DETERMINATION REPORT
CEP CARBON EMISSIONS PARTNERS S.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 "Dniprogaz"

REPORT NO. UKRAINE-DET/0685/2012

REVISION NO. 02

BUREAU VERITAS CERTIFICATION

DETERMINATION REPORT

Date of first issue	Organizational unit:
07/10/2012	Bureau Veritas Certification Holding SAS
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 "Dniprogaz" project of CEP CARBON EMISSIONS PARTNERS S.A., located in Dnipropetrovsk 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 study of project's baseline, monitoring plan and other relevant documents. It consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final determination report and opinion. The overall determination, from Contract Review to Determination Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

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

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the "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/0685/2012	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 "Dniprogaz"

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

Work reviewed by:
Ivan Sokolov - Internal Technical Reviewer
Vasyl Kobzar – Technical Expert

Work approved by:
Ivan Sokolov – Operational Manager

Date of this revision:	Rev. No.:	Number of pages:
15/10/2012	02	68

Bureau Veritas Certification Holding SAS

☒ No distribution without permission from the Client or responsible organizational unit

☐ Limited distribution

☐ Unrestricted distribution

Table of Contents *Page*

1 INTRODUCTION

CEP Carbon Emissions Partners S.A. has commissioned Bureau Veritas Certification to determine its 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 “Dniprogaz” (hereafter called “the project”) in Dnipropetrovsk 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 and obligatory 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, the monitoring plan and other relevant documents. The information in these documents meets the Kyoto Protocol requirements, UNFCCC rules and associated interpretation.

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

1.3 Determination team

The determination team consists of the following personnel:

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

Dmytro Balyn
Bureau Veritas Certification Team Member, Technical Expert

This determination report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification Internal Technical Reviewer

Vasyl Kobzar
Bureau Veritas Certification Technical Expert

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 verification and the results from determining the identified criteria.

The determination protocol serves the following purposes:

- It organizes, describes 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 determination protocol consists of two tables and is enclosed in Appendix A to this report.

2.1 Review of Documents

The Project Design Document (PDD) was submitted by CEP CARBON EMISSIONS PARTNERS S.A. together with such additional documents related to the project design and baseline as: host country Law, Guidelines for users of the joint implementation project design document form, approved CDM methodologies and/or Guidance on criteria for baseline setting and monitoring, the Kyoto Protocol, Clarifications on Determination Requirements to be checked by an Accredited Independent Entity.

To address Bureau Veritas Certification corrective action, forward action and clarification requests, CEP CARBON EMISSIONS PARTNERS S.A. revised the PDD version 01 of 22/08/2012 and resubmitted it on 10/10/2012 as version 02.

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 10/10/2012 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of PJSC “Dniprogaz" and CEP CARBON EMISSIONS PARTNERS S.A. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview Topics

Interviewed organization	Interview topics
PJSC “Dniprogaz"	➢ Project History ➢ Project approach ➢ Project boundary ➢ Implementation schedule ➢ Organizational Structure ➢ Responsibilities and obligations ➢ Personnel training ➢ Quality control procedures and technologies ➢ Modernization / installation of equipment (records) ➢ Control over metering equipment ➢ System of measurements record-keeping, database ➢ Technical Documentation ➢ Monitoring Plan and procedures ➢ Permits and licenses ➢ Environmental Impact Assessment ➢ Stakeholders’ response
CEP Carbon Emissions Partners S.A.	➢ Baseline methodology ➢ Monitoring plan ➢ Additionality proofs ➢ Calculations of emission reductions ➢ Project design ➢ Legal issues relating to the project ➢ Environmental impacts ➢ 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 “Dniprogaz” is reduction of methane leaks at gas transportation and gas distribution infrastructure of PJSC “Dniprogaz”. These leaks are the result of leaking gas equipment and gas fittings. The main sources of leaks are gas distribution networks (GDN) components included in the project boundary, namely:

- gas equipment (pressure regulators, valves, filters, switching devices) located at gas distribution points (GDP) and cabinet gas distribution points (CGDP) of PJSC “Dniprogaz”;
- gas fittings (taps, valves, vents, etc.), located at the gas pipelines of PJSC “Dniprogaz”.

The project boundary includes 226 GDPs, 1450 CGDPs, and 2974 gas fitting units.

The main cause of natural gas leaks is failure of sealing elements of equipment caused by temperature fluctuations and moisture. Natural gas consists mainly of methane, which is greenhouse gas. Methane makes up 92-95% of natural gas. Methane leak repair will lead to the reduction of greenhouse gas emissions.Hereinafter, natural gas leaks will also be referred to as “methane leaks”, since methane is the gas instrumental leak measurements deal with.

PJSC “Dniprogaz” is an enterprise that provides transportation and supply of liquified and natural gas in Dnipropetrovsk region. At the moment, the company supplies natural gas to industrial enterprises (361), budget-funded and public utility entities (3 540), population (399 184 apartments and individual households).

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 structure of the existing tariffs for gas transportation, regulated by the state, do not take into account the depreciation and investment needs of gas distribution enterprises. This causes a lack of funds for repair and modernization of gas networks, purchase of adequate technological equipment and components and, as a result, pushes up methane leaks at PJSC “Dniprogaz” facilities.

Project activities consist of the reduction of methane leaks that occur as a result of faulty sealing of GDN components of PJSC “Dniprogaz” (gas equipment of GDPs (CGDPs) and gas fittings of 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 pressure-sealing elements with the use of modern sealing materials, changing the common practice of servicing and repair on the basis of paronite gaskets and cotton fiber stuffing with oil tightening and asbestos-graphite compound.

The existing practice of servicing and repair on the basis of paronite gaskets and sealing stuffing of cotton fibre with fatty impregnation and asbestos-graphite filler does not give a long-lasting effect of methane leak reductions.

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 (GDP and CGDP equipment and gas fittings).
- Detection of methane leaks: leak monitoring system at all GDN components (GDP and CGDP equipment and gas fittings), included into the project boundary including methane leaks (GDN repaired within the project activity).
- Repair of all leaks detected: repairs of GDN components under this project will include replacement of sealing elements using new materials and/or replacement of gas equipment and gas fittings by new modern equipment.

The project was initiated in March, 2005:

In March 2005, an inspection of PJSC “Dniprogaz” GDP (CGDP) gas equipment, fittings, flanged and threaded joints; primary leak measurements were made.

March 2005 – the start of inspection and repair works at GDP (CGDP) gas equipment and gas fittings, flanged and threaded joints of gas distribution networks of PJSC “Dniprogaz”. The PDD development (version 01) began, which included emissions monitoring programme.

02/03/2005 – the starting date of the project, when PJSC “Dniprogaz” commenced repair works at GDP (CGDP) gas equipment and gas fittings, flanged and threaded joints of gas distribution networks of PJSC “Dniprogaz” under the JI project.

10/09/2012 – a Working Team was created to ensure performance of the JI Monitoring Plan.

04/10/2012 - Letter of Endorsement No.2888/23/7 was issued for the JI project by the State Environmental Investment Agency of Ukraine.

The 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 30 Corrective Action Requests and 3 Clarification Requests.

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

4.1 Project approval by Parties involved (19-20)

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 “Dniprogaz” project has already been approved by the Government of Ukraine (Letter of Endorsement No.2888/23/7, issued by the State Environmental Investment Agency of Ukraine dated 04/10/2012).

