



VERIFICATION REPORT

VEMA S.A.

VERIFICATION OF THE JI PROJECT

REDUCTION OF GREENHOUSE GASES EMISSIONS BY GASIFICATION OF ODESA REGION

Third periodic

REPORT NO. UKRAINE-VER/0522/2012

REVISION No. 03

for the period 01/01/2012 – 31/05/2012

BUREAU VERITAS CERTIFICATION



**BUREAU
VERITAS**

VERIFICATION REPORT

Date of first issue: 09/07/2012	Organizational unit: Bureau Veritas Certification Holding SAS
Client: VEMA S.A.	Client ref.: Fabian Knodel

Summary:
Bureau Veritas Certification has made the second periodic verification for the period from January 1, 2012 to May 31, 2012 of the "Reduction of greenhouse gases emissions by gasification of Odesa region" project of VEMA S.A., located in Odesa region, Ukraine, and applying JI specific approach, 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 (but for the crediting period) 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 verification scope is defined as a periodic independent review and ex post determination by the Accredited Entity of the monitored reductions in GHG emissions during defined verification period, and consisted of the following three phases: i) desk review of the monitoring report against 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 verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the verification process is a list of Clarification, Corrective Actions Requests, Forward Actions Requests (CR, CAR and FAR), presented in Appendix A.

In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in approved project design documents. Installed equipment that is essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reduction is calculated without material errors and the ERUs issued totalize 642 561 tonnes of CO₂ equivalent for the monitoring period from 01/01/2012 to 31/05/2012.

Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and related to the approved project baseline and monitoring plan, and its associated documents.

Report No.: UKRAINE-ver/0522/2012	Subject Group: JI
Project title: Reduction of greenhouse gases emissions by gasification of Odesa region	
Work carried out by: Oleg Skoblyk – Team Leader, Climate Change Verifier	
Work reviewed by: Ivan Sokolov - Internal Technical Reviewer O. Kuzmenko - technical specialist	
Work approved by: Ivan Sokolov – Operational Manager	
Date of this revision: 24/07/2012	Rev. No.: 03
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1 INTRODUCTION

VEMA S.A. has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project “Reduction of greenhouse gases emissions by gasification of Odesa region” (hereafter called “the project”) located in Odesa region, Ukraine.

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

The verification covers the period from January 1, 2012 to May 31, 2012.

1.1 Objective

Verification is the periodic independent review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions during defined verification period.

The objective of verification can be divided in Initial Verification and Periodic Verification.

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.

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1.2 Scope

The verification scope is defined as an independent and objective review of the project design document, the project’s baseline study, and monitoring plan, and monitoring report and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

1.3 Verification Team

The verification team consists of the following personnel:



Oleg Skoblyk

Bureau Veritas Certification, Team Leader, Climate Change Verifier

This verification report was reviewed by:

Ivan Sokolov

Bureau Veritas Certification, Internal Technical Reviewer

O.Kuzmenko

Bureau Veritas Certification, technical specialist

2 METHODOLOGY

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

In order to ensure transparency, a verification 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 verifying the identified criteria. The verification protocol serves the following purposes:

- It organizes, details and clarifies the requirements a JI project is expected to meet;

- It ensures a transparent verification process where the verifier will document how a particular requirement has been verified and the result of the verification.

The completed verification protocol is enclosed in Appendix A to this report.

2.1 Review of Documents

The Monitoring Report (MR) submitted by VEMA S.A. and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), Approved CDM methodology, Determination Report of the project issued by Bureau Veritas Certification Holding SAS No. UKRAINE-det/0314/2011 as of 10/08/2011, Guidance on criteria for baseline setting and monitoring, Host party criteria, the Kyoto Protocol, Clarifications on Verification Requirements to be Checked by an Accredited Independent Entity were reviewed.

The verification findings presented in this report relate to the Monitoring Report version 01 of June 20, 2012 and version 02 of July 4, 2012, version 03 of July 16, 2012, version 04 of July 23, 2012 and project as described in the determined PDD.



2.2 Follow-up Interviews

On 02/07/2012 Bureau Veritas Certification verification team conducted a visit to the project site, PJSC “Odesagas”, and performed (on-site) interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of VEMA S.A. and PJSC “Odesagas” were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
PJSC “Odesagas”	<ul style="list-style-type: none"> ∅ Organizational structure ∅ Responsibilities and authorities ∅ Personnel training ∅ Quality control procedures and technology ∅ Equipment use (records) ∅ Metering equipment control ∅ Metering record keeping system, database
Consultant: VEMA S.A.	<ul style="list-style-type: none"> ∅ Baseline methodology ∅ Monitoring plan ∅ Monitoring report ∅ Deviations from the PDD

2.3 Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the verification 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 GHG emission reduction calculation.

