



BUREAU  
VERITAS

# VERIFICATION REPORT LE “KRYMTEPLOCOMUNENERGO”

## VERIFICATION OF THE REHABILITATION OF THE DISTRICT HEATING SYSTEM OF CRIMEA

(FOURTH PERIODIC FOR THE PERIOD 01/01/2010-31/12/2010)

REPORT No. UKRAINE-VER/0235/2010

REVISION No. 02

BUREAU VERITAS CERTIFICATION



## VERIFICATION REPORT

Date of first issue: <b>29/03/2010</b>	Organizational unit: <b>Bureau Veritas Certification Holding SAS</b>
Client: <b>LE "Krymteplocomunenergo"</b>	Client ref.: <b>Sheyman Myhaylo</b>

## Summary:

Bureau Veritas Certification has made the 4<sup>th</sup> periodic verification of the Rehabilitation of the district heating system of Crimea, JI Registration Reference Number UA 1000025, project of LE "Krymteplocomunenergo" located in cities, towns and villages of the Autonomous Republic of Crimea, 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 planned and described in the determined and registered 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 generating GHG emission reductions. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements, and the ERUs issued totalize 127559.02 tons of CO<sub>2</sub>eq for the monitoring period from 01/01/2010 to 31/12/2010. 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.: <b>UKRAINE-ver/0235/2010</b>	Subject Group: <b>JI</b>	
Project title: <b>Rehabilitation of the district heating system of Crimea</b>		
Work carried out by: <b>Oleg Skoblyk – team leader, lead verifier Vyacheslav Yeriomin – verifier trainee</b>		
Work reviewed by: <b>Ivan Sokolov – Internal Technical Reviewer</b>		
Work approved by: <b>Flavio Gomes – Operational Manager</b>		
Date of this revision: <b>04/04/2011</b>	Rev. No.: <b>02</b>	Number of pages: <b>33</b>

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## 1 INTRODUCTION

LE “Krymteplocomunenergo” has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project Rehabilitation of district heating system of Crimea (hereafter called “the project”) at cities, towns and villages of Autonomous Republic of Crimea, 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

Vyacheslav Yeriomin

Bureau Veritas Certification Climate Change Verifier Trainee

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) submitted by “Institute of Engineering Ecology” 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 closing CARs from AIE “Institute of Engineering Ecology” has issued new version of the Monitoring Report as of number 02.

The verification findings presented in this report relate to the Monitoring Report version(s) 2.0, and project as described in the determined PDD.

### 2.2 Follow-up Interviews

On 17/03/2010 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 LE “Krymteplocomunenergo” and Institute of Engineering Ecology were interviewed (see References). The main topics of the interviews are summarized in Table 1.

**Table 1 Interview topics**

<b>Interviewed organization</b>	<b>Interview topics</b>
LE "Krymteplocomun energo"	Organizational structure Responsibilities and authorities Roles and responsibilities for data collection and processing Installation of equipment Data logging, archiving and reporting Metering equipment control Metering record keeping system, database Training of personnel Quality management procedures and technology Internal audits and check-ups
CONSULTANT: Institute of Engineering Ecology	Monitoring plan Monitoring report Deviations from PDD ERUs calculation model

### **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 5 Corrective Action Requests.

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 the Host Party (Ukraine) has been issued by National Environmental Investment Agency of Ukraine №8149/10/10-07 dated 24.07.2007, Letter of Approval by Netherlands № 2008JI11 has been issued 19.12.2008, when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest.

The abovementioned written approval is unconditional.

#### **3.2 Project implementation (92-93)**

The project “Rehabilitation of the District Heating System of Crimea” was initiated in 2004. It consists of two parts:

- rehabilitation of the district heating system of Crimea, which includes boiler and distribution network equipment replacement and rehabilitation with installation of combined heat and electricity production plants (CHP) at the boiler houses, installation of heat-utilizers, replacement of heat exchangers at the central heat supply stations and frequency controllers installation;
- implementation of landfill gas extraction at Simferopol city landfill, which will allow to reduce methane emissions, and its further utilization at closest to the landfill boiler house.

Rehabilitation of the district heating system includes 188 boiler-houses with 708 boilers, 633 of which are in operation, and 516 km of heat distributing networks that belong to LE “Krymteplocomunenergo”. This is the major part of Crimea regional DH system. Project provide replacement of 416 boilers and rehabilitation of 46 boilers, installation of cogeneration

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units at 5 boiler houses (6 gas engines, 0.5 MW each) with total installed capacity 3 MW. Deutz TBG 616 V12 K machines are considered as potential candidate for installation. Landfill gas extraction at Simferopol city landfill will allow capturing 3700 ths. m<sup>3</sup> of methane annually.

