Verification Report
OJSC «Odesagas»

Verification of the project:

Reduction of Methane Emissions at Flanged, Threaded Joints and Shut-down Devices of OJSC “Odesagas” Equipment»

(THIRD PERIODIC FOR 1-3 QUARTERS OF 2010)

REPORT NO. UKRAINE 0164/2010
REVISION NO. 01

BUREAU VERITAS CERTIFICATION

Report No: UKRAINE 0164/2010

VERIFICATION REPORT

Date of first issue: 03.10.2010.	Organizational unit: Bureau Veritas Certification Holding
Client: OJSC “Odesagas”	Client’s representative: Vitaliy Gerasymenko

Summary:
Bureau Veritas Certification has made the verification of the project “Reduction of Methane Emissions at Flanged, Threaded Joints and Shut-down Devices of OJSC “Odesagas” Equipment” implemented by the Institute of ecology and energy saving in Odesa city and region, Ukraine on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for due project’s exploitation, its monitoring and reporting, as well as the host country criteria.
The verification scope is defined as a periodic independent review and post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions during defined verification period, and consisted of the following three phases: i) review of the Monitoring Report, Project Design Document 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 Requests, Corrective Actions Requests, Forward Actions Requests (CL, CAR and FAR), presented in Appendix A.
Verification was conducted on the ground of the monitoring report (for the period from January 01, 2010 till September 30, 2010), monitoring plan, determined PDD, edition 7 as of 30.04.2010 and other accompanying documents produced to the representatives of the Bureau Veritas Certification by the project participants.
In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in project design documents. 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.
Our opinion relates to the project’s GHG emissions and resulting GHG emissions reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents. Based on information seen and evaluated we confirm that the implementation of the project has resulted in 467 895,66 t CO2e reductions during period from 01/01/2010 up to 30/09/2010.

Report No: UKRAINE/0164/2010	Subject Group: JI	
Project title: «Reduction of Methane Emissions at Flanged, Threaded Joints and Shut-down Devices of OJSC “Odesagas” Equipment»		
Work approved by: Flavio Gomes – Operational Manager		
Work was carried out by: Team Leader, leading verifier: Flavio Gomes Team Member, verifier: Oleg Skoblyk Team Member, verifier: Kateryna Zinevych		
Work was verified by: Ivan Sokolov – Internal Technical Reviewer		
Date of this revision 03/10/2010	Rev. No.: 01	Number of pages: 46

Key words

Climate Change, Kyoto Protocol, JI, Emission Reduction, Verification

Abbreviations

AIE	НАО	**Accredited Independent Entity**
CAR	ЗКД	**Corrective Action Request**
CL	ЗР	**Clarification Request**
CO_2	CO_2	**Carbon Dioxide**
ERU	ОСВ	**Emission Reduction Unit**
FAR	ЗПД	**Forward Action Request**
GHG	ПГ	**Green House Gas(es)**
GDP	ГРП	**Gas Distribution Post**
IETA	АМТВ	**International Emissions Trading Association**
JI	СВ	**Joint Implementation**
JISC	КНСВ	**Joint Implementation Supervisory Committee**
MoV	ЗВ	**Means of Verification**
MP	МП	**Monitoring Plan**
OJSC	ВАТ	**Open Joint-Stock Company**
PCF	ПВФ	**Prototype Carbon Fund**
PDD	ПТД	**Project Design Document**
UNFCCC	РКЗК ООН	**United Nations Framework Convention for 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 region, Ukraine, according to the UNFCCC requirements of host party.
This report summarizes the findings of the verification of the project, performed on the basis of criteria given to provide for consistent project operations, monitoring and reporting, and contains a statement for the verified emission reductions. The order includes the initial and first periodic verification of the project.
This report is based on requirements as to the Initial Verification Report Template (Version 3.0, December 2003) and Periodic Verification Report Template (Version 3.0, December 2003), both part of the Validation and Verification Manual (VVM) published by International Emission Trading Association (IETA).
Initial verification and verification of reductions for 2005-2007 has been performed as one integrated activity. It consisted of review of the project documents including PDD, monitoring plan, determination report, monitoring report and further documentation.Project determination was conducted by Bureau Veritas Certification Holding SAS. Determination results are given in the report No. 0118/2010: Determination of the project “Reduction of Methane Emissions at Flanged, Threaded Joints and Shut-down Devices of OJSC “Odesagas” Equipment", Ukraine, as of May 15, 2010. The result of earlier credits verification is stated in report No. UKRAINE/0119/2010 “Verification of the project “Reduction of Methane Emissions at Flanged, Threaded Joints and Shut-down Devices of OJSC “Odesagas” Equipment" as of 07.06.2010, and the result of the first periodic verification is stated in the report No. #UKRAINE/0120/2010 as of 07.06.2010, and the second periodic verification – in the report #UKRAINE/0121/2010 as of 07.06.2010. The project was approved by the National Environmental Investment Agency of Ukraine, Ministry of Climate and Energetics of Denmark and Energy Agency of Denmark.

1.1 Objective

Verification is the periodic independent review and ex post determination by the AIE of the monitored reductions in GHG emissions during defined verification period.
The objective of verification can be divided in Initial Verification and Periodic Verification.
Initial Verification: The objective of an initial verification is to verify that the project is implemented as planned, to confirm that the monitoring system is in place and fully functional, and to assure that the project will generate

verifiable emission reductions. A separate initial verification prior to the project entering into regular operations is not a mandatory requirement.
Periodic Verification: The objective of the periodic verification is to verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan; furthermore the periodic verification evaluates the GHG emission reduction data and express a conclusion with a high, but not absolute, level of assurance about whether the reported GHG emission reduction data is free of material misstatements; and verifies that the reported GHG emission data is sufficiently supported by evidence, i.e. monitoring records. If no prior initial verification has been carried out, the objective of the first periodic verification also includes the objectives of the initial verification.