If the Verification Team, in assessing the monitoring report and supporting documents, identifies issues that need to be corrected, clarified or improved with regard to the monitoring requirements, it should raise these issues and inform the project participants of these issues in the form of:

- (a) Corrective action request (CAR), requesting the project participants to correct a mistake that is not in accordance with the monitoring plan;
- (b) Clarification request (CL), requesting the project participants to provide additional information for the Verification Team to assess compliance with the monitoring plan



(c) Forward action request (FAR), informing the project participants of an issue, relating to the monitoring that needs to be reviewed during the next verification period.

The Verification Team will make an objective assessment as to whether the actions taken by the project participants, if any, satisfactorily resolve the issues raised, if any, and should conclude its findings of the 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 VERIFICATION CONCLUSIONS

In the following sections, the conclusions of the verification are stated.

The findings from the desk review of the original monitoring documents and the findings from interviews during the follow up visit are described in the Verification Protocol in Appendix A.

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 8 Corrective Action Requests and 4 Clarification Requests.

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

3.1 Remaining issues and FARs from previous verifications

There are no any remaining CLs and FARs from previous verifications.

3.2 Project approval by Parties involved (90-91)

The project was approved by the host Party, Ukraine, which is confirmed by the Letter of Approval No. 2401/23/7 dated 05/09/2011 issued by State Environmental Investment Agency of Ukraine. The written project approval by Switzerland, the other Party involved, has been issued by the Federal Office for the Environment FOEN of Switzerland (Letter of Approval No.J294-0485 dated 23/08/2011).

The abovementioned written approvals are unconditional.



The identified areas of concern as to the project approval by the parties involved, project participants responses and Bureau Veritas Certification's conclusions are described in Appendix A to this report (refer to CAR 01).

3.3 Project implementation (92-93)

The project which is implemented by PJSC «Odesagas» is aimed at the reduction of greenhouse gas emissions by changing the structure of fuel consumption in industrial, municipal, administrative and private sectors of Odesa region while replacing solid and liquid fuels with natural gas. The project provides for construction and expansion of gas distribution systems (GDS) of Odesa region, which will also increase the energy efficiency of thermal power generation due to the transition of existing thermal power plants to natural gas, and installation of individual heating and hot water supply systems characterized by better efficiency compared to centralized systems.

In the absence of the project activity existing systems of transportation and preparation of energy carrier as well as heating systems would be used that would result in the use by the consumers of less ecological fuel (fuel oil, coal, diesel oil), which would generate a significant amount of greenhouse gases (GHG) when burned. This scenario is considered to be the baseline scenario of the project.

In general, the project activity is aimed at ensuring the supply of gaseous fuels (gasification) to end users through the construction and reconstruction of gas distribution network, replacement of solid and liquid fuels and electricity with natural gas, increase in heat energy efficiency, and, as a result, reduction of greenhouse gases under the Joint Implementation Mechanism (JI).

Implementation of project activities started in late 2003, as provided for in the determined PDD. However, emission reductions achieved in 2003 are conservatively excluded from the calculation. Therefore, 01/01/2004 was taken as a starting date of the crediting period.

Project implementation status in the reporting period of 01/01/2012 – 31/05/2012, including the project milestones, is provided in Table 2 below.

Table 2. Project implementation status during the monitoring period

The length of gas pipelines built during the period 01/01/2012 – 31/05/2012, thousand km
0,02140085



Status of project activity implementation during the considered monitoring period complies with the determined PDD version 02.

The verification team can confirm, through the visual inspection and document review that all physical features of the proposed JI project activity including data collecting and storage systems have been implemented according to the PDD.

The monitoring system is in place.

Monitoring equipment, such as gas meters, is installed and meets industry standards of Ukraine. All monitoring equipment is included in the detailed verification (calibration) plan and tested at intervals prescribed by the manufacturers of such equipment.

The impact of the project “Reduction of greenhouse gases emissions by gasification of Odesa region” on the environment during the construction work can be assessed as permissible. Project facilities are not included in the list of activities and facilities of environmental hazard. Completed analysis of the facilities impact of the environment, which considers all factors, showed that in the normal technical operational mode they will neither cause any negative processes in the environment of the region, nor lead to any negative social and economic consequences and the risk of accidents and their possible impact is minimized.

The identified areas of concern as to the project implementation, project participants responses and Bureau Veritas Certification’s conclusions are described in Appendix A to this report (refer to CAR 02).

3.4 Compliance of the monitoring plan with the monitoring methodology (94-98)

The monitoring occurred in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website.

