VERIFICATION REPORT
OJSC ODESAGAS

Verification of the

REDUCTION OF METHANE EMISSIONS AT FLANGED, THREADED JOINTS AND SHUT-DOWN DEVICES OF OJSC "ODESAGAS" EQUIPMENT»

FOURTH PERIODIC FOR THE PERIOD OF 01.10.2010-31.01.2011

REPORT NO. UKRAINE-VER/0214/2011

REVISION NO. 02

BUREAU VERITAS CERTIFICATION

Report No: UKRAINE/0214/2011

VERIFICATION REPORT

Date of first issue: 21.02.2011	Organizational unit: Bureau Veritas Certification Holding SAS
Client: OJSC "Odesagas"	Client ref.: Vitaliy Gerasymenko

Summary:
Bureau Veritas Certification has made the 4th periodic for the period of 01.10.2010-31.01.2011 verification o the "Reduction of Methane Emissions at Flanged, Threaded Joints and Shut-down Devices of OJSC "Odesagas" Equipment" implemented in Odesa city and region, Ukraine, and applying the 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 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 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 fina 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 per determined changes Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is ready to generate GHG emission reductions. The GHG emission reduction is calculated without material misstatements, and the ERUs issued totalize 211 779 tons of CO2eq for the monitoring period of 01.10.2010-31.01.2011 (from 01/10/2010 to 31/12/2010: 158 404 t CO2 equivalents, from 01/01/2011 to 31/01/2011: 53 375 t CO2 equivalents.).

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

Report No.: UKRAINE-ver/0214/2011	Subject Group: JI	
Project title: "Reduction of Methane Emissions at Flanged, Threaded Joints and Shut-down Devices of OJSC "Odesagas" Equipment"		
Work carried out by: Team Leader, Lead verifier: Oleg Skoblyk Team Member, verifier: Kateryna Zinevych		
Work reviewed by: Ivan Sokolov - Internal Technical Reviewer		
Work approved by: Flavio Gomes – Operational Manager		
Date of this revision: 23/02/2011	Rev. No.: 02	Number of pages: 27

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Bureau Veritas Certification Holding SAS

Abbreviations

AIE	Accredited Independent Entity
BVCH	Bureau Veritas Certification Holding SAS
CAR	Corrective Action Request
CGDP	Cabinet Gas-Distribution Posts
CL	Clarification Request
CO_2	Carbon Dioxide
ERU	Emission Reduction Unit
FAR	Forward Action Request
GHG	Green House Gas(es)
GDP	Gas-Distribution Posts
IETA	International Emissions Trading Association
JI	Joint Implementation
JISC	JI Supervisory Committee
MoV	Means of Verification
MP	Monitoring Plan
OJSC	Open Joint Stock Company
PCF	Prototype Carbon Fund
PDD	Project Design Document
UNFCCC	United Nations Framework Convention on Climate Change

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1 INTRODUCTION

OJSC Odesagas has commissioned Bureau Veritas Certification Holding SAS to verify the emissions reductions of its JI project "Reduction of Methane Emissions at Flanged, Threaded Joints and Shut-down Devices of OJSC “Odesagas” Equipment” in Odessa city and Odessa 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.

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.

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 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 and/or corrective 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 Lead Verifier

Kateryna Zinevych
Bureau Veritas Certification Climate Change Verifier

This verification report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification, Internal Technical Reviewer

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 determination protocol is enclosed in Appendix A to this report.

2.1 Review of Documents

The Monitoring Report (MR) version 1 submitted by OJSC Odesagas and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), Approved CDM methodology (if applicable) and/or Guidance on criteria for baseline setting and monitoring, Host party criteria, Kyoto Protocol, Clarifications on Verification Requirements to be Checked by an Accredited Independent Entity were reviewed.

After the procedure of Internal Technical Review PP had to correct MR and issued new version 02 as of 23/02/2011, which caused issuance of the new revision of Verification report as of 2nd dated 23/02/2011.

The verification findings presented in this report relate to the project as described in the PDD version 07 and Project Monitoring Report version 02.

