DETERMINATION REPORT

CEP CARBON EMISSIONS PARTNERS S.A.

DETERMINATION OF THE JI PROJECT

Reduction of methane leaks on the gas equipment of the gas distribution points and on the gas armature, flanged, threaded joints of the gas distribution pipelines of PJSC "Zakarpatgas"

REPORT NO. UKRAINE-DET/0617/2012

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DETERMINATION REPORT

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Client: CEP Carbon Emissions Partners S.A.	Client ref.: Fabian Knodel

Summary:

Bureau Veritas Certification has made the determination of the "Reduction of methane leaks on the gas equipment of the gas distribution points and on the gas armature, flanged, threaded joints of the gas distribution pipelines of PJSC "Zakarpatgas" project of CEP Carbon Emissions PartnersS.A. located in the territories of villages and cities of Zakarpattia region, Ukraine, on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

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

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

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

Report No.:	Subject Group:
UKRAINE-DET/0617/2012	JI

Project title:
"Reduction of methane leaks on the gas equipment of the gas distribution points and on the gas armature, flanged, threaded joints of the gas distribution pipelines of PJSC "Zakarpatgas

Work is carried out by:
Oleg Skoblyk –Team Leader, Climate Change Lead Verifier
Dmytro Balyn – Technical specialist

Work is checked by:
Ivan Sokolov – Internal Technical Reviewer
Vasyl Kobzar - Technical specialist

Work is verified by:
Ivan Sokolov – Operational Manager

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1 INTRODUCTION

CEP Carbon Emissions Partners S.A. has commissioned Bureau Veritas Certification to determine the JI project "Reduction of methane leaks on the gas equipment of the gas distribution points and on the gas armature, flanged, threaded joints of the gas distribution pipelines of PJSC "Zakarpatgas" (hereafter called "the project") located in the territory of villages and cities of Zakarpattia region, Ukraine.

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

1.1 Objective

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

The determination team consists of the following personnel:
Oleg Skoblyk
Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Dmytro Balyn
Bureau Veritas Certification Team Member, Technical Specialist

This determination report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification Internal Technical Reviewer

Vasyl Kobzar
Bureau Veritas Certification Technical Specialist

2 METHODOLOGY

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

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

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

The completed determination protocol, consisting of two tables, is enclosed in Appendix A to this report.

2.1 Review of Documents

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

To address Bureau Veritas Certification corrective action and clarification requests, CEP Carbon Emissions Partners S.A. revised the PDD version

01 dated 25/06/2012 and resubmitted the PDD as version 02 dated 14/08/2012.
The determination findings presented in this report relate to the project as described in the PDD versions 01 and 02.

2.2 Follow-up Interviews

On 13/08/2012 Bureau Veritas Certification Determination team performed (on-site) interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of PJSC "Zakarpatgas" and CEP Carbon Emissions Partners S.A. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1Interview topics

Interviewed organization	Interview topics
PJSC «Zakarpatgas»	➢ Project history ➢ Project approach ➢ Project boundary ➢ Implementation Schedule ➢ Organizational structure ➢ Responsibilities and authorities ➢ Training of personnel ➢ Quality management procedures and technology ➢ Modernization /installation of equipment (records) ➢ Metering equipment control ➢ Metering record keeping system, database ➢ Technical documents ➢ Plan and procedures of monitoring ➢ Permissions and licenses ➢ Environmental impact assessment ➢ Stakeholders' responses
CEP Carbon Emissions Partners S.A.	➢ Baseline methodology ➢ Monitoring plan ➢ Proof of additionality ➢ Emission reduction calculations ➢ Project design ➢ Legal issues related to the project ➢ Environmental impact ➢ Approval by the Host Party

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 Request (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 issue Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable JI requirements have been met.

The determination team may also issue Forward Action Request (FAR), informing the project participants of an issue that needs to be reviewed during the verification.

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

The purpose of the project ”Reduction of methane leaks on the gas equipment of the gas distribution points and on the gas armature, flanged, threaded joints of the gas distribution pipelines of PJSC “Zakarpatgas” is reduction of methane leaks at gas transport and gas distribution infrastructure of PJSC “Zakarpatgas”, which are the result of faulty sealing of gas equipment and fittings. The basic sources of leaks are elements of distribution pipelines, included into the project boundary, notably:

- gas equipment (pressure regulators, valves, filters, break switches, etc.), located at gas distribution points (GDPs) and cabinet-type gas distribution points (CGDPs) of PJSC “Zakarpatgas”;
- gas fittings (faucets, valve gates, screw valves, etc.), located at gas pipelines of PJSC “Zakarpatgas”.

The project boundary encompasses 885 GDPs (CGDPs), and 1625 gas fitting units at gas pipelines.

The main cause of methane leaks is failure of sealing elements of equipment caused by temperature fluctuations and moisture. Basic component of natural gas is methane (92 - 95%), which is a greenhouse gas. Repair of methane leaks will result in a reduction of greenhouse gas emissions.

PJSC "Zakarpatgas" is an enterprise that provides transportation and supply of natural gas to industrial enterprises (180), public-service facilities (9 079) and population (276 806 apartments and individual accommodation units) in Zakarpattia region, Ukraine.

The main activities of the company are:

- Transportation of natural gas and oil gas by distribution pipelines;
- Supply of natural gas at regulated tariffs;
- Installation of domestic gas meters;
- Design, installation of gas supply systems;
- Maintenance, repair works.

The structure of existing tariffs for gas transportation regulated by the state does not take into account the amortization and investment needs of gas distribution enterprises. This leads to a lack of financing for repair works and modernization of gas networks, purchase of proper technological equipment and components, and, as a result, contributes to the increase of methane leaks at PJSC "Zakarpatgas" facilities.

Project activities are aimed at the reduction of methane leaks that occur as a result of faulty sealing of gas equipment of GDPs (CGDPs) and gas fittings of PJSC "Zakarpatgas" gas pipelines.

Within the framework of the JI project in order to repair methane leaks at gas equipment and gas fittings two types of repairs are applied:

1. Complete replacement of old gas equipment and gas fittings with new units.
2. Replacement of sealing elements with the use of modern sealing materials, changing the common practice of maintenance and repair on the basis of paronite packing and gaskets made of cotton fibers with fatty treatment and asbestic and graphite filler.

The existing practice of maintenance and repair on the basis of paronite packing and gaskets made of cotton fibers with fatty treatment and asbestic and graphite filler does not give a long-lasting effect of methane leak reduction.

As a result of JI project activities, in addition to methane leak reductions, technical losses of natural gas will decrease, a contribution will be made

to the improvement of environmental situation, and the risk of accidents and explosions will be reduced.

Project activities will include:

- Implementation of Purposeful Examination and Technical Maintenance (PETM) of GDN components (gas equipment of GDPs (CGDPs) and gas fittings);
- Detection of methane leaks: leak monitoring system at all GDN components (gas equipment of GDPs (CGDPs), gas fittings) that are included in the project boundary and including repaired methane leaks (elements of GDN repaired as part of the project activity);
- Repair of all leaks detected: repair of leaking GDN components within the project boundary will vary from replacement of sealing elements by using new and modern materials to replacement of gas equipment units and gas fittings with new and modern ones.

The project was initiated in February 2005:

In January 2005 an inspection of all GDN components of OJSC “Zakarpatgas” (GDP (CGDP) gas equipment and gas fittings, flanged and threaded joints of gas pipelines) took place, the results of this inspection made the basis for the Registry of leak spots of the project.

10/01/2005 – OJSC «Zakarpatgas» approved the PDD (version 01), which included the programme of emission monitoring.

February 4, 2005 – the starting date of the project, when OJSC “Zakarpatgas” started inspection and repair works at GDP (CGDP) gas equipment and gas fittings, flanged and threaded joints of OJSC «Zakarpatgas» gas distribution networks in the framework of the JI Project.

November 30, 2010 – the change in the form of business occurred. The name of the company Open Joint Stock Company of gas supplying and gasification “Zakarpatgas” was changed into Public Joint Stock Company of gas supplying and gasification “Zakarpatgas”.

July 16, 2012 – a Working Team was created at PJSC “Zakarpatgaz” in order to ensure implementation of the JI project monitoring plan.

August 14, 2012 – a Letter of Endorsement № 221/23/7 was issued by the State Environmental Investment Agency of Ukraine.

Determination protocol of the project contains CARs and CLs for PDD versions 01 and 02.

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 35 Corrective Action Requests and 6 Clarification Requests.

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

4.1 Project approvals by Parties involved (19-20)

The project ”Reduction of methane leaks on the gas equipment of the gas distribution points and on the gas armature, flanged, threaded joints of the gas distribution pipelines of PJSC “Zakarpatgas” has already obtained endorsement from the government of Ukraine, namely a Letter of Endorsement No.2221/23/7 issued by the State Environmental Investment Agency of Ukrainedated 14/08/2012.

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

After the Determination Report is complete, the Project Design Documents will be submitted to the State Environmental Investment Agency of Ukraine to receive a Letter of Approval.

Since the project has not been approved by the Host Party, CAR 18 is pending and will be closed after the report is completed (see Appendix A).

The identified areas of concern as to the project approval by the Parties, project participants responses and BVC’s conclusion are described in Appendix A to the Determination report (refer to CAR 18).

4.2 Authorization of project participants by Parties involved (21)

The participation for each of the legal entities listed as project participants in the PDD will be authorized through written Letters of Approval (from the Government of Switzerland, as the country – project participant, and from Ukraine, as the Host Party). Refer to CAR 18.

4.3 Baseline setting (22-26)

The PDD explicitly indicates that using a methodology for baseline setting and monitoring developed in accordance with the requirements of Appendix B of the JI Guidelines (hereinafter referred to as "specific approach") was the selected approach for setting the baseline (in accordance with paragraph 11 of the Guidance on criteria for baseline setting and monitoring (Version 03)).

The proposed project applies a JI specific approach based on the JI Guidance on criteria for baseline setting and monitoring, Version 03 and the "Methodology for calculation of greenhouse gas emission reductions achieved by above-standard natural gas leak repair at gas distribution networks" that was developed by the Institute of Gas of the National Academy of Sciences of Ukraine to set the baseline. Project participants selected the calculation method for estimation of GHG emission reductions.

The Methodology is based on approved Clean Development Mechanism methodology AM0023 version 4.0 "Leak detection and repair in gas production, processing, transmission, storage and distribution systems and in refinery facilities" and takes into account the specifics of methane leak detection and repair activity in Ukraine.