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

Upon completion of the Determination Report the project design document will be submitted to the State Environmental Investment Agency of Ukraine for receiving a Letter of Approval.

As the project has no approval by the Host Party, CAR 18 remains pending and will be closed after report finalizing (see Appendix A).

The identified areas of concern as to the project approval, project participants' response and Bureau Veritas Certification's conclusion are described in Appendix A to 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 by the Parties involved, through the written Letters of Approval (from the government of Switzerland as the country-participant, and from Ukraine as the host party). See CAR 18 of this report.

4.3 Baseline setting (22-26)

The PDD explicitly indicates that using a methodology for baseline setting and monitoring developed in accordance with Appendix B of the JI Guidelines (hereinafter referred to as JI specific approach) was the selected approach for identifying the baseline (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 Joint Implementation requirements in accordance with paragraph 9 (a) of the JI Guidance on criteria for baseline setting and monitoring, Version 03 and the "Methodology for calculation of greenhouse gas emission reductions achieved by eliminating above-standard methane leaks at gas distribution networks" (hereinafter - the Methodology), developed by the Institute of Gas of the National Academy of Sciences of Ukraine to set the baseline. Project participants selected the computational 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 development of projects aimed at methane leak reduction in technological equipment of gas distribution networks and is applicable to project activities that reduce physical 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 was 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. Proposed project activity without the use of the JI mechanism.

(b) Taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, gas supply industry 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. Energy sector plays an absolute and crucial part in Ukraine, being a factor of political sovereignty. Ukrainian economy is one of the world's most energy-consuming by primary energy consumption per GDP unit. 15/03/2006 The Cabinet of Ministers of Ukraine has approved the "Energy strategy of Ukraine till 2030". The energy strategy considers the research of non-traditional and renewable energy sources an important factor of energy safety improvement, reduction of anthropogenic impact on the environment and resistance to global climate change.

b. Most natural gas transportation and supply companies currently operating in Ukraine use equipment installed back in Soviet times.

c. The current practice of natural gas loss (and accordingly, methane emissions) detection and repair conforms to the current legislation of Ukraine. The legislation admits and doesn't forbid natural gas losses, and, accordingly, methane emissions in the process of natural gas transportation. The regulations set periodicity of equipment verifications to be carried out by gas distribution organizations with the aim of natural gas loss detection. Practice of natural gas loss detection at PJSC "Dniprogaz" corresponds to the indicated standards. Control over compliance with standards is performed by implementation of annual revisions by authorized bodies.

d. State support in the natural gas transportation and supply sector is provided in amounts of funds provided by the law of Ukraine on State Budget of Ukraine for the relevant year.

e. The current Ukrainian system of formation of prices for natural gas transportation does not include an investment component for the development of gas transportation infrastructure. According to Law of Ukraine "On the basis of the natural gas market functioning", the company is not obliged and has no incentives to implement new equipment, provided for by the project, at its own expense. Meanwhile, 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 is already implementing JI projects in natural gas transportation and supply ("Reduction of methane leakage at flange, threaded joints and shut-down devices of the equipment of OJSC "Kyivgas", Reduction of methane leakage at flange, threaded joints and switch mechanisms of the equipment of JSC Odesagas, "Reduction of natural gas emissions at OJSC "Odesagas" gate stations and gas distribution networks") thanks to the sale of emission reduction units.

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

The methods of calculation used to determine the ex-ante and ex-post baseline emissions, are sufficiently described in Sections E and B of the PDD, respectively.

The identified areas of concern as to the baseline, project participants' response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination Report (refer to CAR 19 – CAR 25; CL 03).

4.4 Additionality (27-31)

The most recent version of the "Tool for the demonstration and assessment of additionality" approved by the CDM Executive Board was used in accordance with the JI specific approach, defined pursuant to paragraph 9 (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 anthropogenic emissions under the project are lower than the emissions that would take place in the absence of the 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:Proposed project activity without the use of the 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.

Possible barriers, such as financial (additional financial expenses for implementation of project activities, for purchase and use of modern metering devices to detect and measure methane emissions), organizational (lack of potential of labour and technical resources of PJSC "Dniprogaz" for implementation and carrying out of purposeful examination and technical maintenance of gas equipment), which would complicate the realization of the project scenario without the additional income from project implementation within the Joint Implementation Mechanism, and which de facto make impossible any alternative scenario except for the baseline, were described and justified in an appropriate manner. There are no barriers for the baseline alternative, which is continuation of the situation existing prior to the project activity.
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 appropriately as a result of the analysis using the approach chosen.

4.5 Project boundary (32-33)

The project boundary defined in the PDD, delineated with the territory of Dnipropetrovsk region and include all gas supply facilities included in the JI project boundary on the basis of Agreements on the use of state property that is not subject to privatization No.04/01-822 of 28/12/2001, encompass all anthropogenic emissions by GHG sources, which are:

(i) Under the control of the project participants, such as:

- technological natural gas losses 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 controllers, valves, filters, etc.) of gas distribution points (cabinet-type gas distribution points);
- methane leaks in gas fittings (faucets, valves, etc.), located in gas distribution networks of PJSC "Dniprogaz".

Only methane leaks of type (iii) are included in the JI 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 is the date when PJSC "Dniprogaz" commenced repair works at GDP (CGDP) gas equipment and gas fittings, flanged and threaded joints of gas distribution networks of PJSC "Dniprogaz" under the JI project. Thus, the starting date of the project is 02/03/2005, 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 10 months, or 154 months – from March 02, 2005, to December 31, 2017.

The PDD states the length of the crediting period in years and months, which is 12 years and 10 months, or 154 months, and its starting date of the crediting period is 02/03/2005, which is the date the first project activities took place at PJSC "Dniprogaz" pipelines" and the first emission reductions are expected to be generated by the project.

The PDD states that the crediting period for the issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project.

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

The identified areas of concern as to the crediting period, project participants' response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination Report (refer to CAR 27).

4.7 Monitoring plan (35-39)

The PDD in the section relating to the monitoring plan clearly states that a specific JI approach was chosen.

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, 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. be clearly connected with the effect to be measured), and that provide a transparent picture of the emission reductions or enhancements of net removals to be monitored such as: sequence number of GDN component, number of activity (replacement/repair) at GDN component after leakdetection, average mass fraction of methane in natural gas, natural gas leak factor of GDN component in CLP, natural gas leak factor that corresponds to EPNGL of GDN component, time in operation of GDN component under the pressure from the beginning of monitoring period y to the implementation of the project activity (repair/replacement) that caused removal of leak.

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 the Guidelines for users of the JI PDD forms, revision 04, the described approach to monitoring clearly states:

Data and parameters that are not subject to monitoring during the crediting period but are identified only once and are available at the PDD development stage:

i	Sequence number of the GDN component (GDP (CGDP), gas fitting) included into the project boundary
ConvFactor	Volume to weight conversion factor for methane leaks, t of natural gas/m^3 of natural gas.

a) Data and parameters that are not controlled during the crediting period but are identified only once (and thus remain fixed for the crediting period) and are not available at the PDD development stage: none.

b) Data and parameters controlled during the whole crediting period:

h	No. of activity (replacement/repair) in GDN component after EPNGL detection
W_y	Average mass ratio of methane in natural gas in period *y* of the project scenario
$K_{i'h}^{g}$	Natural gas leakage factor of GDN component in CLP:
$K_{i''}^{n}$	Natural gas leakage factor corresponding to EPNGL of GDN component

$H^{g}_{i'hy}$	Time of GDN component operation under the pressure from the beginning of monitoring period *y* to the implementation of the project activity (repair/replacement) that caused EPNGL removal
$H^{n}_{i"hy}$	Time of GDN component operation under the pressure from the implementation of the project activity (repair/replacement) that caused EPNGL removal to the end of monitoring period *y*
GWP_{CH_4}	Global Warming Potential of methane

The monitoring plan describes the methods applied for monitoring data (including its frequency) and record-keeping methods such as data storage through accounting software.