For calculating the emission reductions, key factors, such as total amount of the consumed natural gas, data on fuel types used by the consumers prior to the gasification and others, influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account.

Data sources used for calculating emission reductions such as appropriately calibrated measuring devices, enterprise’s data, National Inventory of anthropogenic greenhouse gas emissions by sources and removals by sinks in Ukraine, sectoral methodologies, official data on carbon dioxide emission factors for the power grid of Ukraine, official data



of Ministry of Fuel and Energy of Ukraine are clearly identified, reliable and transparent.

Emission factors, including default emission factors, are selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.

The calculation of emission reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner.

The identified areas of concern as to the compliance of the monitoring plan with the monitoring methodology, project participants responses and Bureau Veritas Certification's conclusions are described in Appendix A to this report (refer to CAR 03 - CAR 06, CL 01 - CL 03).

3.5 Revision of monitoring plan (99-100)

Not applicable.

3.6 Data management (101)

The data and their sources, provided in monitoring report, are clearly identified, reliable and transparent.

The implementation of data collection procedures is in accordance with the PDD and revised monitoring plan, including the quality control and quality assurance procedures. The project monitoring is conducted according to standard operational practices established at the enterprise within the existing system of the data collection, accounting and reporting. Information on gas consumption is submitted by the legal entities to the Gas accounting department of PJSC "Odesagas" every month. Also, the department for control of gas consumption by consumers for Odesa MPU conducts monthly inspections of meters, issues the statements, signed by the enterprise, and forwards them to the Gas accounting service. The Gas accounting service of PJSC "Odesagas" submits the information to the Gas supply regime department for its processing into basic form by "Atlas SYBIL" program. Gas supply data processed by "Atlas SYBIL" program are provided to the project developer "VEMA S.A.". The information regarding natural gas consumption by the individuals comes to the customer service department of PJSC "Odesagas" in form of paid bills by the consumers. The department for control of gas consumption by consumers for Odesa MPU also conducts monthly inspections of meters, issues the statements, signed by the individuals, and forwards them to the customer service department of PJSC "Odesagas". The customer service department processes received information and records it into "Gasolina" program. The data on natural gas supply volume processed by «Gasolina»

program are then provided to “VEMA S.A.”. The length of gas distribution systems implemented under the project is recorded by the technical and assembly service of PJSC “Odesagas”.

Structure of data collection as a part of the project monitoring is shown in Figure 1.