This Methodology is designed for developing of projects aimed at methane leak reduction at technological equipment of gas distribution networks and is applicable to project activities that reduce methane leaks by implementing investment activities, which would not be implemented under the existing company practice, i.e. methane leaks would not be repaired.

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. Continuation of the current system of leak detection and repair;
   b. Implementation of this Project without the application of JI mechanism.

(b) Taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, gas supply 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. The role of energy sector is absolute and crucial for Ukraine. Power sector is a political factor of sovereignty in Ukraine. Ukrainian economy is considered to be one of the most energy intensive in the world in terms of the consumption of primary energy per a gross domestic product unit. On March 15, 2006 the Cabinet of Ministers of Ukraine adopted “Energy Strategy of Ukraine till 2030”. The Energy strategy considers exploration of non-traditional and renewable energy sources as a significant factor in increasing the level of energy safety, decrease of energy anthropogenic affect on environment and counteractions against global climate change.

b. Most natural gas transportation and supply companies currently working in Ukraine operate of equipment installed back in the Soviet era.

c. The current practice of detection and repair of natural gas losses and, correspondingly, methane emissions complies with the current legislation of Ukraine. The legislation permits the loss of natural gas and, correspondingly, methane emissions in the course of natural gas transportation. The standards set only the frequency of inspection of equipment by gas distribution organizations to detect losses of natural gas. The practice of natural gas loss detection at PJSC "Zakarpatgas" meets the standards. The control of compliance with norms shall be performed by annual inspections by authorized bodies.

d. The state support in the sphere of natural gas transportation and supply is available in accordance with funds provided by the State Budget of Ukraine for the corresponding year.

e. The current Ukrainian system of formation oftariffs for natural gas supply does not include an investment component for gas infrastructure development. According to the Law “On fundamentals of natural gas market functioning” PJSC “Zakarpatgas” is not obliged and is unmotivated to implement new equipment at its own expense. In addition, state investment programs in most cases are targeted at administrative and organizational implementations.

f. The project scenario requires attracting significant additional funds. Such investment is characterized by a significant

payback period and high investment risks, that is why it is not attractive for investors.

g. Ukraine already implements JI projects in the sphere of natural gas transportation and supply "Reduction of methane emissions at flanged, threaded Joints and shut-down devices of OJSC "Kyivgas" equipment", "Reduction of Methane Emissions at Flanged, Threaded Joints and Shut-down Devices of OJSC "Odesagas" Equipment", "Reduction of natural gas emissions at OJSC "Odesagas" gate stations and gas distribution networks") by selling emission reduction units.

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

The methods of calculation used to determine the expected and actual baseline emissions, are sufficiently described in sections E and D of the PDD, respectively.

The identified areas of concern as to the baseline, project participants responses and BVC's conclusion are described in Appendix A to the Determination report (refer to CAR 19 -CAR 27, CL 05).

4.4 Additionality (27-31)

The most recent version of the "Tool for the demonstration and assessment of additionality" approved by the CDM Executive Board was used according to the JI specific approach determined as per paragraph9 (a) of the "Guidance on criteria for baseline setting and monitoring", Version 03. All explanations, descriptions and analyses are made in accordance with the selected tool or method.

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

The developer of the project proved that the amount of project anthropogenic emissions is lower than the emissions that would occur in the absence of project activity.
Additionality proofs are provided.
Two plausible and realistic alternative scenarios of the project were identified:

- Alternative 1.1.: Continuation of the current system of leak detection and repair;
- Alternative 1.2.: Implementation of this Project without the application of JI mechanism.

and the mandatory compliance of the scenarios with the legislation and legal acts was demonstrated.

According to the "Tool for the demonstration and assessment of additionality" (Version 06.0.0) barrier analysis and common practice analysis were used in the PDD to justify additionality of the project.
Such potential barriers as financial barriers (additional cost on implementation of measures planned by the project, purchase and operation of modern measuring equipment for detection and measuring of methane emissions), organizational barriers (lack of labour and technical resources of PJSC "Zakarpatgas" for implementation and carrying out purposeful examination and technical maintenance of gas equipment) that hinder the implementation of the project scenario without additional income from the project under the joint implementation mechanism, and which in fact will not allow for implementation of any alternative other than the baseline scenario, were described and grounded properly. There are no barriers to baseline alternative, which is the continuation of the situation before the implementation of project activities.

Thus, the overall conclusion is that the project activity meets the criteria of additionality, is not a baseline scenario and is additional.

Additionality is demonstrated properly, as a result of the analysis using the selected approach.

The identified areas of concern as to the additionality, project participants responses and BVC's conclusion are described in Appendix A to the Determination report (refer to CAR 28 – CAR 30).

4.5 Project boundary (32-33)

The project boundary defined in the PDD, which according to the specific approach is outlined by the territory of Zakarpattia region and includes GDN components included in the JI project boundary on the basis of Agreement on the use of state property that is not subject to privatization № 04/01-832 dated 28/12/2001, encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs) that are:

(i) Under the control of the project participants, such as:
- technological natural gas leaks during scheduled repair of gas pipelines;

(ii) Reasonably attributable to the project, such as:
- methane leaks at gas fittings of house distribution networks;

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

- leaks at gas equipment (pressure relief valves, gate valves, filters, etc.) of gas distribution points (cabinet-type gas distribution points);
- methane leaks at gas fittings (faucets, slide valve, etc.), , located at gas distribution networks of PJSC "Zakarpatgas".

Only leaks of type (iii) are included in the project boundary.

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

4.6 Crediting period (34)

The PDD states the starting date of the project as the date when OJSC “Zakarpatgas” started inspection and repair works at GDP (CGDP) gas equipment and gas fittings, flanged and threaded joints of OJSC «Zakarpatgas» gas distribution networks in the framework of the JI Project, and the starting date is 04/02/2005, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 12 years and 11 months, or 155 months, from 04/02/2005 to 31/12/2017.

The PDD states the length of the crediting period in years and months, which is 12 years and 11 months, or 155 months, and its starting date is 04/02/2005, which is the date when the first project activities at gas pipelines of PJSC “Zakarpatgas” were implemented and when the first emission reductions are expected to be generated.

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’s approval, and the estimates of emission reductions or enhancements of net removals are presented separately for those until 2012 and those after 2012 in all relevant sections of the PDD.

The identified areas of concern as to the crediting period, project participants responses and BVC’s conclusion are described in Appendix A to the Determination report (refer to CAR 31, CAR 32).

4.7 Monitoring plan (35-39)

The PDD, in its monitoring plan section, explicitly indicates that the JI specific approach 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 reporting forms, the operational structure and management structure of the enterprise, that will be applied when implementing the monitoring plan.

The monitoring plan specifies the indicators, constants and variables that are reliable (i.e. provide consistent and accurate values), valid (i.e. are clearly connected with the effect to be measured), and that provide a transparent picture of the emission reductions or enhancements of net removals to be monitored such as: sequence number of GDN component, Global Warming Potential of methane, Number of activity (replacement/repair) at GDN component after the presence of leak was determined at such component, average mass fraction of methane in the natural gas, Natural gas leak factor from GDN componentin CLS, natural gas leak factor that corresponds to APLNG for GDN component, time of operation ofGDN componentunderpressure from the beginning of monitoring period "y" to implementation of project activities (repair / replacement) that resulted in the repair of APLNG at such component.

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, as appropriate, among which: baseline emissions (BE_y), project emissions (PE_y), Global Warming Potential(GWP_{xx}).

According to Guidance for users of JI PDD forms, version 04, described approach to monitoring clearly and accurately specifies:

(i) Data and parameters that are not monitored throughout the crediting period, but are determined only once , and that are available already at the stage of the PDD development:

i	Sequence number of GDN component (GDP (CGDP), gas fittings of gas pipeline) included in the project boundary

(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 PDD development: absent.

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

h	Number of activity (replacement/repair) at GDN component

	after the presence of APLNG was determined at such component
W_y	Average mass fraction of methane in the natural gas, in period "y", in the project scenario
$K^g_{i,h}$	Natural gas leak factor from GDN component in CLS
$K^n_{i"}$	Natural gas leak factor that corresponds to APLNG for GDN component
$H^g_{i',h,y}$	Time of operation ofGDN component under pressure from the beginning of monitoring period "y" to implementation of project activities (repair / replacement) that resulted in the repair of APLNG at such component
$H^n_{i",h,y}$	Time of operation of GDN component tunder pressure from the moment of implementation of project activities (repair / replacement) that resulted in the repair of APLNG at such component to the end of the monitoring period "y"
GWP_{CH4}	Global Warming Potential of methane

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording, such as data archiving by using accounting and statistical software.

The most objective and cumulative factor that provides a clear picture of whether the emission reductions took place is the fact of GDN component replacement.It can be determined by means of the calculation method that is based on the use of data on methane leaks from GDN components that are formed from the standard values of methane emissions for each GDN component and data obtained through statistical processing of results of actual measurements of methane leaks before and after activities aimed at leak repair.

The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions and project emissions, such as:

Formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO_2 equivalent):

Greenhouse gas emissions in the project scenario according to a specific approach to Joint Implementation projects (calculations by using the tabular method of the Methodology) are calculated according to the formula:

$$PE_y = GWP_{CH_4} \cdot ConvFactor \cdot W_y \cdot P_y \quad (1)$$

where:

PE_y –greenhouse gas emissions in period «y», in the project scenario(t CO_2eq);
GWP_{CH_4} –global warming potential of methane (tCO_2eq/tCH_4);

W_y –Average mass fraction of methane in the natural gas in period «y», in the project scenario (%);

P_y –volume of natural gas leaks into the atmosphere in period «y», in the project scenario (m^3 CH_4);
$ConvFactor$ – Conversion factor to convert methane leaks from volume units to weight units (t CH_4/ m^3 CH_4). Undernormal conditions defined as 0 degree Celsius and 0.1013 MPa, $ConvFactor$ =0.0007168 (t/ m^3).
[*y*] – index that corresponds to monitoring period;
[CH_4] – index that corresponds to methane.