The verification follows UNFCCC criteria referring to the Kyoto Protocol criteria, the JI/CDM rules and modalities, and the subsequent decisions by the JISC, as well as the host country criteria.

1. 2 Scope

Verification scope is defined as an independent and objective review and ex post determination by the AIE of the monitored reductions in GHG emissions. The verification is based on the submitted monitoring report and the determinated project design document including 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. Bureau Veritas Certification uses the recommendations stated in the Validation and Verification Manual for assessment of the project implementation risks and generation of emission reduction units (ERUs).
The verification is meant to check the project monitoring for accurate assessment towards reductions in the GHG emissions.
The verification team has been provided with a Monitoring Report version 1 (as of 01.10.2010) for the period from January 1, 2010 to September 30, 2010 inclusive.

1.3 Project description

OJSC «Odesagas» manages 26 district gas distribution networks and infrastructures located at Odesa region and one in Odesa city implementing transportation and supply of natural gas to industries and households. Total length of distribution gas pipeline of high (12Mpa – 0,6 Mpa), middle (0,3 Mpa) and low (0,005 Mpa) pressure is 4579 km. 2625 km is at property of OJSC "Odesagas". Average annual of transported gas reaches 2861718 thou. M3. The existing structure of gas transportation tariffs doesn't consider amortization and development needs of gas companies. They suffer from lack of funds required for gas

network repairs and upgrading, procurement of equipment, spear parts and materials resulting in increase of gas leaks at OJSC «Odesagas» facilities.

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 41 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 gas station and gas distribution network, 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.

2 METHODOLOGY

The verification is as a preliminary review of the documents, field visit including discussions and interviews with selected experts and stakeholders. Verification protocol is used as part of the verification. In order to ensure transparency, a verification protocol was customized for the project, according to the Validation and Verification Manual (IETA/PCF). The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from verifying the identified criteria. It details and clarifies the requirements the project is expected to meet. It ensures a transparent verification process.

The verification protocol consists of one table of Initial Verification and four tables of Periodic verification. The different columns in these tables are described in Figure 1.

The overall verification according to the Contract of Verification was conducted using Bureau Veritas Certification procedures.

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

Initial Verification Protocol Table 1			
Objective	**Reference**	**Comments**	**Conclusion (CARs/FARs)**
The requirements the project must meet	Gives reference to where the requirement is found.	Description of circumstances and further comments on the conclusion	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR). Forward Action Request (FAR) indicates essential risks for further periodic verifications.

Periodic Verification Protocol Table 2: Data Management System/Controls		
Identification of potential reporting risk	**Identification, assessment and testing of management controls**	**Areas of residual risks**
The project operator's data management system/controls are assessed to identify reporting risks and to assess the data management system's/control's ability to mitigate reporting risks. The GHG data management system/controls are assessed against the expectations detailed in the table.	A score is assigned as follows: • Full - all best-practice expectations are implemented. • Partial - a proportion of the best practice expectations is implemented • Limited - this	Description of circumstances and further commendation to the conclusion. This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) of risk or non compliance with stated requirements. The corrective action requests are numbered and presented to the client in the verification report. The Initial Verification has additional Forward Action Requests (FAR). FAR indicates essential risks for further periodic verifications.

		should be given if little or none of the system component is in place.	

Periodic Verification Protocol Table 3: GHG calculation procedures and management control testing		
Identification of potential reporting risk	**Identification, assessment and testing of management controls**	**Areas of residual risks**
Identify and list potential reporting risks based on an assessment of the emission estimation procedures, i.e. ➢ the calculation methods, ➢ raw data collection and sources of supporting documentation, ➢ reports/databases/information systems from which data is obtained. Identify key source data. Examples of source data include metering records, process monitors, operational logs, laboratory/analytical data, accounting records, utility data and vendor data. Check appropriate calibration and maintenance of equipment, and assess the likely accuracy of data supplied. Focus on those risks that impact the accuracy, completeness and consistency of the reported data. Risks are weakness in the GHG calculation systems and may include: ➢ manual transfer of data/manual calculations, ➢ unclear origins of data, ➢ accuracy due to technological limitations, ➢ lack of appropriate data protection measures. For example, protected calculation cells in spreadsheets and/or password restrictions	Identify the key controls for each area with potential reporting risks. Assess the adequacy of the key controls and eventually test that the key controls are actually in operation. Internal controls include (not exhaustive): ➢ Understanding of responsibilities and roles ➢ Reporting, reviewing and formal management approval of data; ➢ Procedures for ensuring data completeness, conformance with reporting guidelines, maintenance of data trails etc. ➢ Controls to ensure the arithmetical accuracy of the GHG data generated and accounting records e.g. internal audits, and checking/ review procedures; ➢ Controls over the computer information systems; ➢ Review processes for identification and understanding of key process parameters and implementation of calibration maintenance regimes ➢ Comparing and analysing the GHG data with previous periods, targets and benchmarks. When testing the specific internal controls, the following questions are considered: 1. Is the control designed properly to ensure that it would either prevent or detect and correct any	Identify areas of residual risks, i.e. areas of potential reporting risks where there are no adequate management controls to mitigate potential reporting risks Areas where data accuracy, completeness and consistency could be improved are highlighted.

	significant misstatements? 2. To what extent have the internal controls been implemented according to their design; 3. To what extent have the internal controls (if existing) functioned properly (policies and procedures have been followed) throughout the period? 4. How does management assess the internal control as reliable?	