The following activities will ensure fuel saving:

- Replacement of old boilers by the new highly efficient boilers;
- Upgrading of boilers' burners for the combustion improvement;
- Switching of boiler-houses from fuel oil to natural gas;
- Improving of the network organization, application of the new insulation and the pre-insulated pipes;
- Installation of niche-flow burners;
- Installation of combined heat and power production units;
- Installation of heat-utilizers (contact heat-recovery gas-cleaning apparatuses) that provide utilization and recovery of flue gas heat as well as additional heat from steam condensation when temperature of flue gas falls below the dew point;
- Replacement of heat exchangers at central heat supply stations;
- Installation of frequency controllers to electric drives of smoke exhausters, ventilators and network pumps;
- Landfill gas extraction at Simferopol city landfill and its further utilization at the closest to the landfill boiler house at the address: 66th Glinki Street.

Implementation of boiler houses and network rehabilitation is realized according to project plan with some slippage from the time-table. All of the project stages have not been finished yet. In several cases replacement of different (from planned before) diameters of network pipes takes place.

CHP units installation is delayed due to lack of financing.

Landfill gas utilization was not provided because LE "Krymteplocomunenergo" didn't get the corresponding letter of attorney from the owner of the Landfill.

Table of implemented energy saving measures is presented bellow

Implemented energy saving measures	Volume of performed works (number of boilers, etc.) 2010	Total
Boilers replacement	27	100
Switch to gas	0	27
Replacement of boiler's burners	10	84





Installation of heat utilizers	0	2
Replacement of heat exchangers	1	43
Reconstruction of boilers	13	134
Installation of frequency controllers	0	14
Installation of gas correctors	0	8
Replacement of network pipes, m	8808	34956.4 5

More detailed information is provided in Exel file calculation of emission reductions.

### 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 and the activity level of the project as well as risks associated with the project were taken into account as appropriate.

The data sources used for calculating emission reductions 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 data and their sources, provided in monitoring report, are clearly identified, reliable and transparent.



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The implementation of data collection procedures is in accordance with the monitoring plan, including the quality control and quality assurance procedures.

Registration of natural gas consumption at the boiler houses of LE “Krymteplocomunenergo” is carried out by the following scheme:

1. For automatic fuel control: gas flow metering commercial system is installed at gas distributing unit of a boiler-house that consists of gas flow meter and automatic corrector for temperature and pressure, see Fig. 5. Gas consumption is registered automatically. Every day operator of a boiler house makes registration of daily gas consumption in the special paper journal, see Fig. 6.  
For manual fuel control: gas flow metering commercial system is installed at gas distributing unit of a boiler-house that consists of gas flow meter, temperature of the natural gas sensor and gas pressure sensor. Operator registers gas consumption and parameters of gas (temperature and pressure) in operational journal every hour. These parameters are used to bring gas consumption to normal conditions.
2. Data are summarized daily and transferred to accounting centers of LE “Krymteplocomunenergo” branches located in City of Simferopol and towns: Alushta, Dzhankoj, Evpatoria, Kerch, Rozdolne, Feodosia and Jalta.
3. Data from branches are transferred to accounting center of LE “Krymteplocomunenergo” for archiving and storage.
4. Every month the accounting center transfers these data to the gas supplying company.

The function of the monitoring equipment, including its calibration status, is in order. Calibration of gas meters is provided by State Metrological Service in Autonomous Republic Crimea. Gas meters are within their calibration interval.

The evidence and records used for the monitoring are maintained in a traceable manner.

The data collection and management system for the project is in accordance with the monitoring plan. The data monitored and used to ERUs calculation is stored in central office of LE “Krymteplocomunenergo” in paper and electronic format.

Mr. Mihaylo Sheyman, the Chief engineer of LE “Krymteplocomunenergo”, was appointed as a responsible person for the implementation and management of the monitoring process at the LE



“Krymteplocomunenergo”. Mr. Mihaylo Sheyman is responsible for supervising data collection.

Mr. Sergiy Zhukovskiy - Head of fuel-energy resources department, is responsible for the data collection, measurements, calibration, data recording and storage.

Dr. Vladimir Gomon, Managing Engineer of the European Institute for safety, security, insurance and environmental technics, is responsible for baseline and monitoring methodology development.

Dr. Dmitri Paderno, Deputy director of the Institute of Engineering Ecology, is responsible for baseline and monitoring methodology development.

Mrs. Kateryna Korinchuk, engineer of the Institute of Engineering Ecology, is responsible for data processing.

### **3.6 Verification regarding programmes of activities (102-110)**

Not applicable.

## **4 VERIFICATION OPINION**

Bureau Veritas Certification has performed the 4<sup>th</sup> verification of the “Rehabilitation of the district heating system of Crimea Project” in 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 LE “Krymteplocomunenergo” 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 04. 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 planned and described in approved 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 generating GHG emission reductions.