Emissions of natural gas (92-95% of which is methane) in the atmosphere caused by leaks from gas transportation networks are calculated according to the formula:

$$P_y = \sum_{h \in H_{i'}} \sum_{i' \in I'} K^g_{i'h} \cdot H^g_{i'hy} + \sum_{h \in H_{i''}} \sum_{i'' \in I''} K^g_{i''h} \cdot H^n_{i''hy} \quad (2)$$

$K^g_{i'h}$ – natural gas leak factor for GDN component i' that is in CLS (i.e. corresponds to SPLNG) in period «y», in the project scenario (m^3/h) ;

$K^g_{i''h}$ –natural gas leak factor that corresponds to APLNG for GDN component i'' in period «y», in the project scenario (m^3/h);

$H^g_{i'hy}$ – Time of operation ofGDN componentunderpressure from the beginning of monitoring period “y” to implementation of project activities (repair / replacement) that resulted in the repair of APLNG at such component (h);

$H^n_{i''hy}$ – Time of operation of GDN component under pressure from the moment of implementation of project activities (repair / replacement) that resulted in the repair of APLNG at such component to the end of the monitoring period “y” (h);
[*y*] – index that corresponds to monitoring period;
[*i'*] – index that corresponds to a number of GDN component, which is in a set of elements *I'((I' + I'') = I*, where I is a set that includes all GDN components that are in the project boundary) where the project activities

did not result in any emission reductions (there was no replacement / repair of components) in the reporting monitoring period;
[*i''*] – index that corresponds to a number of GDN component, which is in a set of elements *I''* *((I' + I'') = I*, where I is a set that includes all GDN components that are in the project boundary) where the project activities resulted in emission reductions (there was replacement / repair of components) in the reporting monitoring period;
[*h*] – index that corresponds to a number of activity under the project at GDN component, if more than one activity was carried out at reporting component in the monitoring period (where H is a set, which includes all activities in the project scenario at GDN component in the monitoring period);
[*g*] – index that corresponds to SPLNG;
[*n*] – index that corresponds to APLNG.

Formulae used to estimate baseline emissions (for each gas, source etc.; emissions in units of CO_2 equivalent):

Greenhouse gas emissions in the baseline scenario according to a JI specific approach (which is calculated by using the tabular method of the Methodology) are calculated according to the formula:

$$BE_y = GWP_{CH_4} \cdot ConvFactor \cdot W_y \cdot B_y \quad (3)$$

Where:
BE_y –greenhouse gas emissions in period «y», in the baseline scenario(t CO_2eq);
GWP_{CH_4} –global warming potential of methane (tCO_2eq/tCH_4);
W_y –Average mass fraction of methane in the natural gas in period «y», in the project scenario (%);
B_y –volume of natural gas leaks into the atmosphere in period «y», in the baseline scenario (m^3);
$ConvFactor$ – Conversion factor to convert methane leaks from volume units to weight units (t CH_4/ m^3 CH_4). Undernormal conditions defined as 0 degree Celsius and 0.1013 MPa, $ConvFactor$ =0.0007168t / m^3.
[*y*] – index that corresponds to monitoring period;
[*CH4*] – index that corresponds to methane.

Emissions of natural gas (92-95% of which is methane) in the atmosphere caused by leaks from gas transportation networks are calculated according to the formula:

$$B_y = \sum_{h \in H_i} \left(\sum_{i' \in I'} K^g_{i'h} \cdot H^g_{i'hy} + \sum_{i'' \in I''} K^n_{i''h} \cdot H^n_{i''hy} \right) \quad (4)$$

Where:

$K^g_{i',h}$–natural gas leak factor for GDN component i' that is in CLS (i.e. corresponds to SPLNG) in period «y», in the baseline scenario (m^3/h);

$K^n_{i''h}$ – natural gas leak factor that corresponds to APLNG for GDN component i'' in period «y», in the baseline scenario (m^3/h);

$H^g_{i'hy}$ –Time of operation of GDN component in CLS under pressure in period «y», in the baseline scenario(h);

$H^n_{i''hy}$ –Time of operation ofGDN componentfrom the moment when project activities (repair / replacement)that resulted in the repair of APLNG were implementedto the end of monitoring period «y» (h);

[*y*] – index that corresponds to monitoring period;

[*i'*] – index that corresponds to a number of GDN component, which is in a set of elements *I' ((I' + I'')* = *I*, where I is a set that includes all GDN components that are in the project boundary) where the project activities did not result in any emission reductions (there was no replacement / repair of components) in the reporting monitoring period;

[*i''*] – index that corresponds to a number of GDN component, which is in a set of elements *I''((I' + I'')* = *I*, where I is a set that includes all GDN components that are in the project boundary) where the project activities resulted in emission reductions (there was replacement / repair of components) in the reporting monitoring period;

[*h*] – index that corresponds to a number of activity under the project at GDN component, if more than one activity was carried out at reporting component in the monitoring period (where H is a set, which includes all activities in the project scenario at GDN component in the monitoring period);

[*g*] – index that corresponds to SPLNG;

[*n*] – index that corresponds to APLNG.

Formulae used to estimate leakage (for each gas, source etc.; emissions in units of CO_2 equivalent):

According to a JI specific approach based on the Joint Implementation requirements in accordance with paragraph 9 (a) of the JI Guidance on criteria for baseline setting and monitoring, Version 03, the “Methodology for calculation of greenhouse gas emission reductions achieved by above-standard natural gas leak repair at gas distribution networks" that was developed by the Institute of Gas of the National Academy of Sciences of Ukraine and on the basis of elements of approved CDM methodology AM0023 version 4.0 no leakage is expected.

Formulae used to calculate emission reductions from the project (for each gas, source etc.; emissions/emission reductions in units of CO_2 equivalent):

Reduction of GHG emissions under the Project in period "y" (ER_y) is calculated by the formula:

$$ER_y = BE_y - PE_y; \quad (5)$$

where:

ER_y - Total GHG emission reduction generated by the in period y, t CO_2eq;

PE_y - Project GHG emissions in period y, t CO_2eq;

BE_y - Baseline GHG emissions in period y, t CO_2eq;

$[y]$ - Monitoring period.

The monitoring plan presents the quality assurance and control procedures for the monitoring process, which are sufficiently described in tabular form in sections of the PDD D.2. and D.3.This includes, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities. Collection of all the key parameters required for monitoring and calculation of GHG emission reductions are continuously carried out according to the practice, established atPJSC "Zakarpatgas". Monitoring of the project does not require any changes in the existing and data collection and accounting system.
On the whole, the monitoring plan reflects good monitoring practices appropriate to the project type.
The monitoring plan provides, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources (e.g. official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature etc.) but not including data that are calculated with equations.

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

The identified areas of concern as to the monitoring plan, project participants responses and BVC's conclusion are described in Appendix A to the Determination report (refer to CAR 33, CL 06).

4.8 Leakage (40-41)

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

According to a JI specific approach based on the Joint Implementation requirements in accordance with paragraph 9 (a) of the JI Guidance on criteria for baseline setting and monitoring, Version 03, the “Methodology for calculation of greenhouse gas emission reductions achieved by above-standard natural gas leak repair at gas distribution networks" that was developed by the Institute of Gas of the National Academy of Sciences of Ukraine and on the basis of elements of approved CDM methodology AM0023 version 4.0 no leakage is expected.

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

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

The PDD provides the forecasted estimates of:

(a) Emissions or net removals for the project scenario (within the project boundary), which are 245 400 tons of CO_2eq for 2005-2007, 409 000 tons of CO_2eq for 2008-2012, 409 000 tons of CO_2eq for 2013-2017;

(b) Leakage is not expected in the project boundary;

(c) Emissions or net removals for the baseline scenario (within the project boundary), which are 618 639 tons of CO_2eq for 2005-2007, 2 097 463 tons of CO_2eq for 2008-2012, 2 186 330 tons of CO_2eq for 2013-2017;

(d) Emission reductions or enhancements of net removals adjusted by leakage (based on (a)-(c) above), which are 373 239 tons of CO_2eq for 2005-2007, 1 688 463 tons of CO_2eq for 2008-2012, 1 777 330 tons of CO_2eq for 2013-2017.

The estimates referred to above are given:

(a) On an annual basis;

(b) From 04/02/2005 to 31/12/2017, covering the whole crediting period;

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

(d) For each GHG gas, which is CO_2;

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

The formulae used for calculating the estimates referred above, are given in Section 4.7. All formulae are consistent throughout the PDD.
For calculating the estimates referred to above, key factors, e.g. the Ukrainian environmental legislation and other national legislation, as well as key relevant factors such as availability of funds for implementation of the project activities, tariffs established by the state, modern technology and the possibility of know-how implementation in gas supply sector influencing the baseline emissions or removals and the activity level of the project and the emissions as well as risks associated with the project were taken into account, as appropriate.

Data sources used for calculating the estimates referred to above, such as documents and archive data of the enterprise, standards and statistical forms, results of periodic inspections of meters are clearly identified, reliable and transparent.
Natural gas leak factor for GDN component i' that is in CLS ($K^{g}_{i,h}$) and natural gas leak factor that corresponds to APLNG for GDN component i'' (K^{n}_{i}) were selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.

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

The estimates referred to above are consistent throughout the PDD.The annual average of estimated emission reductions or enhancements of net removals over the crediting period is calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period, and multiplying by twelve.

Detailed algorithms of calculation and their results are described in Sections B, E and supporting documents to the PDD.

The identified areas of concern as to the estimation of emission reductions, project participants responses and BVC's conclusion are described in Appendix A to the Determination report (refer to CAR 34).

4.10 Environmental impacts (48)

Sections F.1. and F.2. of the PDD provide information about documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party.

The PDD states that according to the environmental standards of Ukraine, natural gas emissions into the air are not considered polluting(CMU Resolution dated 29/11/2001 No.1598 "On approval of the list of the most popular and dangerous pollutants, which emissions into the atmosphere are subject to regulation"). Therefore no environmental permissions are required for natural gas transportation and supply.
According to the PDD the only environmental impact is reduction of natural gas emissions into the atmosphere.

Implementation of this project will increase the safety of operation of gas distribution networks, which, in turn, will reduce the probability of explosions or fires.

No transboundary impacts from the project activity, according to their definition in the text of the “Convention on long-range tansboundary pollution” ratified by Ukraine, will take place.

Project implementation does not provide for any harmful environmental impacts.

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.

The identified areas of concern as to the environmental impacts, project participants responses and BVC’s conclusion are described in Appendix A to the Determination report (refer to CAR 35).

4.11 Stakeholder consultation (49)

Consultations were conducted with the specialists of the Institute of General Energy of NAS of Ukraine. No comments from Stakeholders were received. The project activity doesn’t provide for any negative impact on the environment or negative social effect.

4.12 Determination regarding small scale projects (50-57)

Not applicable.

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

Not applicable.

4.14 Determination regarding programmes of activities (65-73)

Not applicable.