The most objective and cumulative factor that provides a clear picture of whether the emission reduction took place is the fact of GDN component replacement. The computational method can be used as the method based on data on methane leaks from GDN components formed from standard values on methane emissions for each GDN component as well as data obtained by statistical processing of the results of ex-post methane leak measurement before and after the repairs.

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 CO2 equivalent):

Greenhouse gas emissions in the project scenario according to the JI-specific approach (calculated using the tabular method of the Methodology) are calculated by the following formulae:

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

where:

PE_y - greenhouse gas emissions in period y of the project scenario, t CO_2eq;

GWP_{CH_4} - global warming potential of methane, tCO_2eq/tCH_4;

W_y - average mass ratio of methane in natural gas in period y of the project scenario, %;

P_y – natural gas leaks to the atmosphere in period y of the project scenario, m^3;

$ConvFactor$ - volume to weight conversion factor for methane leaks, t CH_4/m_3 CH^4. Under normal conditions - zero degrees Celsius and 0.1013 MPa, $ConvFactor$ =0.0007168 t/m^3.

$[y]$ - index for monitoring period;

$[CH_4]$ - index for methane.

Natural gas (92-95% of methane) emissions to the atmosphere caused by leaks from gas transportation networks are calculated by the following formula:

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

$K^g_{i'h}$ - natural gas leak factor of i' GDN component in CLP (i.e. corresponding to SPNGL) in the project scenario, m^3/h;

$K^g_{i''h}$ - natural gas leak factor corresponding to EPNGL of i'' GDN component in the project scenario, m^3/h;

$H^g_{i'hy}$ - time of GDN component operation from the beginning of monitoring period *y* to the implementation of the project activity (repair/replacement) that caused EPNGL removal, h;

$H^n_{i''hy}$ - time of GDN component operation under the pressure from the implementation of the project activity (repair/replacement) that caused EPNGL removal to the end of monitoring period *y*, h;

$[y]$ - index for monitoring period;

$[i']$ - index for GDN component number that belongs to the set of elements I' (I'+I'')=I, where I is a set embracing all the GDN components included into the project boundary) where project activity generated no emission reductions (no component replacement/repair took place) in the reporting monitoring period;

$[i'']$ - index for GDN component number that belongs to the set of elements I'' (I'+I'')=I, where I is a set embracing all the GDN components included into the project boundary) where project activity generated emission reductions (component replacement/repair took place) in the reporting monitoring period;

$[h]$ - index for the number of project activity in GDN component, if more than one activity was carried out at this component in monitoring period (where *H* is a set embracing all activities in the project scenario at the GDN component in monitoring period);

$[g]$ - index for SPNGL;

$[n]$ - index for EPNGL.

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* of the baseline scenario, t CO_2eq;

GWP_{CH_4} - global warming potential of methane, tCO_2eq/tCH_4;

W_y - average mass ratio of methane in natural gas in period *y* of the project scenario, %;

B_y – natural gas leaks to the atmosphere in period *y* of the baseline scenario, m^3;

$ConvFactor$ - volume to weight conversion factor for methane leaks, t CH_4/m^3 CH_4. Under normal conditions - zero degrees Celsius and 0.1013 MPa, $ConvFactor$ =0.0007168 t/m^3.

$[y]$ - index for monitoring period;

$[CH_4]$ - index for methane.

Natural gas (92-95% of methane) emissions to the atmosphere caused by leaks from gas transportation networks are calculated by the following formula:

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

$K^g_{i'h}$ - natural gas leak factor of i' GDN component in CLP (i.e. corresponding to SPNGL) in the baseline scenario, m^3/h;

i'' - natural gas leak factor corresponding to EPNGL of GDN component $K^n_{i''}$ in the baseline scenario, m^3/h;

$H^{g}_{i'hy}$ - time of GDN component operation in CLP under the pressure in period *y* of the baseline scenario, h;

$H^{n}_{i"hy}$ - time of GDN component operation under the pressure from the implementation of the project activity (repair/replacement) that caused EPNGL removal to the end of monitoring period *y*, h;

$[y]$ - index for monitoring period;

$[i']$ - index for GDN component number that belongs to the set of elements I' (I'+I") = I, where I is a set embracing all the GDN components included into the project boundary) where project activity generated no emission reductions (no component replacement/repair took place) in the reporting monitoring period;

$[i"]$ - index for GDN component number that belongs to the set of elements I" (I'+I") = I, where I is a set embracing all the GDN components included into the project boundary) where project activity generated emission reductions (component replacement/repair took place) in the reporting monitoring period;

$[h]$ - index corresponding to the number of project activity in GDN component, if more than one activity was carried out at this component in monitoring period (where H is a set embracing all activities in the project scenario at the GDN component in monitoring period)

$[g]$ - index for SPNGL;

$[n]$ - index for EPNGL.

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

According to the selected 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 and the "Methodology for calculation of greenhouse gas emission reductions achieved by eliminating above-standard methane leaks at gas distribution networks", dated 30/04/2012, developed by the Institute of Gas of the National Academy of Sciences of Ukraine to set the baseline (measurement and calculation of methane leaks) and elements of the Approved Clean Development Mechanism Methodology AM0023 Version 4.0, no leakage is expected.

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

GHG emission reductions are calculated under the formula that follows:

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

where:

ER_y greenhouse gas emission reductions in period *y*, t CO_2eq;

BE_y - greenhouse gas emissions in period *y* of the baseline scenario, t CO_2eq;

PE_y - greenhouse gas emissions in period *y* of the project scenario, t CO_2eq;

[*y*] - index for monitoring period.

The monitoring plan represents quality control procedures and quality assurance for the monitoring process, which are sufficiently described in tabular form in PDD Sections D.2 and D.3. This includes, where appropriate, provision and submission on request of information about calibration, as well as information about how data are recorded and / or how the applicability of the method and accuracy of data are assured.

The monitoring plan clearly establishes responsibility and authority in respect of monitoring actions. Collection of all the key parameters necessary for monitoring and calculation of greenhouse gases emissions reduction are constantly carried out according to the practice, established in PJSC “Dniprogaz”. Monitoring under the project does not require changes in existing record-keeping and data collection system.

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

The monitoring plan provides 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 (for example, official statistics, experts’ opinions, company’s own 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’ response and Bureau Veritas Certification’s conclusion are described in Appendix A to Determination Report (refer to CAR 28.

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 the selected 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 and the “Methodology for calculation of greenhouse gas emission reductions achieved by eliminating above-standard methane leaks at gas distribution networks", dated 30/04/2012, developed by the Institute of Gas of the National Academy of Sciences of Ukraine to set the baseline (measurement and calculation of methane leaks) and elements of the Approved Clean Development Mechanism Methodology AM0023 Version 4.0, the PDD states 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 generated by the project.