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Periodic Verification Protocol Table 4: Detailed audit testing of residual risk areas and random testing		
Areas of residual risks	**Additional verification testing performed**	**Conclusions and Areas Requiring Improvement (including Forward Action Requests)**
List the residual areas of risks (Table 2 where detailed audit testing is necessary. In addition, other material areas may be selected for detailed audit testing.	The additional verification testing performed is described. Testing may include: 1. Sample cross checking of manual transfers of data 2. Recalculation 3. Spreadsheet 'walk throughs' to check links and equations 4. Inspection of calibration and maintenance records for key equipment ➢ Check sampling analysis results ➢ Discussions with process engineers who have detailed knowledge of process uncertainty/error bands	Errors and uncertainty can be due to a number of reasons: ➢ Calculation errors. These may be due to inaccurate manual transposition, use of inappropriate emission factors or assumptions etc. ➢ Lack of clarity in the monitoring plan. This could lead to inconsistent approaches to calculations or scope of reported data. ➢ Technological limitations. There may be inherent uncertainties (error bands) associated with the methods used to measure emissions e.g. use of particular equipment such as meters. ➢ Lack of source data. Data for some sources may not be cost effective or practical to collect. This may result in the use of default data which has been derived based on certain assumptions/conditions and which will therefore have varying applicability in different situations. The first and second categories are explored with the site personnel, based on their knowledge and experience of the processes. High risk process parameters or source data (i.e. those with a significant influence on the reported data, such as meters) are reviewed for these uncertainties.

Verification Protocol Table 5: Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	**Ref. to checklist question in tables 2/3**	**Summary of project owner response**	**Verification conclusion**
If the conclusions from the Verification are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Tables 2, 3 and 4 where the Corrective Action Request or Clarification Request is explained.	The responses given by the Client or other project participants during the communications with the verification team should be summarized in this section.	This section should summarize the verification team's responses and final conclusions. The conclusions should also be included in Tables 2, 3 and 4, under "Final Conclusion".

Figure 1 Verification protocol tables

2.1 Review of Documents

AIE reviewed Monitoring report, version 1, submitted by the OJSC "Odesagas", and additional documents related to the project design and baseline as to the requirements of Ukrainian Laws, PDD, methodology and Kyoto Protocol.

The verification findings presented in this report relate to the PDD version 07 and Project Monitoring Report version 01.

2.2 Follow-up Interviews

On 07/09/2010 verifiers of "Bureau Veritas Certification Holding SAS" performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of OJSC «Odesagas» were interviewed. The main topics of the interviews are summarized in Table 1.1.

Table 1 Interview topics

Interviewed organization	Interviews Topics
OJSC «Odesagas»	➢ Organizational structure. ➢ Personal responsibility. ➢ Training of personnel. ➢ Quality management procedures. ➢ Repair of the equipment (records). ➢ Metering equipment control. ➢ Metering record keeping system, database.
Local Stakeholder: Heat Network Administration:	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 clarification, corrective and forward action requests and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the GHG emission reduction calculation. Findings established during the initial verification are also taken into consideration since they have identified criteria ensuring the proper implementation of a project and risks related to quality of emission reductions.

Corrective Action Requests (CAR) are issued, where:

i) there is a clear deviation concerning the implementation of the project as defined by the PDD;

ii) requirements set by the MP on have not been met completely; or

iii) there is a risk that the project would not be able to generate (high quality) ERUs.

Forward Action Requests (FAR) are issued, where:

iv) the actual status requires a special focus on this item for the next consecutive verification, or

v) an adjustment of the MP is recommended.

The verification team may also use the term Clarification Request (CL), which would be where:

vi) additional information is needed to fully clarify an issue.

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 FINDINGS FOR 1-3 QUARTERS 2010

In the following sections, the findings of the verification are stated. The verification findings for each verification subject are presented as follows:

1) The findings from the desk review of the original project activity documents and the findings from interviews during the follow up visit are summarized. A more detailed record of these findings can be found in the Verification Protocol in Appendix A.

2) The conclusion for verification is presented.

Discussions, remarks and conclusions stated in the verification report project are given also in final verification report.

3.1 Remaining issues CLs, CARs, FARs from previous determination.

The task of this verification is to check the remaining issues from the previous determination or issues which are clearly defined for assessment in the PDD. The determination report, prepared by Bureau Veritas Certification, does not note any open issues.

3.2 Project implementation

3.2.1 Discussion

The key task of Initial Verification is to check the project's preparedness for emission reductions generation.

The status of project's implementation, including the basic stages, is given in Table 1.2.

No.	Arrangements	Quantity of units of performed works, pcs.	Commencement of building	Putting into operation
9 months (January-September) of 2010				
1	Rehabilitation and hermetization	174 pcs.	March 2010	March 2010

Table 1.2. Status of implementation (in accordance with version 6 of PDD).

174 objects were rehabilitated and hermetized during 9 months (January-September) of 2010.
The list of rehabilitated objects is given in Annex A.

3.2.2 Determined discrepancies

None.

3.3 Internal and External Data

3.3.1 Discussion

Parameters applied for calculation of methane leakage reduction are given below in the table 1.3.

Identification No.	Variable data	Source of data	Unit of data measurement	Form of data received	Comments
1. i	Serial number of bolt, cock, valve, flanged or threaded joint, where the gas leakage was detected, is eliminated and then checked.	Measurement of leakage	Dimensionless	Electronic	Detected leakage is awarded a respective No. List of shut-down devices (valves, cocks, bolts), flanged and threaded joints is given in Annex A. Check after repair is conducted.
2. Ti	Time	Results of inspection	Quantity of hour of operation of the equipment, wherein the leakage was detected within the year	Electronic	Quantity of hours pf the equipment operation during the year from the moment of its repair (replacement)