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

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

6 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the ”Reduction of methane leaks on the gas equipment of the gas distribution points and on the gas armature, flanged, threaded joints of the gas distribution pipelines of PJSC “Zakarpatgas” Project in Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

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

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

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

The determination revealed one pending issue related to the current determination stage of the project: the issue of the written approval of the project by the host Party. If the written approval by the host Party is awarded, it is our opinion that the project as described in the Project Design Document, Version 02 dated 27/07/2012 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

The review of the project design documentation (version 02 dated 27/07/2012) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

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

7 REFERENCES

Category 1 Documents:

Documents provided by CEP Carbon Emissions Partners S. A. that relate directly to the GHG components of the project.

/1/	PDD «Reduction of methane leaks on the gas equipment of the gas distribution points and on the gas armature, flanged, threaded joints of the gas distribution pipelines of PJSC "Zakarpatgas", version 01 dated 25/06/2012;
/2/	PDD «Reduction of methane leaks on the gas equipment of the gas distribution points and on the gas armature, flanged, threaded joints of the gas distribution pipelines of PJSC "Zakarpatgas", version 02 dated 14/08/2012;
/3/	Supporting document 1 "Calculation of GHG emission reductions of the Joint Implementation Project "Reduction of methane leaks on the gas equipment of the gas distribution points and on the gas armature, flanged, threaded joints of the gas distribution pipelines of PJSC "Zakarpatgas"
/4/	Supporting document 2 "Registry of GDN components of the Joint Implementation Project "Reduction of methane leaks on the gas equipment of the gas distribution points and on the gas armature, flanged, threaded joints of the gas distribution pipelines of PJSC "Zakarpatgas"
/5/	Methodology for calculation of greenhouse gas emission reductions achieved by above-standard natural gas leak repair at gas distribution networks" that was developed by the Institute of Gas of the National Academy of Sciences of Ukraine (registration number UkrNTI 0112U00A816 dated 2012);
/6/	Report on the scientific and technical work "Development of methodological fundamentals of reducing greenhouse gas emissions by repairing above-standard leaks of natural gas at gas distribution networks of Ukraine"
/7/	Letter of Endorsement № 2221/23/7 dated 14/08/2012 issued by the State Environmental Investment Agency of Ukraine;
/8/	Guidelines for users of the JI PDD form, version 04, JISC;
/9/	Clean Development Mechanism methodology AM0023 version 4.0 "Leak detection and repair in gas production, processing, transmission, storage and distribution systems and in refinery facilities";
/10/	Tool for the demonstration and assessment of additionality, Version 06.0.0;
/11/	Kyoto Protocol;
/12/	Marrakech Agreement, JI methods;

/13/	National inventory of greenhouse gas anthropogenic emissions by sources and removals by sinks in Ukraine for the period of 1990-2009;
/14/	Third National Communication of Ukraine on climate change under the Kyoto Protocol
/15/	Fourth National Communication of Ukraine on climate change under the Kyoto Protocol
/16/	Fifth National Communication of Ukraine on climate change under the Kyoto Protocol
/17/	Law of Ukraine "On the fundamentals of the natural gas market functioning";
/18/	Law of Ukraine "On Pipeline Transport";
/19/	Order of the Ministry of Fuel and Energy Industry of Ukraine "On approval of methods for detection of specific losses, technological and production losses of natural gas during gas transportation in gas distribution networks;
/20/	JI Guidelines. Annex to Resolution 9/CDM.1.;
/21/	Determination and verification manual, version 01;
/22/	Guidance on criteria for baseline setting and monitoring, JISC. Version 03.

Category 2 Documents:

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

/1/	Emission Reductions Purchase Agreement relating to the JI project concluded by CEP Carbon Emissions Partners S.A. and PJSC for gas supply and gasification “Zakarpatgas” dated 13/12/2010
/2/	Contract No. 04/01-832 on the use of state property that is not subject to privatization dated 28/12/2001
/3/	Additional Agreement № 2 to the Contract No. 04/01-832 on the use of state property that is not subject to privatization dated 28/12/2001 dated 17/10/2007
/4/	Additional Agreement № 3 to the Contract No. 04/01-832 on the use of state property that is not subject to privatization dated 28/12/2001 dated 30/12/2008
/5/	Additional Agreement № 4 to the Contract No. 04/01-832 on the use of state property that is not subject to privatization dated 28/12/2001 dated 30/12/2008
/6/	Order on drawing up an inventory of state property, which is used by NJSC "Naftogaz of Ukraine” № 215 dated 23/06/2006
/7/	Information on the supply and transportation of natural gas by OJSC "Zakarpatgas"
/8/	Order on creation of a working team on methane leak reduction at

	gas equipment of gas distribution points and gas fittings, flanged, threaded joints of the gas distribution pipelines in the framework of Joint Implementation project dated 16/07/2012
/9/	Replacement certificate of ball valve and manometer of medium pressure at ShU-№8 dated 04/02/2005
/10	Acceptance certificate of sub-contract works performed in May 2005 (installation of gas pressure regulators up to 100 mm)
/11	Acceptance certificate of sub-contract works performed in June 2007 (installation of flanged air valves, shut-off valves, sliding valves, kocks at gas pipelines made of steel pipes of diameter up to 100 mm)
/12	Acceptance certificate of completed gas supply system facility dated 03/12/2005
/13	Decision of the acceptance commission to implement in full the construction and assembly works
/14	Acceptance certificate of completed gas supply system facility dated 13/12/2005
/15	Decision of the acceptance commission to implement in full the construction and assembly works
/16	Acceptance certificate of completed gas supply system facility dated 30/11/2005
/17	Decision of the acceptance commission to implement in full the construction and assembly works
/18	Extract from the welding work log on welding of pipes of underground pipeline
/19	Acceptance certificate of completed gas supply system facility
/20	Passport of detector-explosimeter STKh -17
/21	Calibration certificate of working measuring instrument № 2012-496-T(detector-explosimeter STKh-17-80) dated 28/03/2012
/22	Calibration certificate of working measuring instrument (thermo-chemical detector STKh-17-18 № 418) № 2012-229-T dated 17/02/2012
/23	Acceptance certificate of sub-contract works performed in June 2010 (cutting of the internal pipeline in operation; diameter up to 50 mm, installation of a unit for reduction of gas pressure)
/24	Acceptance certificate of sub-contract works performed in June 2010 (installation of flanged air valves, shut-off valves, sliding valves, kocks at gas pipelines made of steel pipes of diameter up to 100 mm)
/25	Acceptance certificate of sub-contract works performed in September 2010 (installation of flanged air valves, shut-off valves, sliding valves, kocks at gas pipelines made of steel pipes of diameter up to 100 mm)
/26	Passport of thermo-chemical detector-explosimeter STKh -17
/27	List of people who are involved in the project on leak detection at SPH Mukachivska branch of PJSC “Zakarpangas”

/28	Photos of measurement works at SPH Mukachivska branch of PJSC “Zakarpangas”
/29	Acceptance certificate of sub-contract works performed in June 2008 (safety valve repair when replacing membranes, springs, PPR-4-M valve replacement)
/30	Acceptance certificate of sub-contract works performed in February 2008 (PPK-4-M valve replacement)
/31	Acceptance certificate of sub-contract works performed in May 2008 (Repair shut-off and safety valve of GDP (PKZ), CGDP, maintenance and adjustment of CGDP equipment, repair of pilot of pressure regulator of GDP, repair of CGDP pressure regulator when replacing membrane)
/32	Acceptance certificate of sub-contract works performed in June 2008 (replacement of RD-50-M regulator)
/33	Passport of detector-explosimeter VARTA 5
/34	List of people who are involved in the project at Khustska branch of PJSC “Zakarpangas”
/35	Photos of measurement works at Khustska branch of PJSC “Zakarpangas”
/36	List of people who are involved in the project at Khustska branch of PJSC “Zakarpangas”
/37	List of people who are involved in the project at Vynohradivska branch of PJSC “Zakarpangas”
/38	Photos of measurement work at Vynohradivska branch of PJSC “Zakarpatgas”
/39	Calibration certificate of working measuring instrument №2012-500-T (detector-explosimeter STKh-17-80) dated 28/03/2012
/40	Passport of detector-explosimeter STKh-17-80
/41	Calibration certificate of working measuring instrument №2012-501-T (detector-explosimeter STKh-17-80) dated 28/03/2012
/42	Calibration certificate of working measuring instrument №2012-499-T (detector-explosimeter STKh-17-80) dated 28/03/2012
/43	Calibration certificate of working measuring instrument №2012-498-T (detector-explosimeter STKh-17-80) dated 28/03/2012
/44	Calibration certificate of working measuring instrument №2012-518-T (leak detector - indicator VARTA 5-03) dated 28/03/2012
/45	Calibration certificate of working measuring instrument №2012-517-T (leak detector - indicator VARTA 5-03) dated 28/03/2012
/46	Calibration certificate of working measuring instrument №2012-515-T (leak detector - indicator VARTA 5-03) dated 28/03/2012
/47	Calibration certificate of working measuring instrument №2012-514-T (leak detector - indicator VARTA 5-03) dated 28/03/2012
/48	certificate of conformity for measuring equipment type (leak detector - indicator VARTA 5) issued on 13/11/2008
/49	Certificated of GDP (CGDP) gas equipment replacement dated 17/07/2005

/50	Certificated of GDP (CGDP) gas equipment replacement dated 11/05/2008
/51	Certificated of GDP (CGDP) gas equipment replacement dated 09/07/2009
/52	Certificated of GDP (CGDP) gas equipment replacement dated 08/05/2005
/53	Certificated of GDP (CGDP) gas equipment replacement dated 22/05/2005
/54	Certificated of GDP (CGDP) gas equipment replacement dated 03/05/2005
/55	Certificated of GDP (CGDP) gas equipment replacement dated 17/04/2008
/56	Certificated of GDP (CGDP) gas equipment replacement dated 20/06/2007
/57	Calibration certificate of working measuring instrument №2012-516-T (leak detector - indicator VARTA 5-03) dated 28/03/2012
/58	Calibration certificate of working measuring instrument №2012-502-T (detector-explosimeter STKh-17-80) dated 28/03/2012
/59	Calibration certificate of working measuring instrument №2012-513-T (gas leak deterctor POISK-02M) dated 28/03/2012
/60	Calibration certificate of working measuring instrument № 84138/47(gas leak deterctor POISK-02M) dated 28/03/2012
/61	Passport of gas analyzer VARIOTEC 480, 450, 460, 410
/62	Passport of lead detector – indicator FP 12
/63	Cabinet-type gas distribution point (CGDP) commissionning certificate dated 22/06/2005
/64	Cabinet-type gas distribution point (CGDP) commissionning certificate dated 08/05/2005
/65	Cabinet-type gas distribution point (CGDP) commissionning certificate dated 17/07/2005
/66	Cabinet-type gas distribution point (CGDP) commissionning certificate dated 11/05/2008
/67	Cabinet-type gas distribution point (CGDP) commissionning certificate dated 17/04/2008
/68	Cabinet-type gas distribution point (CGDP) commissionning certificate dated 03/05/2006
/69	Passport of gas leak deterctor POISK-02M
/70	Calibration certificate of working measuring instrument №2012-511-T (gas leak deterctor POISK-02M) dated 28/03/2012
/71	Calibration certificate of working measuring instrument №2012-510-T (detector-explosimeter STKh-17-80) dated 28/03/2012
/72	Calibration certificate of working measuring instrument №2012-509-T (detector-explosimeter STKh-17-80) dated 28/03/2012

