VERIFICATION REPORT
OJSC
"OBLTEPLOCOMUNENERGO"

VERIFICATION OF THE DISTRICT HEATING SYSTEM REHABILITATION OF CHERNIHIV REGION

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

REPORT NO. UKRAINE-VER/0224/2011

REVISION NO. 02

BUREAU VERITAS CERTIFICATION

Report No: UKRAINE-ver/0224/2011

VERIFICATION REPORT

Date of first issue:	Organizational unit:
05/04/2011	Bureau Veritas Certification Holding SAS
Client:	**Client ref.:**
OJSC "Oblteplocomunenergo"	Yuri Barbarov

Summary:

Bureau Veritas Certification has made the 4th periodic verification of the District Heating System Rehabilitation of Chernihiv Region, JI Registration Reference Number 0081, project of JSC «Oblteplocomunenergo»located in cities, towns and villages of the Chernihiv Region, Ukraine, and applying the JI specific approach, on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

The verification scope is defined as a periodic independent review and ex post determination by the Accredited Entity of the monitored reductions in GHG emissions during defined verification period, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the verification process is a list of Clarification, Corrective Actions Requests, Forward Actions Requests (CR, CAR and FAR), presented in Appendix A.

In summary, Bureau Veritas Certification confirms that the project is implemented as 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 108386.98 tons of CO_2eq 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.:	Subject Group:	
UKRAINE-ver/0224/2011	JI	
Project title:		
District Heating System Rehabilitation of Chernihiv Region		
Work carried out by:		
Oleg Skoblyk – team leader, lead verifier Vyacheslav Yeriomin – verifier trainee		
Work reviewed by:		
Ivan Sokolov – Internal Technical Reviewer		
Work approved by:		
Flavio Gomes – Operational Manager		
Date of this revision:	**Rev. No.:**	**Number of pages:**
05/04/2011	02	32

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Table of Contents *Page*

1 INTRODUCTION

OJSC «Oblteplocomunenergo» has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project District Heating System Rehabilitation of Chernihiv Region (hereafter called "the project") at cities, towns and villages of Chernihiv Region, Ukraine.

This report summarizes the findings of the verification of the project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

1.1 Objective

Verification is the periodic independent review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions during defined verification period.

The objective of verification can be divided in Initial Verification and Periodic Verification.

UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

1.2 Scope

The verification scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

1.3 Verification Team

The verification team consists of the following personnel:

Oleg Skoblyk
Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

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 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.

The verification findings presented in this report relate to the Monitoring Report version(s) 1.0, 2.0 and project as described in the determined PDD.

2.2 Follow-up Interviews

On 03/03/2011 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of OJSC «Oblteplocomunenergo» and Institute of Engineering Ecology were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
OJSC "Chernigivoblteplocomunenergo" "Nizhynteplomerezhi" Ltd ME "Prilukiteplovodopostachannya" ME "Bahmachteplomerezhi" PEHN "Borznateplocomunenergo" ME "Nosivski teplovi merezhi"	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). The letter of approval has been issued by National Environmental Investment Agency of Ukraine (№ 5411-k/10/3-10 dated 14.05.2007) 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. Letter of Approval from The Federal Environmental Agency of Germany was issued on 16.07.2009.

3.2 Project implementation (92-93)

The project was initiated in 2002 to rehabilitate Chernihiv region's district heating system, including boiler and distribution network equipment replacement and rehabilitation.
The 124 boiler-houses with 458 boilers (total maximal connected load 423.9 Gkal/hour, 2002) and 227 km of heat distributing networks in Chernihiv city and Chernihiv Region, which belong to "Oblteplocomunenergo" are involved in the project as well as the 65 boiler-houses with 223 boilers (total maximal connected load 173.8 Gkal/hour, 2002) and 125 km of heat distributing networks in Chernihiv

Region, which belong to other heat supply enterprises that empowered OJSC “Oblteplocomunenergo” to represent their interests in this project.
The total number of boiler-houses which are involved in the project is 189 with 681 boilers (435 of which are for reconstruction and replacement within this project) and 352 km heat distribution networks (198 of which are for reconstruction and replacement within this project). The following activities ensuring fuel saving were performed before 2008:

- Replacement of old boilers by new highly efficient boilers;
- Upgrading of boilers,
- Upgrading of boilers’ burners;
- Installation of heat utilizers, including condensation ones;
- Fuel switch from coal and fuel oil to gas;
- Decreasing pipelines length and replacing the 4-pipe lines by 2-pipe lines, with application of the new insulation and the pre-insulated pipes.