Identification No.	Variable data	Source of data	Unit of data measurement	Form of data received	Comments
3.	Date	Repair (rehabilitation) and monitoring (register) data	Date of repair (rehabilitation) and monitoring	Electronic	Date of reconstruction used together with the number of hours of equipment operation to determine general number of hours of operation Should leaks be repeated, it is taken the same as the date of last inspection which showed the absence of leakage
4. GWPCH4	Global warming potential	IPCC	Tones of CO2 equiv.	Electronic	Project developer will conduct monitoring of any potential changes caused by global warming for methane, published by IPCC and approved by COP
5. FCH4,i	Speed of leakage for each detected leakage	Leakage measurement	m3 CH4/year	Electronic	Calculated by means of the largest deviation from device's error (10% for gas analyzer)
6. t, P	Gas temperature and pressure	Data of measurements of glass mercury thermometer TL-4 and manometer «D-59H-100-1.0 6 kPa».	^{0}C and kPa	Electronic	Measured for determination of CH4 density Note: Notwithstanding measurements, many variants are not expected as pressure and temperature at different stations are taken constant

Identification No.	Variable data	Source of data	Unit of data measurement	Form of data received	Comments
7. URi	Equipment uncertainty factor; measurement of leakage	Information provided by manufacturer and/or IPCC GPG	%	Electronic	Where possible, 95% confidence interval is evaluated; advice of management board given in section 6 2000 IPCC of GPG If manufacturer of equipment where leaks are measured specifies uncertainty range without specification of confidence internal, it can be taken 95%
8. *Vbag*	Reservoir capacity	Data of flow meter measurement	m^3	Electronic and paper	Reservoir is filled in with water. Amount of water measured by flow meter will be reservoir capacity Measurement showed that reservoir capacity is 0.87 m^3.
9. $w_{sampleCH4,i}$	Methane concentration in sample	Data of gas analyzer EX-TEC® SR5 measurements	%	Electronic	Methane concentration in sample (in reservoir) of leak *i* is the difference between methane concentration in the beginning and in the end of measurement Concentration is measured with gas analyzer EX-TEC® SR5.
10. τ_i	Time during which methane concentration in reservoir reaches certain level	Data of measurements made by seconds counter« SOS pr-2b-2»	seconds	Electronic	Time during which methane concentration in reservoir reaches certain level is determined with stop-watch. Measurement starts from the moment the tap is opened on the tank cap and ends when methane concentration inside the reservoir reaches certain level.

Table 1.3. Parameters used in calculation of GHG emissions

3.3.2 Discrepancies

Outstanding questions connected with baseline and additionality are given in Table 5 below (See CL2).

3.3.3 Conclusion

Project complies with requirements.

3.4 Environmental and Social Indicators

3.4.1 Discussion

No environmental and social indicators are defined in the monitoring plan.
The verification team on site met a number 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.

3.4.2 Discrepancies

None

3.4.3. Conclusion

The Project complies with Ukrainian Laws, and with the JI project requirements.

3.5 Management and Operational System

3.5.1 Discussion

In order to ensure successful implementation of a project and the credibility and verifiability of the GHG emission 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 verification 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.

3.5.2 Discrepancies

None.

3.5.2 Conclusion

The Monitoring Report and the Management and Operational Systems are eligible for reliable project monitoring.

3.6. Completeness of Monitoring

3.6.1 Discussion

The reporting procedures reflect the monitoring plan completely. It is confirmed that the monitoring report does comply with the monitoring methodology and PDD.
All 10 parameters were determined as prescribed. All reported parameters were determined. The complete data is stored electronically and documented. The necessary monitoring procedures defined in internal procedures and additional internal documents have been submitted for determination.
According to PDD version 07, emission reductions during first nine months of 2010 monitoring period were expected 498292,50 t CO2 e. According to Monitoring Report version 01 emission reductions achieved are 467 895,66 t CO2 e. The difference in the emission reductions are explained as follows. The reductions expected in PDD are expected reductions, but due to the lack of financing project activities were not performed in full.

3.6.2 Discrepancies

Outstanding questions connected with baseline and additionality are given in Table 5 below (See CR1).

3.6.3 Conclusion

The project complies with all requirements.

3.7. Accuracy of Emission Reduction Calculation

3.7.1 Discussion

The verification team confirms that emission reduction calculations have been performed according to the Monitoring Plan and to the calculation methodology reported in the Section D.3.4. of the Monitoring Report version 01.

Calculation of methane leaks has taken into account possible error of devices used in measurement of leaks, and calculation uncertainty.

3.7.2 Discrepancies

None

3.7.3 Conclusion

The project complies with all requirements.

3.8. Quality Evidence to Determine Emissions Reductions

3.8.1 Discussion

Verification of the calculation of emission reductions is based on internal data. The origin of those data was checked. Further on, processing of those data in the monitoring workbook Excel sheet was checked where predefined algorithms compute the net annual profit gained from the emission reductions. All equations and algorithms used in the different Excel-sheets were checked. Inspection of calibration and maintenance records for gas analyzers was performed.
Necessary procedures have been defined in internal procedures and additional internal documents relevant for the determination of the various parameters of the baseline.