The PDD provides the ex ante estimates of:

(a) Emissions or net removals for the project scenario (within the project boundary), which are 407 190 tons of CO_2eq for 2005-2007, 678 650 tons of CO_2eq for 2008-2012, 678 650 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 1 104 972 tons of CO_2eq for 2005-2007, 3 469 778 tons of CO_2eq for 2008-2012, 3 586 075 tons of CO_2eq for 2013-2017;

(d) Emission reductions adjusted by leakage (based on (a)-(c) above), which are 697 782 tons of CO_2eq in 2005-2007, 2 791 128 tons of CO_2eq in 2008-2012, 2 907 425 tons of CO_2eq in 2013-2017.
The estimates referred to above are given:

(a) on an annual basis;

(b) from 02/03/2005 to 31/12/2017, covering the entire crediting period;

(c) based on primary sources and sources;

(d) for each GHG, 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.

To calculate the above estimations such key factors as the Ukrainian environmental legislation and other national legislation, as well as key relevant factors such as availability of funds for implementation of measures envisaged by the project, tariffs that are set by the state, modern technology and the ability to implement know-how in gasification sphere, that affect the baseline emissions level, project activity level and level of emissions, as well as risks associated with the project were properly taken into account.

Sources of data that were used for calculation of the above estimations such as documents and archival data of the enterprise, standards and statistical forms, results of annual meter readings, etc. are clearly defined, credible and transparent.

Natural gas leakage factor of GDN component i' in CLP ($K^{g}_{i'h}$) and natural gas leakage factor corresponding to EPNGL of i'' GDN component ($K^{n}_{i''}$) were selected by careful balancing of accuracy and reasonability and justified their choice in appropriate manner.

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 over the crediting period by the total months of the crediting period, and multiplying by twelve.

Detailed algorithms of calculations and their results are described in sections B, E and Supporting Documents to the PDD.

The identified areas of concern as to the evaluation of emission reductions, project participants' response and Bureau Veritas Certification's conclusion are described in Appendix A to Determination Report (refer to CAR 29).

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. (The Decree of the Cabinet of Ministers of Ukraine №1598 dated 29/11/2001 "About approval of the list of the most widespread and dangerous polluting substances which emissions 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.

In addition, implementation of this Project will improve the gas distribution network operation safety, which, in turn, will lower the possibility of explosions or fires.

Transboundary impacts from the project activity, according to their definition in the text of "Convention on long-range transboundary pollution" ratified by Ukraine, will not take place.

No negative impact is expected as a result of the Project implementation.

The PDD provides opinions and references to supporting documents on environmental impact assessment, which is carried out in accordance with the procedures set by the host Party.

The problem issues revealed as to environmental impacts, comments of project participants and the opinion of Bureau Veritas Certification are described in Annex A of the Determination Report (refer to CAR 30).

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 does not provide for any negative environmental or social impact.

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 "Dniprogaz" 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 participant/s used the latest tool for demonstration of the additionality. According to this tool the PDD contains barrier analysis and analysis of common practice to determine that the project activity isn't 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 (Ukraine). If the written approval by the host Country is provided, it is our opinion that the project as described in the Project Design Document, version 02 dated 10/10/2012 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Country criteria as well as expectations of the stakeholders.

The review of the project design documentation (version 02 dated 10/10/2012) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfilment 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 "Dniprogaz", version 01 dated 22/08/2012
/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 "Dniprogaz", version 02 dated 10/10/2012
/3/	Supporting Document 1: Registry of gas distribution points, cabinet gas distribution points, gas fittings, gas distribution networks of 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 "Dniprogaz"
/4/	Supporting Document 2. Calculation of GHG emissions under 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 "Dniprogaz"
/5/	"Methodology for calculation of greenhouse gas emission reductions achieved through above-standard natural gas leak repair at the gas distribution networks", registry No. UkrNTI 0112U00A816, dated 2012, developed by the Institute of Gas of the National Academy of Sciences of Ukraine
/6/	Report on the scientific and engineering research "Development of methodological basics for the calculation of greenhouse gases emission reduction by repair of natural gas leaks in gas distribution networks"
/7/	Letter of Endorsement No.2888/23/7 issued by the State Environmental Investment Agency of Ukraine dated 04/10/2012.
/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 Accords, JI Methods
/13/	National inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases in Ukraine for 1990-2010
/14/	Ukraine's Third National Communication on Climate Change under the Kyoto Protocol
/15/	Ukraine's Fourth National Communication on Climate Change under the Kyoto Protocol
/16/	Ukraine's Fifth National Communication on Climate Change under the Kyoto

	Protocol
/17/	Law of Ukraine “On the basis of the natural gas market functioning”
/18/	Law of Ukraine “On Pipeline Transport”
/19/	Decree 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. Appendix to decision 9/CDM.1
/21/	JI Guidance for determination and verification, 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/	Decree No.421 “On creation of the Working Team on 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 networks within the boundary of the Joint Implementation project” dated 10/09/2012
/2/	Registry of gas distribution points and gas fittings 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 “Dniprogaz” (Form 5)
/3/	Log of repairs and replacement of GDP (CGDP) gas equipment and gas fittings at PJSC “Dniprogaz” pipelines (Form 3)
/4/	Certificate of Completion approved by the State Acceptance Commitee dated 09/03/2012 (CGDP-2 with RD-50M)
/5/	Certificate of Completion approved by the State Acceptance Commitee dated 09/03/2012 (RDUK-50 pressure regulator)
/6/	Certificate of Completion approved by the State Acceptance Commitee dated 19/08/2012 (CGDP with RD-50M)
/7/	Certificate of Operational Activity of Public Joint Stock Company “Dniprogaz” for 2005
/8/	Certificate of Operational Activity of Public Joint Stock Company “Dniprogaz” for 2006
/9/	Certificate of Operational Activity of Public Joint Stock Company “Dniprogaz” for 2007
/10/	Certificate of Operational Activity of Public Joint Stock Company “Dniprogaz” for 2008
/11/	Certificate of Operational Activity of Public Joint Stock Company “Dniprogaz” for 2009
/12/	Certificate of Operational Activity of Public Joint Stock Company “Dniprogaz” for 2010