Bureau Veritas Certification can confirm that the GHG emission reduction is accurately calculated and is free of material errors, omissions, or 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, with a reasonable level of assurance, the following statement:

Reporting period: From 01/01/2010 to 31/12/2010

Baseline emissions	:560328.05 t CO <sub>2</sub> equivalents.
Project emissions	:432769.03 t CO <sub>2</sub> equivalents.
Emission Reductions	:127559.02 t CO <sub>2</sub> equivalents.



## 5 REFERENCES

### Category 1 Documents:

Documents provided by Type the name of the company that relate directly to the GHG components of the project.

- /1/ Project Design Document "Rehabilitation of the district heating system of Crimea" version 04 dated 23.04.08
- /2/ Monitoring Report "Rehabilitation of the district heating system of Crimea" version 01 dated 25.02.11
- /3/ Monitoring Report "Rehabilitation of the district heating system of Crimea" version 02 dated 01.04.11
- /4/ ERU's calculation model Exel file "Annex 2,3\_MR4\_Crimea\_10-v01-1-end-s"
- /5/ Determination and Verification Manual, version 01.

### Category 2 Documents:

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

- /1/ Gas meter calibration certificate ПГК-1000, № 047852, Batumskiy 2 str.
- /2/ Gas meter calibration certificate ПГК-1000, № 051662 Batumskiy 2 str.
- /3/ Gas meter calibration certificate ПГК-1000, №051661 Turgeneva 15 str.
- /4/ Gas meter calibration certificate ПГК-1000, №051663 Altayska 2 str.
- /5/ Gas meter calibration certificate ПГК-1000, № 047851 Batumskiy 2 str.
- /6/ Gas meter calibration certificate ПГК-1000, №047568 M. Zalky 9 str.
- /7/ Gas meter calibration certificate ПГК-1000, №046296 M. Zalky 9 str
- /8/ Gas meter calibration certificate ПГК-1000, №047878 Haidara 3 str.
- /9/ Gas meter calibration certificate ПГК-1000, № 047879 Turgeneva 11 str.
- /10/ Gas meter calibration certificate ПГК-1000, № 047655 Dziubanova 11 str.
- /11/ Gas meter calibration certificate ЛГК-200, № 044542 Zaliznychnykv 13 str.
- /12/ Gas meter calibration certificate ПГК-1000, № 044547 Pivnichnyi 17 str.
- /13/ Gas meter calibration certificate ПГК-1000, № 041766 Sportyvna 1 str.
- /14/ Gas meter calibration certificate ПГК-1000, № 039784 Pivnichnyi 17 str.
- /15/ Gas meter calibration certificate ПГК-1000, № 037752 Haidara 3 str.



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- /16/ Gas meter calibration certificate PГK-1000, № 39744 Zaliznychnyiv 13 str.
- /17/ Gas meter calibration certificate PГK-1000, №039786 Strilkova str.
- /18/ Gas meter calibration certificate PГK-1000, №039785, Altaiska 9 str.
- /19/ Gas meter calibration certificate PГK-1000, №041596 Glynky 66 str.
- /20/ Gas meter calibration certificate PГK-1000, №041595 Molodizhne village
- /21/ Gas meter calibration certificate PГK-1000, №036381 Radischeva 78 str.
- /22/ Gas meter calibration certificate PГK-650, №037754, Strilkova 96 str.
- /23/ Gas meter calibration certificate PГK-600, №039782 Dziubanova 11 str.
- /24/ Gas meter calibration certificate PГK-600, №036380 Altaiska 2 str.
- /25/ Gas meter calibration certificate PГK-1000, №041764, Lenina 5 av.
- /25/ Gas meter calibration certificate PГK-600, №043129 S. Tzenskogo 4 str.
- /26/ Gas meter calibration certificate PГK-600, №039783 Lugova 77 str.
- /27/ Gas meter calibration certificate PГK-600, №037753 Shkilne village
- /28/ Gas meter calibration certificate PГK-600, №044533 Zaliznychnyiv 13 str.
- /29/ Gas meter calibration certificate PГK-600, №044530 1<sup>st</sup> Kinnoii Armii. 37
- /30/ Gas meter calibration certificate PГK-600, №044548 Kirova 47 str.
- /31/ Gas meter calibration certificate PГK-600, №044532 Pershotravneve village
- /32/ Gas meter calibration certificate PГK-600, №044546 Radionova 3 str.
- /33/ Gas meter calibration certificate PГK-600, №044538 Artyleriiska 91 str.
- /34/ Gas meter calibration certificate PГK-400, №041562 Chornozemna str.
- /35/ Gas meter calibration certificate PГK-400, №041561 Obiizna str.
- /36/ Gas meter calibration certificate PГK-600, № 041763 Sevastopolska 45 str.
- /37/ Gas meter calibration certificate PГK-400, №053533, Pakhotna 1 str.
- /38/ Gas meter calibration certificate PГK-400, №043131 Barykadna 59 str.
- /39/ Gas meter calibration certificate PГK-400, №043162 Krymska 4 str.
- /40/ Gas meter calibration certificate PГK-400, №041768 Pushkina 44 str.
- /41/ Gas meter calibration certificate PГK-400, №041657 Zheliabova 52 str.
- /42/ Gas meter calibration certificate PГK-250, №044537 Hurzufska 5 str.
- /43/ Gas meter calibration certificate PГK-250, №041597, Z. Zhyltzovoi 10 str.
- /44/ Gas meter calibration certificate PГK-250, №041563 Sevastopolska 32 str.
- /45/ Gas meter calibration certificate PГK-250, №047628, Nosenka 68 str.



