explanations, descriptions and analyses pertaining to the baseline in the PDD are made in accordance with the approved CDM methodology ACM0008 (version 07). Corrective Action Request 09 (CAR09)	**CAR09:** In section B.1 a reference has been inserted to Table D.1.1.3 under Section D in order to avoid double mentioning of parameters.	Conclusion on CAR09. Necessary information was added. Issue is closed.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		Please provide in section B.1 description of key parameters in tabular form as per Guidelines for users of the JI PDD Form.			
26 (d)	Is the baseline identified appropriately as a result?	As the baseline was chosen continuation of the current situation: venting of the CMM into the atmosphere, heat generation with the existing coal fired boilers, and the full purchase of electricity from the grid.	N/a	N/a	OK
Additionality					
JI specific approach only					
28	Does the PDD indicate which of the following approaches for demonstrating additionality is used? (a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals;	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	(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".				
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	N/a	N/a	N/a	OK
29 (b)	Are additionality proofs provided?	N/a	N/a	N/a	OK
29 (c)	Is the additionality demonstrated appropriately as a result?	N/a	N/a	N/a	OK
30	If the approach 28 (c) is	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?				
Approved CDM methodology approach only					
31 (a)	Does the PDD provide the title, reference number and version of the approved CDM methodology used?	There are used CDM methodology ACM0008 (version 07) "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" and "Tool for demonstration and assessment of additionality" version 05.2.	N/a	N/a	OK
31 (b)	Does the PDD provide a description of why and how the referenced approved CDM methodology is applicable to the project?	As described in the PDD, chosen approved CDM methodology is applicable to this JI project.	N/a	N/a	OK
31 (c)	Are all explanations, descriptions and analyses with regard to additionality made in accordance with the selected methodology?	Corrective Action Request 10 (CAR10) Please divide Step4 into proper sub-steps 4a and 4b as required by Tool.	**CAR10:** This section of the additionality has been amended as per the Tool. Step 4a and 4b has been discussed separately.	Conclusion on CAR10. Issue is closed. Corrections were made in accordance with the Tool.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		Corrective Action Request 11 (CAR11) Please note that the current version of the Tool does not contain Step 5 Impact of the JI revenues. Please correct. Corrective Action Request 12 (CAR12) In sub-step 2b the developer is indicating that the IRR is used as the benchmark parameter. At the same time in sub-step 2c the Developer is representing NPV calculated. Please correct. The NPV calculations are unnecessary and shall be eliminated in the PDD text and Excel file. Corrective Action Request 13 (CAR13) The IRR benchmark introduced lacks sufficient justification. Please note that the link indicated on page 26 leads to the main page of NBU site where the	**CAR11:** Step 5 has been deleted from the PDD with respect to the additionality Tool used in the PDD. **CAR12:** PDD and excel sheet has been now updated with IRR calculation. **CAR13:** The IRR benchmark has been calculated from the official average interest rate of banks on credits, published by the National Bank of Ukraine *http://www.bank.gov.ua*. The benchmark chosen for this project is 11.5% which is average commercial lending rate offered by the banks. **CAR14:** Please see CAR13, electricity tariff has been taken from the Power Purchase Agreement (please refer to document "091216 UAGGK KNU Power Purchase Agreement").	Conclusion on CAR11. Issue is closed. Conclusion on CAR12. According to the amendments issue is closed. Conclusion on CAR13. Issue is closed. Conclusion on CAR14. Issue is closed due to explanations. Conclusion on CAR15. Based on updated information issue is closed. Conclusion 1 on CAR16. Added information is correct. As a result,	