2.2 Follow-up Interviews

On 15/02/2011 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of OJSC Odesagas were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
OJSC Odesagas	Organizational structure. Responsibilities and authorities. Training of personnel. Quality management procedures and technology. Implementation of equipment (records). Metering equipment control. Metering record keeping system, database. Social impacts. Environmental impacts.
Consultant: ITI Biotekhnika UAAN	Baseline methodology. Monitoring plan. Monitoring report. Deviations from 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 AIE 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.

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 1 Corrective Action Request.

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

3.1 Project approval by Parties involved (90-91)

Written project approval by Ukraine and Denmark has been issued by the NFP of that Party when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest. (see Reference)

The abovementioned written approval is unconditional.

3.2 Project implementation (92-93)

OJSC Odesagas is the company uniting gas supply facilities of 26 districts in Odessa region and gas supply facility in Odessa, and providing natural gas transportation and supply to industrial and domestic consumers.

OJSC Odesagas controls 1917 gas-distribution posts and cabinet gas-distribution posts, among them 1851 (GDP, CGDP) are the OJSC Odesagas property. The structure of current gas transport rates does not include depreciation and investment needs of gas distribution enterprises, which does not ensure receipt of funds for performance of necessary repair works and modernization of gas networks, purchase of appropriate engineering equipment and components, and also results in increase of natural gas leakage at the objects of OJSC Odesagas.

The purpose of the project is reduction of natural gas leakage at gas transport and gas distribution infrastructure of JSC Odesagas. The main sources of leakage are switch mechanisms (bolts, cocks, valves), flange and threaded joints of gas pipelines of JSC Odesagas in the amount of 11 174 pieces. The main reason for natural gas leakage is quick failure of sealant elements. Methane, the main component of natural gas (92-95 vol.%) is a greenhouse gas. Elimination of methane leakage will result in reduction of greenhouse gas emission. Hereinafter an expression “methane leaks” is used to determine natural gas leakage, as instrumental measurements concern methane in particular.

The project activity includes:

Implementation of purposeful examination and technical maintenance (PETM) of all switch mechanisms (bolts, cocks, valves), flange and threaded joints – modern and the most economically effective practice, which allows not only detection of leaking areas, but also determination of leakage volume (i.e., potential volume of gas leakage reduction). This key information is required for substantiation of efficiency of repair works and priority choice of its objects, which is important under short financing for elimination of all leakages. This activity will include purchase and calibration of modern measuring equipment, appropriate training of employees, development of monitoring map for each switch mechanism, flange and threaded joint of gas distribution network, with the list of all equipment components to be regularly examined, creation of leakage data collection and storage system, and implementation of internal audit and quality system for elimination and accounting of methane leakage.

Motivated by the Regulations on gas network safe operation in Ukraine based primarily on safety concerns, at the beginning of project in the year 2005 OJSC “Odesagas” just detects leaks using detectors with the purpose to avoid emergency and explosions. Measurement of leaks is not required, and measurement instruments are not available. Theoretical calculations of emission volume based on executed measurements of

methane losses as a result of leakage at shutters and flanges' connections for OJSC «Odesagas» are equal as 38 mln. m3 of estimate leaks per annum.

The project objective is reduction of natural gas (methane) leaks as a result of leakage at flanged, threaded joints and shut-down devices of OJSC "Odesagas" equipment in quantity of 11174. Within project scope, advanced sealant materials will be applied for repair of identified leaks to replace the current practice of maintenance and repair of networks, namely using rubberized asbestos fabric gaskets and cotton fiber stuffing with oil tightening with asbestos-graphite compound resulting in increased leaks and methane emissions into the atmosphere. In addition to reducing emissions, project reduces natural gas losses (therefore, financial losses) producing environmental benefits and contributing to safety requirements, and will reduce emergency risk, especially applied for household gas regulators and street surface facilities.

The project activity will involve:

- Introduction and use of directed inspection and maintenance (DI&M) at flanged, threaded joints and shut-down devices of OJSC "Odesagas" as the most advanced and efficient practice allowing both leak detection and measurement (i.e. quantification of gas losses) as a tool for justification efficient repairs and prioritization of leaks to be repaired as this is important at shortage of funds. This includes procurement of advanced leak detection and measurement equipment, training of staff, development of monitoring map for each shut-down device, specifying list of equipment components to be examined on regular basis, establishment of data-base for leak data collection and storage, and internal auditing and QA/QS system to eliminate and register methane leaks.