/13/	Certificate of Operational Activity of Public Joint Stock Company “Dniprogaz” for 2011
/14/	Metering Device Calibration Certificate No.80649/4 (EX-TEC-SRS5 gas analyzer), valid till 16/05/2012
/15/	Metering Device Calibration Certificate No.82012/15 (EX-TEC-SRS5 gas analyzer), valid till 12/03/2012
/16/	Metering Device Calibration Certificate No.84138/8 (EX-TEC-SRS5 gas analyzer), valid till 21/04/2012
/17/	Metering Device Calibration Certificate No.80084 (EX-TEC-SRS5 gas analyzer), valid till 13/04/2009
/18/	Metering Device Calibration Certificate No.82012/11 (Variotec-8), valid till 12/03/2011
/19/	Metering Device Calibration Certificate No.80404/4 (Variotec-8), valid till 06/04/2013
/20/	Metering Device Calibration Certificate No.84100/18 (Variotec-8), valid till 29/03/2012
/21/	Metering Device Calibration Certificate No.82012/3 (Variotec-6), valid till 12/03/2011
/22/	Metering Device Calibration Certificate No.80404/1 (Variotec-6), valid till 06/03/2013
/23/	Metering Device Calibration Certificate No.84100/12 (Variotec-6), valid till 29/03/2012
/24/	Metering Device Calibration Certificate No.80649/4 (EX-TEC-SRS5 gas analyzer), valid till 16/05/2013
/25/	Metering Device Calibration Certificate No.84138/8 (EX-TEC-SRS5 gas analyzer), valid till 21/04/2012
/26/	Metering Device Calibration Certificate No.82012/15 (EX-TEC-SRS5 gas analyzer), valid till 12/03/2011
/27/	Ready for Commissioning Certificate (cabinet-type unit with pressure regulator RD-50M (ShP-2) dated 12/03/2011
/28/	Ready for Commissioning Certificate (GRPSh-2F-2FE25S-Y1 with two pressure regulators RD FE25S) dated 19/12/2010
/29/	Ready for Commissioning Certificate (CGDP with pressure regulator RBI 2012) dated 10/12/2009
/30/	Certificate of Acceptance of gas equipment for complex test (pre-commissioning) dated December 2009
/31/	Certificate of Acceptance of gas equipment for complex test (pre-commissioning) dated 22/09/2009
/32/	Certificate of Acceptance of gas equipment for complex test (pre-commissioning) dated 10/12/2009
/33/	Certificate of Completion approved by the Acceptance Commitee (gas fittings: faucets, valves, alarms, meters, pressure regulators) dated 20/04/2009
/34/	Certificate of Completion approved by the Acceptance Commitee (gas fittings: faucets, valves, alarms, meters, pressure regulators) dated

	18/03/2008
/35/	Certificate of Completion approved by the Acceptance Commitee (gas fittings: faucets, valves, alarms, meters, pressure regulators) dated 03/11/2008
/36/	Certificate of Completion approved by the Acceptance Commitee (gas fittings: faucets, valves, alarms, meters, pressure regulators) dated 15/01/2008
/37/	Certificate of Completion approved by the Acceptance Commitee (gas fittings: faucets, valves, alarms, meters, pressure regulators) dated 19/08/2005
/38/	Certificate of Completion approved by the Acceptance Commitee (gas fittings: faucets, valves, alarms, meters, pressure regulators) dated 04/06/2007
/39/	Certificate of Completion approved by the Acceptance Commitee (gas fittings: faucets, valves, alarms, meters, pressure regulators) dated 21/06/2006
/40/	Certificate of Completion approved by the Acceptance Commitee (gas fittings: faucets, valves, alarms, meters, pressure regulators) dated 12/12/2006
/41/	Certificate of Completion approved by the Acceptance Commitee (gas fittings: faucets, valves, alarms, meters, pressure regulators) dated 30/05/2005
/42/	Certificate of Completion approved by the Acceptance Commitee (gas fittings: faucets, valves, alarms, meters, pressure regulators) dated 12/09/2005
/43/	Certificate of Completion approved by the Acceptance Commitee (gas fittings: faucets, valves, alarms, meters, pressure regulators) dated 27/01/2005
/44/	Certificate of Completion approved by the Acceptance Commitee (gas fittings: faucets, valves, alarms, meters, pressure regulators) dated 24/10/2005
/45/	Certificate of Completion approved by the Acceptance Commitee (gas fittings: faucets, valves, alarms, meters, pressure regulators) dated 28/02/2005
/46/	Photo of replaced equipment
/47/	Photo of metering equipment
/48/	Photo of metering works being conducted

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	Organisation	Title
/1/	M. Melets	PJSC “Dniprogaz"	Chief Metrologist of the Metrological Centre
/2/	Y. Haltsev	PJSC “Dniprogaz"	Chief Engineer of PTD
/3/	M.Smirnov	PJSC “Dniprogaz"	Chief Engineer of the Metrological Centre
/4/	S. Borychiv	PJSC “Dniprogaz"	Senior Master of CPE
/5/	S. Marchenko	PJSC “Dniprogaz"	Engineer of the Metrological Centre
/6/	D. Prokhach	“CEP” LLC	CEP CARBON EMISSIONS PARTNERS S.A. Consultant

APPENDIX A: COMPANY PROJECT DETERMINATION PROTOCOL

BUREAU VERITAS CERTIFICATION HOLDING SAS

Check list for determination, according to the JOINT IMPLEMENTATION 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 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 "Dniprogaz".	OK	OK
A.1	Is the sectoral scope to which the project pertains presented?	Sectoral scope: Sector 10. Fugitive emissions from fuel (solid fuel, 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 10/10/2012. See Section A.1.	OK	OK
A.1	Is the date when the document was created presented?	The date when the document was created: 10/10/2012.	OK	OK
A.2. Description of the project				
A.2	Is the purpose of the project included with	The purpose of the project "Reduction of methane	**CL 01**	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	a concise, summarizing explanation (max. 1-2 pages) of the: a) Situation existing prior to the starting date of the project b) Baseline scenario and c) Project scenario (expected outcome, including a technical description)?	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 "Dniprogaz" is reduction of methane leaks at gas transportation and gas distribution infrastructure of PJSC "Dniprogaz". These leaks are the result of leaking gas equipment and gas fittings. The main sources of leaks are gas distribution networks (GDN) components included in the project boundary, namely: - gas equipment (pressure regulators, valves, filters, switching devices) located at gas distribution points (GDP) and cabinet gas distribution points (CGDP) of PJSC "Dniprogaz"; - gas fittings (taps, valves, vents, etc.), located at the gas pipelines of PJSC "Dniprogaz". Detailed information on the baseline and project scenarios with 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 to be repaired under the project, in Section A.2 of the PDD.		
A.2	Is the history of the project (incl. its JI component) briefly summarized?	**CAR 01.** Section A.2. should contain data on the starting date of the project activity.	**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 02. The title of the body that issued the Letter of Endorsement is incorrect. **CAR 03.** The date when the Letter of Endorsement was obtained is incorrect.	**CAR 03**	OK
A.3. Project participants				
A.3	Are project participants and Party(ies) involved in the project listed?	Parties involved in the project: PJSC "Dniprogaz" (Ukraine - the Host Party), CEP Carbon Emissions Partners S.A. (Switzerland).	OK	OK
A.3	Is the data of the project participants presented in tabular format?	The data of the project participants is presented in tabular format. **CAR 04.** Please provide information on the type of commercial activity "Dniprogaz". **CAR 05.** In PDD Section A.3. please provide USREOU code of PJSC "Dniprogaz". **CAR 06.** Please provide information on participation of the country in the project activity in Section A.3.	**CAR 04** **CAR 05** **CAR 06**	OK OK OK
A.3	Is contact information provided in Annex 1 of the PDD?	The contact information of PJSC "Dniprogaz" and Carbon Emissions Partners S.A. is provided in Annex 1 of the PDD. **CAR 07.** In Annex 1 to the PDD, name and patronymic of the person representing the project owner are mixed up.	**CAR 07**	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
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. **CL 02.** Please provide reference to the Law of Ukraine "On ratification of the Kyoto Protocol to the United Nations Framework Convention on Climate Change" in Section A.4.1.1 of the PDD.	**CL 02**	OK
A.4.1.2	Region/State/Province etc.	The project is located in the territory of Dnipropetrovsk region, Ukraine.	OK	OK
A.4.1.3	City/Town/Community etc.	Dnipropetrovsk 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.	OK	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 implementation schedule described?	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 project activities. Project engineering represents the current cutting-edge practice.	**CAR 08** **CAR 09** **CAR 10** **CAR 11** **CAR 13**	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
		CAR 08. The model of gas analyser in Figure 2 in Section A.4.2. differs from that for which specifications are provided. Please correct this discrepancy. **CAR 09.** GOST for sealants is incorrect. Please make corresponding amendments. **CAR 10.** The implementation schedule contains information on signing of the document (Memorandum of Understanding), which is non-existent. Pleae delete this information. **CAR 11.** Entry 7 of the Project 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 12.** Entry 5 of the implementation schedule lacks information on the number of gas fitting units in the period of January-December 2008.		
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances				
A.4.3	Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	The project activity encompasses: - repair (replacement) of GDP (CGDP) gas equipment and gas fittings of PJSC "Dniprogaz"	**CAR 13**	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		gas pipelines with the use of modern sealing materials and modern equipment of the European producers and their analogues of domestic production; - monitoring of methane leaks aimed at the detection of methane leaks caused by sealing failures; - further renewal of sealing of GDN components of PJSC "Dniprogaz". **CAR 13.** Please provide information on whether emission reductions are possible without the project activity.		
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.** Please correct Tables of Section A.4.3.1 in line with the requirements of the Guidelines for users of the JI PDD form. **CAR 15.** Table 2 in Section A.4.3.1. lacks the Total emission reductions over the crediting period. **CAR 16.** Table 2 in Section A.4.3.1. provides an incorrect value of annual average of GHG emission reductions. **CAR 17.** Please provide the Total estimated GHG emission reductions and annual average emission	**CAR 14** **CAR 15** **CAR 16** **CAR 17**	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
		reductions over the crediting period in Table 4 of Section A.4.3.1.		
A.4.3	Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	The estimated annual reduction for the first commitment period in tCO_2e is provided, as well as the estimated annual reduction for the period before and after the first commitment period within the project.	OK	OK
A.4.3	Are the data from questions above presented in tabular format?	Information for the credit period and after the credit period is presented in tabular format. See PDD (Version 02) Tables 2, 3 and 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 A.4.3.1. of the 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 investing country. To obtain the Letter of Approval the final Determination report must be submitted to the State Environmental Investment Agency of Ukraine that includes this	**CAR 18**	Pending decision.

