

## VERIFICATION REPORT VEMA S.A.

## VERIFICATION OF THE JI PROJECT

# REDUCTION OF GREENHOUSE GASES EMISSIONS BY GASIFICATION OF ODESA REGION

Forth periodic

REPORT NO. UKRAINE-VER/0923/2013

**REVISION No. 02** 

for the period 01/06/2012 - 31/12/2012

**BUREAU VERITAS CERTIFICATION** 



### VERIFICATION REPORT

Date of first issue:	Organizational unit:
23/04/2013	Bureau Veritas Certification
	Holding SAS
Client:	Client ref.:
VEMA S.A.	Fabian Knodel

Summary:

Bureau Veritas Certification has made the forth periodic verification for the period from June 1, 2012 to December 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 505 830 tonnes of CO2 equivalent for the monitoring period from 01/06/2012 to 31/12/2012.

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.:	Subject Group	:		
UKRAINE-ver/0923/2013	JI			
Project title: Reduction of greenl by gasification of Od		emissions		
Work carried out by: Vyacheslav Yeriomin Verifier Sergii Verteletskiy - Te			-	
Work reviewed by: Ivan Sokolov - Internal Borys Kostyukovskyy -		ecialist	Cortific	No distribution without permission from the Client or responsible organizational unit
Work approved by: Ivan Sokolov - Operati		Cau Joing	SAS	Limited distribution
Date of this revision: 17/05/2013 Rev. 02	No.: Numb 27	er of pages		Unrestricted distribution



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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 June 1, 2012 to December 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.



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## 1.3 Verification Team

The verification team consists of the following personnel:

Vyacheslav Yeriomin

Bureau Veritas Certification, Team Leader

Sergii Verteletskiy

Bureau Veritas Certification, Team Member, Verifier

This verification report was reviewed by:

Ivan Sokolov

Bureau Veritas Certification, Internal Technical Reviewer

Borys Kostyukovskyy 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



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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 02/04/2013 and version 02 of 29/04/2013 project as described in the determined PDD.

## 2.2 Follow-up Interviews

On 14/05/2013 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> <li>Organizational structure</li> <li>Responsibilities and authorities</li> <li>Personnel training</li> <li>Quality control procedures and technology</li> <li>Equipment use (records)</li> <li>Metering equipment control</li> <li>Metering record keeping system, database</li> </ul>
Consultant: VEMA S.A.	<ul> <li>Baseline methodology</li> <li>Monitoring plan</li> <li>Monitoring report</li> <li>Deviations from the PDD</li> </ul>

## 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;



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- (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 2 Corrective Action Requests and 3 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



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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.

## 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 01/06/2012 - 31/12/2012, including the project milestones, is provided in Table 2 below.

## Table 2. Project implementation status during the monitoring period



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The length of gas pipelines built during the period 01/06/2012 – 31/12/2012, thousand km

0,0658863

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 permittable. 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.

## 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.



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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 01, CAR 02, 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 department for control of gas consumption by the consumers.



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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.

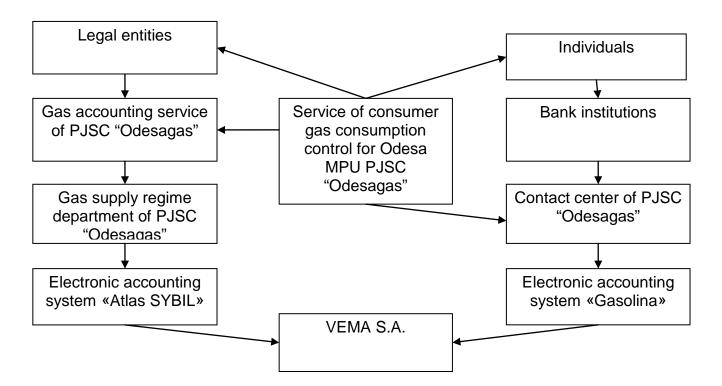


Figure 1 Structure of monitoring data collection

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.



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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.

## 3.7 Verification regarding programmes of activities (102-110)

Not applicable.

## 4 VERIFICATION OPINION

Bureau Veritas Certification has performed the forth periodic verification for the period from June 1, 2012 to December 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.

PJSC "Odesagas" management is responsible for the preparation of data which serve as the basis for estimation of GHG emission reductions. VEMA S.A. provides PJSC "Odesagas" with consultative support in the issues relating to organization of data collection and is responsible for developing the monitoring report based on the Project Monitoring Plan included in the final PDD version 02.