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		interest values are constantly updated, so it can not be checked. Please pay attention that the interest rate the present benchmark derived from is obviously deals with the loans denominated in UAH, while the present financial model is made in EUR. Thereby proper benchmark shall be derived from the average interest rates for loans denominated in the foreign currencies. Please correct. Corrective Action Request 14 (CAR14) Taking into account the fact that the starting date of the project is indicated as 05/03/2007 financial model shall be based on the data available for that day. For example the IRR benchmark may be derived from the average rate for loans in foreign currencies as of January 2007. It was 11.5%. Source: http://bank.gov.ua/Fin_ryn/Pot_tend/2007.zip. The same applies for	**CAR15:** The O&M cost has been now adjusted considering 3% inflation. **Response 1 on CAR16:** The financial model has been updated and adjusted for 10 years or 120 moths which is also the operational lifetime of the project. **Response 2 on CAR16:** The Crediting period is also divided in to two parts one is until Kyoto commitment period (2010-2012, i.e 2.2 years) and other is after 2012 (2013-2020, i.e 8 years) **CAR17:** The excel sheet has been now updated with a fair liquidation value set to 10% of the total equipment cost which is very conservative. **CL04:** The electricity tariff has been taken from the Power Purchase Agreement (please refer to CAR14).	should be make additional correction in the PDD that connected with length of the crediting period. Please change in section C.3 of the PDD length of the crediting period according to the provided calculation of ER. Final conclusion on CAR16. Necessary amendments are done. Issue is closed. Conclusion on CAR17. Issue is closed. Conclusion on CL04. Required clarification information was added. Issue is closed.	

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		electricity tariff used for calculations. Please make amendments. Corrective Action Request 15 (CAR15) The inflation rate of 3% for electricity tariff applied in the model is reasonable value, but you should pay attention that O&M expenses shall be adjusted for inflation as well. Please correct. Corrective Action Request 16 (CAR16) The developer is indicating the duration of the operation lifetime of the project as at least 10 years on page 34 while the model accounts for only 8 years of operation thereby contradicting with requirements of the tool. Please extend the period covered by the model by 2 years i.e. till 2021. Corrective Action Request 17	**CL05:** Since the company is VAT payer. Therefore, investment and operational costs, tariffs and prices indicated in the excel sheet are excluded VAT. **CL06:** The O&M costs were recalculated and split down into each year. Through the O&M split, the mistake was amended. **CL07:** Break down of the OPEX has been included in the excel sheet of the investment analysis**.** **CAR28:** Section B.2.2 of the PDD, i.e the sensitivity table has now been corrected**.**	Conclusion on CL05. Issue is closed. Conclusion on CL06. Correction was checked. Issue is closed. Conclusion on CL07. Issue is closed. Conclusion on CAR28. Requested corrections were made. Issue is closed.	

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		(CAR17) Please include the fair liquidating value of the project assets as of the end of assessment period to the cash flow for the final year of the financial model as stipulated by the Tool. This value may be equivalent of the residual (book) value of the assets or the scrap value when equipment's lifetime expired. Clarification Request 04 (CL04) Please provide the reference for the source of electricity tariff data. Clarification Request 05 (CL05) Please indicate whether investment and operational costs, tariffs and prices indicated with VAT included or not. Please note that the general approach is to make calculations using all input values (investment costs, tariffs and prices) with VAT excluded. In case if the company is not VAT payer calculations shall include VAT.			

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		Clarification Request 06 (CL06) Please clarify why the project O&M expenses are increasing to the full extent in 2011 while electricity generation starts only in 2012. Clarification Request 07 (CL07) Please provide the break down of the O&M expenses of the project. Corrective Action Request 28 (CAR28). Please recheck the values in the table B.2.2. of the PDD The value for 20% Capex scenario shall be +2,2% instead of -2,2%. IRR for -20% production scenario shall be -1,7% instead of 0,1% indicated.			
31 (d)	Are additionality proofs provided?	There are provided investment analysis, barrier analysis, and common practice analysis for additionality proofs.	N/a	N/a	OK
31 (e)	Is the additionality demonstrated appropriately as a result?	Refer to section 31 (c) above.	-	-	-
Project boundary (applicable except for JI LULUCF projects					