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		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. **CAR 18** will be closed after the Letter of Approval is issued by the Host Party and country-investor.		
19	Does the PDD identify at least the host Party as a "Party involved"?	The Host Party involved is Ukraine.	OK	OK
19	Has the DFP of the host Party issued a written project approval?	Reference to **CAR 18**.	**CAR 18**	Pending decision.
20	Are all the written project approvals by Parties involved unconditional?	Reference to **CAR 18**.	**CAR 18**	Pending decision.
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? − 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 "Dniprogaz". 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 decision.
Baseline setting				

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
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 baseline chosen is described in Section B.1 of the PDD. A specific JI 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 is justified; theoretical description is provided in Section B.1 of PDD version 02. **CAR 19.** Section B.1. of the PDD by mistake mentions the second version of the Guidance on criteria for baseline setting and monitoring. **CAR 20.** Please provide the full title of the approved methodology AM0023 version 4.0, whose elements are used to set the baseline. **CAR 21.** The title of Supporting Document 1 is incorrect. **CL 03.** Please provide references to AM0023 methodology 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 conservative assumptions and selecting the most plausible one?	The PDD provides a detailed theoretical description in a complete and transparent manner, as well as justification, that the baseline was established: (a) Identifying plausible future scenarios and choosing the most plausible one. As a result of evaluation of several alternatives the most plausible of them have	**CAR 22**	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	(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? (d) 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?	been identified and will be used as a baseline: - Alternative 1.1 - Continuation of the current system of leak detection and repair. - Alternative 1.2 -Proposed project activity without the use of the JI mechanism. (b) Taking into account key factors such as for example technological rules of the sector, 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 of 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 (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 identified, the description is given in Section B of the PDD.		

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		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 check indexes in the description of formulae in Tables of Section B.1. **CAR 24.** Volume to weight conversion factor for methane leaks is incorrect. Please make the necessary corrections. **CAR 25.**A Table in Section B.1 provides incorrect information on QA/QC procedures (to be) applied for the parameter GWP_{CH_4}. **CAR 26.** Time of determination/monitoring for parameter GWP_{CH_4} is incorrect.	**CAR 21** **CAR 22** **CAR 23** **CAR 24** **CAR 25**	OK OK OK OK OK
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	When setting baseline the following factors are used: natural gas leakage factor of GDN component i' in CLP: ($K^{g}_{i'h}$) and natural gas leakage factor corresponding to EPNGL of GDN component i'' ($K^{n}_{i''}$).	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		Source of data (to be) used "Methodology for calculation of greenhouse gas emission reductions achieved through above-standard natural gas leak repair at the gas distribution networks"		
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 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	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 and assessed in Section B.2. of the PDD using the "Tool for the demonstration and assessment of additionality" (Version 06.0.0).	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board".			
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	Detailed analysis described in Section 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?	Yes. Refer to section B.2. of the PDD.	OK	OK
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 newest version of the "Tools 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?	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:		

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	(ii) Reasonably attributable to the project? (iii) Significant?	- technological natural gas losses 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 controllers, valves, filters, etc.) of gas distribution points (cabinet-type gas distribution points); - methane leaks in gas fittings (faucets, valves, etc.), located in gas distribution networks of PJSC "Dniprogaz". Only methane leaks of type (iii) are included in the JI Project boundary:		