Bureau Veritas Certification verified the Project Monitoring Report version 02 for the reporting period from 01/06/2012 to 31/12/2012 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



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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 01/06/2012 to 31/12/2012 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 02 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	emiss	ion	Ex-post	GHG	emiss	sion
	reductions	stated	in	the	reductions	stated	in	the
	determined F	PDD in	tonnes	of	Monitoring	report in	tonnes	of
	CO₂eq				CO₂eq			
01/06/2012-	5	72 842			-	505 830		
31/12/2012								

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 01/06/2012 to 31/12/2012. 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 (7 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 01/06/2012 to 31/12/2012

Baseline emissions :1 368 879 tonnes of CO2 equivalent.
Project emissions : 863 049 tonnes of CO2 equivalent.
Emission Reductions : 505 830 tonnes of CO2 equivalent.



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## **5 REFERENCES**

## **Category 1 Documents:**

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

	Monitoring Report of the JI project "Reduction of greenhouse
/1/	gases emissions by gasification of Odesa region" for the period
	from 01/06/2012 to 31/12/2012 version 01 dated 02/04/2013
12.1	Monitoring Report of the JI project "Reduction of greenhouse
/2/	gases emissions by gasification of Odesa region" for the period
	from 01/06/2012 to 31/12/2012 version 02 dated 29/04/2013
	Annex 1 to the Monitoring Report of the JI project "Reduction of greenhouse gases emissions by gasification of Odesa region" for
/3/	the period from 01/06/2012 to 31/12/2012. Values of the project
	monitoring parameters in the period of 01/06/2012 to 31/12/2012
	Annex 2 to the Monitoring Report of the JI project "Reduction of
/4/	greenhouse gases emissions by gasification of Odesa region" for
/4/	the period from 01/06/2012 to 31/12/2012: Registry of gas networks
	with legislative normative documentation (Excel files)
	Annex 3 to the Monitoring Report of the JI project "Reduction of
/5/	greenhouse gases emissions by gasification of Odesa region" for
/5/	the period from 01/06/2012 to 31/12/2012: Calculation of GHG emission reductions due to gasification of Odesa region (Excel
	files (3: 3.13.18))
	Annex 4 to the Monitoring Report of the JI project "Reduction of
/6/	greenhouse gases emissions by gasification of Odesa region" for
/ 0/	the period from $01/06/2012$ to $31/12/2012$ : Types of metering
	equipment (Excel file (4: 4.1-4.18))
/7/	Project Design Document of the project "Reduction of greenhouse gases emissions by gasification of Odesa region", version 02 dated
///	05/08/2011
	Determination Report of the project "Reduction of greenhouse
/8/	gases emissions by gasification of Odesa region" No. UKRAINE-
	det/0314/2011 of 10/08/2011 issued by Bureau Veritas Certification
	Letter of Approval of the Joint Implementation project "Reduction
/9/	of greenhouse gases emissions by gasification of Odesa region"
	#2401/23/7 of 05/09/2011 issued by State Environmental
	Investment Agency of Ukraine  Letter of Approval of the JI project "Reduction of greenhouse"
	gases emissions by gasification of Odesa region" # J294-0485
/10/	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/	Operational environment of "Sybil" software. Extract from the log of
	actual gas consumption
/2/	Operational environment of "Gasolina" software. Extract from the
	log of actual gas consumption
/3/	Kominternivske district state administration. Information on the
	main type of fuel used in settlements of Kominternivske district
	prior to gasification
/4/	Kotovsk district state administration. Information on the main type
	of fuel used in settlements of Kotovsk district prior to gasification
/5/	Krasni Okny district state administration. Information on the main
	type of fuel used in settlements of Krasni Okny district prior to
	gasification
/6/	Shyryayeve district state administration. Information on the main
	type of fuel used in settlements of Shyryayeve district prior to
	gasification
/7/	Bilyaivka district state administration. Information on the main type
	of fuel used in settlements of Bilyaivka district prior to gasification
/8/	The acts of acceptance to exploitation of completed construction
	projects of gas supply system
/9/	The acts of acceptance of gas equipment for comprehensive
	checking (commissioning) (Form U)
/10/	The acts of acceptance of gas equipment for comprehensive
	checking (commissioning) gas supply of apartment house
/11/	Acts of lifting and transferring the gas meter to calibrate
/12/	Passports of household gas meter



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## 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.

113164	sted 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	JI project consultant of VEMA S.A.			
/5/	Vorobyov Ye.V.	"CEP" LLC	Consultant of VEMA S.A.			