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- /46/ Gas meter calibration certificate PГK-250, №039781, Uchylyshchna 42 str.
- /47/ Gas meter calibration certificate PГK-250, №043132, Bespalova 27 str.
- /48/ Gas meter calibration certificate PГK-250, №039780, Zhukovskoho 23 str.
- /49/ Gas meter calibration certificate PГK-250, №037751 Nat. Guard
- /50/ Gas meter calibration certificate PГK-100, №043133, Vorovskogo 19 str.
- /51/ Gas meter calibration certificate PГK-100, №047853, Baturyna 12 str.
- /52/ Gas meter calibration certificate PГK-100, №047567, Molodizhne village
- /53/ Gas meter calibration certificate PГK-100, № 041598, Hoholia 32 str.
- /54/ Gas meter calibration certificate PГK-100, № 041769 Lenina str. 17
- /55/ Gas meter calibration certificate Metrix G25, №043180, Elevatorne village
- /56/ Gas meter calibration certificate PГK-400, №041767, var.8
- /57/ Gas meter calibration certificate PГK-650, №043130, Leskova 51 str.
- /58/ Average temperature certificate for branches LE «Krymteploomunenergo», January 2010
- /59/ Average temperature certificate for branches LE «Krymteploomunenergo», February 2010
- /60/ Average temperature certificate for branches LE «Krymteploomunenergo», March 2010
- /61/ Average temperature certificate for branches LE «Krymteploomunenergo», April 2010
- /62/ Average temperature certificate for branches LE «Krymteploomunenergo», October 2010
- /63/ Average temperature certificate for branches LE «Krymteploomunenergo», November 2010
- /64/ Average temperature certificate for branches LE «Krymteploomunenergo», December 2010
- /65/ Regional executive committee of Simferopol city decision on the beginning of heating period № 2715 by 08.10.10
- /66/ Regional executive committee of Simferopol city decision on the end of heating period № 828 by 09.04.10
- /67/ Parameter chart of boiler RTQ-600, ст.№1, Hurzufska 5, Simferopol city.
- /68/ Parameter chart of of boiler RTQ-600, ст.№2, Hurzufska 5, Simferopol city.
- /69/ 2tp form, III quarter 2010 year, Shchelkyno town
- /70/ 2tp form, III quarter 2010 year, Simferopol city
- /71/ 2tp form, III quarter 2010 year, Bilogirsk town
- /72/ 2tp form, III quarter 2010 year, Simferopol district
- /73/ 2tp form, II quarter 2010 year, Simferopol city
- /74/ 2tp form, II quarter 2010 year, Bilogirsk town
- /75/ 2tp form, II quarter 2010 year, Simferopol district



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- /76/ 2tp form, II quarter 2010 year, Shchelkyno town
- /77/ 2tp form, I quarter 2010 year, Simferopol city
- /78/ 2tp form, I quarter 2010 year, Bilogirsk town
- /79/ 2tp form, I quarter 2010 year, Simferopol district
- /80/ 2tp form, I quarter 2010 year, Shchelkyno town
- /81/ 2tp form, 2010 year, Simferopol city
- /82/ 2tp form, 2010 year, Bilogirsk town
- /83/ 2tp form, 2010 year, Simferopol district
- /84/ 2tp form, 2010 year, Shchelkyno town
- /85/ Gas certificate, January 2010
- /86/ Gas certificate, February 2010
- /87/ Gas certificate, April 2010
- /88/ Gas certificate, March 2010
- /89/ Gas certificate, May 2010
- /90/ Gas certificate, June 2010
- /91/ Gas certificate, July 2010
- /92/ Gas certificate, August 2010
- /93/ Gas certificate, September 2010
- /94/ Gas certificate, October 2010
- /95/ Gas certificate, November 2010
- /96/ Gas certificate, December 2010
- /97/ License LE "Krymteplocmunenergo". Research and developer works in building, installation supporting and barrier constructions, building and installation engineer and transport networks, include seismic regions and difficult engineer and geological circumstances.
- /98/ License№ 372.09.43.40.30.0. Prolongation making dangerous works
- /99/ License №345054 give LE "Krymteplocmunenergo" for producing heat energy, transporting it by main pipelines and local heating networks, supply heat energy.
- /100/ 11mtp form January-December 2010
- /101/ Passport №1139 fuel oil M-100
- /102/ Fuel oil compliance certificate M-100, given JIS «LYNIK»
- /103/ Fuel oil compliance certificate M-100, given ПАТ «Ukrtatnafta»
- /104/ Passport №72 fuel oil M-100 ashy highsulphurous
- /105/ Passport №83 fuel oil M-100 ashy highsulphurous
- /106/ Fuel oil compliance certificate M-100, given JIS «Mishel Plus»
- /107/ Passport №76 fuel oil M-100 ashy highsulphurous
- /108/ Report of liquid fuel consumption Kyivskiyi PTC January 2010
- /109/ Report of liquid fuel consumption Zaliznychniyi PTC January 2010
- /110/ Report of liquid fuel consumption Zaliznychniyi PTC December 2010
- /111/ Report of liquid fuel consumption Kyivskiyi PTC травень 2010
- /112/ Report of liquid fuel consumption Kyivskiyi PTC December 2010
- /113/ Report about heating area, number of customers, capacity of hot water supply, connected heating load Centralnyi PTC,
- /114/ Report about heating area, number of customers, capacity of hot water supply, connected heating load Centralnyi PTC, 2010 year 2010 year





