



# VERIFICATION REPORT OJSC ODESAGAS

## **Verification of the REDUCTION OF NATURAL GAS EMISSIONS AT OJSC “ODESAGAS” GATE STATIONS AND GAS DISTRIBUTION NETWORKS**

FIFTH PERIODIC FOR THE PERIOD OF 01.02.2011-  
30.04.2011

REPORT No. UKRAINE-VER/0275/2011  
REVISION No. 02

BUREAU VERITAS CERTIFICATION



**BUREAU  
VERITAS**

Report No: UKRAINE-ver/0275/2011

VERIFICATION REPORT

|                                    |   |
|------------------------------------|---|
| Date of first issue:<br>05.05.2011 | Organizational unit:<br>Bureau Veritas Certification<br>Holding SAS |
| Client:<br>OJSC "Odesagas"         | Client ref.:<br>Vitaliy Gerasymenko                                 |

**Summary:**  
Bureau Veritas Certification has made the 5<sup>th</sup> periodic for the period of 01.02.2011-30.04.2011 verification of the "Reduction of natural gas emissions at OJSC "Odesagas" gate stations and gas distribution networks" 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 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 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 111504 tons of CO<sub>2</sub>eq for the monitoring period from 01/02/2011 to 30/04/2011.

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.:<br>UKRAINE-ver/0275/2011   | Subject Group:<br>JI |
| Project title:<br>"Reduction of natural gas emissions at OJSC "Odesagas" gate stations and gas distribution networks " |                      |
| Work carried out by:<br>Team Leader, Lead verifier: Oleg Skoblyk<br>Team Member, verifier: Kateryna Zinevych           |                      |
| Work reviewed by:<br>Ivan Sokolov - Internal Technical Reviewer  |                      |
| Work approved by:<br>Flavio Gomes – Operational Manager  |                      |
| Date of this revision:<br>09/05/2011   | Rev. No.:<br>02      |
| Number of pages:<br>28   |                      |

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## Abbreviations

|                 |   |
|-----------------|---|
| AIE             | Accredited Independent Entity                         |
| BVCH            | Bureau Veritas Certification Holding SAS              |
| CAR             | Corrective Action Request                             |
| CGDP            | Cabinet Gas-Distribution Posts                        |
| CL              | Clarification Request                                 |
| CO <sub>2</sub> | 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 natural gas emissions at OJSC "Odesagas" gate stations and gas distribution networks" 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 verification protocol is enclosed in Appendix A to this report.

### **2.1 Review of Documents**

The Monitoring Report (MR) version 1 dated 04.05.2011 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 05/05/2011.



The verification findings presented in this report relate to the project as described in the PDD version 06 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.<br>Responsibilities and authorities.<br>Training of personnel.<br>Quality management procedures and technology.<br>Implementation of equipment (records).<br>Metering equipment control.<br>Metering record keeping system, database.<br>Social impacts.<br>Environmental impacts. |
| Consultant:<br>ITI Biotekhnika UAAN | Baseline methodology.<br>Monitoring plan.<br>Monitoring report.<br>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 2 Corrective Action Requests and 1 Clarification 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.





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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 main goal of the project is reduction of natural gas leakages in gas distribution posts and in cabinet gas distribution posts, which will result in reduction of methane emissions into the air, which is a greenhouse gas. The main sources of leakage are junctions of the elements of gas-distribution posts and cabinet gas-distribution posts. Many connecting parts of GDP and CGDP require repair in the result of quick wear of compactor elements. Within the scope of the project for repair of GDP and CGDP equipment, for the purpose of leakage elimination, modern compacting materials will be used, replacing service and repair practice based on rubberized asbestos fabric and rubber gaskets, and compacting padding made of cotton fiber with fat soakage and asbestos graphite filler, which results in additional methane leakage, which is a greenhouse gas.