3.8.2 Discrepancies

None

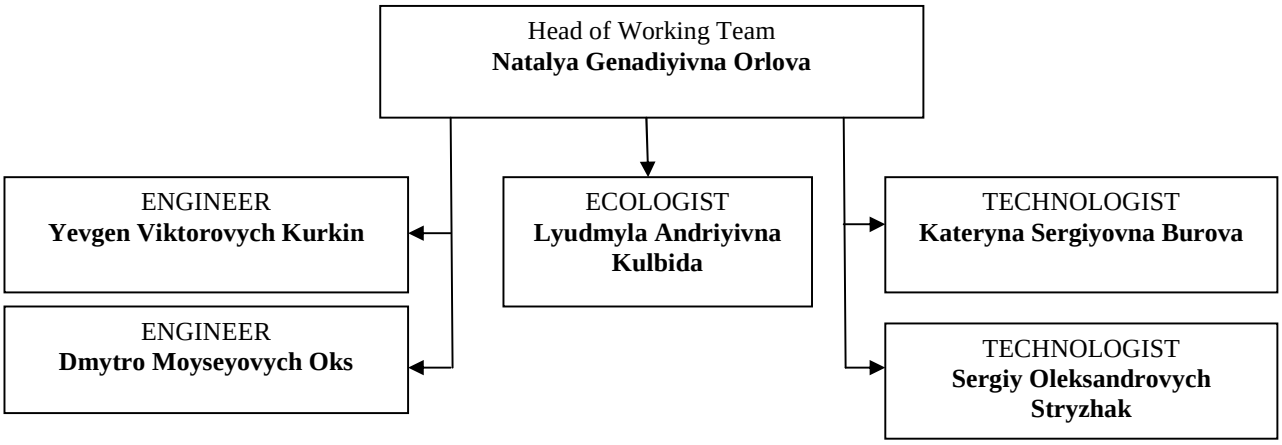
3.8.3 Conclusion

The project complies with all requirements.

3.9. Management System and Quality Assurance

3.9.1 Discussion

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.



Picture.1. 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 calculations. 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.

3.9.2 Discrepancies

None

3.9.3 Conclusion

The project complies with all requirements.

4 PROJECT SCORECARD

Risk Areas		Conclusions			Summary of findings and comments
		Baseline Emissions	Project Emissions	Calculated Emission Reductions	
Completeness	Source coverage/ boundary definition	✓	✓	✓	All relevant emission sources within the project are defined correctly and transparently and are covered by the monitoring plan
Accuracy	Physical Measurement	✓	✓	✓	Appropriate devices are presented. Necessary reserve decisions are provided.
	Data calculations	✓	✓	✓	Emission reductions are calculated correctly
	management & reporting	✓	✓	✓	Management and reporting were found to be satisfying.
Consistency	Changes in the project	✓	✓	✓	Results are consistent to underlying raw data.

5 CONCLUSION ON THIRD PERIODIC VERIFICATION FOR 1-3 QUARTERS OF 2010

Bureau Veritas Certification has performed the verification of JI project "Reduction of Methane Emissions at Flanged, Threaded Joints and Shut-down Devices of OJSC "Odesagas" Equipment" for the period of first nine months of 2010.

Verification was done in accordance with UNFCCC criteria and criteria of host country.

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 Monitoring Plan indicated in the PDD version 07. The project's administration is responsible for project implementation, organization of data collection, and calculations and determination of GHG emission reductions.

Bureau Veritas Certification verified the Project Monitoring Report version 01 for the reporting period. Bureau Veritas Certification confirms that the project is implemented as planned and described in determination documents and presented project documentation. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. Monitoring system is duly organized. The project is ready to generate GHG emission reductions.

Bureau Veritas Certification confirms that the GHG emission reduction is calculated in accordance with the principle of additionality. On the basis of seen and analyzed documents we confirm the following:

Reporting period	:	From 01/01/2010 to 30/09/2010
Baseline emissions	:	482 454,31 t CO2 equivalents.
Project emissions	:	14 558,65 t CO2 equivalents.
Emission Reductions	:	467 895,66 t CO2 equivalents.

6 REFERENCES

Category 1 Documents:

Principal documents related directly to the project registration

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

/2/ Monitoring Report, version 01, dated 01.10.2010

/3/ Determination Report of Bureau Veritas Certification Holding SAS dated 15.05.2010

/4/ Letter of Approval, National Environmental Investment Agency of Ukraine, No. 737/23/7as of 07.06.2010.

/5/ 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 project and/or methodology.

/1/ Documents checked during the verification onsite are presented in Appendix B

Persons interviewed:

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

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

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

/3/ Natalya Genadiyivna Orlova – chief of production and technical department of OJSC «Odesagas»

/4/ Dmytro Moyseyovych Oks – chief of production and technical department of gas industry management in Odessa city under OJSC «Odesagas»

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

/6/ Kateryna Sergiyivna Burova - the engineer of of production and technical department of JSC Odesagas

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

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4. ANNEX A: JI PROJECT VERIFICATION PROTOCOL

Initial Verification Protocol
Table 1

Objective	References	Comments	Conclusion (CARs/FARs)
1. Introduction			
1.1. Introduction to audit	/1/, /2/, /3/	The intentions and the targets of the audit were illustrated to the participants of the audit. Participants at the audit were the following persons: Verification Team: Flavio Gomes Bureau Veritas Certification Leading Climate Change Verifier Oleg Skoblyk Bureau Veritas Certification Climate Change Verifier Kateryna Zinevych Bureau Veritas Certification Climate Change Verifier Report checked by: Ivan Sokolov Bureau Veritas Certification Internal Technical Reviewer Employees of OJSC “Odesagas”:	OK

Objective	References	Comments	Conclusion (CARs/FARs)
		Yakiv Lvovych Zatynaiko - the chief engineer of JSC Odesagas Natalya Genadiyivna Orlova – chief of production and technical department of OJSC «Odesagas» Dmytro Moyseyovych Oks – chief of production and technical department of gas industry management in Odessa city under OJSC «Odesagas» Lyudmyla Andriyivna Kulbida - the LOP engineer of JSC Odesagas Kateryna Sergiyivna Burova - the engineer of production and technical department of JSC Odesagas Sergiy Oleksandrovych Stryzhak – head of SEUG and DV UEGG in Odessa of JSC Odesagas	
1.2. Clarification of access to data archives, records, plans, drawings etc.	/1/, /2/, /3/	The verification team got open access to all required plans, data, drawings, diagrams, records, corresponding objects and facilities.	OK
1.3. Contractors for equipment erection and putting into operation	/1/, /2/, /3/	Project has been implemented as defined in the PDD and the implementation is evidenced by statements of work completion.	OK
1.4. Actual status of installation works	/1/, /2/, /3/	Implementation of heating networks for elimination of leaks is carried out according to project plan. See section A.6 of Monitoring Report.	OK
2. Open issues indicated in determination report			
2.1. Missing steps to final	/4/	Project is approved by the both NFPs	OK