Persons interviewed:

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

	Name	Organization	Position
/1/	Horvat A.A.	PJSC «Zakarpatgas»	Acting Chief Engineer
/2/	Pavlusyk I.M.	PJSC «Zakarpatgas»	Acting head of production and technical department
/3/	Kovach V.I.	PJSC «Zakarpatgas»	Lead engineer on ecological safety issues
/4/	Hovdysh V.Ya.	PJSC «Zakarpatgas»	Engineer of production and technical department
/5/	Ushtan M.V.	PJSC «Zakarpatgas»	Chief metrologist
/6/	Ushatskyi R.V.	“CEP” LLC	Consultant of CEP CARBON EMISSIONS PARTNERS S.A.

APPENDIX A: COMPANY PROJECT DETERMINATION PROTOCOL

BUREAU VERITAS CERTIFICATION HOLDING SAS

Checklist for determination according to the DETERMINATION AND VERIFICATION MANUAL (Version 01)

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
Guidelines for Users of the JI PDD form Section A General description of the project				
A.1. Title of the project				
A.1	Is the title of the project presented?	The title of the project is presented: Reduction of methane leaks on the gas equipment of the gas distribution points and on the gas armature, flanged, threaded joints of the gas distribution pipelines of PJSC “Zakarpatgas”	OK	OK
A.1	Is the sectoral scope to which the project pertains presented?	Sectoral scope: Sector 10. Fugitive emissions from fuels (solid, oil and gas).	OK	OK
A.1	Is the current version number of the document presented?	The current version of the document: PDD version 02 dated 27/07/2012. See Section A.1.	OK	OK
A.1	Is the date when the document was created presented?	The date when the document was created: 27/07/2012.	OK	OK
A.2. Description of the project				
A.2	Is the purpose of the project included with a concise, summarizing explanation (max.	The purpose of the project ”Reduction of methane leaks on the gas equipment of the gas distribution	**CL 01** **CL 02**	OK OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	1-2 pages) of the: a) Situation existing prior to the starting date of the project b) Baseline scenario and c) Project scenario (expected outcome, including a technical description)?	points and on the gas armature, flanged, threaded joints of the gas distribution pipelines of PJSC "Zakarpatgas" is reduction of methane leaks at gas transport and gas distribution infrastructure of PJSC "Zakarpatgas", which are the result of faulty sealing of gas equipment and fittings. The basic sources of leaks are elements of distribution pipelines, included into the project boundary, notably: - gas equipment (pressure regulators, valves, filters, break switches, etc.), located at gas distribution points (GDPs) and cabinet-type gas distribution points (CGDPs) of PJSC "Zakarpatgas"; - gas fittings (faucets, valve gates, screw valves, etc.), located at gas pipelines of PJSC "Zakarpatgas". Detailed information on the baseline and project scenarios as well as their technical description is provided in Sections A.2 and A.4.2. of the PDD. **CL 01.** Please, provide information on the causes of methane leaks. **CL 02.** Please, provide the clarifications on the positive impact of the project activity in PDD Section A.2.	**CAR 01** **CAR 02**	OK OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		CAR 01. Please, provide more details on primary activities of the company. **CAR 02.** The description of the project scenario in Section A.2. provides an incorrect title of the company.		
A.2	Is the history of the project (incl. its JI component) briefly summarized?	**CAR 03.** Please, provide the information on the change of the company's type of ownership in PDD Section A.2. **CAR 04.** In Section A.2. of the PDD it is stated that the project was initiated in March, 2005, whereas the project started in February 2005. Please, make the necessary corrections. **CL 03.** Please, provide the document confirming the starting date of the project.	**CAR 03** **CAR 04** **CL 03**	OK OK OK
A.3. Project participants				
A.3	Are project participants and Party (ies) involved in the project listed?	Parties involved in the project: PJSC «Zakarpatgas» (Ukraine – the Host Party), Moston Properties Limited (the UK), CEP Carbon Emissions Partners S. A. (Switzerland).	OK	OK
A.3	Is the data of the project participants presented in tabular format?	The data on project participants are given in tabular form. **CAR 05.** Table in Section A.3. shall meet the format set forth in the Guidelines for users of the JI PDD form.	**CAR 05**	OK
A.3	Is contact information provided in Annex 1	Contact information of PJSC «Zakarpatgas» and CEP	**CAR 06**	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	of the PDD?	Carbon Emissions Partners S. A. is provided in Annex 1 to the PDD. **CAR 06.** Please, indicate in Annex 1 who PJSC "Zakarpatgas" is represented by.		
A.3	Is it indicated, if it is the case, that the Party involved is a host Party?	Ukraine is the Host Party.	OK	OK
A.4 Technical description of the project				
Location of the project				
A.4.1.1	Host Party(ies)	Ukraine is the Host Party. **CAR 07.** Please, provide the map of Ukraine with geographical marks in Ukrainian.	**CAR 07**	OK
A.4.1.2	Region/State/Province etc.	The project is located in the territory of Zakarpattia region, Ukraine.	OK	OK
A.4.1.3	City/Town/Community etc.	Cities and villages of Zakarpattia region.	OK	OK
A.4.1.4	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page).	Information about location is given in Section A.4.1.4 of the PDD. **CAR 08.** Please, provide a brief description of the project location in Section 4.1.4. of the PDD.	**CAR 08**	OK
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	PDD Section A.4.2 provides the description of the main stages of the project implementation, the annual project activities schedule, some relevant technical data relating to main equipment to be installed as well as	**CAR 09** **CAR 10** **CAR 11** **CAR 12**	OK OK OK OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	implementation schedule described?	project activities to be implemented in the framework of the project. Project design represents the current cutting-edge practice. **CAR 09.** The model of gas leak detector in Figure 2 in Section A.4.2. differs from the one for which specifications are provided. Please, correct the inconsistency. **CAR 10.** GOST for sealants is incorrect. Please, make corresponding amendments. **CAR 11.** Please, delete the information on the Memorandum of Understanding from the project schedule, since this document was not signed. **CAR 12.** Entry 6 of the Project Implementation Schedule indicates that continuation of implementation of the PETM programme will take place till 2020, whereas the crediting period ends in 2017. Please, make corresponding amendments. **CAR 13.** Please, indicate the number of equipment units within the project boundary. **CL 04.** Please, provide references to GOSTs mentioned in Section A.4.2. of the PDD.	**CAR 13** **CAR 14** **CL 04**	OK OK OK
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				

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and/or sectoral policies and circumstances				
A.4.3	Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	The project activity includes: - repair (replacement) of GDP (CGDP) gas equipment, gas fittings of PJSC "Zakarpatgas" gas pipelines with the use of modern sealing materials and modern equipment of European producers and their analogues of national production; - monitoring of methane leaks aimed at the detection of methane leaks caused by sealing failures; - further renewal of leakproofness at GDN components of PJSC "Zakarpatgas".	OK	OK
A.4.3	Is it provided the estimation of emission reductions over the crediting period?	The estimation of emission reductions over the crediting period is provided in Section A.4.3.1. of the PDD. **CAR 14.**Total emission reductions provided in Table 2 for 2007 differs from total GHG emission reductions provided in the spreadsheet. **CAR 15.** Table 2 in Section A.4.3.1. provides an incorrect value of total GHG emission reductions. **CAR 16.** Table 3 in Section A.4.3.1. does not contain the information on the length of the crediting period. **CAR 17.** Table 4 does not comply with the format recommended by the Guidelines for Users of the JI PDD form.	**CAR 14** **CAR 15** **CAR 16** **CAR 17**	OK OK OK OK

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A.4.3	Is it provided the estimated annual reduction for the chosen crediting period in tCO_2e?	The estimated annual emission reductions for the first commitment period in tCO_2e are provided; the estimated annual emission reductions for the periods before and after the first commitment period within the project are also provided.	OK	OK
A.4.3	Are the data from questions above presented in tabular format?	The data are presented in tabular format, for the first commitment period and for the periods before and after the first commitment period. Refer to the PDD (Version 02) Tables 2, 3, 4 Section A.4.3.1.	OK	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 indicated in the PDD Section A.4.3.1 and Section C.	OK	OK
A.4.3.1	Are estimates of total as well as annual and average annual emission reductions in tonnes of CO_2 equivalent provided?	Total as well as annual and average annual emission reductions in tonnes of CO_2 equivalent are provided in accordance with the calculated values in the tables of Section A4.3.1 of PDD and the Supporting documents.	OK	OK
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	**CAR 18**. The project has no approval of the Host Party and the country – investor. To obtain the Letter of Approval the final Determination report together with this Determination Protocol and the list of sources of Reference Informationmust be submitted to the State Environmental Investment	**CAR 18**	Pending

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		Agency of Ukraine. A Letter of Approval of Switzerland as the country-participant is also not obtained at the current stage of the Project. **CAR 18** will be closed after the Letters of Approval are issued by the Host Party and the country-investor.		
19	Does the PDD identify at least the host Party as a "Party involved"?	Host Party involved in project is Ukraine.	OK	OK
19	Has the DFP of the host Party issued a written project approval?	Reference to CAR 1**8**	**CAR 18**	Pending
20	Are all the written project approvals by Parties involved unconditional?	Reference to CAR 1**8**	**CAR 18**	Pending
Authorization of project participants by Parties involved				
21	Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through: − A written project approval by a Party involved, explicitly indicating the name of the legal entity? or − Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity?	Party involved 1: Ukraine (the Host Party), legal entity is PJSC «Zakarpatgas». Party involved 2: Switzerland, legal entity is CEP Carbon Emissions Partners S. A. The project participants will be authorized in accordance with the relevant project approvals. Pending **CAR 18**.	**CAR 18**	Pending