The project activity includes:

- Implementation of purposeful examination and technical maintenance (PETM) of gas-distribution posts and cabinet gas-distribution posts – modern and economically most efficient practice, which allows not only detection of leaking areas, but also determination of leakage volume (i.e., potential volume of gas leakage reduction. This is a key information for substantiation of types of repair 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 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.
- Detection and measurement of leakage: monitoring system of leakages, including eliminated leakages (repaired equipment components) will be exercised on a regular basis (once in four days or once in a week, depending on the type of equipment) by specially trained personnel. Each component will be checked according to the monitoring map, and detected leakage will be duly marked with individual number; gas leakage volumes will be measured and registered in the database.
- Elimination of all detected leakages: repair of leaking junctions of GDP and CGDP elements within the scope of this project will vary from replacement of gaskets and wedge plugs, use of new sealants or compacting materials, to capital repair and replacement of safety



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valves of pressure regulators, piston rods, installation of natural gas gauges. Repaired GDP and CGDP equipment components will be regularly checked as a part of a standard monitoring program (see above) to make sure they have not become the source of leakage again.

Duration of the project is not limited, as PETM, monitoring and leakage elimination programs are aimed to become a part of work of OJSC Odesagas. Reduction of emissions equivalent to CO<sub>2</sub> is stated for period of crediting 18 years according to modality and Joint Implementation Procedures.

According PDD version 6 the project boundary include the methane leakage places as a result non-hermetic gas equipment of gas-distributing posts (GDP) and cabinet gas-distributing posts (CGDP). Total project boundary was included 1851 GDP (CGDP). During 2005 – 2010 years at the frame of project was repaired, reconstructed and changed 1010 GDP (CGDP). During monitoring period was repaired, reconstructed and changed 108 GDP (CGDP): on 50 GDP (CGDP) was full changed, on 12 GDP (CGDP) was particular changed (reconstructed) gas equipment on shutoff fittings of European manufacturers Pietro Fiorentini ([www.fiorentini.com/](http://www.fiorentini.com/)), Tartarini (<http://www.fisherregulators.com/tartarini/>) and their analogues of a domestic production, on 46 GDP (CGDP) was made repair of gas equipment – hermetic sealing connections. List of all repaired, reconstructed and changed GDP (CGDP) during monitoring period are in Annex A to the Monitoring Report.

The project activity for current monitoring period is further accomplishment of purposeful examination and technical maintenance (PETM) of all GDP (CGDP) gas equipment, switch was reconstructed (packaged) during all JI project operation time (for all JI project operation time was repaired gas equipment on 1118 GDP (CGDP)).

Repaired during 2005-2010 years GDP (CGDP) gas equipment 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 06 the regular repairs of the components are done once per year, technical maintenance – once per half year.

Methane leakage volumes received in the result of measurements on the repairing GDP (CGDP) gas equipment 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 01/02/2011 – 30/04/2011.



### **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)**

The control and monitoring system is divided into three main parts:

- 1) Measurement of methane leakages before reconstruction (hermtization) of gas-distributing point
- 2) Measurement of methane leakages after reconstruction (hermtization) of gas-distributing point
- 3) Archiving and processing of obtained results

For measurement of natural gas leakage volumes it was decided to apply method on the basis of "Calibrated bag" technology described in Approved methodology of baseline AM0023 "Reduction of natural gas leakages from compressors and shut-off stations". One of problem of this methodology application is complication of accounting of fitting (applied for measurement) volume and initial volume of air in the course of calculation of volume of the gas received by the bag.

A special device was designed and developed to solve these problems. It is made on the basis of a plastic capacity of a certain volume, package, plastic hose and pressure gauges connected with each other.