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## APPENDIX A: PROJECT VERIFICATION PROTOCOL

## **BUREAU VERITAS CERTIFICATION HOLDING SAS**

## **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 app	provals 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?	, , , , , , , , , , , , , , , , , , , ,	OK	OK
91	approvals by Parties involved unconditional?	Yes, all the written project approvals by Parties involved are unconditional.	OK	OK
Project imp	plementation			
92	implemented in accordance with	The implementation of the measures under the project during the monitoring period was carried out according to the determined PDD	OK	OK



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?		OK	OK
Complianc	e 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 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 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	consumed natural gas, information on types of fuel consumed by the end consumers before gasification, etc. influencing the	CAR 01	ОК



DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	the project and the emissions or removals as well as risks associated with the project taken into account, as appropriate?	risks associated with the project were taken into account. <b>CAR 01.</b> 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".  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 appropriately justified of the choice?	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	ОК
95 (d)	Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and	Calculation of emission reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner.  CAR 02. Please indicate the value of emission	CAR 02	OK



DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	the most plausible scenarios in a transparent manner?	reductions, emissions from the project and baseline GHG emissions in tCO <sub>2</sub> equivalent.		
Applicable	to JI SSC projects only			
96	Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis? 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?	Not applicable	Not applicable	Not applicable
	to bundled JI SSC projects only			
97 (a)	Has the composition of the bundle not changed from that is stated in F-JI-SSCBUNDLE?	Not applicable	Not applicable	Not 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	Not applicable	Not applicable	Not applicable



DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	component of the project clearly specified in the monitoring			
	specified in the monitoring report?			
	Do the monitoring periods not			
	overlap with those for which verifications were already			
	deemed final in the past?			
Revision o	f monitoring plan			
	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
99 (b)  Data mana	Does the proposed revision improve the accuracy and/or applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans?		Not applicable	Not applicable
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control	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.	ОК	ОК



DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	procedures?			
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.	ОК	ОК
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	nitoring GHG emission reductions monitoring is		ОК
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	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.	ОК	ОК
Verificatio	n 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	Not applicable	Not	Not



Check Item	Initial finding	Draft Conclusion	Final Conclusion
overlap with previous monitoring periods?		applicable	applicable
If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?	Not applicable	Not applicable	Not applicable
to sample-based approach only			
Does the sampling plan prepared by the AIE:  (a) Describe its sample selection, taking into account that:  (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:  - The types of JPAs;  - The complexity of the	Not applicable	Not applicable	Not applicable
	overlap with previous monitoring periods?  If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?  to sample-based approach only Does the sampling plan prepared by the AIE: (a) Describe its sample selection, taking into account that: (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:  - The types of JPAs;  - The complexity of the	overlap with previous monitoring periods?  If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?  to sample-based approach only  Does the sampling plan prepared by the AIE: (a) Describe its sample selection, taking into account that: (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:  - The types of JPAs;	overlap with previous monitoring periods?  If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?  to sample-based approach only  Does the sampling plan prepared by the AIE:  (a) Describe its sample selection, taking into account that:  (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:  — The types of JPAs; — The complexity of the



DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	<ul> <li>The geographical location of each JPA;</li> </ul>			
	<ul> <li>The amounts of expected emission reductions of the</li> </ul>			
	JPAs being verified;			
	- The number of JPAs for			
	which emission reductions are being verified;			
	- The length of monitoring			
	periods of the JPAs being			
	verified; and			
	<ul> <li>The samples selected for prior verifications, if any?</li> </ul>			
107	Is the sampling plan ready for	Not applicable	Not	Not
	publication through the	The of the same	applicable	applicable
	secretariat along with the			
	verification report and supporting			
	documentation?			
108	Has the AIE made site	Not applicable	Not	Not
	inspections of at least the square		applicable	applicable
	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			



DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	provide a reasonable explanation and justification?			
109	Is the sampling plan available for submission to the secretariat for the JISC's ex ante assessment? (Optional)	Not applicable	Not applicable	Not applicable
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



## VERIFICATION REPORT

## 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. 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).	
<b>CAR 02.</b> Please indicate the value of emission reductions, emissions from the project and baseline GHG emissions in tCO <sub>2</sub> equivalent.	95 (d)	All values of emission reductions, emissions from the project and baseline emissions are listed in tCO <sub>2</sub> equivalent. See MR version 02.	The issue is closed based on corresponding values in appropriate units.
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.	94	Monitoring of the project activity consists in measuring natural gas consumption by 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.	
<b>CL 02.</b> 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 02.	The issue is closed based on the links provided in the MR version 02.
<b>CL 03.</b> Please provide the link to The national inventory report of anthropogenic emissions by	95 (b)	Relevant links were provided in the MR version 02.	The issue is closed based

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sources and removals by sinks of greenhouse		on the links provided in the
gases in Ukraine for 1990-2010 in the section		MR version 02.
D.2.4		