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
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?	N/a	N/a	N/a	OK
32 (b)	Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above?	N/a	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?	N/a	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	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	appropriately justified?				
Approved CDM methodology approach only					
33	Is the project boundary defined in accordance with the approved CDM methodology?	The project boundary is defined in accordance with chosen approved CDM methodology ACM0008. In the PDD there were identified baseline and project emissions.	N/a	N/a	OK
Crediting period					
34 (a)	Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?	The starting date of the project is 05/03/2007. It is the date of the signed Memorandum of Understanding between the green gas Ukraine Holding B.V., subsidiary company of the project participant Green Gas International B.V., and OJSC Krasnodonvuhillya.	N/a	N/a	OK
34 (a)	Is the starting date after the beginning of 2000?	05/03/2007 is the starting date of the project.	N/a	N/a	OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	Corrective Action Request 18 (CAR18) Please state the expected operational lifetime of the JI project in years and months.	**CAR18:** Expected operational lifetime of the project is 10 years or 120 months, which is now corrected in the PDD under section C.2	Conclusion on CAR18. 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 of the project is the following: first stage obligation crediting under	**CAR19:** Table A.4.3.1 of the PDD and excel sheet of	Conclusion on CAR19. PP made	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		Kyoto Protocol in the years 2010-2012 - 2.2 years or 26 months; and late crediting in the years 2013-2020 - 7.8 years or 94 months. Corrective Action Request 19 (CAR19) In the Table A.4.3.1 of the PDD stated that the value of estimated emission reduction in 2010 is for September – December (4 months) and in Excel file "CO2 Calculation" stated that this value is for October – December. Thus, the information presented in the Table A.4.3.1 contradicts to the length of the crediting period. Please correct.	emission reduction has been corrected. Now this is calculated only for 2 months in 2010**.** This also complies with the commissioning date of the flare facility.	required amendments and recalculations. Issue is closed.	
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?	Corrective Action Request 20 (CAR20) There is deviation from the implementation schedule and commissioning of the flare facility is planned in November 2010. Therefore, the starting date of the crediting period as well as the length of the crediting period should be changed. Please make	**CAR20: See CAR19** Both information have been amended accordingly.	Conclusion on CAR20. The starting date of the crediting period was changed. Issue is closed.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		amendments. Besides that please recalculate the value of emission reduction for 2010, taking into account the change of the length of the crediting period of this 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?	According to the PDD, the crediting period starts in 2010. The length of crediting period is 10 years. The expected operational lifetime of the project is 10 year or 120 months.	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 presented separately for those until 2012 and those after 2012?	The crediting period is divided into several stages: first stage 2010-2012 and 2013-2020. The length of first crediting period does not extend beyond 2012 and is 2010-2012 (2 years and 2 months).	N/a	N/a	OK
Monitoring plan					
35	Does the PDD explicitly indicate which of the following approaches is	Based on the information provided in the PDD, approved CDM methodology ACM0008	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	used? − JI specific approach − Approved CDM methodology approach	(version 07) "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" is used for current project.			
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?	N/a	N/a	N/a	OK
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored?	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
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?	N/a	N/a	N/a	OK
36 (b) (i)	For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified?	N/a	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?	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	N/a	N/a	N/a	OK
36 (b) (iv)	Are International System Unit (SI units) used?	N/a	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?	N/a	N/a	N/a	OK
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	N/a	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"?	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or 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?	N/a	N/a	N/a	OK
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	N/a	N/a	N/a	OK
36 (f)	Does the monitoring plan	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/ removals or direct monitoring of emission reductions from the project, leakage, as appropriate?				
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	N/a	N/a	N/a	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	N/a	N/a	N/a	OK
36 (f) (iii)	Are all equations numbered?	N/a	N/a	N/a	OK
36 (f) (iv)	Are all variables, with units indicated defined?	N/a	N/a	N/a	OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	N/a	N/a	N/a	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	N/a	N/a	N/a	OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	for calculating the emissions or net removals of the baseline ensured?				
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	N/a	N/a	N/a	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	N/a	N/a	N/a	OK
36 (f) (vii)	Are references provided as necessary?	N/a	N/a	N/a	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	N/a	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?	N/a	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	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	parameters for the calculation of emission reductions or enhancements of net removals provided?				
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project? Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?	N/a	N/a	N/a	OK
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	N/a	N/a	N/a	OK
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate,	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request?				
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	N/a	N/a	N/a	OK
36 (k)	Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type? If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?	N/a	N/a	N/a	OK
36 (l)	Does the monitoring plan provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	calculated with equations?				
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?	N/a	N/a	N/a	OK
37	If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above?	N/a	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?	In the PDD provided that CDM methodology ACM0008 (version 07) "Consolidated methodology for coal bed methane, coal mine methane and ventilation air methane capture and use for power (electrical or motive) and	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		heat and/or destruction through flaring or flameless oxidation" is used. Also, list of tools of latest version are taken into account (see section D.1 of the PDD).			
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)?	Used CDM methodology ACM0008 version 07 is the latest approved version.	N/a	N/a	OK
38 (b)	Does the PDD provide a description of why the approved CDM methodology is applicable to the project?	Applicability of the CDM methodology ACM0008 to this project is described in section B.1 of the PDD.	N/a	N/a	OK
38 (c)	Are all explanations, descriptions and analyses pertaining to monitoring in the PDD made in accordance with the referenced approved CDM methodology?	In general, description of the Monitoring Plan (MP) is made in accordance with chosen approved CDM methodology. All necessary procedures connected to the Monitoring Plan are developed. Corrective Action Request 21 (CAR21) Reference number of the formula	**CAR21:** The reference number of the equation was amended accordingly. **CAR22:** Table D.1.1.2 of the PDD has now been corrected t D.1.1.3. **CAR23:** The three ID numbers have been	Conclusion on CAR21. Issue is closed based on amendments. Conclusion on CAR22. Issue is closed according to the corrections.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		that describes MD_{FL} is not correct (p. 40). Please make correction. Corrective Action Request 22 (CAR22) In the PDD is missed section D.1.1.3, and Table D.1.1.2 is part of the section D.1.1.3. Please correct. Corrective Action Request 23 (CAR23) Tables D.1.1.1 and D1.1.3 have the same symbols (P11, P12, P13) but these symbols have different meanings. In fact, symbol P11 in table D1.1.3 is equal to symbol P16 in the table D.1.1.1; and symbol P12 in table D1.1.3 is equal to symbol P17 in the table D.1.1.1. Please check and correct. Corrective Action Request 24 (CAR24) In table D.2 (1 column) some reference to the parameters is not in compliance with description in	corrected. **CAR24:** Table D.2 has been amended accordingly and has now the correct and updated ID numbers. **CL08:** A statement has been inserted stating that Green Gas Germany GmbH is not a project participant.	Conclusion on CAR23. Required actions were made. Issue is closed. Conclusion on CAR24. Information was corrected. Issue is closed. Conclusion on CL08. Necessary information was added, that is why issue is closed.	