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- /115/ Report about heating area, number of customers, capacity of hot water supply, connected heating load Zaliznychnyi PTC, 2010 year
- /116/ Report about heating area, number of customers, capacity of hot water supply, connected heating load Kyivskyi PTC, 2010 year
- /117/ Commissioning certificate of boiler KBГM-10 №1, M. Zalky 9a, 26.01.10
- /118/ Commissioning certificate of boiler KBГM-10 №2, M. Zalky 9a, 16.03.10
- /119/ Commissioning certificate burners Riello RS130 Crymska 4b, 19.05.10
- /120/ Commissioning certificate burners Riello RS130 Barykadna 57a, 25.05.10
- /121/ Commissioning certificate heating line, N. Hospitalna, 10.02.10
- /122/ Commissioning certificate burners Riello RS130, Radishcheva 69a, 22.02.10
- /123/ Commissioning certificate heating line, вул.. Беспалова-Морська 3, 29.06.10
- /124/ Commissioning certificate heating line D 219 mm, Radishcheva 69a, 25.03.10
- /125/ Commissioning certificate heating line D 102 mm, Radishcheva 69a, 24.03.10
- /126/ Commissioning certificate of boiler Riello RTQ-700., Radishcheva 69a, 22.02.10
- /127/ Commissioning certificate boilers Riello RTQ-600., вул.. Желябова 50, 29.03.10
- /128/ Commissioning certificate boilers KBВ-3,15, KBНГ-2,5 з заміною екранних труб вул.. С. Ценського 4, 10.08.10
- /129/ Commissioning certificate of boiler KBГ-7,5, №1 replacement of convective part Batumskyi 2, 21.09.10
- /130/ Commissioning certificate of boiler KBГ-7,5, №2 replacement of convective part, Batumskyi 2, 16.08.10
- /131/ Commissioning certificate boilers Riello RTQ-1250, Nosenko 68, 28.07.10
- /132/ Commissioning certificate boilers Riello RTQ-700, Uchylyshchna 42b, 19.02.10
- /133/ Commissioning certificate heating line D 102 mm, Trubachenko str., 26.08.10
- /134/ Commissioning certificate heating line D 76 mm, Leskova 51, 27.10.10
- /135/ Commissioning certificate heating line D 57 mm, D 76 mm, D 108 mm, D 159 mm, Kirova 47a avenue, 22.10.10
- /136/ Commissioning certificate boilers Riello RTQ-600 ., Hurzufska 5, 25.10.10
- /137/ Claiming and act about unsupplied heat, bill 29-20751
- /138/ Claiming and act about unsupplied heat, bill 29-10377
- /139/ Claiming and act about unsupplied heat, bill 29-20763
- /140/ Claiming and act about unsupplied heat, bill 71881
- /141/ Claiming and act about unsupplied heat, bill 71889