- Leak detection and measurement: leakage monitoring system at flanged, threaded joints and shut-down devices of OJSC "Odesagas" including eliminated leaks (repaired equipment components) will be implemented on a scheduled (once in four days or once a week – subject to equipment type; once for the year for equipment of apartments and houses) basis by specially trained staff. Each component will be surveyed, identified leaks will be tagged and their amounts will be measured and recorded in the database.

- Repair of all identified leaks: repairs of the equipment with leaks within the scope of this project will range from tightening of block valves and flanges, use of advanced sealants and stuffing to major overhaul and replacement of pressure regulators safety valves and piston rods. Repairs will be regularly surveyed as component of standard monitoring program (see above) to ensure they are not leak sources.

Project duration is not limited since the DI&M and monitoring programmes are aimed to become an integrated part of OJSC «Odesagas» production and business practices. CO2e emission reductions will be claimed for period 22 years as per modalities and procedures of Joint Implementation Mechanism.

OJSC "Odesagaz" made reconstruction and packaging of 174 shut-down devices in March of the 2010 year. The list of shut-down devices, which were repaired (packaged) and gas leakages were made before and after reconstruction, is in the Annex 1 to the preceding Monitoring Report.

There are not new reconstructions (packaging) of shut-down devices during current monitoring period (since October 2010 to January 2011).
The project activity for current monitoring period is further accomplishment of purposeful examination and technical maintenance (PETM) of all flanged, threaded joints and shut-down devices of OJSC "Odesagaz" gas distributing network, witch was repaired (packaged, replaced) during all JI project operation time.
11 165 shut down devices was reconstructed, packaged, replaced since the JI project start.
Repaired (packaged, replaced) during 2005-2010 years shut down devices will be regularly checked as a part of a standard monitoring program to make sure they have not become the source of leakage again.
According to Monitoring Plan in PDD version 07 the regular repairs of the shut down devices are done once per year, technical maintenance – once per half year.
Methane leakage volumes received in the result of measurements on the repairing shut down devices are not exceeding the methane leakage volumes, which was measured after the first repair of equipment.

The implementation status of the project is fully operational during the whole monitoring period, which is 01/10/2010 – 31/01/2011.

3.3 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 or enhancements of net removals, key factors, 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 were taken into account, as appropriate.

Data sources used for calculating emission reductions or enhancements of net removals 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 or enhancements of net removals is based on conservative assumptions and the most plausible scenarios in a transparent manner.

3.4 Revision of monitoring plan (99-100)

Not applicable.

3.5 Data management (101)

Control and monitoring system consists of three parts:
1) Measurements of methane leakage value before the rehabilitation (hermetization) of the object;
2) Measurements of methane leakage value after the rehabilitation (hermetization) of the object;
3) Archiving and processing of obtained results.

To measure leakage volume of natural gas it was decided to use the method based on the Calibrated Bag Technology described in the approved baseline strategy AM0023 “Reduction of natural gas leakage at compressor and gas distribution stations of main gas lines”. One of the problems incurred by using this method is difficult accounting of the volume of the valves measurements are done on, and of the initial air volume upon determination of gas volume received in the bag.