According to the project activity following equipment had been implemented during 2010 year.

Implemented energy saving measures	**Volume of performed works (number of boilers, etc.), pieces**	
	2010	**Total**
JSC „Oblteplocomunenergo”		
Replacement of boilers	2	180
Replacement of boiler's burners	3	24
Replacement of boiler's screen tubes	-	8
Replacement of boiler's convection part	1	3
Replacement of refractory lining of boilers	5	5
Individual heat supply stations installation	-	2
Load switch	-	2
Heat utilizers installation	7	5
Frequency controllers installation	7	7
Replacement of exhausters	1	1

Network rehabilitation, m	1101	20941

Chernihiv Region enterprises		
	2010	Total
Replacement of boilers	-	104
Replacement of boiler's burners	1	3
Replacement of boiler's heating surfaces	1	1
Heat utilizers installation	3	3
Pumps replacement	7	7
Gas meters and correctors installation	2	2
Load switch	-	5
Network rehabilitation, m	2236	7500

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, the activity level of the project and risks associated with the project were taken into account.

The data sources used for calculating emission reductions or enhancements of net removals are clearly identified, reliable and transparent.

Emission factors, including default emission factors, are selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.

The calculation of emission reductions or enhancements of net removals is based on conservative assumptions and the most plausible scenarios in a transparent manner.

3.4 Revision of monitoring plan (99-100)

Not applicable.

3.5 Data management (101)

The data and their sources, provided in monitoring report, are clearly identified, reliable and transparent.

The function of the monitoring equipment, including its calibration status, is in order.

The JSC “Oblteplocomunenergo” has its own heat technical laboratory that is authorized to calibrate the measurement devices for own needs and for other enterprises.

The JSC “Oblteplocomunenergo” carries out calibration of the measurement equipment for the “Nizhynteplomerezhi” Ltd.

Calibration procedure for the ME “Nosivski teplovi merezhi” is carried out by the JSC “Chernihivgas service center”, for the ME “Bahmachteplomerezhi” and the PEHN “Borznateplocomunenergo” - the JSC “Chernihiv State center of standardization, metrology and certification”.

The “Derzhspozhivstandart” of Ukraine and the JSC “Chernihiv State center of standardization, metrology and certification” carry out calibration of the measurement equipment for the ME “Prilukiteplovodopostachannya”.

The data collection and management system for the project is in accordance with the monitoring plan.

From 2008 the every registration point of the JSC „Oblteplocomunenergo” is equipped with gas consumption correctors of the following types: OE 22 ДMiz, OE 22 AAiz and OE VPT with modems, throw which information is carried out every hour to united server, installed at the JSC „Oblteplocomunenergo” calculating center.

During 2008 gas consumption correctors «Флоутек ТМ-3-4» were installed at the several boiler-houses of “Nizhynteplomerezhi” Ltd.
In addition registration of natural gas consumption in paper journal is carried out too.
Monthly data for the last month, with printout of daily bulletin and final bulletin, are transferred to gas supplying company.