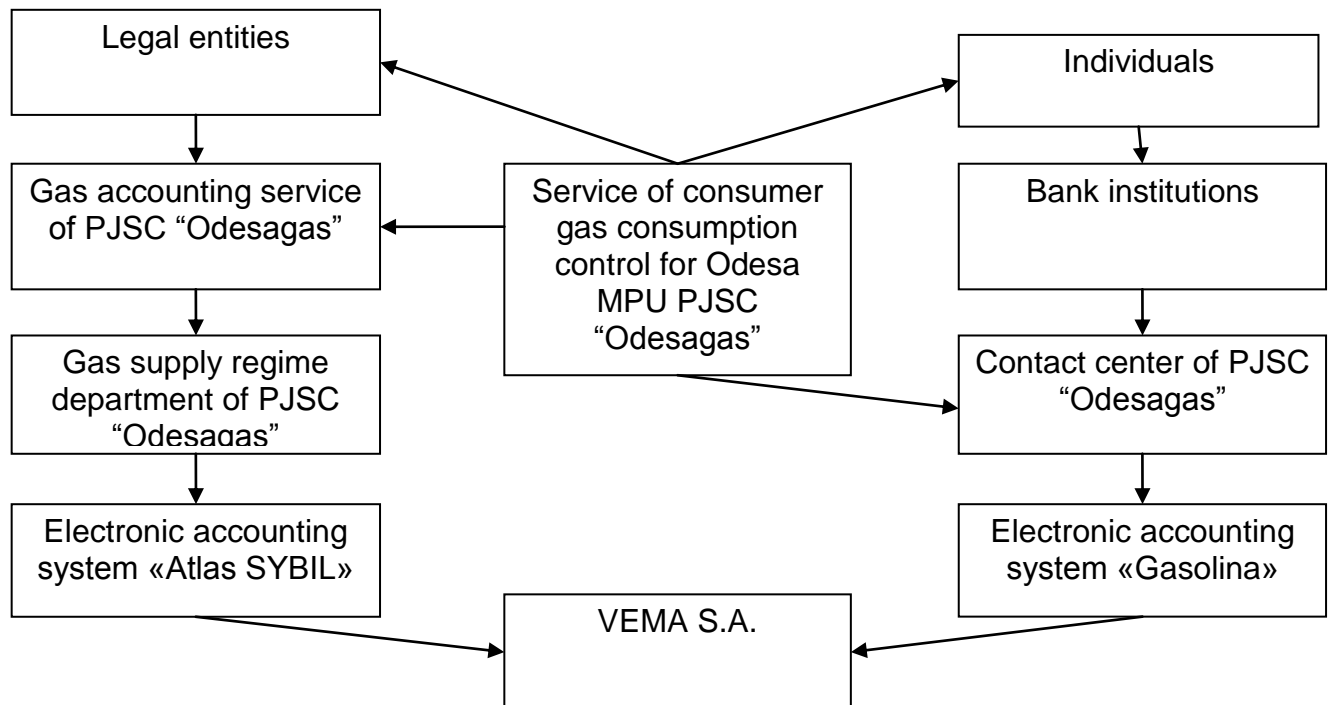


Figure 1 Structure of monitoring data collection

The function of the monitoring equipment, including its calibration status, is in order. The measurement equipment used for project monitoring is serviced, calibrated and maintained in accordance with the original manufacturer’s instructions and industry standards; relevant records on measuring devices are kept as required.

The evidence and records used for the monitoring are maintained in a traceable manner. All necessary information for monitoring of GHGs emission reductions are stored in paper and/or electronic formats. For accounting of the natural gas consumed by the legal entities and individuals the electronic accounting programs “Atlas SYBIL” and “Gasolina” are used; the department for software maintenance of PJSC “Odesagas” is responsible for proper operation of these programs.

The data collection and management system for the project is in accordance with the monitoring plan.

The Monitoring Report provides sufficient information on the assigning roles, responsibilities and authorities for implementation and maintenance



of monitoring procedures including control of data. The verification team confirms effectiveness of the existing management and operational systems and found them eligible for reliable project monitoring.

The identified areas of concern as to the data management, project participants responses and Bureau Veritas Certification's conclusions are described in Appendix A to this report (refer to CAR 07, CAR 08, CL 04).

3.7 Verification regarding programmes of activities (102-110)

Not applicable.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the third periodic verification for the period from January 1, 2012 to May 31, 2012 of the "Reduction of greenhouse gases emissions by gasification of Odesa region" project in Odesa region, Ukraine, which applies JI specific approach. The verification 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 verification consisted of the following three phases: i) desk review of the monitoring report against 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 verification report and opinion.

The management of VEMA S.A. is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring Plan indicated in the final PDD version 02. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification verified the Project Monitoring Report version 04 for the reporting period from 01/01/2012 to 31/05/2012 as indicated below. Bureau Veritas Certification confirms that the project is implemented as per approved PDD version. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions.

The emission reductions achieved under the project for the period from 01/01/2012 to 31/05/2012 not significantly differ from the amount of



emission reductions provided for the same period in the determined PDD. Emission reductions estimated in the determined PDD version 02 and the MR version 04 are provided in Table 3 of this Report.

Table 3 Emission reductions estimated in the determined PDD version 02 and the MR version 02

Period	Estimated GHG emission reductions stated in the determined PDD in tonnes of 2 q	Ex-post GHG emission reductions stated in the Monitoring report in tonnes of 2 q
01/01/2012-31/05/2012	409 173	642 561

This is because at the time of PDD development it was impossible to obtain accurate data necessary for calculating GHG emission reductions. The date when the determined PDD version 02 was written is 05/08/2011, and this monitoring report covers the period from 01/01/2012 to 31/05/2012. So during the process of PDD writing it was impossible to accurately predict all the factors that influenced the reduction of GHG emissions. In the determined PDD GHG emission reductions were calculated by dividing the total emission reductions by 12 (12 months) and multiplying by the number of months (5 of 2012) covering the monitoring period.

Bureau Veritas Certification can confirm that the GHG emission reduction is calculated without material misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the approved project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated, we confirm the following statement:

Reporting period: From 01/01/2012 to 31/05/2012

Baseline emissions : 1 847 756 tonnes of CO2 equivalent.
 Project emissions : 1 205 195 tonnes of CO2 equivalent.
 Emission Reductions : 642 561 tonnes of CO2 equivalent.



5 REFERENCES

Category 1 Documents:

Documents provided by the project participants that relate directly to the GHG components of the project.