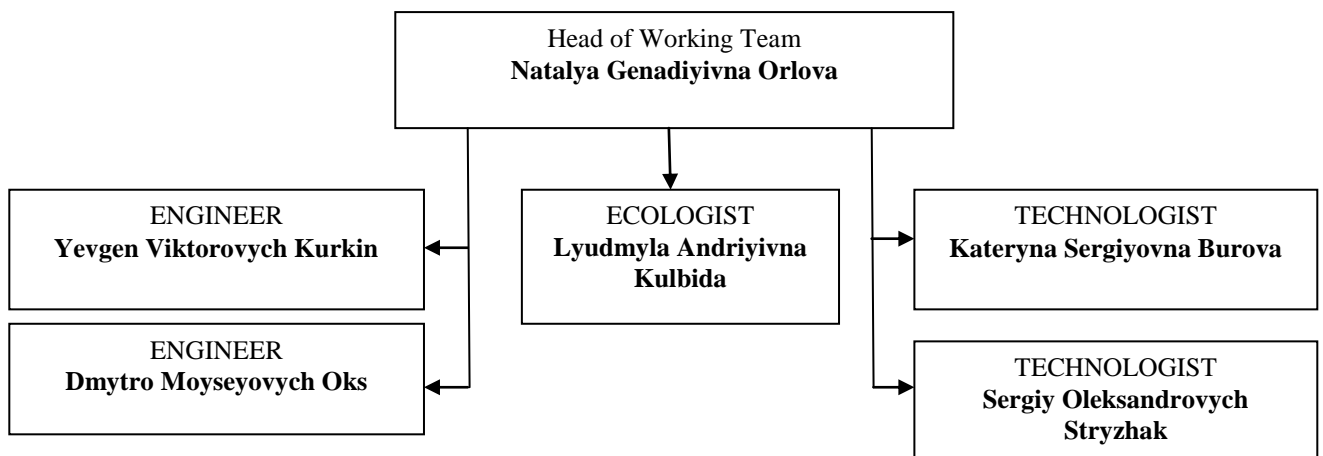
In order to ensure successful implementation of a project and the credibility and verifiability of the emissions reductions achieved, the project must have a well-defined management and operational system. Systems of administration, management and control of OJSC Odesagas are organized in accordance 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 1.



Pic. 1 Structure of Working team

Sergiy Oleksandrovyeh 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 5<sup>th</sup> periodic for the period of 01.02.2011-30.04.2011 verification of the "Reduction of natural gas leakages at the shut-off stations and natural gas networks of OJSC Odesagas 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 06. 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 02 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 01/02/2011 to 30/04/2011

|                     |          |                                |
|---------------------|----------|--------------------------------|
| Baseline emissions  | : 132812 | t CO <sub>2</sub> equivalents. |
| Project emissions   | : 21308  | t CO <sub>2</sub> equivalents. |
| Emission Reductions | : 111504 | t CO <sub>2</sub> equivalents. |



## 5 REFERENCES

### Category 1 Documents:

Documents provided by OJSC "Odesagas" that relate directly to the GHG components of the project.

|     |   |
|-----|---|
| /1/ | PDD version 06, dated December 10, 2009   |
| /2/ | Monitoring Report "Reduction of natural gas emissions at OJSC "Odesagas" gate stations and gas distributing networks" (Monitoring period: 01.02.2011 – 30.04.2011) version 01, dated May 04, 2011 |
| /3/ | Monitoring Report "Reduction of natural gas emissions at OJSC "Odesagas" gate stations and gas distributing networks" (Monitoring period: 01.02.2011 – 30.04.2011) version 02, dated May 05, 2011 |
| /4/ | Determination Report of Bureau Veritas Certification Holding SAS dated December 10, 2009  |
| /5/ | Letter of Approval, National Agency of Ecological Investments of Ukraine, #1566/23/7 dated 25.12.2009.  |
| /6/ | Letter of Approval, Ministry of Climate and Energy Danish Energy Agency #1602/1102-0023, dated 21.12.2009   |

### Category 2 Documents:

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

- /1/. Instruction for exploitation 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 N041020009 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, by 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 measuring by unplanned work for capsulation gas-dealing stations JSC "Odessa-gaz", by May 2010
- /15/. sheet of measuring by unplanned work for capsulation gas-dealing stations JSC "Odessa-gaz", by June 2010