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		the table D.1.1.3 (e.g. parameter $PMM_{PJ,y}$ is B5, parameter GEN_y is B9). Please make appropriate amendments. Clarification Request 08 (CL08) Please indicate in section D.4 whether entity that setting the monitoring plans is or is not a project participant.			
38 (d)	Is the monitoring plan established appropriately as a result?	As a result, the monitoring plan is established appropriately.	N/a	N/a	OK
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	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	(i.e. the data/parameters monitored for one component are not dependent on/effect data/parameters to be monitored for another component)? (c) Does the monitoring plan ensure that monitoring is performed for all components and that in these cases all the requirements of the JI guidelines and further guidance by the JISC regarding monitoring are met? (d) Does the monitoring plan explicitly provide for overlapping monitoring periods of clearly defined project components, justify its need and state how the conditions mentioned in (a)-(c) are met?				
Leakage					
JI specific approach only					
40 (a)	Does the PDD appropriately describe an assessment of	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?				
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	N/a	N/a	N/a	OK
Approved CDM methodology approach only					
41	Are the leakage and the procedure for its estimation defined in accordance with the approved CDM methodology?	No leakage is considered in this project. Justification is provided in the PDD section D.1.3.	N/a	N/a	OK
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	Assessment of emissions in the baseline scenario and in the project scenario 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	The value of estimated project emissions is 102 098 t CO_2 equivalent. No leakage is considered in this	**CAR25:** Table E.4.1 has been corrected to baseline emission.	Conclusion on CAR25. Issue is closed.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	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?	project. The value of estimated baseline emissions is 726 660 t CO_2 equivalent. The value of emission reduction is 624 562 t CO_2 equivalent. Corrective Action Request 25 (CAR25) Table E.4.1. is the table of baseline emissions. Please correct. Corrective Action Request 26 (CAR26) Please delete comas in all figures that used for calculation of PE, BE, and ER in order to eliminate misunderstanding.	**CAR26:** All comas have been deleted.	Conclusion on CAR26. Required correction was made in the PDD. Issue is closed.	
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	N/a	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	enhancements of net removals adjusted by leakage?				
45	For both approaches in 42 (a) Are the estimates in 43 or 44 given: (i) On a periodic basis? (ii) At least from the beginning until the end of the crediting period? (iii) On a source-by-source/sink-by-sink basis? (iv) For each GHG? (v) In tones of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? (b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors	Estimates are given on yearly basis for the crediting period. The values are provided in tones of CO2 equivalent, using global warming potential of CH_4. The formula used for calculating the estimates of BE, PE, ER are consistent throughout the PDD. All necessary factors (e.g. GWP, carbon emission factor of CH_4, standardized emission factor for Ukrainian electricity grid) influencing the baseline emissions and project emissions are taken into account. Data sources used for calculation emissions are official, reliable, and transparent. As default data is used standardized emission factor for Ukrainian electricity grid (0.0896 t CO_2e/MWhel). This factor was assessed by independent entity (TUV Sud).	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	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	Calculation to the JI project is based on conservative assumptions and made in a transparent manner. Main values are consistent through the PDD.			