/1/	Monitoring Report of the JI project "Reduction of greenhouse gases emissions by gasification of Odesa region" for the period from 01/01/2012 to 31/05/2012 version 01 dated 20/06/2012
/2/	Monitoring Report of the JI project "Reduction of greenhouse gases emissions by gasification of Odesa region" for the period from 01/01/2012 to 31/05/2012 version 02 dated 04/07/2012
/3/	Monitoring Report of the JI project "Reduction of greenhouse gases emissions by gasification of Odesa region" for the period from 01/01/2012 to 31/05/2012 version 03 dated 16/07/2012
/4/	Monitoring Report of the JI project "Reduction of greenhouse gases emissions by gasification of Odesa region" for the period from 01/01/2012 to 31/05/2012 version 04 dated 23/07/2012
/5/	Annex 1 to the Monitoring Report of the JI project "Reduction of greenhouse gases emissions by gasification of Odesa region" for the period from 01/01/2012 to 31/05/2012. Values of the project monitoring parameters in the period of 01/01/2012 to 31/05/2012
/6/	Annex 2 to the Monitoring Report of the JI project "Reduction of greenhouse gases emissions by gasification of Odesa region" for the period from 01/01/2012 to 31/05/2012: Registry of gas networks with legislative normative documentation (Excel files)
/7/	Annex 3 to the Monitoring Report of the JI project "Reduction of greenhouse gases emissions by gasification of Odesa region" for the period from 01/01/2012 to 31/05/2012: Calculation of GHG emission reductions due to gasification of Odesa region (Excel files (3: 3.1.-3.18))
/8/	Annex 4 to the Monitoring Report of the JI project "Reduction of greenhouse gases emissions by gasification of Odesa region" for the period from 01/01/2012 to 31/05/2012: Types of metering equipment (Excel file (4: 4.1-4.17))
/9/	Project Design Document of the project "Reduction of greenhouse gases emissions by gasification of Odesa region", version 02 dated 05/08/2011
/10/	Determination Report of the project "Reduction of greenhouse gases emissions by gasification of Odesa region" No. UKRAINE-det/0314/2011 of 10/08/2011 issued by Bureau Veritas Certification
/11/	Letter of Approval of the Joint Implementation project "Reduction of greenhouse gases emissions by gasification of Odesa region" #2401/23/7 of 05/09/2011 issued by State Environmental Investment Agency of Ukraine



/12/	Letter of Approval of the JI project "Reduction of greenhouse gases emissions by gasification of Odesa region" # J294-0485 issued by the Federal Office for the Environment of Switzerland dated 23/08/2011
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Category 2 Documents:

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

/1/	Guidance on Criteria for Baseline Setting and Monitoring, version 02, JISC
/2/	Approved CDM methodology ACM0009 «Consolidated baseline and monitoring methodology for fuel switching from coal or petroleum fuel to natural gas», Version 3.2
/3/	National inventory report of anthropogenic greenhouse gas emissions by sources and removals by sinks in Ukraine for 1990-2010
/4/	Report «Determination of change of specific energy data of heat supply system in the course of gasification», developed by "Ukrenergoprom-2" of 24/06/2011
/5/	Order of the National Environmental Investment Agency of Ukraine (NEIA) № 75 of 12/05/2011 on approval of carbon dioxide emission indicators for 2011
/6/	Operational environment of "Sybil" software. Extract from the log of actual gas consumption
/7/	Operational environment of "Gasolina" software. Extract from the log of actual gas consumption
/8/	Kominternivske district state administration. Information on the main type of fuel used in settlements of Kominternivske district prior to gasification
/9/	Kotovsk district state administration. Information on the main type of fuel used in settlements of Kotovsk district prior to gasification
/10/	Krasni Okny district state administration. Information on the main type of fuel used in settlements of Krasni Okny district prior to gasification
/11/	Shyryayeve district state administration. Information on the main type of fuel used in settlements of Shyryayeve district prior to gasification
/12/	Bilyaivka district state administration. Information on the main type of fuel used in settlements of Bilyaivka district prior to gasification
/13/	Annex to the Order of transfers of enterprises on reserve fuel types