Objective	References	Comments	Conclusion (CARs/FARs)
approval			
3. Project implementation			
3.1. Physical components	/1/, /2/, /3/	Project has been implemented as defined in the PDD with some deviations, see cl. 1.4 and 3.1 of Verification Report.	OK
3.2. Project boundaries	/1/, /2/, /3/	Project boundaries are set as described in PDD.	OK
3.3. Achieved emission reductions	/2/	According to PDD, version 7, expected emission reductions for monitoring period of first 9 months of 2010 were 498292,50 t CO2 e. According to the monitoring report, version 1, achieved emission reductions are 467 895,66 t CO2 e. Clarification request 1 (CR) 1 Please explain the difference between achieved reductions under the MR and reductions provided for in PDD	CR1
3.4. Monitoring and metering systems	/1/, /2/, /3/	JSC Odesagas has all relevant equipment for monitoring of specifications related to the project. All equipments are of reputed make. They and included in the structured calibration plans where they are periodically calibrated. The procedures documented for the equipment operation are in place.	OK

Objective	References	Comments	Conclusion (CARs/FARs)
3.5. Data uncertainty	/1/, /2/, /3/	All measuring equipment corresponds to the regulatory requirements on accuracy of meters and measurement deviations applicable in Ukraine. Verification team analyzed submitted documents characterizing metering devices. Types of devices are determined in the regulatory documents of Ukraine. Accuracy of devices is guaranteed by the manufacturer, possible error has been calculated and confirmed by device passport. Therefore, uncertainty level of measurements corresponds to technologies used, and is taken into account when taking data from the device.	OK
3.6. Calibration and measurement quality assurance	/1/, /2/, /3/	All monitoring equipment is part of detailed calibration plan. The strict control is maintained over the calibration process. On the date of verification, Calibration records of the measuring and monitoring equipment has been verified at site. All the meters have been found to be calibrated regularly as per determined calibration plan for each site. The following remarks have been given.	OK
3.7. Data collection and data processing systems	/1/, /2/, /3/	All measurements of methane leaks are done by operative team equipped as necessary. A program for initial monitoring measurements for shut-off stations and natural gas networks of JSC Odesagas is executed for each object (gas distribution post) of measurement. 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	OK

Objective	References	Comments	Conclusion (CARs/FARs)
		(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.	
3.8. Reporting procedures	/1/, /2/, /3/	The Monitoring Plan defines persons responsible for collection of the data required for GHG emission reduction calculations. Calculations are transparent and are filled in annually into a predefined Excel spreadsheet.	OK
3.9. Documented instructions	/1/, /2/, /3/	Monitoring report, section B, version 01 specifies procedure for data collection, archiving (including software use), and also reflects monitoring, metering and reporting procedures. This information was verified during the visit to OJSC Odesagas and is satisfactory.	OK
3.10. Qualification and training	/1/, /2/, /3/	Refer to section 3.6 above.	OK
3.11. Responsibilities	/1/, /2/, /3/	Refer to section 3.6 above.	OK
3.12. Troubleshooting procedures	/1/, /2/, /3/	Detection, liquidation and registration of failures and emergencies at gas-distribution posts of JSC Odesagas is carried out according to Safety rules of gas-supply systems of Ukraine.	OK
4. Internal data			

Objective	References	Comments	Conclusion (CARs/FARs)
4.1. Type and sources of internal data	/1/, /2/, /3/	The internal parameters are obtained according to the monitoring plan	OK
4.2. Data collection	/1/, /2/, /3/	All measurements of methane leaks are done by operative team equipped as necessary. A program for initial monitoring measurements for shut-off stations and natural gas networks of JSC Odesagas is executed for each object (gas distribution post) of measurement. 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.	OK
4.3. Quality assurance	/1/, /2/, /3/	Monitoring report, section B, version 01 specifies procedure for data collection, archiving, and also reflects monitoring, metering and reporting procedures. This information was verified during the visit to JSC Odesagas and is satisfactory. Monitoring procedures are absolutely effective.	OK

Objective	References	Comments	Conclusion (CARs/FARs)
4.4. Significance of reporting risks	/1/, /2/, /3/	All data are collected with periodicity established in the norms of monitoring plan. Record-keeping is controlled by the management bodies of JSC Odesagas and by the representatives of ITI Biotekhnika UAAN. Probability of discrepancy in the report is rather low.	OK
5. External Data			
5.1. Type and sources of external data	/1/, /2/, /3/	External data are not used.	OK
5.2. Access to external data	/1/, /2/, /3/	Refer to 5.1	OK
5.3. Quality assurance	/1/, /2/, /3/	Refer to 5.1	OK
5.4. Data uncertainty	/1/, /2/, /3/	Refer to 5.1	OK
5.5. Emergency procedures	/1/, /2/, /3/	Refer to 5.1	OK
6. Environmental and Social Indicators			
6.1. Implementation of measures	/1/, /2/, /3/	Environmental and social indicators are not defined in the monitoring plan. Hence the question is not applicable. But the public and staff representatives informed verification team during the audit that the project is of great importance as it implies reconstruction of gas-distribution posts, which will result in improvement of gas supply quality to consumers. No negative	OK