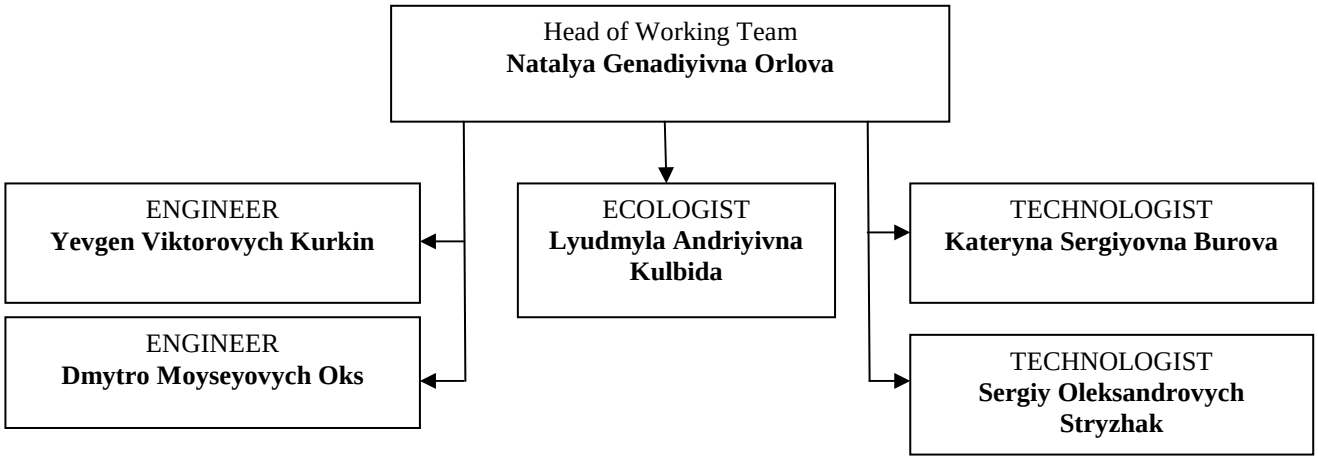
In order to ensure successful implementation of a project and the credibility and verifiability of the emissions reductions achieved, the project must have a well-defined management and operational system.
Systems of administration, management and control of OJSC Odesagas are organized in accordance with the laws of Ukraine. The audit team knows the laws required for project implementation. The team has been provided with equipment descriptions and technological instructions. Operational instructions are in place. Inspection schedules are duly agreed as provided for by requirements of the law of Ukraine.

Third parties involved

SE "Analitgas-Service" is authorized to conduct of verification and calibration of the measurement devices.

Operational team

Coordination of work of all departments and services of OJSC Odesagas concerning project implementation is done by specially created Working team. The structure of Working team is shown on the Picture 3.



Pic. 3 Structure of Working team

Sergiy Oleksandrovych Stryzhak and Lyudmyla Andriyivna Kulbida are responsible for collection of all information provided for by monitoring plan, and for making all necessary settlements. Archiving of all received information in the result of measurements and settlements is done under guidance of Kateryna Sergiyivna Burova. The head of working team (Nataliya Genadiyivna Orlova) on the basis of received information determines plan of measures under the Project and scope of resources required. Technical maintenance of the Project is carried out by Dmytro Moyseyovych Oks and Yevgen Viktorovych Kurkin. Control of data collection and processing and execution of Monitoring Report are done by ITI Biotekhnika UAAN.

Environmental impact

No environmental and social indicators are defined in the monitoring plan. The auditor team on site met a sample of local stakeholders. They expressed their deep appreciations for the project. As the project has brought sustainable development in to Odessa Region by means of implementation of activities for natural gas leaks reduction as well as improving of living comfort for population through improving of gas supply quality and safety, it will also have positive environmental impact.

3.6 Verification regarding programs of activities (102-110)

Not applicable.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the 4th periodic for the period of 01.10.2010-31.01.2011 verification of the "Reduction of Methane Emissions at Flanged, Threaded Joints and Shut-down Devices of OJSC "Odesagas" Equipment" located in Odesa, Ukraine, which applies the 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 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 OJSC Odesagas 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 and Verification Plan indicated in the final PDD version 07. 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 01 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as per determined changes. 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.

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 01/10/2010 to 31/01/2011
Baseline emissions : 217369 t CO_2 equivalents.
Project emissions : 5590 t CO_2 equivalents.
Emission Reductions : 211779 t CO_2 equivalents.
Emission Reductions from 01/10/2010 to 31/12/2010: 158 404 t CO_2 equivalents.
Emission Reductions From 01/01/2011 to 31/01/2011: 53 375 t CO_2 equivalents.

5 REFERENCES

Category 1 Documents:
Documents provided by PFC, LTD that relate directly to the GHG components of the project.

/1/ PDD, version 07, as of April 30, 2010

/2/ Monitoring Report, version 01, dated 08.02.2010

/3/ Monitoring Report, version 02, dated 23.02.2011

/4/ Determination Report of Bureau Veritas Certification Holding SAS dated 15.05.2010

/5/ Letter of Approval, National Environmental Investment Agency of Ukraine, No. 737/23/7as of 07.06.2010.