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
32 (b)	Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above?	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 form (Figure 3) and is understandable enough so that there is no need of tabular presentation.	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 PDD version 02.	OK	OK
Approved CDM methodology approach only_Paragraph 33_ Not applicable				
Crediting period				
34 (a)	Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?	According to the Guidelines for users of JI PDD form (version 04) the starting date of the project is the date on which the implementation or construction or real action of the project begins. The project's starting date is identified and specified in Section C. 1 of the PDD. Purposes of the project activity: 02/03/2005 – the date when PJSC "Dniprogaz" commenced repair works at GDP (CGDP) gas equipment and gas fittings, flanged and threaded joints of gas distribution networks of	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		PJSC "Dniprogaz" under the JI project.		
34 (a)	Is the starting date after 2000?	The starting date is after 2000.	OK	OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	**CAR 27.** The starting date of the expected operational lifetime cannot be before the starting date of the project.	**CAR 27**	OK
34 (c)	Does the PDD state the length of the crediting period in years and months?	The length of the crediting period in years and months is stated in Section C.3.	OK	OK
34 (c)	Is the starting date of the crediting period on or after the date of the first emission reductions or enhancements of net removals generated by the project?	The starting date of the crediting period is on the date when the first project activities were carried out at PJSC "Dniprogaz" pipelines and when the first emission reductions are expected, namely 02/03/2005.	OK	OK
34 (d)	Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?	ERU generation belongs 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 it is prolonged, the crediting period under the	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		project will be prolonged by 5 years/60 months until December 31, 2017.		
Monitoring plan				
35	Does the PDD clearly indicate which of the following approaches is used? − JI specific approach − Approved CDM methodology approach.	The proposed project uses a JI-specific approach in accordance with paragraph 9 (a) of the JI "Guidance on criteria for baseline setting and monitoring", Version 03.	OK	OK
JI specific approach only				
36 (a)	Does the monitoring plan describe: - All relevant factors and key characteristics that will be monitored? - The period in which they will be monitored? - All decisive factors for the control and reporting of project performance?	The monitoring plan specifies all decisive factors for the control and reporting of 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 enhancement of net removals to be monitored. Data to be monitored are presented in PDD Section D.	OK	OK
36 (b)	If defailt 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?	The monitoring plan clearly indicates how the values are to be selected 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 these values are taken, and the conservativeness of the values provided is duly 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 Unit (SI units) used?	The International System Units are used for some parameters.	OK	OK
36 (b) (v)	Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline	Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases within the project boundary is presented in table	**CAR 28**	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	emissions or net removals but are obtained through monitoring?	D.1.1.3. of the PDD. **CAR 28.** Please add to the description of $K^{g}_{i',h}$ and $K^{n}_{i''}$ parameters indexes corresponding to GDN component number.		
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 identified on the basis of the 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	Monitoring plan explicitly distinguishes between all these 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. (iii) Data and parameters that are monitored throughout the crediting period. (ii) Data and parameters that are not monitored throughout the crediting period, but are determined	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	period), but that are not already available at the stage of determination? (iii) Data and parameters that are monitored throughout the crediting period?	only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination.		
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 given in Section D 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 defined?	Yes. Refer to section D of the PDD.	OK	OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	Yes, algorithms/procedures comply with state norms and are conservative.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
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 calculating the baseline emission 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 changes in existing accounting system and data collection existing in PJSC “Dniprogaz” practice.	OK	OK
36 (f) (vii)	Are references provided as necessary?	References to corresponding rules 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
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	Equipment for methane leak detection in gas transported by GDNs of PJSC “Dniprogaz” calibrated and verified in accordance with the procedures for quality control	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	net removals provided?			
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project? Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?	The monitoring plan was set in accordance with the national rules 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 available upon request?	Verification (calibration) of measurement devices is carried out in accordance with manufacturer's manuals, approved methodologies on metering devices verification/calibration, as well as with the state standards of Ukraine.	OK	OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	Technologist is responsible for collection of information and performance of all the necessary calculations as provided in the monitoring plan of the JI project. Engineer is responsible for organization of measurements and repair of leaks. Working Team	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
		Leader is responsible for the Project schedule development and determination of the necessary resources based on the data received. Metrologist ensures the availability of the calibrated metering devices and technical maintenance of the JI project. Coordinator is responsible for storage, archiving and backup of data relating to the JI project.		
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?	Monitoring plan includes the following sections: 1. The programme of initial monitoring measurements of methane leaks in GDP (CGDP) gas equipment and gas fitting of gas distribution networks of PJSC "Dniprogaz". 2. The monitoring map of methane leak measurements in GDP (CGDP) gas equipment and gas fitting of gas distribution networks of PJSC "Dniprogaz". 3. Methodology of methane leak detection. 4. Guidance on collection and archiving of monitoring measurement data.	OK	OK
36 (l)	Does the monitoring plan provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are	Tables D.1.1.1 and D.1.1.3 provide compilation of all data needed to monitor project and baseline emissions.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	collected from other sources but not including data that are calculated with equations?			
36 (m)	Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project?	Data to be monitored and required for determination will be kept for two years after the last transfer of ERUs for 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, the baseline was set using selected elements of approved CDM methodology. The selected elements and combinations 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 period: (a) Is the underlying project composed of clearly identifiable components for which emission reductions or enhancements of removals can be calculated independently?	No periods to overlap during the crediting period are expected.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	(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 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	According to the selected JI specific approach based on the Joint Implementation requirements in accordance with paragraph 9 (a) of the JI Guidance on	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	sources of leakage are to be calculated and which can be neglected?	criteria for baseline setting and monitoring, Version 03 and the "Methodology for calculation of greenhouse gas emission reductions achieved by eliminating above-standard methane leaks at gas distribution networks", developed by the Institute of Gas of the National Academy of Sciences of Ukraine to set the baseline (measurement and calculation of methane leaks) and elements of the Approved Clean Development Mechanism Methodology AM0023 Version 4.0, no leakage is expected.		
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 reductions	In the PDD the approach of estimation of emissions in the baseline scenario and in the project scenario is indicated.	OK	OK
43	If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project	PDD provides 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)	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	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?	(d) Emission reductions adjusted by leakage (Section E.6).		
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? (d) 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? (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?	(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. (b) The formulae used in PDD are consistent. (c) Key factors influencing baseline emissions and activity level of the project and risks associated with the project are taken into account, as appropriate. (d) Data sources used to calculate the estimates are clearly identified, reliable and transparent.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	(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, 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	(e) Emission factors were taken from the defined 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
	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?	Baseline emissions are calculated based on the JI-specific approach, based on the "Methodology for calculation of greenhouse gas emission reductions achieved by eliminating above-standard methane leaks at gas distribution networks" and 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" Forecasted emissions calculation is clearly provided in the PDD.	OK	OK
Approved CDM methodology approach only_Paragraphs 47(a) – 47(b)_Not applicable				
Environmental impacts				
48 (a)	Does the PDD list and attach	The environmental impacts of the project have been	**CAR 30**	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	sufficiently described **CAR 30.** 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 (b)	If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to Supporting Documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party?	No negative impact is expected as a result of the project implementation.	OK	OK
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?	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 does not provide for any negative environmental or social impact.	OK	OK