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	approved by Decree of CMU dated 25/03/09, № 263. Schedule of industrial enterprises (Odessa region) transfer to reserve fuel during the heating season 2011/2012
/14/	The act of acceptance to exploitation of completed construction projects of gas supply system dated 17/01/2012
/15/	The act of acceptance of gas equipment for comprehensive checking (commissioning) (Form U) dated 12/03/2012
/16/	The act of acceptance to exploitation of completed construction projects of gas supply system dated 30/03/2012
/17/	The act of acceptance of gas equipment for comprehensive checking (commissioning) (Form U) from 14/02/2012
/18/	The act of acceptance to exploitation of completed construction projects of gas supply system dated 09/04/2012
/19/	The act of acceptance of gas equipment for comprehensive checking (commissioning) gas supply of apartment house number 69/2 , Fontanskaya doroga Street. Odessa city
/20/	The act of acceptance to exploitation of completed construction projects of gas supply system dated 16/02/2012
/21/	The act of acceptance to exploitation of completed construction projects of gas supply system dated 31/01/2012
/22/	Act # 172 of lifting and transferring the gas meter to calibrate at Lenin st. 41a/7
/23/	Act # 117 of lifting and transferring the gas meter to calibrate at Lazo-2 st.
/24/	Act # 116 of lifting and transferring the gas meter to calibrate at Lazo-4 st.
/25/	Act # 142 of lifting and transferring the gas meter to calibrate at Shorsa-3a st.
/26/	Act # 193 of lifting and transferring the gas meter to calibrate at 2nd department
/27/	Act # 162 of lifting and transferring the gas meter to calibrate at Lenin st. 41/3
/28/	Act # 197 of lifting and transferring the gas meter to calibrate at Lenin st. 8
/29/	Act # 164 of lifting and transferring the gas meter to calibrate at Lenin st. 39/2
/30/	Act # 166 of lifting and transferring the gas meter to calibrate at Lenin st. 4
/31/	Passport of household gas meter # 357 (Actaris Gallus-2000)
/32/	Passport of household gas meter # 385 (Actaris Gallus-2000)
/33/	Passport of household gas meter # 359 (Actaris Gallus-2000)
/34/	Passport of household gas meter # 575 (Actaris Gallus-2000)
/35/	Passport of household gas meter # 577 (Actaris Gallus-2000)



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/36/	Passport of household gas meter # 574 (Actaris Gallus-2000)
/37/	Passport of household gas meter # 567 (Actaris Gallus-2000)
/38/	Passport of household gas meter # 573 (Actaris Gallus-2000)

Persons interviewed:

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

	Name	Organization	Position
/1/	Orlova N.G.	PJSC "Odesagas"	head of the planning and technical department
/2/	Stryzhak S.O.	PJSC "Odesagas"	head of the street pipelines and yard input service
/3/	Hisko O.M.	PJSC "Odesagas"	head of the programming department
/4/	Pogosov O.G.	"CEP" LLC	J1 project consultant of VEMA S.A.
/5/	Vorobyov Ye.V.	"CEP" LLC	Consultant of VEMA S.A.



APPENDIX A: PROJECT VERIFICATION PROTOCOL

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VERIFICATION PROTOCOL

Table 1. Check list for verification, according to the JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 01)

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project approvals by Parties involved				
90	Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	The project has been approved by both the Host party (Ukraine) and the other Party involved (Switzerland). The Letters of Approval were issued by NFPs of the Parties involved. Two Letters of Approval were available at the beginning of the first verification of the project. CAR 01. The name of authority that issued the Letter of Approval from Host country is stated incorrectly.	CAR 01	OK
91	Are all the written project approvals by Parties involved unconditional?	Yes, all the written project approvals by Parties involved are unconditional.	OK	OK
Project implementation				
92	Has the project been implemented in accordance with the PDD regarding which the	The implementation of the measures under the project during the monitoring period was carried out according to the determined PDD	OK	OK

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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	determination has been deemed final and is so listed on the UNFCCC JI website?	version 02. Detailed information on construction and reconstruction of gas distribution networks (GDNs) for each department and division is provided in the supporting document "Annex 2. Registry of gas networks with legislative normative documentation" (Excel file).		
93	What is the status of operation of the project during the monitoring period?	The project measures were implemented without any deviations from the implementation plan included in the determined PDD version 02. CAR 02. Please check the value of the length of gas pipelines that was built in the monitoring period. Length specified in MR does not meet the length, as indicated in Annex 3 and 2 to MR.	CAR 02	OK
Compliance with monitoring plan				
94	Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	The monitoring occurred in accordance with the monitoring plan included in the determined PDD regarding which the determination has been deemed final. CL 01. Please in Section B. provide information about the method of obtaining values of the parameters provided for calculating emissions reductions in the monitoring period.	CL 01	OK
95 (a)	For calculating the emission reductions or enhancements of	For calculating the emission reductions, such key factors as total quantity of	CAR 03	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) of the DVM, influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project taken into account, as appropriate?	consumed natural gas, information on types of fuel consumed by the end consumers before gasification, etc. influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account. CAR 03. Please include in MR that Annex 3, "Calculation of GHG emission reductions due to gasification of Odesa region" contains other excel files.		
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	Data sources used for calculating emission reductions or enhancements of net removals are clearly identified, reliable and transparent. CL 02. Please provide the link to "Guidance on criteria for baseline setting and monitoring" (Version 2). CL 03. Please provide the link to The national inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases in Ukraine for 1990-2010 in the section D.2.4	CL 02 CL 03	OK OK
95 (c)	Are emission factors, including default emission factors, if used for calculating the emission reductions or enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and	Yes, emission factors, including default emission factors, that were used for calculating the emission reductions, were selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.	OK	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	appropriately justified of the choice?			
95 (d)	Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and the most plausible scenarios in a transparent manner?	<p>Calculation of emission reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner.</p> <p>CAR 04. The coefficient $k_{4, pipes}^b$ for fuel oil for central heating system that shown in Table 3. is not correct.</p> <p>CAR 05. In Table 6 values of Net calorific value of natural gas specified incorrectly, according to mentioned source and Appendix 3 (3: 3.1-3.18).</p> <p>CAR 06. Please indicate the value of emission reductions, emissions from the project and baseline GHG emissions in tCO₂ equivalent.</p>	<p>CAR 04</p> <p>CAR 05</p> <p>CAR 06</p>	<p>OK</p> <p>OK</p> <p>OK</p>
Applicable to JI SSC projects only				
96	<p>Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis?</p> <p>If the threshold is exceeded, is the maximum emission reduction level estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined?</p>	Not applicable	Not applicable	Not applicable
Applicable to bundled JI SSC projects only				
97 (a)	Has the composition of the	Not applicable	Not	Not