/6/ Letter of Approval, Ministry of Climate and Energetics of Denmark and Energy Agency of Denmark № 1602/1102-0041 as of 01.06.2010

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

/1/. Instruction for expluatation gas-analyzer Severin SR-5
/2/. Severin SR-5 form
/3/. calibration warrant of Severin SR-5 N 041020010, by 23.12.09
/4/. calibration warrant of Severin SR-5 N 041020009, by 12.03.10
/5/. state metrological attestation warrant of gas-analyzer Severin SR-5 N041020010 by 10.12.08
/6/. Severin SR-5 N041020010 form, back side
/7/. Severin SR-5 N041020009 form, back side
/8/. thermometer TL C-4 form
/9/. passport of Thermometer TL C-4 form, by 25.10.10
/10/. second-counter with passport, January 1978
/11/. D-59-N barometer operation manual, by 17.06.04
/12/. calibration warrant of barometer D-59-N, by 27.09.08
/13/. calibration warrant of barometer D-59-N, by 15.12.09
/14/. sheet of mesuring by unplanned work for capsulation gas-switchers, flange and screw-joint connection JSC "Odessa-gaz", March 2010
/15/. order about Kyoto workgroup creation, by 12.01.05
/16/. program of beginning monitorig measures for switc-off station and gas-dealing networks JSC "Odessa-gaz", at GDS-075, Melytopolskaya str. 1, by 02.04.05
/17/. program of beginning monitorig measures for switc-off station and gas-dealing networks JSC "Odessa-gaz", at GDS-075, Melytopolskaya str. 1, by 12.06.06
/18/. program of beginning monitorig measures for switc-off station and gas-dealing networks JSC "Odessa-gaz", at GDS-075, Melytopolskaya str. 1, by 25.06.07
/19/. program of beginning monitorig measures for switc-off station and gas-dealing networks JSC "Odessa-gaz", at GDS-075, Melytopolskaya str. 1, by 10.06.08

/20/. program of beginning monitorig measures for switc-off station and gas-dealing networks JSC "Odessa-gaz", at GDS-075, Melytopolskaya str. 1, by 15.06.09
/21/. program of beginning monitorig measures for switc-off station and gas-dealing networks JSC "Odessa-gaz", at GDS-075, Melytopolskaya str. 1, by 4.06.10
/22/. program of beginning monitorig measures for switc-off station and gas-dealing networks JSC "Odessa-gaz", at GDS-073, 3rd Stupenchatiy 6 alley, by 5.04.10
/23/. program of beginning monitorig measures for switc-off station and gas-dealing networks JSC "Odessa-gaz", at GDS-044, Lokomotivnaya str. 25, by 6.04.10
/24/. gas-damper, corner of Jukovskogo and Pol'skaya str.
/25/. passport of gas-dumper on corner of Jukovskogo and Polskaya str.
/26/. Manometer D-59-N in work
/27/. gas-damper in manhole, corner of Jukovskogo and Pol'skaya str.
/28/. Leakage-measuring device
/29/. gas-damper in manhole, corner of Jukovskogo and Pol'skaya str.
/30/. manhole with gas-dumper, corner of Jukovskogo and Polskaya str.
/31/. gas-damper in manhole, corner of Jukovskogo and Pol'skaya str.
/32/. gas dumper, corner Bunina and Polskaya str.
/33/. gas-damper with canceller in manhole, corner of Jukovskogo and Pol'skaya str.
/34/. gas-damper in manhole, corner of Jukovskogo and Pol'skaya str.
/35/. Leakage-measuring device
/36/. gas dumper in manhole in sity square, near Deribasovskaya str
/37/. gas dumper in manhole in sity square, near Deribasovskaya str
/38/. gas dumper Balkovaya 110 str.
/39/. gas dumper Balkovaya 110 str.
/40/. gas dumper Balkovaya 110 str.
/41/. gas dumper in can, Prohorovskaya str.
/42/. gas dumper during cheking tight joint, Melnitskaya str.
/43/. gas dumper at gas shut-down station
/44/. gas dumper at gas shut-down station
/45/. gas dumper at gas shut-down station
/46/. gas dumper at gas shut-down station, cheking tight joint
/47/. dumper at the gas shut-down station, new joint scaling strip
/48/. gas cock at corner Zaporogskaya and B. Khmelnitskogo str.
/49/. gas dumper with controller in can, Zaporogskaya str.
/50/. gas controller in can, Zaporogskaya str.
/51/. gas dumpers in manhole, Mar. Malynovskiy str.1
/52/. report of monitoring leakages