Guidelines for Users of the JI PDD form or DVM Paragraph	Check Item	Initial finding	Project participants' actions review	Final Conclusion
	(c) A description on whether and how the comments have been addressed?			
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 CLARIFICATION 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. Section A.2. should contain data on the starting date of the project activity.	A.2	02/03/2005 – the starting date of the project, when PJSC "Dniprogaz" commenced repair works at GDP (CGDP) gas equipment and gas fittings, flanged and threaded joints of gas distribution networks of PJSC "Dniprogaz" under the JI project.	The information is provided, the issue is closed.
CAR 02. The title of the body that issued the Letter of Endorsement is incorrect.	A.2	The Letter of Endorsement was issued by the State Environmental Investment Agency of Ukraine. Corrections have been made in the respective PDD Section	The information is provided, the issue is closed.
CAR 03. The date when the Letter of Endorsement was obtained is incorrect.	A.3	04/10/2012 - Letter of Endorsement No.2888/23/7 was issued.	Relevant corrections are made, the issue is closed.
CAR 04. Please provide information on the type of commercial activity "Dniprogaz". .	A.3	The type of economic activity according to the standard industrial classification of economic activities: 40.22.0 Gas distribution and supply 45.33.3 Gas pipeline works 45.21.4 Construction of local pipelines, communications and power lines	The issue is closed as relevant information is provided.
CAR 05. In PDD Section A.3. please provide USREOU code of PJSC "Dniprogaz".	A.3	USREOU Code: 20262860.	The issue is closed as relevant information is 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
CAR 06. Please provide information on participation of the country in the project activity in Section A.3.	A.3	PJSC "Dniprogaz" is responsible for the design, construction and installation work performed by its own staff or through contractors. It finances the project and does not receive any income. CEP Carbon Emissions Partners S.A. is a research and engineering organization. It is responsible for the development of project design documents for the joint implementation project. Besides, it will participate in determination, monitoring and verification of the project.	The issue is closed as relevant information is provided.
CAR 07. In Annex 1 to the PDD, name and patronymic of the person representing the project owner are mixed up.	A.3	Relevant corrections have been made. See Annex 1 to the PDD.	The issue is closed as corresponding changes are made.
CAR 08. The model of gas analyser in Figure 2 in Section A.4.2. differs from that for which specifications are provided. Please correct this discrepancy.	A.4.2	The discrepancy has been corrected. Figure 2 of the PDD shows FT-02V1 gas analyser, and Table 1 provides its specifications.	The corrections are made, the issue is closed.
CAR 09. GOST for sealants is incorrect. Please make corresponding amendments.	A.4.2	Sealants GOST 7338-90. Corrections were made. See PDD version 02.	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. The implementation schedule contains information on signing of the document (Memorandum of Understanding), which is non-existent. Please delete this information.	A.4.2	The irrelevant information has been deleted.	The information has been deleted, the issue is closed.
CAR 11. Entry 7 of the Project 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 changes are made.
CAR 12. Entry 5 of the implementation schedule lacks information on the number of gas fitting units in the period of January-December 2008.	A.4.2	Implementation of PETM programme, repair (replacement) of gas equipment: 355 GDPs (CGDPs) and 595 gas fittings (January-December 2008).	The issue is closed as relevant information is provided.
CAR 13. Please provide information on whether emission reductions are possible without the project activity.	A.4.3	Absence of the Project activity means that all equipment, including old units, that are still capable of working, and equipment characterized by worse leak-proofness than the one planned in the project activity, will be operated for a long time in the ordinary mode.	The issue is closed as relevant information is 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
		This makes it impossible to reduce methane emissions. Relevant corrections have been made in the PDD version 02.	
CAR 14. Please correct Tables of Section A.4.3.1 in line with the requirements of the Guidelines for users of the JI PDD form.	A.4.3	Tables of Section A.4.3.1 have been corrected.	The issue is closed as corresponding changes are made.
CAR 15. Table 2 in Section A.4.3.1. lacks the Total emission reductions over the crediting period.	A.4.3	Relevant corrections have been made in Table 2 of Section A.4.3.1. of the PDD version 02.	Corrections are made, the issue is closed.
CAR 16. Table 2 in Section A.4.3.1. provides an incorrect value of annual average of GHG emission reductions.	A.4.3	Relevant corrections have been made. Annual average emission reductions have been recalculated.	Corrections are made, the issue is closed.
CAR 17. Please provide the Total estimated GHG emission reductions and annual average emission reductions over the crediting period in Table 4 of Section A.4.3.1.	A.4.3	Relevant information is provided in Section A.4.3.1 of the PDD version 02.	The information is provided, the issue is closed.
CAR 18. The project has no approval of the Host Party and the investing country.	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.	The issue will be closed after the Letter of Approval is issued by the Host Party and country-investor.

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
		A Letter of Approval of Switzerland as the country-participant is not obtained at the current stage of the Project either.	
CAR 19. Section B.1. of the PDD by mistake mentions the second version of the Guidance on criteria for baseline setting and monitoring.	23	For baseline setting (identifying and calculation of methane leaks) the proposed project uses a JI-specific approach in accordance with paragraph 9 (a) of the "Guidance on criteria for baseline setting and monitoring", Version 03.	Corrections are made, the issue is closed.
CAR 20. Please provide the full title of the approved methodology AM0023 version 4.0, whose elements are used to set the baseline.	23	"Methodology for calculation of greenhouse gas emission reductions achieved through above-standard natural gas leak repair at the gas distribution networks". Corrections were made in the PDD version 02.	Corrections are made, the issue is closed.
CAR 21. The title of Supporting Document 1 is incorrect.	23	Complete information on all GDN components (GDP, CGDP gas equipment, shut-down and control valves of pipelines) included into the project boundary is provided in the Registry of gas distribution points, cabinet-type gas distribution point and gas fittings of gas distribution networks of the JI project PJSC	The issue is closed as corresponding corrections are 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
		"Dniprogaz" "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 "Dniprogaz" (Supporting Document 1).	
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.	Relevant corrections have been made.
CAR 23. Please check indexes in the description of formulae in Tables of Section B.1.	24	The information has been verified, relevant corrections have been made.	Verified. The issue is closed.
CAR 24. Volume to weight conversion factor for methane leaks is incorrect. Please make the necessary corrections.	24	$ConvFactor$ - volume to weight conversion factor for methane leaks, t CH_4/m^3 CH_4. Under normal conditions - zero degrees Celsius and 0.1013 MPa, $ConvFactor$=0.0007168 t/m^3. Relevant correcions have been made in the PDD version 03.	The issue is closed as corresponding changes are made.
CAR 25.A Table in Section B.1 provides incorrect information on QA/QC procedures (to be) applied for the parameter GWP_{CH_4}.	24	If GWP_{CH_4} of methane changes, the baseline and the project scenario will be recalculated based on the new values. Relevant information is presented in the PDD version 03.	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 25. In Table in Section B.1, please provide information on QA/QC procedures (to be) applied for the parameter GWP_{CH_4}.	24	If GWP_{CH_4} of methane changes, the baseline and the project scenario will be recalculated based on the new values. Relevant information is presented in the PDD version 02.	The information is provided, the issue is closed.
CAR 26. Time of determination/monitoring for parameter GWP_{CH_4} is incorrect.	24	Throughout the crediting period Relevant correcions have been made in the PDD version 02.	The issue is closed, corrections are made.
CAR 27. The starting date of the expected operational lifetime cannot be before the starting date of the project.	34(b)	The expected operational lifetime of the project in years and months is 12 years and 10 months / 154 months: from 02/03/2005 to 31/12/2017 if the Kyoto Protocol is prolonged.	The corrections are accepted, the issue is closed.
CAR 28. Please add to the description of $K^g_{i',h}$ and $K^n_{i"}$ parameters indexes corresponding to GDN component number.	36 (b) (v)	$K^g_{i',h}$ - Natural gas leak factor of GDN component i' in CLP: $K^n_{i"}$ - Natural gas leak factor corresponding to EPNGL of GDN component $i"$	The issue is closed.
CAR 29. Please provide explanation to the formula provided in Section E.5 of the PDD.	42	For detailed explanation see Section E of the corrected PDD.	The issue is closed.
CAR 30. The date of issue of Decree of the	48 (a)	Decree of the Cabinet of Ministers of	The corrections are made, 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
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.		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".	issue is closed.
CL 01. Please provide information on the causes of methane leaks to be repaired under the project, in Section A.2 of the PDD.	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 reference to the Law of Ukraine "On ratification of the Kyoto Protocol to the United Nations Framework Convention on Climate Change" in Section A.4.1.1 of the PDD.	A. 4.1.1	Relevant reference has been provided. See Section A.4.1.1 of the PDD.	The issue is closed as relevant reference is provided.
CL 03. Please provide references to AM0023 methodology in Section B.1. of the PDD.	23	Relevant reference has been provided. See Section B.1. of the PDD.	The issue is closed as relevant reference is provided.