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	bundle not changed from that is stated in F-JI-SSCBUNDLE?		applicable	applicable
97 (b)	If the determination was conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report?	Not applicable	Not applicable	Not applicable
98	If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods, are the monitoring periods per component of the project clearly specified in the monitoring report? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past?	Not applicable	Not applicable	Not applicable
Revision of monitoring plan				
Applicable only if monitoring plan is revised by project participant				
99 (a)	Did the project participants provide an appropriate justification for the proposed revision?	Not applicable.	Not applicable	Not applicable
99 (b)	Does the proposed revision improve the accuracy and/or applicability of information	Not applicable	Not applicable	Not applicable



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans?			
Data management				
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	<p>The implementation of data collection procedures, including the quality control and quality assurance procedures, are in accordance with the determined PDD and the monitoring plan.</p> <p>CAR 07. The procedure for monitoring consumption of fuel gas enterprise PJSC "Odesagas" described in MR is not full. Please provide information on the control of natural gas by legal entities.</p> <p>CAR 08. Links to Resolution NERC as of 04/01/2000 № 1 is not correct. Please provide the correct link.</p> <p>CL 04. Please provide information about possible trainings of personal of PJSC "Odesagas" in the way of installing new equipment.</p>	<p>CAR 07</p> <p>CAR 08</p> <p>CL 04</p>	<p>OK</p> <p>OK</p> <p>OK</p>
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	All the equipment, involved in the project monitoring, operates, is calibrated and maintained according to manufacturer's instructions and standards of the industry.	OK	OK



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	All the information that is necessary for GHG emission reductions monitoring is stored in paper and/or electronic formats.	OK	OK
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	The data collection and management system for the project is in accordance with the PDD and the monitoring plan. The verification team confirms the effectiveness of the existing management and operating systems and considers them suitable for reliable monitoring of the project.	OK	OK
Verification regarding programs of activities (additional elements for assessment)				
102	Is any JPA that has not been added to the JI PoA not verified?	Not applicable	Not applicable	Not applicable
103	Is the verification based on the monitoring reports of all JPAs to be verified?	Not applicable	Not applicable	Not applicable
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	Not applicable	Not applicable	Not applicable
104	Does the monitoring period not overlap with previous monitoring periods?	Not applicable	Not applicable	Not applicable
105	If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its	Not applicable	Not applicable	Not applicable



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	findings in writing?			
Applicable to sample-based approach only				
106	<p>Does the sampling plan prepared by the AIE:</p> <p>(a) Describe its sample selection, taking into account that:</p> <p>(i) For each verification that uses a sample-based approach, the sample selection shall be sufficiently representative of the JPAs in the JI PoA such extrapolation to all JPAs identified for that verification is reasonable, taking into account differences among the characteristics of JPAs, such as:</p> <ul style="list-style-type: none"> - The types of JPAs; - The complexity of the applicable technologies and/or measures used; - The geographical location of each JPA; - The amounts of expected emission reductions of the JPAs being verified; 	Not applicable	Not applicable	Not applicable



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	<ul style="list-style-type: none"> - The number of JPAs for which emission reductions are being verified; - The length of monitoring periods of the JPAs being verified; and - The samples selected for prior verifications, if any? 			
107	Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation?	Not applicable	Not applicable	Not applicable
108	Has the AIE made site inspections of at least the square root of the number of total JPAs, rounded to the upper whole number? If the AIE makes no site inspections or fewer site inspections than the square root of the number of total JPAs, rounded to the upper whole number, then does the AIE provide a reasonable explanation and justification?	Not applicable	Not applicable	Not applicable
109	Is the sampling plan available for submission to the secretariat for	Not applicable	Not applicable	Not applicable