Persons interviewed:

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

/1/ Vitaliy Oleksandrovych Gerasymenko – the executive director of OJSC Odesagas

/2/ Yakiv Lvovych Zatynaiko - the chief engineer of OJSC Odesagas

/3/ Natalya Genadiyivna Orlova – VTV head of OJSC Odesagas

/4/ Dmytro Moyseyovych Oks – head of VTV UEGG in Odessa of OJSC Odesagas

/5/ Lyudmyla Andriyivna Kulbida - the LOP engineer of OJSC Odesagas

/6/ Kateryna Sergiyivna Burova - the VTV engineer of OJSC Odesagas

/7/ Sergiy Oleksandrovych Stryzhak – head of SEUG and DV UEGG in Odessa of OJSC Odesagas

/8/ V.Ya. Khodorchuk – scientist, secretary of ITI Biotekhinka UAAN.

/9/ V.I. Dorovskykh – head of laboratory of ITI Biotekhinka UAAN, candidate of technical sciences

/10/ M.K. Tsvigovsky – deputy head of department of ITI Biotekhinka UAAN, candidate of technical sciences

/11/ Vyacheslav Vitaliyevych Ivchuk – Chief engineer of Odessa Interdistrict Department

/12/ Sergiy Mykolayovych Korzhov – Chief engineer of Ananyev department

/13/ Valeriy Ivanovych Yakimchuk – Chief engineer of Berezivsky department

/14/ Oleksandr Terentiyovych Ivanov – Chief engineer of Bolgrad department

/15/ Oleksandr Mykolayovych Zhebrovsky – Chief engineer of Ivanivsky department

/16/ Oleksandr Leontiyovych Bogovyk – Chief engineer of Ovidiopil department

/17/ Andriy Oleksiyovych Shyshovsky – Head of permanent commission for realization of regulatory policy of Odessa municipal council

/18/ Anatoliy Yuriyovych Ivanov – Deputy head of commission for fuel and power complex, energy saving and utility complex issues

VERIFICATION PROTOCOL

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

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
Project approvals by Parties involved					
90	Has the NFPs 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 NFPs. The Letters of Approval were presented to the verification team. Letters of Approval by both Parties were submitted to the secretariat on the final determination stage.	N/a	N/a	OK
91	Are all the written project approvals by Parties involved unconditional?	Yes, all the written project approvals by Parties involved are unconditional.	N/a	N/a	OK
Project implementation					
92	Has the project been implemented in accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	The project objective is reduction of natural gas (methane) leaks as a result of leakage at flanged, threaded joints and shut-down devices of OJSC "Odesagas" equipment in quantity of 11174. Within project scope, advanced sealant materials will be	N/a	N/a	OK

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
		applied for repair of identified leaks to replace the current practice of maintenance and repair of networks, namely using rubberized asbestos fabric gaskets and cotton fiber stuffing with oil tightening with asbestos-graphite compound resulting in increased leaks and methane emissions into the atmosphere. In addition to reducing emissions, project reduces natural gas losses (therefore, financial losses) producing environmental benefits and contributing to safety requirements, and will reduce emergency risk, especially applied for household gas regulators and street surface facilities.			
93	What is the status of operation of the project during the monitoring period?	Project has been operational for the whole monitoring period, which is 01.10.2010 – 31.01.2011.	N/a	N/a	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	Yes, the monitoring occured in accordance with the monitoring plan included in			OK

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
	deemed final and is so listed on the UNFCCC JI website?	the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website. CAR 1. According to determined PDD version 7 ERUs for the monitoring period were supposed to be 221463,33 tCO2e but MR version 1 showed ERUs amount as 211779,28 tCO2e. Clarify the difference.	CAR 1. Decrease in quantity of reductions in comparison with reductions stated in PDD is due to difficulties in financing and delays in project implementation schedule.	The issue is closed.	
95 (a)	For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) above, 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?	Yes, for calculating the emission reductions or enhancements of net removals, key factors, e.g. those listed in 23 (b) (i)-(vii) above, 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 were taken into account, as appropriate.	N/a	N/a	OK
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and	Yes, data sources used for calculating emission reductions or	N/a	N/a	OK