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	the PDD? (h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?				
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?	Developer of JI project performed ex ante emissions calculation. Results of calculation provided in the Excel files that are supporting to the project design documents.	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?	Calculation of emission reduction was made based on chosen CDM methodology ACM0008 version 07. All data used for estimation of emissions are official and calculation was carried out in transparent manner in accordance with the equations	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		from the approved CDM methodology ACM0008.			
47 (b)	Is the estimation of emission reductions or enhancements of net removals presented in the PDD: − On a periodic basis? − At least from the beginning until the end of the crediting period? − On a source-by-source/sink-by-sink basis? − For each GHG? − In tones of 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	Estimates are given on yearly basis for the crediting period. The values are provided in tones of CO2 equivalent, using global warming potential of CH_4. The formula used for calculating the estimates of BE, PE, ER are consistent throughout the PDD. All necessary factors (e.g. GWP, carbon emission factor of CH_4, standardized emission factor for Ukrainian electricity grid) influencing the baseline emissions and project emissions are taken into account. Data sources used for calculation emissions are official, reliable, and transparent. As default data is used standardized emission factor for Ukrainian electricity grid (0.0896 t CO_2e/MWhel). This factor was assessed by independent entity (TUV Sud). Calculation to the JI project is	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	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?	based on conservative assumptions and made in a transparent manner. Main values are consistent through the PDD.			
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?	In the PDD section F.1 presented the list of documents connected to the environmental impacts. Mentioned documents were provided to the verification team during site visit for revision. According to the information from the PDD, the flare facility causes no harmful environmental impacts as no resources as water or round are required. In fact the utilization of otherwise vented CMG reduces in an active manner the amount of CMG which is released to the atmosphere and provides significant benefits for the global	N/a	N/a	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		climate production by converting the harmful methane into the less harmful carbon dioxide. Furthermore, no transboundary impacts occur during the project activity implementation.			
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?	As required host Party environmental legislation, the Ukrainian Institute Lugansh GIPROshakht has performed the Environmental Impact Assessment (Order #7302).	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	In the local newspaper was published the Letter of intent. In the PDD stated that all comments received by the coal mine were positive towards implementation of the JI project. There was especially noted that	**CAR27:** See CAR06, Name of the issuing authority has been corrected in the PDD. **CL09:** Project Participant has appointed design task Institute	Conclusion on CAR27. Issue is closed according to the corrected information.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	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?	utilization of coal mine methane will increase the safety of the work at the coal mine and create new working places. No negative comments were received. <u>Corrective Action Request 27 (CAR27)</u> In the PDD section G there is reference to the Letter of Approval dated 03/06/2009 issued Ministry of Environmental Protection of Ukraine. In fact, mentioned letter is the Letter of Endorsement and it is issued by National Environmental Investment Agency of Ukraine. Please correct. <u>Clarification Request 09 (CL09)</u> Please provide in the PDD section F list of stakeholders from whom positive comments on the projects have been received.	in Lugansk to carry out stakeholder process. Part of the 'Design Task' was the preparation of an Environmental Impact Assessment. Upon completion of the EIA, advertisements were placed in the local press inviting comment from all interested parties, individuals and organisations. In total 4 advertisements were placed over a two month period. No responses nor adverse comment or request for information from individuals or interested stakeholder groups were received by the Design Institute. The same has been also described in the PDD under section G.1	<u>Conclusion on CL09</u>. Due to the provided information, issue is closed.	