Mr. Oleksiy Teterya, Deputy Head of the Board, has been appointed for the implementation and management of the monitoring process at the JSC “Oblteplocomunenergo”, the “Nizhynteplomerezhi” Ltd, the ME “Prilukiteplovodopostachannya”, the ME “Bahmachteplomerezhi”, the PEHN “Borznateplocomunenergo”, the ME “Nosivski teplovi merezhi”. Mr. Oleksiy Teterya is responsible for supervising 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, vice director of the Institute of Engineering Ecology, is responsible for baseline and monitoring methodology development.
Ms. 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 4th verification of the "District heating system rehabilitation of Chernihiv Region" 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 OJSC «Oblteplocomunenergo» 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 11. 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	:375396.90 t CO_2 equivalents.
Project emissions	:267009.92 t CO_2 equivalents.
Emission Reductions	:108386.98 t CO_2 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 “District Heating System Rehabilitation of Chernigiv Region” version 11 dated 09 July 2009
/2/ Monitoring Report “District Heating System Rehabilitation of Chernihiv Region” version 01 dated 28 February 2011
/3/ Monitoring Report “District Heating System Rehabilitation of Chernihiv Region” version 02 dated 04 April 2011
/4/ ERU’s calculation model Exel file “Annex 2-4_Chern_10_v01”
/5/ Determination and Verification Manual, version 01.
/6/ Letter of Approval of Ukrainian Ministry of Environment Protection, № 5411-к/10/3-10 from 14.05.07
/7/ Letter of Approval of German Federal Environment Agency; German Emission Trading Authority

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

/1/ Photo: Front side of boiler TVG-8M with new refractory lining
/2/ Photo: Front of exhauster #1
/3/ Photo: Control board with frequency converters for exhauster #1 and fan #1
/4/ Photo: Regulating station of frequency converters for exhauster #1
/5/ Photo: Regulating station of frequency converters for fan #1
/6/ Photo: Front of command and commutation system from fan #1 and exhauster #1
/7/ Photo: Feed pump with frequency converter
/8/ Photo: Frequency converter of feed pump
/9/ Photo: Commutation and control devices
/10/ Photo: Old refractory lining
/11/ Photo: New pipes thermo isolation
/12/ Photo: Control block of exhauster #2
/13/ Photo: Control block of fan #2
/14/ Photo: Regulation block of frequency converter for exhauster #2
/15/ Photo: Regulation block of frequency converter for fan #2
/16/ Photo: Front of command and commutation system from fan #2 and exhauster #2
/17/ Photo: Front of command and commutation system from fan #3 and exhauster #3
/18/ Photo: Regulation block of frequency converter for exhauster #4

/19/ Photo: Regulation block of frequency converter for fan #4
/20/ Photo: Regulation block of frequency converter for fan #
/21/ Photo: Control panel of boiler TVG-8M #5
/22/ Photo: Front side of the boiler TVG-8M #5 with old burners
/23/ Photo: Automatic control block Alfa-M of boiler
/24/ Photo: Control panel of boiler
/25/ Photo: Heating pipeline to heat supply station at Rokossovskogo 4a
/26/ Photo: Mount of flow meter at heat supply station at Rokossovskogo 4a
/27/ Photo: Mount of flow meter at heat supply station at Rokossovskogo 4a
/28/ Photo: Heat counter SVTU-11T
/29/ Photo: Heat regenerator
/30/ Photo: Transmitter of out-flow gases temperature
/31/ Photo: Heat regenerator
/32/ 2tp form, given JIS “Chernigivoblteplocomunenergo” for 2010
/33/ 11mtp form given JIS “Chernigivoblteplocomunenergo” for 2010
/34/ calibration certificate of checking etalon gas meter ЛГЕ-2500
/35/ calibration certificate of checking etalon gas meter desk УЛПГ-2500.
/36/ 2-tp form Horodnya
/37/ 2-tp form Korykovka
/38/ 2-tp form Naumovka
/39/ 2-tp form Korop
/40/ 2-tp form Schors
/41/ 2-tp form Oster
/42/ 2-tp form Semenivka
/43/ 2-tp form Novgorod-Siversky
/44/ 2-tp form Mena
/45/ 2-tp form Kulikovka
/46/ 2-tp form Ripki
/47/ 2-tp form M. Kotzubinsky
/48/ 2-tp form Lybech
/49/ 2-tp form Sosnitzya
/50/ 2-tp form Sribne
/51/ 2-tp form Kozeletz
/52/ 2-tp form Bileyki
/53/ 2-tp form Chmilnitzya
/54/ 2-tp form Kolychivka
/55/ 2-tp form Kiynya
/56/ 2-tp form Halyavino
/57/ 2-tp form S. Divitzya
/58/ 2-tp form Ladan
/59/ 2-tp form Honcharivske
/60/ 2-tp form Bachmatch
/61/ Summation of metrological research gas meter ЛГЕ-250 № 66
/62/ Certificate of calibration etalon gas meter ЛГЕ-25
/63/ Certificate of attestation work measuring device ОЕ-22ЛА № 0166