Objective	References	Comments	Conclusion (CARs/FARs)
		environmental impact is expected.	
6.2. Monitoring equipment	/1/, /2/, /3/	See chapter 6.1.	OK
6.3. Quality assurance procedures	/1/, /2/, /3/	See chapter 6.1.	OK
6.4. External data	/1/, /2/, /3/	See chapter 6.1.	OK
7. Management and Operational System			
7.1. Documentation	/1/, /2/, /3/	The company complies with all legal and statutory requirements of the Ukraine and requirements of the verification team. JSC Odesagas has all the necessary permissions and licenses, issued by the State Inspection on Labor Safety.	OK
7.2. Qualification and training	/1/, /2/, /3/	No special trainings for operation of new equipment are required. All trainings under the project were performed by equipment suppliers, and their cost is included to the cost of equipment.	OK
7.3. Allocation of responsibilities	/1/, /2/, /3/	All measurements of methane leaks are done by operative team equipped as necessary. A program for initial monitoring measurements for shut-off stations and natural gas networks of JSC Odesagas is executed for each object (gas distribution post) of measurement. Sergiy Oleksandrovych Stryzhak and Lyudmyla Andriyivna	OK

Objective	References	Comments	Conclusion (CARs/FARs)
		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.	
7.4. Emergency procedures	/1/, /2/, /3/	Detection, liquidation and registration of failures and emergencies at gas-distribution posts of JSC Odesagas is carried out according to Safety rules of gas-supply systems of Ukraine.	OK
7.5. Data archiving	/1/, /2/, /3/	Data are stored in paper and in electronic form, and are archived in relative databases.	OK
7.6. Monitoring report	/1/, /2/, /3/	Calculations are provided in Monitoring Report. Clarification request (CR) 2 Please explain the difference between the formula for methane emission calculation in MR version 1 and PDD version 7.	CR2
7.7. Internal audits and management review	/1/, /2/, /3/	All information collected and processed by working team is verified by the executive director of JSC Odesagas and representatives of INI Biotekhinka UAAN.	OK

Periodic Verification Protocol
Table 2: Data Management System/Controls.

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
1. Defined organizational structure, responsibilities and competencies		
1.1. Position and roles	In full	Employees of OJSC "Odesagas": Vitaliy Oleksandrovych Gerasymenko – the executive director of JSC Odesagas Yakiv Lvovych Zatynaiko - the chief engineer of JSC Odesagas" Natalya Genadiyivna Orlova – chief of production and technical department of OJSC «Odesagas» Dmytro Moyseyovych Oks – chief of production and technical department of gas industry management in Odessa city under OJSC «Odesagas» Lyudmyla Andriyivna Kulbida - the LOP engineer of JSC Odesagas Kateryna Sergiyivna Burova - the engineer of of production and

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
		technical department of JSC Odesagas Sergiy Oleksandrovych Stryzhak – head of SEUG and DV UEGG in Odessa of JSC Odesagas Developer's representatives: V.Ya. Khodorchuk – scientist, secretary of ITI Biotekhinka UAAN V.I. Dorovskykh – head of laboratory of ITI Biotekhinka UAAN, candidate of technical sciences M.K. Tsvigovsky – deputy head of department of ITI Biotekhinka UAAN, candidate of technical sciences Public representatives: Andriy Oleksiyovych Shyshovsky – Head of permanent commission for realization of regulatory policy of Odessa municipal council Anatoliy Yuriyovych Ivanov – Deputy head of commission for fuel and power complex, energy saving and utility complex issues

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
1.2. Responsibilities	In full	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.
1.3. Competencies needed	In full	All employees of OJSC Odesagas involved into the project have required qualification level and working experience in the area of gas supply.
2. Conformance with monitoring plan		
2.1. Reporting procedures	In full	The monitoring plan is as per the determined PDD. The project uses Monitoring Methodology provided for by methodology AM0023 "Reduction of natural gas emissions at compressor and gas-distribution stations of main gas lines", version 03.

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
2.2. Necessary Changes	In full	The project is implemented in accordance with the plan.
3. Application of GHG determination methods		
3.1. Methods used	In full	The reporting procedures reflect the monitoring plan content. The calculation of the emission reduction is correct.
3.2. Information/process flow	In full	All measurements of methane leaks are done by operative team equipped as necessary. A program for initial monitoring measurements for shut-off stations and natural gas networks of JSC Odesagas is executed for each object (gas distribution post) of measurement. 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

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
		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.
3.3. Data transfer	In full	Data are stored on paper and in electronic form, and are archived in relative databases
3.4. Study of data transfer system	In full	The necessary procedures have been defined in internal procedures and additional internal documents relevant for the determination of the all the parameters listed in the monitoring plan.
4. Identification and maintenance of key process parameters		
4.1. Identification of key parameters	In full	The critical parameters for the determination of GHG emissions are the parameters listed in section D of the approved PDD.
4.2. Calibration/maintenance	In full	The company maintains the elaborate calibration plan for each unit of the equipment. The audit team verified the status for all the equipment provided for by the JI project, and confirms them to be complying with the plan.
5. GHG Calculations		

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
5.1. Use of estimates and default data	In full	All assumptions are given in section D of approved PDD.
5.2. Guidance on checks and reviews	In full	Monitoring plan is fully performed.
5.3. Internal validation and verification	In full	Monitoring procedure for JI Project includes the responsibility and frequency for carrying out internal audits. The audit team did verify all the parameters listed in monitoring report.
5.4. Data protection measures	In full	The necessary procedures for ensuring data security and preventing the unauthorized use were demonstrated to verifiers during on-site verification.
5.5. IT systems	In full	IT systems are the electronic network of JSC Odesagas, computers and hard data carriers.