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DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	the JISC's ex ante assessment? (Optional)			
110	If the AIE learns of a fraudulently included JPA, a fraudulently monitored JPA or an inflated number of emission reductions claimed in a JI PoA, has the AIE informed the JISC of the fraud in writing?	Not applicable	Not applicable	Not applicable



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Table 2. Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by verification team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
CAR 01. The name of authority that issued the Letter of Approval from Host country is stated incorrectly.	90	The project obtained approval from Ukraine (the Host country) in September 2011 (Letter of Approval No.2401/23/7, issued by the State Environmental Investment Agency of Ukraine dated 05/09/2011).	The issue is closed based on relevant corrections made in the MR version 04.
CAR 02. Please check the value of the length of gas pipelines that was built in the monitoring period. Length specified in MR does not meet the length, as indicated in Annex 3 and 2 to MR.	93	The length of gas pipelines that was built in the period 01/01/2012 – 05/31/2012 is 0.02140085. Error occurred because of rounding values in Appendix 2 and 3.	The issue is closed taking into account changes made in the MR.
CAR 03. Please include in MR that Annex 3, "Calculation of GHG emission reductions due to gasification of Odesa region" contains other excel files.	93	"Annex 3: Calculation of GHG emission reductions due to gasification of Odesa region" (3: 3.1-3.18).	The issue is closed based on the information provided.
CAR 04. The coefficient $k_{4, pipes}^b$ for fuel oil for central heating system that shown in Table 3. is not correct.	95 (d)	Efficiency factor that takes into account heat energy losses in the course of heat carrier transportation to end consumer, in the baseline scenario for fuel oil for central heating system is 0.844.	The issue is closed taking into account changes made in the MR.
CAR 05. In Table 6 values of Net calorific value of natural gas specified incorrectly, according to mentioned source and Appendix 3	95 (d)	Mistake has been fixed. See. MR version 04.	The issue is closed taking into account changes made in the MR.



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(3: 3.1-3.18).			
CAR 06. Please indicate the value of emission reductions, emissions from the project and baseline GHG emissions in tCO ₂ equivalent.	95 (d)	All values of emission reductions, emissions from the project and baseline emissions are listed in tCO ₂ equivalent. See MR version 04.	The issue is closed based on corresponding values in appropriate units.
CAR 07. The procedure for monitoring consumption of fuel gas enterprise PJSC "Odesagas" described in MR is not full. Please provide information on the control of natural gas by legal entities.	101 (a)	<p>PJSC "Odesagas" carries out the monitoring of natural gas consumption by legal entities in the following way:</p> <ul style="list-style-type: none"> - Legal entities supply information on gas consumption to the Gas accounting department every month. - The Department of consumer gas consumption control conducts monthly inspections of meters, executes statements signed by enterprises and transfers them to the Gas accounting department. - The Gas accounting department provides information to the Gas supply regime department for its processing into basic form by "Atlas SYBIL" program. - Indices of gas supply volume processed by "Atlas SYBIL" program are delivered to project developer «VEMA S.A.». 	The issue is closed based on the information provided.
CAR 08. Links to Resolution NERC as of 04/01/2000 № 1 is not correct. Please provide the correct link.	101 (a)	The correct link was given in Section C.3. PDD	The issue is closed on the basis of the correct link in the updated version of MR.
CL 01. Please in Section B. provide information about the method of	94	Monitoring of the project activity consists in measuring natural gas consumption by	The issue is closed on the



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obtaining values of the parameters provided for calculating emissions reductions in the monitoring period.		end customers and control over the length of gas distribution systems constructed under the project. Other parameters are obtained by calculation or from state statistics and inventory.	basis of the information provided.
CL 02. Please provide the link to "Guidance on criteria for baseline setting and monitoring" (Version 2).	101 (a)	Relevant links were provided in the MR version 04.	The issue is closed based on the links provided in the MR version 04.
CL 03. Please provide the link to The national inventory report of anthropogenic emissions by sources and removals by sinks of greenhouse gases in Ukraine for 1990-2010 in the section D.2.4	95 (b)	Relevant links were provided in the MR version 04.	The issue is closed based on the links provided in the MR version 04.
CL 04. Please provide information about possible trainings of personal of PJSC "Odesagas" in the way of installing new equipment.	101 (a)	In case of new equipment implementation (the equipment which has not been used by this enterprise before), the company-manufacturer or the company-supplier of this equipment shall conduct trainings on the peculiarities of equipment operation for the personnel. During the monitoring period the equipment which would require special training for personnel was not installed.	The information is provided, the issue is closed.