/64/ Certificate of attestation work measuring device ОЕ-22ЛА № 0132
/65/ Certificate of attestation work measuring device ОЕ-22ЛА № 0152
/66/ Certificate of attestation work measuring device ОЕ-22ЛА № 0133
/67/ Gas quality certificate #206
/68/ Gas quality certificate #224
/69/ Gas quality certificate #81
/70/ Gas quality certificate #201
/71/ Gas quality certificate
/72/ Gas quality certificate #235
/73/ Monthly gas consumption during 2010 year
/74/ Certificate gas meter G-400 РГК-1/30-01-r, № 0047
/75/ Certificate gas meter РГ-К-250-0,1-01-r-10, № 6672
/76/ Certificate gas meter РГ-К-400-0,1-01-r-5, № 6360
/77/ Certificate gas meter G-400 РГК-1/30-01-r, № 0556
/78/ Certificate gas corrector, ОЕ-VPT 0,2/60 № 17300
/79/ Commissioning statement #228a, Belova 6 boiler house, 9.11.2010
/80/ Commissioning statement #257a, Shevchenko 47b, 8.10.2010
/81/ Commissioning statement #257a, Rokossovskogo 4a, 8.10.2010
/82/ Commissioning statement #228a, Mira avenue 151, 9.11.2010
/83/ Commissioning statement #228a, Mira avenue 193a, 9.11.2010
/84/ Average monthly temperature of Chernigiv Region, April 2010
/85/ Average monthly temperature of Chernigiv Region, March 2010
/86/ Average monthly temperature of Chernigiv Region, February 2010
/87/ Average monthly temperature of Chernigiv Region, December 2010
/88/ Average monthly temperature of Chernigiv Region, October 2010
/89/ Average monthly temperature of Chernigiv Region, November 2010
/90/ Average monthly temperature of Chernigiv Region, January 2010
/91/ Regional executive committee decision on the beginning of heating period 5.10.2010
/92/ Regional executive committee decision on the end of heating period 7.04.2010
/93/ Regional executive committee decision on changing of heating period 14.04.2010
/94/ Heat supply contract, 21.02.11
/95/ Heat supply contract, 28.03.10
/96/ Heat supply contract, 27.12.10
/97/ Heat supply contract, 24.06.10
/98/ Heat supply contract, 16.02.11
/99/ Heat supply contract, 21.02.11
/100/ Evaluation statement on unsupplied heat, account # 57747, 25.01.11
/101/ Calculation list on unsupplied heat, account #57747
/102/ Evaluation statement on unsupplied heat, account # 37179, 24.01.11
/103/ Calculation list on unsupplied heat, account #37179
/104/ Evaluation statement on unsupplied heat, account # 37175, 25.01.11
/105/ Calculation list on unsupplied heat, account #37175
/106/ Evaluation statement on unsupplied heat, account # 40336, 10.03.10
/107/ Calculation list on unsupplied heat, account #40336