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- /16/. sheet of measuring by unplanned work for capsulation gas-dealing stations JSC "Odessa-gaz", by April 2010
- |   |
|---|
| Sheet of measurement by unplanned work for repiar and capsulation GDP (CGDP) of OJSC "Odessagaz", by April 2011 |
|---|
- /17/. order about Kyoto workgroup creation, by 12.01.05
- /18/. 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
- /19/. 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
- /20/. 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
- /21/. 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
- /22/. 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
- /23/. 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
- /24/. 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
- /25/. 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
- /26/. Gas-Dealing Station - 59 in sity square, near Deribasovskaya str.
- /27/. journal of GDS-59 keeping
- /28/. izolation of gas dumper in GDS-140, during leakages monitoring, Dm. Donskogo str.
- /29/. leakage-measuring device in work
- /30/. Manometer D-59-N in work
- /31/. gas-analyzer Severin SR-5 in work
- /32/. second-counter in action
- /33/. head-out gas dumper at the GDS-140
- /34/. GDS-140
- /35/. head-out gas dumper at the GDS-140
- /36/. izolation of gas dumper in GDS-140, during leakages monitoring
- /37/. Manometer at GDS-140
- /38/. gas-dumper at GDS-140
- /39/. izolation of gas dumper in GDS-140, during leakages monitoring
- /40/. gas-controller at GDS-140
- /41/. journal of GDS-140 keeping
- /42/. 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





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- /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 Biotekhnika UAAN.
- /9/ V.I. Dorovskykh – head of laboratory of ITI Biotekhnika UAAN, candidate of technical sciences
- /10/ M.K. Tsvigovsky – deputy head of department of ITI Biotekhnika 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 REPORT

## 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 |
|--|---|---|---|--|------------|
| <b>Project approvals by Parties involved</b> |   |   |   |  |            |
| 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         |
| <b>Project implementation</b>                |   |   |   |  |            |
| 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?  | Yes, the project has been implemented in accordance with the PDD, which is listed on the UNFCCC JI website.<br><br>The main goal of the project is reduction of natural gas leakages in gas distribution posts and in cabinet gas | Provided in the new version of MR (version 2.0) | Issue is closed.                       | OK         |



VERIFICATION REPORT

| DVM Paragraph | Check Item | Initial finding   | Action requested to project participants | Review of project Participants' action | Conclusion |
|---------------|------------|---|--|--|------------|
|               |            | <p>distribution posts, which will result in reduction of methane emissions into the air, which is a greenhouse gas. The main sources of leakage are junctions of the elements of gas-distribution posts and cabinet gas-distribution posts. Many connecting parts of GDP and CGDP require repair in the result of quick wear of compactor elements. Within the scope of the project for repair of GDP and CGDP equipment, for the purpose of leakage elimination, modern compacting materials will be used, replacing service and repair practice based on rubberized asbestos fabric and rubber gaskets, and compacting padding made of cotton fiber with fat soakage and asbestos graphite filler, which results in additional methane leakage, which is a greenhouse gas.</p> <p>CAR 1. Please provide the</p> |  |  |            |

## VERIFICATION REPORT

| DVM Paragraph                          | Check Item   | Initial finding  | Action requested to project participants  | Review of project Participants' action | Conclusion |
|--|--|--|---|--|------------|
|  |  | amount of repaired and reconstructed or replaced GDP (GDSP) for the reporting period.  |   |  |            |
| 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 01.02.2011 - 30.04.2011.  | N/a   | N/a                                    | OK         |
| <b>Compliance with monitoring plan</b> |  |  |   |  |            |
| 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?                                   | Yes, 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.<br>CAR 3. According to determined PDD version 6 ERUs for the monitoring period were supposed to be 114999,99 tCO <sub>2</sub> e but MR version 1 showed ERUs amount as 111504 tCO <sub>2</sub> e. Clarify the difference. | CAR 3. Decrease of the amount of ERUs in MR from the ones in PDD is due to delay in the repairment schedule. Actual repairment works are delayed in comparison to planned ones. | The issue is closed.                   | 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) above, influencing the baseline emissions or net removals and the activity level of the | Yes, for calculating the emission reductions or enhancements of net removals, key factors, e.g. those listed in 23 (b) (i)-(vii)   | N/a   | N/a                                    | OK         |



## VERIFICATION REPORT

| DVM Paragraph                             | Check Item   | Initial finding   | Action requested to project participants | Review of project Participants' action | Conclusion |
|---|--|---|--|--|------------|
|   | project and the emissions or removals as well as risks associated with the project taken into account, as appropriate?   | 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.   |  |  |            |
| 95 (b)                                    | Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?  | Yes, data sources used for calculating emission reductions or enhancements of net removals are clearly identified, reliable and transparent   | N/a                                      | N/a                                    | 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 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         |
| <b>Applicable to JI SSC projects only</b> |  |   |  |  |            |
| 96  | Is the relevant threshold to be classified as JI SSC project not exceeded during the   | N/a   | N/a                                      | N/a                                    | N/a        |