APPENDIX B: CVs OF DETERMINATION TEAM

The determination team consists of the following personnel:

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)
Climate Change Lead Verifier, Operational Manager
Acting CEO Bureau Veritas Ukraine

He has over 25 years of experience in Research Institute in the field of biochemistry, biotechnology, and microbiology. He is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered), Quality Management System (IRCA registered), Occupational Health and Safety Management System, and Food Safety Management System. He performed over 140 audits since 1999. Also he is Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and Lead Tutor of the IRCA registered ISO 9000 QMS Lead Auditor Training Course. He is Lead Tutor of the Clean Development Mechanism /Joint Implementation Lead Verifier Training Course and he was involved in the determination/verification over 50 JI/CDM projects.

Igor Antipko (Mining Electro-Mechanics)
Climate Change Verifier
Bureau Veritas Ukraine Technical Specialist

Graduated from Stahanov College of Mines, specialist in Mining Electro-Mechanics (Automation processes of production of minerals, development of the circuits of electrosupply 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).

Olena Manziuk, M.Sci. (environmental science)
Climate Change Verifier
Bureau Veritas Ukraine Health, Safety and Environment Department specialist
Project Manager of JI/CDM Project

She has graduated from National University of "Kyiv-Mohyla Academy" with the Master Degree in Environmental Science. She has successfully completed IRCA registered Lead Auditor Training Course for Environment Management Systems and Quality Management Systems. Also, Olena has completed training

intensive course on Clean Development Mechanism (CDM) /Joint Implementation (JI), and is involved in the verification of 9 JI/CDM projects.

Denis Pishchalov (Financial Specialist)
Bureau Veritas Ukraine Specialist in economics

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.

Internal Technical Review was performed by:

Mr. Leonid Yaskin, PhD (thermal engineering)
Internal Technical Reviewer.
Bureau Veritas Certification Rus General Director, Climate Change Local Manager, Lead Auditor, IRCA Lead Tutor, Climate change Lead Verifier,

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