/108/ Evaluation statement on unsupplied heat, account # 82279, 06.07.10
/109/ Calculation list on unsupplied heat, account #82279
/110/ Evaluation statement on unsupplied heat, account # 81336, 11.08.10
/111/ Calculation list on unsupplied heat, account #81336
/112/ Evaluation statement on unsupplied heat, account # 155367, 18.01.10
/113/ Calculation list on unsupplied heat, account #155367
/114/ Refractory lining on boiler at Belova 6, medium
/115/ Photo: Board of old (at the left) and new (at the right) refractory lining
/116/ Regulating station of frequency converters for exhauster #1
/117/ Front of command and commutation system from fan #1 and exhauster #1
/118/ Regulating station of frequency converters for exhauster #2
/119/ Regulating station of frequency converters for fan #1
/120/ Regulating station of frequency converters for exhauster #3
/121/ Regulating station of frequency converters for exhauster #2
/122/ Front of command and commutation system from fan #4and exhauster #4
/123/ Front of command and commutation system from fan #5 and exhauster #5
/124/ New burners
/125/ Old burners
/126/ Furnace, new convective surface
/127/ New burners
/128/ Boilers passport
/129/ Control panel of economizer
/130/ Control panel of economizer
/131/ Control panel of economizer
/132/ Control panel of economizer
/133/ Deaerators with economizers at the back side
/134/ Economizers
/135/ Economizers
/136/ Frequency converter drive of feed pumps
/137/ Front of command and commutation system from fan #1 and exhauster #1
/138/ Front of command and commutation system from fan #1 and exhauster #1
/139/ Economizer
/140/ Economizer
/141/ Pipeline from Heat producing workshop to heat supply station Miru avenue, 153
/142/ Pipeline from Heat producing workshop to heat supply station Miru avenue, 153
/143/ Pipeline from Heat producing workshop to heat supply station Miru avenue, 153
/144/ Heat counter SVTU-11U
/145/ Mount of heat counter SVTU-11U
/146/ Mount of heat counter SVTU-11U
/147/ Frequency converters from fan #1 and exhauster #1
/148/ Frequency converters from fan #2 and exhauster #2
/149/ Electric drive of exhauster #2
/150/ Frequency converters from fan #2 and exhauster #2
/151/ Economizer
/152/ Dumper at the economizer
/153/ Transmitter of out-flow gases temperature

/154/ Heat flow-meters calibration desk
/155/ Reference heat meter # 066 i # 067
/156/ Reference heat meter # 067
/157/ Reference heat meter # 066
/158/ Water flow-meters calibration desk
/159/ Reference gas meter # 083
/160/ Reference gas meter # 007
/161/ Contract about heat energy supply, № 19-0003, 1.02.2003

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/ Yuri Barbarov – Head of the board
/2/ Victor Olejnik - Head of Production Department of the JSC "Oblteplocomunenergo".
/3/ Oleksiy Teterya – Head of the Technical Development Department of the JSC "Oblteplocomunenergo"
/4/ Oleksiy Havrylenko – Deputy chief of board
/5/ Obytotzkyi Vasyl – Head of Energy department
/6/ Mykola Kovalchuk – Head of division
/7/ Andriy Sokolenko - Head of division
/8/ Mykola Kolosok - Head of division
/9/ Volodymyr Barko - Head of division
/10/ Paderno Dmytro – Vice Director of Institute of Engineering Ecology

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

VERIFICATION PROTOCOL

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

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project approvals by Parties involved				
90	Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	CAR №01 In Monitoring Report indicate, that this JI project has been re-determined by TUV SUD, determination report # 453859 by 17 October, 2008. Information about project approval after re-determination is absent. Please, provide information about project approval and provide Letter of Approval.	CAR №01	OK
91	Are all the written project approvals by Parties involved unconditional?	See section 90 of this Protocol.	OK	OK
Project implementation				
92	Has the project been implemented in accordance with the PDD regarding which the	Upgrading of boiler houses and network rehabilitation is in accordance with the PDD.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	determination has been deemed final and is so listed on the UNFCCC JI website?			
93	What is the status of operation of the project during the monitoring period?	The project is operational during complete monitoring period. CAR №02 Please compare table implemented energy saving measures with Annexes 2, 3 of PDD and correct	CAR №02	OK
Compliance with monitoring plan				
94	Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	The monitoring plan included in PDD got a positive determination conclusion. This plan is available at the UNFCCC website. The algorithm of monitoring is in line with the monitoring plan included in determined and registered PDD.	OK	OK
95 (a)	For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) above, influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the	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

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	project taken into account, as appropriate?			
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	CAR №03 Please, provide in Monitoring Report calculation of maximum connected load. CAR №04 Please, provide in Monitoring Report references to the documents which determine duration of hot water supply period.	CAR №03 CAR №04	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