Periodic Verification Protocol
Table 3: GHG calculation procedures and management control testing

Identification of potential reporting risk	Identification, assessment	Areas of residual risks

	and testing of management controls	
Potential reporting risks based on an assessment of the emission estimation procedures can be expected in the following fields of action: □ the calculation methods □ raw data collection □ sources of supporting documentation □ reports/databases/information systems from which data is obtained. Key source data applicable to the project assessed are hereby: ➢ metering records (fuel and power consumption), ➢ indicators of processes (weight of raw materials/products), ➢ operational logs (metering records), ➢ laboratory/analytical data (thermal value), ➢ accounting records, ➢ certificates of calibration and maintenance for appraisal of reliable accuracy of the data. It is hereby needed to focus on those risks that impact the accuracy, completeness and consistency of the reported data. Risks are weakness in the GHG calculation systems and may include: ➢ manual transfer of data/manual calculations, ➢ unclear origins of data, ➢ insufficient accuracy due to technological	Regarding the potential reporting risks identified in the left column the following mitigation measures have been observed during the on-site mission: Understanding of responsibilities and roles. Collection of initial data and their transmission to databases. Metering equipment management system. Reporting, analysis and formal data approval by the management.	The areas of residual risks, i.e. the areas of potential risks without adequate means of control are used in a conservative manner in the reports according to the approach prescribed in the PDD version 7.

limitations, ➢ lack of appropriate data protection measures (for example, protected calculation cells in spreadsheets and/or password restrictions).		

Periodic Verification Protocol
Table 4: Detailed audit testing of residual risk areas and random testing

Areas of residual risks	Additional verification testing performed	Conclusions and Areas Requiring Improvement (including Forward Action Requests)
The issue remaining is the way the data obtained is used to calculate the emission reduction in a conservative manner according to the approach prescribed in the PDD.	There has been a complete check of data transferred from daily consumption and generation readings to the calculation tool. There was no error in such transfer. The correct installation of the metering equipment can be confirmed.	Having investigated the residual risks, the audit team comes to the following conclusion: Immediate action is not needed with respect to the current emission reduction calculation. Those corrections have been considered during the verification process, so no residual risk is open.

Verification Protocol
Table 5: Resolution of Corrective Action and Clarification Requests

List of Corrective Action and Clarification Requests	Ref. to checklist question in table 2/3.	Summary of project owner response	Verification conclusion
Clarification request (CR) 1 Please explain the difference between achieved reductions under the MR and reductions provided for in PDD.	Table 2, request 3.3	Decrease in quantity of reductions in comparison with reductions stated in PDD is due to difficulties in financing and delays in project implementation schedule.	Issue is closed.
Clarification request (CR) 2 Please explain the difference between the formula for methane emission calculation in MR version 1 and PDD version 7.	Table 2, request 7.6	Appropriate amendments in MR, version 2, are made.	MR version 2 is checked. Issue is closed.

APPENDIX B: VERIFICATION TEAM

Flavio Gomes
Leading Verifier
Flavio Gomes is an engineer in chemistry and safety, diploma UNICAMP – University of Campinas State, Master of Construction Engineering Science (improvement of sanitary conditions). He spent four years in RIPASA, a pulp-and-paper mill as an Environmental Engineer. Since 2006 – Global Climate Change Manager. From 1997 – chief consultant of Bureau Veritas Consulting for the management systems of environment, quality, hygiene and occupational safety, and social liability. He is also a project verifier under Clean Development Mechanism, and an auditor of Social/Environmental reports on behalf of Bureau Veritas Certification. Flavio is currently obtaining a degree of Ph.D. in the field of power management of Imperial College – London.

Oleg Skoblyk, Specialist (Power Management)
Climate Change 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 15 JI projects.

Kateryna Zinevych, M. Sci. (environmental science)
Climate Change Verifier
Bureau Veritas Ukraine Health, Safety and Environment 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.

Oleg Skoblyk, Specialist (Power Management)

Climate Change 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 9 JI projects.

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 Black Sea District

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.

APPENDIX C: DOCUMENTS CHECKED DURING VERIFICATION

/1/. Contract with ITI Biotekhnika UAAN.
/2/. An Order on Working Team creation
/3/. Register of equipment of GRP OJSC «Odesagas»
/4/. Recommendations on monitoring of methane leaks at gas distribution posts of OJSC «Odesagas»
/5/. Gas analyzer passport EX-TEC® SR5
/6/. Certificate of state metrological certification EX-TEC® SR5, year 2005
/7/. Certificate of state metrological certification EX-TEC® SR5, year 2006
/8/. Certificate of state metrological certification EX-TEC® SR5, year 2007
/9/. Certificate of state metrological certification EX-TEC® SR5, year 2008
/10/. Certificate of state metrological certification EX-TEC® SR5, year 2009
/11/. Certificate of state metrological certification mercury temperature meter of glass type ТЛ4, year 2005
/12/. Certificate of state metrological certification mercury temperature meter of glass type ТЛ4, year 2006
/13/. Certificate of state metrological certification mercury temperature meter of glass type ТЛ4, year 2007
/14/. Certificate of state metrological certification mercury temperature meter of glass type ТЛ4, year 2008
/15/. Certificate of state metrological certification mercury temperature meter of glass type ТЛ4, year 2009
/16/. Certificate of state metrological certification manometer Д-59Н-100-1.0 6 kPa, year 2005
/17/. Certificate of state metrological certification manometer Д-59Н-100-1.0 6 kPa, year 2006
/18/. Certificate of state metrological certification manometer Д-59Н-100-1.0 6 kPa, year 2007
/19/. Certificate of state metrological certification manometer Д-59Н-100-1.0 6 kPa, year 2008
/20/. Certificate of state metrological certification manometer Д-59Н-100-1.0 6 kPa, year 2009
/21/. Certificate of gas analyzer calibration EX-TEC® SR5.
/22/. Photos of gas analyzer EX-TEC® SR5.
/23/. Photos of measurement taken at the shut-down device at Odesa, 6th km of the Oviopolska road, № 5166, code 00-0414
/24/. Photos of measurement taken at the flanged joint at Odesa, Khimichesky blvrd, 78, № 5576, code 00-0811
/25/. Passport of mercury temperature meter of glass type ТЛ4
/26/. Passport of manometer Д-59Н-100-1.0 6 kPa
/27/. Passport of timer «СОС пр-2б-2»