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
Baseline setting				
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? − JI specific approach − Approved CDM methodology approach	The chosen baseline is described in section B.1. of the PDD. A JI specific approach is used for setting the baseline.	OK	OK
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	The choice of the applicable baseline for the project category is sufficiently justified; detailed theoretical description is provided in section B.1 of the PDD version 02. **CAR 19.** Reference 7 in Section B.1. of the PDD does not work properly. Please, verify the reference. **CAR 20.** AM0023 methodology version whose elements are used in baseline setting is incorrect. **CAR 21.** The description of compliance of the specific approach selected with the third condition contains an incorrect reference to Annex 1. **CL 05.** Please, number all the formulae in Section B.1. of the PDD.	**CAR 19** **CAR 20** **CAR 21** **CL 05**	OK OK OK OK
23	Does the PDD provide justification that the baseline is established: (a) By listing and describing plausible future scenarios on the basis of	The PDD provides detailed, full and transparent description and justification that the baseline is established by: (a) Identifying plausible future scenarios and choosing	**CAR 22**	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	conservative assumptions and selecting the most plausible one? (b) Taking into account relevant national and/or sectoral policies and circumstance? − Are key factors that affect a baseline taken into account? (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors? (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors? (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?	the most plausible one. As a result of evaluation of several alternatives the most plausible of them have been identified and will be used as a baseline: - Alternative 1.1: Continuation of existing practice of leak detection and repair; - Alternative 1.2: The project activities without the use of the Joint Implementation mechanism. (b) Taking into account key factors such as for example technological requirements to the gas supply in Ukraine, Ukrainian environmental legislation and other national legislation, and key relevant factors, such as the ability of financing of construction and reconstruction of gas distribution system, tariffs for gas supply, availability of local technologies and methods of the project, skills and experience in implementing similar projects (c) In a transparent manner with regard to the choice of JI approach and assumptions, parameters, data sources and key factors for identifying initial conditions listed in tabular format in Section B.1. (d) Taking into account of uncertainties and using conservative assumptions		

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		(e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure (f) By drawing on the list of standard variables. The baseline is set; the description is given in Section B of the PDD. **CAR 22.** PDD Section B.1. provides two different names for Alternative 1.1. Please, make the necessary corrections.		
24	If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above?	The baseline assumptions of the developed JI specific approach are clearly described in full in Section B.1 of the PDD version 02. **CAR 23.** Please, provide description of indexes used in the formula for natural gas emissions to the atmosphere caused by leaks from gas transportation networks. **CAR 24.** The tables with description of parameters and values used in baseline setting should meet the form set forth in the Guidelines for Users of the JI PDD form. **CAR 25.** Please, provide the way of storage of data necessary for baseline GHG emissions calculation in Tables in PDD Section B.1. **CAR 26.** Tables in PDD Section B.1 provide the	**CAR 23** **CAR 24** **CAR 25** **CAR 26** **CAR 27**	OK OK OK OK OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		description of K_{ih}^{g} parameter twice. Please, delete the irrelevant information. **CAR 27.** Please, provide a table with the description of $K_{i"}^{n}$ parameter.		
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	In order to set the baseline the following factors are used: $K_{i',h,y}^{g}$ –natural gas leak factor for GDN component i' that is in CLS and $K_{i,y}^{n}$ – natural gas leak factor that corresponds to APLNG for GDN component $i"$. Data source that was (will be) used: "Methodology for calculation of greenhouse gas emission reductions achieved by eliminating above-standard natural gas leaks at gas distribution networks"	OK	OK
CDM methodology approach only				
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	The PDD indicates that the project scenario is not a part of the established baseline scenario. It is also stated that the project will lead to emission reductions.Additionality of the project activity is demonstrated in Section B.2. PDD by using the "Tool for the demonstration and assessment of additionality",	**CAR 28** **CAR 29** **CAR 30**	OK OK OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals (b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality (c) Application of the most recent version of the "Tool for the demonstration and assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board".	version 06.0.0. **CAR 28.** The reference provided for the "Tool for the demonstration and assessment of additionality" version 06.0.0 does not correspond to this document. **CAR 29.** The name for Alternative 1.1. mentioned in Section B.2. differs from the name provided in Section B.1. Please, provide a single name for the alternative. **CAR 30.** The description of additional costs for the purchase of modern metering devices provides another detector but not the one stated in Section A.4.2.		
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	Detailed analysis described in Sections A.4.3, B.1 and B.2, shows that emissions of the baseline scenario are likely to exceed emissions of the project scenario due to the implementation of project activities.	OK	OK
29 (b)	Are additionality proofs provided?	Refer to Section B.2. of the PDD.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
29 (c)	Is the additionality demonstrated appropriately as a result?	The fact that the project activity itself is not the baseline scenario is clearly demonstrated in Sections A.2, B.1, B.2 of the PDD.	OK	OK
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	All explanations, descriptions and analyses are made in accordance with the latest version of the "Tool for the demonstration and assessment of additionality". (Version 06.0.0)	OK	OK
Approved CDM methodology approach only_ Paragraphs 31(a) – 31(e)_Not applicable				
Project boundary (applicable except for JI LULUCF projects)				
JI specific approach only				
32 (a)	Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	The project boundary defined in the PDD encompasses all anthropogenic emissions by sources of GHGs that are: (i) Under the control of the project participants, such as: - technological natural gas leaks during scheduled repair of gas pipelines; (ii) Reasonably attributable to the project, such as: - methane leaks at gas fittings of house distribution networks; (iii) Significant, i.e., as a rule of thumb, would by each source account on average per year over the crediting period for more than 1 per cent of the annual average anthropogenic emissions by sources of GHGs, or exceed an amount of 2,000 tonnes of CO_2		

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		equivalent, whichever is lower: - leaks at gas equipment (pressure relief valves, gate valves, filters, etc.) of gas distribution points (cabinet-type gas distribution points); - methane leaks at gas fittings (faucets, slide valve, etc.), , located at gas distribution networks of PJSC "Zakarpatgas". Only methane leaks of type (iii) are included in the project boundary.		
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?	Project boundary is defined on the basis of case-by-case assessment of different emission sources.	OK	OK
32 (c)	Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart if it is possible?	The project boundary is presented in a graphic figure (Figure 4) and is understandable enough; so there is no need to provide its description in tabular form.	OK	OK
32 (d)	Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?	All gases and sources included are explicitly stated. See Section B of the PDD.	OK	OK
Approved CDM methodology approach only_Paragraph 33_ Not applicable				

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
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?	According to the Guidelines for users of JI PDD form (version 04) the starting date of the project is the date when the implementation or construction or real action of the project begins. The starting date of the project is identified and specified in Section C. 1 of the PDD. The starting date of the project is 04/02/2005, which is the date when OJSC "Zakarpatgas" started inspection and repair works at GDP (CGDP) gas equipment and gas fittings, flanged and threaded joints of OJSC «Zakarpatgas» gas distribution networks in the framework of the JI Project.	OK	OK
34 (a)	Is the starting date after 2000?	The starting date of the project is after 2000.	OK	OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	**CAR 31.** The estimated operational lifetime of the project is incorrect (number of months).	**CAR 31**	OK
34 (c)	Does the PDD state the length of the crediting period in years and months?	The length of the crediting period is stated in Section C.3. **CAR 32.** The length of the crediting period is incorrect (number of months).	**CAR 32**	OK
34 (c)	Is the starting date of the crediting period before or after the date of the first emission	The starting date of the crediting period is the date when the first project activities at gas pipelines of PJSC	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	reductions or enhancements of net removals generated by the project?	"Zakarpatgas" were implemented and when the first emission reductions are expected to be generated, namely 04/02/2005.		
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?	Generation of ERUs relates to the first commitment period of 5 years (January 1, 2008 – December 31, 2012).	OK	OK
34 (d)	If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012?	The PDD states that the prolongation of the crediting period beyond 2012 is subject to approval of the Host Party and estimation of emission reductions is presented separately for those until 2012 and those after 2012 in the relevant sections of the PDD. If after the first commitment period under the Kyoto protocol its validity is prolonged, the crediting period under the project will be prolonged by 5 years or 60 months until December 31, 2017.	OK	OK
Monitoring Plan				
35	Does the PDD explicitly indicate which of the following approaches is used? − JI specific approach − Approved CDM methodology approach	The proposed project uses a JI specific approach based on the JI requirements in accordance with paragraph 9 (a) of the Guidance on criteria for baseline setting and monitoring, version 03.	OK	OK
JI specific approach only				

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
36 (a)	Does the monitoring plan describe: − All relevant factors and key characteristics subject to monitoring? − The period in which they will be monitored? − All critical factors for the control and reporting of project performance?	The monitoring plan specifies all decisive factors for the control and reporting on project performance: quality control (QC) and quality assurance (QA) procedures; operational and management structures that will be applied when implementing the monitoring plan.	OK	OK
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored?	The monitoring plan specifies 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. Data to be monitored are presented in Section D of the PDD. **CL 06.** Please, clarify why $K_{i"}^{n}$ parameter is determined once at the beginning of the project but is provided in a table of data and parameters monitored during the whole crediting period. **CAR 33.** Please, provide the information on how the data for i parameter will be archived in Section D.1.1.3.	**CL 06** **CAR 33**	OK OK
36 (b)	If default values are used: − Are accuracy and reasonableness carefully balanced in their selection? − Do the default values originate from	Default values are provided in the table of Annex 3 to the PDD. They originate from recognized sources and are presented in a transparent manner.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	recognized sources? − Are the default values supported by statistical analyses providing reasonable confidence levels? − Are the default values presented in a transparent manner?			
36 (b) (i)	For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified?	Monitoring plan clearly specifies which values should be chosen and justified.	OK	OK
36 (b) (ii)	For other values, − Does the monitoring plan clearly indicate the precise references from which these values are taken? − Is the conservativeness of the values provided justified?	The monitoring plan clearly indicates the precise references from which the default values are taken. The conservativeness of the values provided is justified.	OK	OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	Refer to Section D of the PDD.	OK	OK
36 (b) (iv)	Are International System Units (IS units) used?	IS units are used for certain parameters.	OK	OK
36 (b) (v)	Does the monitoring plan note any parameters, coefficients, variables, etc.	Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	that are used to calculate baseline emissions or net removals but are obtained through monitoring?	within the project boundary is presented in table D.1.1.3. of the PDD.		
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	The use of parameters, coefficients and variables is consistent between the baseline and monitoring plan.	OK	OK
36 (c)	Does the monitoring plan draw on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"?	The monitoring plan is established taking into account the latest version of "Guidance on criteria for baseline setting and monitoring".	OK	OK
36 (d)	Does the monitoring plan explicitly and clearly distinguish: (i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination? (ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not yet available at the	The monitoring plan clearly distinguishes three types of data and parameters. Refer to Section D.1. of the PDD. (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 monitored throughout the crediting period. (iii) 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 yet available at the	OK	OK