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- /142/ Claiming and act about unsupplied heat, bill 71885
- /143/ Claiming and act about unsupplied heat, bill 66-340007
- /144/ Claiming and act about unsupplied heat, bill 21-67409
- /145/ Claiming and act about unsupplied heat, bill 29-20773
- /146/ Claiming and act about unsupplied heat, bill 60119
- /147/ Claiming and act about unsupplied heat, bill 25-60054
- /148/ Claimings and acts about unsupplied heat, bills 66-121..125
- /149/ Claiming and act about unsupplied heat, bill 66130022
- /150/ Claiming and act about unsupplied heat, bill 29-20772
- /151/ Claiming and act about unsupplied heat, bill 29-207-70
- /152/ Claiming and act about unsupplied heat, bill 29-20-779
- /153/ Claiming and act about unsupplied heat, bill 29-21012
- /154/ Claiming and act about unsupplied heat, bill 66-311189
- /155/ Claiming and act about unsupplied heat, bill 29-21020
- /156/ Claiming and act about unsupplied heat, bill 29-20773
- /157/ Claiming and act about unsupplied heat, bill 29-20754
- /158/ Claiming and act about unsupplied heat, bill 29-21012
- /159/ Claiming and act about unsupplied heat, bill 25-60054
- /160/ Claiming and act about unsupplied heat, bill 28-98010
- /161/ Claiming and act about unsupplied heat, bill 28-98017
- /162/ Claiming and act about unsupplied heat, bill 28-98014
- /163/ Claiming and act about unsupplied heat, bill 29.-10439
- /164/ Claiming and act about unsupplied heat, bill 29-20770
- /165/ Claiming and act about unsupplied heat, bill 29-20779
- /166/ Claiming and act about unsupplied heat, bill 29-21011
- /167/ Claiming and act about unsupplied heat, bill 29-20772
- /168/ Claiming and act about unsupplied heat, bill 71922
- /169/ Claiming and act about unsupplied heat, bill, Leskova 43, flat 8
- /170/ Claiming and act about unsupplied heat, bill 29-10803
- /171/ Claiming and act about unsupplied heat, bill 66-311189
- /172/ Claimings and acts about unsupplied heat, bills 51067, 51071, 51072, 51075, 51076
- /173/ Claiming and act about unsupplied heat, bill, Kievska159 str.
- /174/ Claiming and act about unsupplied heat, bill 60119
- /175/ Claiming and act about unsupplied heat, bill 22-92322
- /176/ Claiming and act about unsupplied heat, bill 22-92310
- /177/ Claiming and act about unsupplied heat, bill 66-312172
- /178/ Claiming and act about unsupplied heat, bill 28-98165
- /179/ Claiming and act about unsupplied heat, bill 60119
- /180/ Claiming and act about unsupplied heat, bill, 51 Army 107str.
- /181/ Claiming and act about unsupplied heat, bill 66-17005
- /182/ Claiming and act about unsupplied heat, bill 28-98128
- /183/ Claiming and act about unsupplied heat, bill 28-97936
- /184/ Claiming and act about unsupplied heat, bill 60119
- /185/ Act about unsupplied heat, Samokisha 5, f.23
- /186/ Act about unsupplied heat, Heroiiv Adzhimushkaiu 3 f. 41
- /187/ Claiming and act about unsupplied heat, bill 6-29460



- /188/ Claiming and act about unsupplied heat, bill 6-29453
- /189/ Act about unsupplied heat, Sevastopolska 4, f. 99
- /190/ Claiming and act about unsupplied heat, bill 66-13154
- /191/ Claiming and act about unsupplied heat, bill 66-10598
- /192/ Claiming and act about unsupplied heat, bill 66-13154
- /193/ Act about unsupplied heat, Sevastopolska 4, f. 1
- /194/ Act about unsupplied heat, Heroiiv Adzhimushkaiu 3 f. 40
- /195/ Fuel oil consumption book
- /196/ Fuel oil consumption book
- /197/ Fuel oil consumption book
- /198/ Fuel oil consumption book
- /199/ Fuel oil consumption book
- /200/ Graduated table for fuel oil steel horizontal reservoir №3, Perevalne village boiler house
- /201/ Graduated table for fuel oil steel horizontal reservoir №1, Perevalne village boiler house
- /202/ Graduated table for fuel oil steel horizontal reservoir №2, Perevalne village boiler house

**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/ Mihaylo Sheyman – Chief engineer;
- /2/ Sergiy Zhukovskiy - Head of fuel-energy resources department;
- /3/ Olga Travina – Head of production department;
- /3/ Irina Bakaldina – senior engineer of production department;
- /4/ Nadiya Kim – senior engineer of fuel-energy resources department.
- /5/ Dmytro Paderno – Deputy director of the Institute of Engineering Ecology.



## VERIFICATION REPORT

**APPENDIX A: COMPANY PROJECT VERIFICATION PROTOCOL  
BUREAU VERITAS CERTIFICATION HOLDING SAS**

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

**BUREAU VERITAS CERTIFICATION HOLDING SAS**

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
<b>Project approvals by Parties involved</b>				
90	Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	CAR №01 Please, add information about Letter of Approval in Monitoring Report.	CAR №01	OK
91	Are all the written project approvals by Parties involved unconditional?	See section 90 of this Protocol.	OK	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?	Modernization of boiler houses and network rehabilitation is in accordance with the PDD. CHP units installation is delayed due to the lack of financing. Landfill gas utilization was not provided because LE "Krymteplocomunenergo" didn't get the corresponding letter of attorney from the owner of the landfill.	OK	OK
93	What is the status of operation of the project during the monitoring period?	Project was operational during complete monitoring period.	OK	OK
<b>Compliance with monitoring plan</b>				
94	Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding	The monitoring plan included in PDD got a positive determination conclusion. This plan is available at the	OK	OK