## VERIFICATION REPORT

| DVM Paragraph   | Check Item   | Initial finding | Action requested to project participants | Review of project Participants' action | Conclusion |
|---|--|-----------------|--|--|------------|
|   | monitoring period on an annual average basis?<br>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?   |                 |  |  |            |
| <b>Applicable to bundled JI SSC projects only</b>                           |  |                 |  |  |            |
| 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 project participants submitted a common monitoring report?   | N/a             | N/a                                      | N/a                                    | N/a        |
| 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?<br>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        |
| <b>Revision of monitoring plan</b>  |  |                 |  |  |            |
| <b>Applicable only if monitoring plan is revised by project participant</b> |  |                 |  |  |            |
| 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  | N/a             | N/a                                      | N/a                                    | N/a        |



## VERIFICATION REPORT

| DVM Paragraph          | Check Item  | Initial finding   | Action requested to project participants  | Review of project Participants' action | Conclusion |
|------------------------|---|---|---|--|------------|
|                        | relevant rules and regulations for the establishment of monitoring plans?   |   |   |  |            |
| <b>Data management</b> |   |   |   |  |            |
| 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.<br>CAR 2. Please provide description of the data quality control measures. | Carrying out of monitoring measurements of leaks of methane is carried out in each Management of Operation of a Gas Economy (MOGE) in Odessa region.<br>Monitoring measurements are carried out by specially-trained personnel conformity with the Technique of carrying out of measurements.<br>Data of monitoring measurements directly at realisation of measurements is fixed on a paper.<br>Then, on the basis of the measurements data on a paper, everyone MOGE form electronic databases, which are sent to the | Issue is closed                        | OK         |



## VERIFICATION REPORT

| DVM Paragraph   | Check Item  | Initial finding  | Action requested to project participants   | Review of project Participants' action | Conclusion |
|---|---|--|--|--|------------|
|   |   |  | central office. The Central Office collect data in a uniform database of monitoring measurements of leaks. |  |            |
| 101 (b)   | Is the function of the monitoring equipment, including its calibration status, is in order?                           | Yes, the function of the monitoring equipment, including its calibration status is in order.   | N/a  | N/a                                    | OK         |
| 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 CL 1. Please check the spelling in the MR version 01. | Spelling was checked and corrected in the MR version 02.   | Issue is closed.                       | OK         |
| <b>Verification regarding programs of activities (additional elements for assessment)</b> |   |  |  |  |            |
| 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 | N/a  | N/a  | N/a                                    | N/a        |





## VERIFICATION REPORT

| DVM Paragraph                                   | Check Item  | Initial finding | Action requested to project participants | Review of project Participants' action | Conclusion |
|---|---|-----------------|--|--|------------|
|   | generated by each JPA?  |                 |  |  |            |
| 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        |
| <b>Applicable to sample-based approach only</b> |   |                 |  |  |            |
| 106   | Does the sampling plan prepared by the AIE:<br>(a) Describe its sample selection, taking into account that:<br>(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:<br>- The types of JPAs;<br>- The complexity of the applicable technologies and/or measures used;<br>- The geographical location of each JPA;<br>- The amounts of expected emission reductions of the JPAs being verified;<br>- The number of JPAs for which emission reductions are being verified;<br>- The length of monitoring periods of the JPAs being verified; and<br>- The samples selected for prior verifications, if any? | N/a             | N/a                                      | N/a                                    | N/a        |
| 107   | Is the sampling plan ready for publication through the secretariat along with the   | N/a             | N/a                                      | N/a                                    | N/a        |



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| DVM Paragraph | Check Item  | Initial finding | Action requested to project participants | Review of project Participants' action | Conclusion |
|---------------|---|-----------------|--|--|------------|
|               | verification report and supporting documentation?   |                 |  |  |            |
| 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 to the secretariat for the JISC.s ex ante assessment? (Optional)  | N/a             | N/a                                      | N/a                                    | N/a        |
| 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 "Bureau 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.