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	stage of determination? (iii) Data and parameters that are monitored throughout the crediting period?	stage of determination, such data are absent.		
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	In tables of parameters provided in section D.1.1.1. of the PDD the time of monitoring (frequency) and the source of data to be used, as well as recording method are indicated for all the monitored parameters and data.	OK	OK
36 (f)	Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate?	All algorithms and formulae used for the estimation of baseline and project emissions are indicated and explained in the PDD. The description of formulae is provided in Section D.1 of the PDD	OK	OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	Refer to section 36 (f) of this table.	OK	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Consistent variables, equation formats, subscripts etc. are used.	OK	OK
36 (f) (iii)	Are all equations numbered?	Yes, all equations are numbered.	OK	OK
36 (f) (iv)	Are all variables with units indicated	Yes. Refer to Section D of the PDD.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	defined?			
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	Yes, algorithms/procedures comply with state norms and are conservative.	OK	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	Uncertainty in parameters used is low taking into account the algorithms of data monitoring.	OK	OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured?	There is consistency between the elaboration on the baseline scenario and procedure for calculating the baseline emissions in the monitoring plan and in tables.	OK	OK
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	The formulae used in the PDD are sufficiently described.	OK	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	Monitoring under the project does not require any changes in the existing data accounting and data collection system of PJSC "Zakarpatgas".	OK	OK
36 (f) (vii)	Are references provided as necessary?	All necessary references to therules and regulatory documents of the Host Party are provided.	OK	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	All key assumptions are explained in a transparent manner.	OK	OK
36 (f) (vii)	Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed?	N/A	OK	OK

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36 (f) (vii)	Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided?	Equipment for measuring calorific value of natural gas transported in GDN of PJSC "Zakarpatgas" is calibrated in accordance with the quality control procedures.	OK	OK
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project? Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?	The monitoring plan was set according to national norms and standards.	OK	OK
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	Yes	OK	OK
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made	Inspection (calibration) of metering and measuring devices is carried out in accordance with manuals of the manufacturer, approved methodologies on inspection/calibration of measuring devices as well as according to the national standards of Ukraine.	OK	OK

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	available upon request?			
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	The technologist is responsible for collection of all information under the monitoring plan and conduction of all necessary calculations. The engineer is responsible for organization of monitoring measurements of leaks and their repair. On the basis of the information received, Head of the Working Team shall determine the plan of project activities and the amount of resources required. The metrologist shall ensure the availability of verified metering devices and technical support. The coordinator is responsible for storage, archiving and backuping of project information.	OK	OK
36 (k)	Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type? If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?	The monitoring plan includes the following sections: 1. The program of the initial monitoring measurements of methane leaks at the gas equipment of GDPs (CGDPs), gas fittings of PJSC "Zakarpatgas" gas distribution networks. 2. Monitoring map of methane leaks at the gas equipment of GDPs (CGDPs), gas fittings of PJSC "Zakarpatgas" gas distribution networks. 3. Methodology of methane leak detection. 4. Guidance on monitoring measurement data collection and storage.	OK	OK

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36 (l)	Does the monitoring plan provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations?	Tables D.1.1.1 and D.1.1.3 provide compilation of all data needed to monitor project and baseline emissions.	OK	OK
36 (m)	Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project?	Data to be monitored and required for determination will be kept for two years after the last transfer of ERUs under the project.	OK	OK
37	If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above?	Yes, selected elements of approved CDM methodology are used for setting the baseline scenario.The selected elements and combinations together with additional elements that were additionally developed by the project participants are in line with requirements of paragraph 36 above.	OK	OK
Approved CDM methodology approach only_Paragraphs 38(a) – 38(d)_Not applicable				
Applicable to both JI specific approach and approved CDM methodology approach				
39	If the monitoring plan indicates overlapping monitoring periods during the crediting	Periods will not overlap in the crediting period.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	period: (a) Is the underlying project composed of clearly identifiable components for which emission reductions or enhancements of removals can be calculated independently? (b) Can monitoring be performed independently for each of these components (i.e. the data/parameters monitored for one component are not dependent on/effect data/parameters to be monitored for another component)? (c) Does the monitoring plan ensure that monitoring is performed for all components and that in these cases all the requirements of the JI guidelines and further guidance by the JISC regarding monitoring are met? (d) Does the monitoring plan explicitly provide for overlapping monitoring periods of clearly defined project components, justify its need and state how the			

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	conditions mentioned in (a)-(c) are met?			
Leakage				
JI specific approach only				
40 (a)	Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?	According to a JI specific approach based on the Joint Implementation requirements in accordance with paragraph 9 (a) of the JI Guidance on criteria for baseline setting and monitoring, Version 03, the "Methodology for calculation of greenhouse gas emission reductions achieved by eliminating above-standard natural gas leaks at gas distribution networks" that was developed by the Institute of Gas of the National Academy of Sciences of Ukraine and on the basis of elements of approved CDM methodology AM0023 version 4.0 no leakage is expected.	OK	OK
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	The PDD states that there isn't any leakage.	OK	OK
Approved CDM methodology approach only_Paragraph 41_Not applicable				
Estimation of emission reductions or enhancements of net removals				
42	Does the PDD indicate which of the following approaches it chooses? (a) Assessment of emissions or net removals in the baseline scenario and in the project scenario (b) Direct assessment of emission	The approach of estimation of emissions in the baseline scenario and in the project scenario is indicated. **CAR 34.** The table in PDD Section E.6 should comply with the Guidelines for Users of the JI PDD form.	**CAR 34**	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	reductions			
43	If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	PDD provides ex ante estimates of: (a) Emissions in the project scenario (Section E.1) (b) Leakage (Section E.2) (c) Emissions in the baseline scenario (Section E.4) (d) Emission reductions adjusted by leakage (Section E.6).	OK	OK
44	If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emission reductions or enhancements of net removals adjusted by leakage?	N/A	N/A	N/A
45	For both approaches in 42 (a) Are the estimates in 43 or 44 given: (i) On a periodic basis?	(a) Estimates in 43 are given on the periodic basis, in tonnes of CO_2 equivalent, on a source-by-source basis, before, during and after the crediting period.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	(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 tonnes of CO_2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? (b)Are the formulae used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate? (d) Are data sources used for calculating the estimates in 43 or 44 clearly identified,	(b) The formulae used in PDD are consistent. (c) Key factors influencing the baseline emissions and the activity level of the project and the project emissions are taken into account, as appropriate. (d) Data sources used to calculate the estimates are clearly identified, reliable and transparent. (e) Default emission factors are taken from identified sources. (f) Estimation in 43 is based on conservative assumptions and the most plausible scenario in a transparent manner. (g) Estimates in 43 are consistent throughout the PDD. (h) The annual average of estimated emission reductions are calculated correctly (by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period and multiplying by twelve).		

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	reliable and transparent? (e) Are emission factors (including default emission factors) if used for calculating the estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice? (f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner? (g) Are the estimates in 43 or 44 consistent throughout the PDD? (h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?			
46	If the calculation of the baseline emissions or net removals is to be performed de facto, does the PDD include an illustrative forecasted emissions or net removals calculation?	The baseline level of emissions is determined on a basis of the specific approach that is based on the "Methodology for calculation of greenhouse gas emission reductions achieved by above-standard natural gas leak repair at gas distribution networks" and	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		approved Clean Development Mechanism methodology AM0023 version 4.0 "Leak detection and repair in gas production, processing, transmission, storage and distribution systems and in refinery facilities". Calculations of the estimated emissions are clearly presented in the PDD.		
Approved CDM methodology approach only_Paragraphs 47(a) – 47(b)_Not applicable				
Environmental impacts				
48 (a)	Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	The EIA of the project was sufficiently described in the PDD. **CAR 35.** The date of issue of Decree of the Cabinet of Ministers of Ukraine No.1598 "On approval of the list of the most widespread and dangerous polluting substances emissions of which are subject to regulation" is incorrect.	**CAR 35**	OK
48 (b)	If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to Accompanying documentation of an environmental impact assessment	The project doesn't provide for any negative impacts on the environment.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	undertaken in accordance with the procedures as required by the host Party?			
Stakeholder consultations				
49	If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide: (a) A list of stakeholders from whom comments on the projects have been received, if any? (b) The nature of the comments? (c) A description on whether and how the comments have been addressed?	There was consultation with specialists of the Institute of General Energetics of the National Academy of Sciences of Ukraine. Comments of the stakeholders were not received. Activities under the project do not provide for any negative impacts on the environment or negative social effect.	OK	OK
Determination regarding small-scale projects (additional elements for assessment)				
Determination regarding land use, land-use change and forestry projects (additional/alternative elements for assessment)				
Determination regarding programmes of activities (additional/alternative elements for assessment)				