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VERITAS**

## VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	which the determination has been deemed final and is so listed on the UNFCCC JI website?	UNFCCC website. The algorithm of monitoring is in line with the monitoring plan included in determined and registered PDD.		
95 (a)	For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) above, influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project taken into account, as appropriate?	Yes. The key factors, e.g. those listed in 23 (b) (i)-(vii) of the DVM check list, influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account for calculating the emission reductions.	OK	OK
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	CAR №02 Please, provide in Monitoring Report calculation of maximum connected load. CAR №03 Please, provide in Monitoring Report references to the documents which determine duration of hot water supply period.	CAR №02  CAR №03	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?	Emission factors used for calculating the emission reduction, are selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.	OK	OK
95 (d)	Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and the most plausible scenarios in a transparent manner?	The calculation of emission reductions or enhancements of net removals are based on conservative assumptions and the most plausible scenarios in a transparent manner.	OK	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 monitoring period on an annual average basis?	Not applicable	Not applicable	Not applicable



## VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	Not applicable	Not applicable	Not applicable
97 (b)	If the determination was conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report?	Not applicable	Not applicable	Not applicable
98	If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods, are the monitoring periods per component of the project clearly specified in the monitoring report? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past?	Not applicable	Not applicable	Not applicable
<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?	Not applicable	Not applicable	Not applicable
99 (b)	Does the proposed revision improve the accuracy and/or applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans?	Not applicable	Not applicable	Not applicable
<b>Data management</b>				
101 (a)	Is the implementation of data collection	The implementation of data collection procedures	OK	OK



**BUREAU  
VERITAS**

## VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	are in accordance with the monitoring plan included in the determined PDD. The data monitored and required to ERUs calculation are saved in paper and electronic form in central office LE "Krymteplocomunenergo"		
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	CAR №04 During the site-visit has been detected, that calibration interval of commercial gas meters ended during monitoring period. Please prove that calibrated equipment has been used for gas accounting overall monitoring period.	CAR №04	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.	OK	OK
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	CAR №05 Please, provide any document, which indicates that the data monitored and required to ERU calculation, are to be kept for two years after the crediting period.	CAR №05	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?	Not applicable	Not applicable	Not applicable
103	Is the verification based on the monitoring reports of all JPAs to be verified?	Not applicable	Not applicable	Not applicable
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	Not applicable	Not applicable	Not applicable
104	Does the monitoring period not overlap with previous monitoring periods?	Not applicable	Not applicable	Not applicable
105	If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?	Not applicable	Not applicable	Not applicable
<b>Applicable to sample-based approach only</b>				



## VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
106	<p>Does the sampling plan prepared by the AIE:</p> <p>(a) Describe its sample selection, taking into account that:</p> <p>(i) For each verification that uses a sample-based approach, the sample selection shall be sufficiently representative of the JPAs in the JI PoA such extrapolation to all JPAs identified for that verification is reasonable, taking into account differences among the characteristics of JPAs, such as:</p> <ul style="list-style-type: none"> <li>- The types of JPAs;</li> <li>- The complexity of the applicable technologies and/or measures used;</li> <li>- The geographical location of each JPA;</li> <li>- The amounts of expected emission reductions of the JPAs being verified;</li> <li>- The number of JPAs for which emission reductions are being verified;</li> <li>- The length of monitoring periods of the JPAs being verified; and</li> <li>- The samples selected for prior verifications, if any?</li> </ul>	Not applicable	Not applicable	Not applicable
107	Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation?	Not applicable	Not applicable	Not applicable
108	Has the AIE made site inspections of at least the square root of the number of total JPAs, rounded to the upper whole number? If the AIE makes no site inspections or fewer site inspections than the square root of the number of total JPAs, rounded to the upper whole number, then does the AIE provide a	Not applicable	Not applicable	Not applicable





VERIFICATION REPORT

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	reasonable explanation and justification?			
109	Is the sampling plan available for submission to the secretariat for the JISC.s ex ante assessment? (Optional)	Not applicable	Not applicable	Not applicable
110	If the AIE learns of a fraudulently included JPA, a fraudulently monitored JPA or an inflated number of emission reductions claimed in a JI PoA, has the AIE informed the JISC of the fraud in writing?	Not applicable	Not applicable	Not applicable