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
	transparent?	enhancements of net removals are clearly identified, reliable and transparent			
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 are used for calculating the emission reductions or enhancements of net removals, are selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.	N/a	N/a	OK
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?	N/a	N/a	N/a	N/a
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?	N/a	N/a	N/a	N/a
97 (b)	If the determination was conducted on the basis of an overall monitoring plan, have the	N/a	N/a	N/a	N/a

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
	project participants submitted a common monitoring report?				
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?	N/a	N/a	N/a	N/a
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?	N/a	N/a	N/a	N/a
99 (b)	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?	N/a	N/a	N/a	N/a
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?	Yes, the implementation of data collection procedures is in accordance with the monitoring plan, including the quality control and quality assurance procedures.	N/a	N/a	OK
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	Yes, the function of the monitoring equipment,	N/a	N/a	OK

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
		including its calibration status is in order.			
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	Yes, the evidence and records used for the monitoring are maintained in a traceable manner	N/a	N/a	OK
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	Yes, the data collection and management system for the project is in accordance with the monitoring plan	N/a	N/a	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?	N/a	N/a	N/a	N/a
103	Is the verification based on the monitoring reports of all JPAs to be verified?	N/a	N/a	N/a	N/a
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	N/a	N/a	N/a	N/a
104	Does the monitoring period not overlap with previous monitoring periods?	N/a	N/a	N/a	N/a
105	If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?	N/a	N/a	N/a	N/a
Applicable to sample-based approach only					
106	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-	N/a	N/a	N/a	N/a

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
	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 applicable technologies and/or measures used; − The geographical location of each JPA; − The amounts of expected emission reductions of the 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 − 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?	N/a	N/a	N/a	N/a
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?	N/a	N/a	N/a	N/a
109	Is the sampling plan available for submission	N/a	N/a	N/a	N/a

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
	to the secretariat for 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?	N/a	N/a	N/a	N/a

APPENDIX B: VERIFICATION TEAM

The verification team consists of the following personnel:

Oleg Skoblyk, Specialist (Power Management)

Team Leader, Climate Change Lead Verifier
Bureau Veritas Ukraine HSE Department Project Manager.

Oleg Skoblyk has graduated from National Technical University of Ukraine 'Kyiv Polytechnic University" with specialty Power Management. He has successfully completed IRCA registered Lead Auditor Training Course for Environment Management Systems and Quality Management Systems. Oleg Skoblyk has undergone intensive training on Clean Development Mechanism /Joint Implementation and he is involved in the determination/verification of 29 JI projects.

Kateryna Zinevych, M.Sci. (environmental science)

Team Member, Climate Change Lead Verifier
Bureau Veritas Ukraine Health, Safety and Environment Department Project Manager

Kateryna Zinevych has graduated from National University of Kyiv-Mohyla Academy with the Master Degree in Environmental Science. She has experience at working in a professional position (analytics) involving the exercise of judgment, problem solving and communication with other professional and managerial personnel as well as customers and other interested parties at analytical centre "Dergzovnishinform" and "Burea Veritas Ukraine" LLC. She has successfully completed IRCA registered Lead Auditor Training Course for Environment Management Systems and Quality Management Systems. She has successfully completed Climate Change Verifier Training Course and she participated as verifier in the determination/verification of 26 JI projects.

The verification report was reviewed by:

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)

Internal Technical Reviewer, Climate Change Lead Verifier, Bureau Veritas Certification Holding SAS Local Climate Change Product Manager for Ukraine

Acting CEO Bureau Veritas Ukraine

He has over 25 years of experience in Research Institute in the field of biochemistry, biotechnology, and microbiology. He is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered), Quality Management System (IRCA registered), Occupational Health and Safety Management System, and Food Safety Management System. He performed over 140 audits since 1999. Also he is Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and Lead Tutor of the IRCA registered ISO 9000 QMS Lead Auditor Training Course. He is Lead Tutor of the Clean Development Mechanism /Joint Implementation Lead Verifier Training Course and he was involved in the determination/verification over 60 JI/CDM projects.