TABLE 2 RESOLUTION OF CORRECTIVE ACTION AND CLARIFICTION REQUESTS

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
CAR 01. Please, provide more details on primary activities of the company.	A.2	The main activities of the company are: - Transportation of natural gas by distribution pipelines; - Supply of natural gas at regulated tariffs; - Installation of domestic gas meters; - Design, installation of gas supply systems; - Maintenance, repair works.	The information is provided, the issue is closed.
CAR 02. The description of the project scenario in Section A.2. provides an incorrect title of the company.	A.2	Project activities consist in the reduction of methane leaks that occur as a result of faulty sealing of GDN components of PJSC "Zakarpatgas" (gas equipment of GDPs (CGDPs) and gas fittings of gas pipelines). Relevant corrections have been made in Section A.2. of the latest PDD version.	The issue is closed as corresponding corrections are made.
CAR 03. Please, provide the information on the change of the company's type of ownership in PDD Section A.2.	A.2	November 30, 2010 – the company's type of ownership changed. The title of the company Open Joint Stock Company of gas supplying and gasification "Zakarpatgas" was changed into Public Joint Stock Company of gas supplying and gasification "Zakarpatgas".	The information is provided, the issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
CAR 04. In Section A.2. The PDD states that the project was initiated in March, 2005, whereas the project started in February 2005. Please, make the necessary corrections.	A.2	The project was initiated in February, 2005. Relevant correcions have been made in the PDD version 02.	The issue is closed as corresponding corrections are made.
CAR 05. Table in Section A.3. shall meet the format set forth in the Guidelines for users of the JI PDD form.	A.3	The table is corrected in line with the requirements of the Guidelines for users of the JI PDD form.	Relevant corrections are made, the issue is closed.
CAR 06. Please, indicate in Annex 1 who PJSC "Zakarpatgas" is represented by.	A.3	PJSC "Zakarpatgas" is represented by Vitalii Martsinovych Shatylo, Head of the Board.	The issue is closed as relevant information is added.
CAR 07. Please, provide the map of Ukraine with geographical marks in Ukrainian.	A.4.1.1	The map of Ukraine with geographical marks in Ukrainian is provided in the latest PDD version, see Figure 1.	The issue is closed as the map of Ukraine with geographical marks in Ukrainian is provided.
CAR 08. Please, provide a brief description of the project location in Section 4.1.4. of the PDD.	A.4.1.4	Zakarpattia region is located in southwestern Ukraine. The area is 12 800 square kilometers. The population is 1 251 000 people. The length of Zakarpattia region is up to 100 km from the North to the South and about 200 km from the West to the East. Geometric geographical center of Zakarpattia region is situated near Mount Kook, in Svaliava district.	The information is provided, the issue is closed.
CAR 09. The model of gas leak detector in Figure 2 in Section A.4.2. differs from the one for which specifications are provided. Please, correct the inconsistency.	A.4.2	To determine whether methane leak is present in a sample, VARTA-5-03 gas leak detector and indicator is used. It is shown in Figure 2 in Section A.4.2. of the PDD.	Relevant corrections are made, the issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
CAR 10. GOST for sealants is incorrect. Please, make corresponding amendments.	A.4.2	Sealants GOST 7338-90. See PDD version 02.	Relevant corrections are made, the issue is closed.
CAR 11. Please, delete the information on the Memorandum of Understanding from the project schedule, since this document was not signed.	A.4.2	Irrelevant and improper information has been deleted. See PDD version 02.	The issue is closed as irrelevant and improper information has been deleted.
CAR 12. Entry 6 of the Project Implementation Schedule indicates that continuation of implementation of the PETM programme will take place till 2020, whereas the crediting period ends in 2017. Please, make corresponding amendments.	A.4.2	Continuation of implementation of the PETM programme, implementation of regular monitoring inspections and measurements at already repaired gas equipment of GDPs (CGDPs) and fittings of gas pipelines, leak repair at already repaired equipment, if such leaks take place (January 2009 - December 2017).	The issue is closed as corresponding corrections are made.
CAR 13. Please, indicate the number of equipment units within the project boundary.	A.4.2	The relevant information on the number of equipment units within the project boundary is provided in Section A.4.2. of PDD version 02.	Relevant information is provided, the issue is closed.
CAR 14. Total emission reductions provided in Table 2 for 2007 differs from total GHG emission reductions provided in the spreadsheet.	A.4.3	Relevant corrections have been made. See Table 2. PDD version 02.	The issue is closed as corresponding corrections are made.
CAR 15. Table 2 in Section A.4.3.1. provides an incorrect value of total GHG emission	A.4.3	Total estimated GHG emission reductions over the crediting period is	Corrections are made, the issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
reductions.		373 239 tonnes of CO_2 equivalent. See PDD version 02.	
CAR 16. Table 3 in Section A.4.3.1. does not contain the information on the length of the crediting period.	A.4.3	The duration of the crediting period of 2008-2012 is 5 years.	Corrections are made, the issue is closed.
CAR 17. Table 4 does not comply with the format recommended by the Guidelines for Users of the JI PDD form.	A.4.3	The table has been corrected. See PDD version 02.	Corrections are made, the issue is closed.
CAR 18. The project has no approval of the Host Party and the country – investor.	19	To obtain the Letter of Approval the final Determination report must be submitted to the State Environmental Investment Agency of Ukraine that includes this Determination Protocol and the list of sources of Reference Information. A Letter of Approval of Switzerland as the country-participant is not obtained at the current stage of the Project either.	The issue will be closed after the Letter of Approval is issued by the Host Party and the country-investor.
CAR 19. Reference 7 in Section B.1. of the PDD does not work properly. Please, verify the reference.	23	The reference has been verified and corrected. See PDD version 02.	Corrections are made, the issue is closed.
CAR 20. AM0023 methodology version whose elements are used in baseline setting is incorrect.	23	The Methodology is based on approved Clean Development Mechanism methodology AM0023	The issue is closed as necessary clarifications are provided.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
		version 4.0 “Leak detection and repair in gas production, processing, transmission, storage and distribution systems and in refinery facilities”	
CAR 21. The description of compliance of the specific approach selected with the third condition contains an incorrect reference to Annex 1.	23	Introduction of step-by-step procedures, creation of the comprehensive database and application of a system approach will allow the company to conduct reliable monitoring of the repaired GDP (CGDP) gas equipment and gas fittings of gas pipelines and detect leaks that occurred again after being repaired, if any (see Annex 3).	The incorrect reference has been corrected, the issue is closed.
CAR 22. PDD Section B.1. provides two different names for Alternative 1.1. Please, make the necessary corrections.	23	Alternative 1.1: Continuation of the current system of leak detection and repair.The corrections have been made. See PDD version 02.	Relevant corrections are made, the issue is closed.
CAR 23. Please, provide description of indexes used in the formula for natural gas emissions to the atmosphere caused by leaks from gas transportation networks.	24	Indexes are described in Section B.1. of the PDD version 02.	The relevant information is provided, the issue is closed.
CAR 24. The tables with description of parameters and values used in baseline setting should meet the form set forth in the Guidelines for Users of the JI PDD form.	24	The tables have been corrected in accordance with the Guidelines for Users of the JI PDD form.	The corrections are made, the issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
CAR 25. Please, provide the way of storage of data necessary for baseline GHG emissions calculation in Tables in PDD Section B.1.	24	Data allowing of calculation of GHG emissions in the baseline scenario will be archived in hard and electronic form. The information is provided in Tables in Section B.1. of the PDD version 02.	The information is provided, the issue is closed.
CAR 26. Tables in PDD Section B.1 provide the description of K_{ih}^{g} parameter twice. Please, delete the irrelevant information.	24	The irrelevant information has been deleted. See PDD version 02.	The issue is closed as irrelevant information has been deleted.
CAR 27. Please, provide a table with the description of $K_{i"}^{n}$ parameter.	24	The Table with the description of $K_{i"}^{n}$ parameter is provided in Section B.1. of the PDD version 02.	The information is provided, the issue is closed.
CAR 28. The reference provided for the "Tool for the demonstration and assessment of additionality" version 06.0.0 does not correspond to this document.	28	The reference has been corrected. See Section B.2. PDD version 02.	The issue is closed as the correct reference is provided.
CAR 29. The name for Alternative 1.1. mentioned in Section B.2. differs from the name provided in Section B.1. Please, provide a single name for the alternative.	28	Alternative 1.1: Continuation of the current system of leak detection and repair.	The issue is closed as corresponding corrections are made.
CAR 30. The description of additional costs for the purchase of modern metering devices provides another detector but not the one stated in Section A.4.2.	28	Additional costs of the Project implementation include the costs of: purchase and use of modern measuring devices for methane emission detection (detectors of "VARTA-5-03", FP 11,2, k., "Poisk-02 MD type or gas analyzers of Variotec	The issue is closed as relevant corrections were made.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
		type).	
CAR 31. The estimated operational lifetime of the project is incorrect (number of months).	34(b)	Expected operational lifetime of the project is 12 years and 11 months / 155 months: from 04/02/2005 to 31/12/2017.	The corrections are accepted, the issue is closed.
CAR 32. The length of the crediting period is incorrect (number of months).	34(c)	The length of the crediting period is 7 years and 11 months, or 95 months.	Corrections are made, the issue is closed.
CAR 33. Please, provide the information on how the data for i parameter will be archived in Section D.1.1.3.	36(b)	The infrmation will be archived in electronic and hard copy.	The issue is closed as relevant information is provided.
CAR 34. The table in PDD Section E.6 should comply with the Guidelines for Users of the JI PDD form.	42	The table has been corrected. See Section E.6. of the PDD version 02.	The issue is closed as corresponding changes are made.
CAR 35. The date of issue of Decree of the Cabinet of Ministers of Ukraine No.1598 "On approval of the list of the most widespread and dangerous polluting substances emissions of which are subject to regulation" is incorrect.	48 (a)	Decree of the Cabinet of Ministers of Ukraine No.1598 dated 29/11/2001 "On approval of the list of the most widespread and dangerous polluting substances emissions of which are subject to regulation".	The corrections are made, the issue is closed.
CL 01. Please, provide information on the causes of methane leaks.	A. 2	The main cause of methane leaks is failure of sealing elements of equipment caused by temperature fluctuations and moisture. The relevant nformation is provided in Section A.2. of the PDD.	The issue is closed as necessary information is provided.
CL 02. Please, provide the clarifications on	A. 2	As a result of JI project activities, in	The information is provided, the

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project participants' responses	Determination team conclusion
the positive impact of the project activity in PDD Section A.2.		addition to methane leak reductions, technical losses of natural gas will decrease, a contribution will be made to the improvement of environmental situation, and the risk of accidents and explosions will be reduced.	issue is closed.
CL 03. Please, provide the document confirming the starting date of the project.	A. 2	Relevant documents have been provided for examination to the determination team.	The issue is closed as relevant documents are provided.
CL 04. Please, provide references to GOSTs mentioned in Section A.4.2. of the PDD.	A.4.2	Relevant references to GOSTs have been provided.	The references are provided, the issue is closed.
CL 05. Please, number all the formulae in Section B.1. of the PDD.	23	The formulae have been numbered. See Section B.1. of the PDD version 02.	The issue is closed as the request is satisfied.
CL 06. Please, clarify why $K_{i"}^{n}$ parameter is determined once at the beginning of the project but is provided in a table of data and parameters monitored during the whole crediting period.	36 (b)	$K_{i"}^{n}$ parameter has constant values but it depends on the GDN component and therefore is subject to monitoring throughout the crediting period.	The issue is closed, the clarification is provided.