VERIFICATION REPORT



**Table 2 Resolution of Corrective Action and Clarification Requests**

<b>Draft report clarifications and corrective action requests by validation team</b>	<b>Ref. to checklist question in table 1</b>	<b>Summary of project participant response</b>	<b>Verification team conclusion</b>
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<p>CAR №01 Please, add information about Letter of Approval in Monitoring Report.</p>	<p>90</p>	<p>Letter of Approval for this project from Ukraine № 8149/10/10-07 was issued on 24.07.2007; Letter of Approval from The Netherlands # 2008JI11 was issued on 19.12.2008.</p> <p>This information is added to MR #4 version 02.</p> <p>However according to DVM para.90, The AIE should assess whether at least one written project approval by a Party involved in the JI project, other than the host Party(ies), has been issued by the DFP of that Party when submitting the first verification report for publication. Thus, only the presence of LoA from the Party of buyer should be assessed, and not later than submitting the first verification report, since the presence of LoA from the Host Party should be assessed, according to DVM para.19, as the necessary circumstance, at the earlier stage - submitting the PDD for publication.</p> <p>Thus, at the stage of the second and later monitoring report, the presence of LoAs from the Host Party and from the Party of buyer are the necessary circumstances and are implied on default.</p>	<p>The MR is checked The issue is closed.</p>
		<p>Since this verification for the Crimea project is the 4<sup>th</sup> one, information on LoAs was not included in text of the</p>	



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<p>CAR №02 Please, provide in Monitoring Report calculation of maximum connected load.</p>	<p>95(b)</p>	<p>Data on the maximum connected load are submitted by the project supplier, as the majority of other statistic data concerning the project. These data are calculated according to the “KTM 204 Ukraine 244-94”, subsection 2.2.5, formula 2.14, and are based on the heat demand at the minimum outside temperatures for a town [see ibid, Annex 1].</p> <p>These calculations are to be done for each customer (building, etc.), and thus are very complicated and cumbersome.</p> <p>Values of the maximum connected load are not used directly for emission reduction calculations in JI project, and are used only for determination of the load mode (heating vs. hot water supply) of a boiler-house. Thus, they are mainly illustrative for such JI project, and it seems not rationale to provide these calculations in the monitoring report.</p> <p>Detailed description of such calculation along with an example are provided to AIE.</p>	<p>The issue is closed based on clarification.</p>
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VERIFICATION REPORT

<p>CAR №03 Please, provide in Monitoring Report references to the documents which determinate duration of hot water supply period.</p>	<p>95(b)</p>	<p>Duration of hot water supply period is determined according to the monthly reports of heating districts. This information is added to MR #4 version 02. Examples of such reports are provided to AIE.</p>	<p>The issue is closed. Monitoring Report checked.</p>
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VERIFICATION REPORT

<p>CAR №04                  During the site-visit has been detected, that calibration interval of commercial gas meters ended during monitoring period.                  Please verify that calibrated equipment has been used for gas accounting overall monitoring period.</p>	<p>101(b)</p>	<p>According to the requirements of the engineering Standard of Ukraine № 2708:2006 "Metrology. Calibration of measuring equipment. The organization and procedure" <a href="https://oscill.com/files/27082006.pdf">[https://oscill.com/files/27082006.pdf]</a>, all measuring equipment is subject to the periodical inspection (calibration).                  Calibration is carried out in term indicated in an act of previous calibration. After next calibration, an act of previous calibration ceases to be in force and can't evidence as reference document, thus it is usually not stored.                  Accordingly, LE "Krymteplocomunenergo" does not store out-of-dated acts on calibration, but uses only in-time calibrated measuring equipment over all monitoring period.                  From the other side, according to the "Regulations of natural gas account in time of its transportation through gas distribution networks, its delivery and consumption" approved by the Order of the Ministry of fuel and energy of Ukraine #618 dated 27.12.2005, for period when a gas flow meter is not calibrated, the gas consumption should be calculated by the total installed capacity of boilers at a</p>	<p>The issue is closed based on clarification.</p>



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<p>CAR №05 Please, provide any document, which is indicated that the data monitored and required to ERU calculation, are to be kept for two years after the crediting period.</p>	<p>101(d)</p>	<p>The data monitored and required to ERU calculation are to be kept for two years after the end of crediting period, i.e. up to 31.12.2014.</p> <p>This is indicated in the Order # 42 dated 31.03.2011, on formation of the operational team and storage term of documents.</p> <p>This information is added to MR #4 version 02.</p> <p>Copy of this order is provided to AIE.</p>	<p>The issue is closed.</p>
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**APPENDIX B: VERIFIERS CV'S****Work carried out by:****Oleg Skoblyk, Specialist (Power Management)**

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 52 JI projects.

**Vyacheslav Yeriomin, Specialist (Electromechanic)**

Climate Change Verifier Trainee

Bureau Veritas Ukraine HSE Department project manager

Vyacheslav Yeriomin has graduated from National Technical University of Ukraine 'Kyiv Polytechnic University' with specialty Electromechanic. He has experience related to working in a professional position (engineering) involved with the exercises in heavy machinery, electric drive, metallurgy at JSC "Inzhenernyi Dom". Vyacheslav Yeriomin has successfully completed IRCA registered Internal Auditor Training Course for Environment Management Systems and Quality Management Systems as well as IRCA registered Lead Auditor Training Course for Quality Management Systems.

Vyacheslav Yeriomin is involved in the determination/verification of 6 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





VERIFICATION REPORT

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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