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Applicable to JI SSC projects only				
96	Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis? If the threshold is exceeded, is the maximum emission reduction level estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined?	Not applicable	Not applicable	Not applicable
Applicable to bundled JI SSC projects only				
97 (a)	Has the composition of the bundle not changed from that is stated in F-JI-SSCBUNDLE?	Not applicable	Not applicable	Not applicable
97 (b)	If the determination was conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report?	Not applicable	Not applicable	Not applicable
98	If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods, are the monitoring periods per component of the project clearly	Not applicable	Not applicable	Not applicable

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	specified in the monitoring report? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past?			
Revision of monitoring plan				
Applicable only if monitoring plan is revised by project participant				
99 (a)	Did the project participants provide an appropriate justification for the proposed revision?	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
Data management				
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control	The implementation of data collection procedures are in accordance with the monitoring plan included in the determined PDD. Documents used in	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	and quality assurance procedures?	ERU calculation are saved in paper or electronic form in JIS "Chernihivoblteplocommunenergo" central office and boiler houses.		
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	Monitoring equipment, specified in Monitoring Report periodically calibrated by JIS "Chernigivoblteplocomunenergo" metrological department in accordance with actual Ukrainian legislation. Procedure of calibrating was found satisfactory.	OK	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 documents, which indicate that the data monitored and required to ERU calculation, are to be kept for two years after the crediting period.	CAR №05	OK
Verification regarding programs of activities (additional elements for assessment)				
102	Is any JPA that has not been added to the JI PoA not verified?	Not applicable	Not applicable	Not applicable
103	Is the verification based on the	Not applicable	Not	Not

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	monitoring reports of all JPAs to be verified?		applicable	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
Applicable to sample-based approach only				
106	Does the sampling plan prepared by the AIE: (a) Describe its sample selection, taking into account that: (i) For each verification that uses a sample-based approach, the sample selection shall be sufficiently representative of the JPAs in the JI PoA such extrapolation to all JPAs	Not applicable	Not applicable	Not applicable

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	identified for that verification is reasonable, taking into account differences among the characteristics of JPAs, such as: − The types of JPAs; − The complexity of the applicable technologies and/or measures used; − The geographical location of each JPA; − The amounts of expected emission reductions of the JPAs being verified; − The number of JPAs for which emission reductions are being verified; − The length of monitoring periods of the JPAs being verified; and − The samples selected for prior verifications, if any?			
107	Is the sampling plan ready for publication through the secretariat along with the verification report and supporting	Not applicable	Not applicable	Not applicable

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	documentation?			
108	Has the AIE made site inspections of at least the square root of the number of total JPAs, rounded to the upper whole number? If the AIE makes no site inspections or fewer site inspections than the square root of the number of total JPAs, rounded to the upper whole number, then does the AIE provide a reasonable explanation and justification?	Not applicable	Not applicable	Not applicable
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

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion

CAR №01 In Monitoring Report indicate, that this JI project has been re-determined by TUV SUD, determination report # 453859 by 17 October, 2008. Information about project approval after re-determination is absent. Please, provide information about project approval and provide Letter of Approval.	90	This JI project has been re-determined by TUV SUD, determination report # 453859 by 17 October, 2008. March, 2005 – Letter of Approval was issued by Ministry for Environmental Protection of Ukraine, but was withdrawn in May, 2005 due to lack of the national procedure for JI projects. May, 2007 – Letter of Approval was re-issued (# 5411-k/10/3-10 dated 14.05.07). After organizing of JISC, PDD for this project was re-made in the new form, and its version 06 dated August 30, 2007, was sent to TUV SUD for re-determination. This version was published at the UNFCCC site for global stakeholder process. During the re-determination, the Determination Protocol from 13 November 2007 was received from TUV SUD with clarification requests and corrective action requests. After meeting of all requirements of determinator, the PDD Version 10, dated July 14, 2008, was created and the same Determination Report # 453859 was re-confirmed on November 17, 2008. Since there was the same Determination report, no re-approval of the project was necessary. Letters of Approval from Ukraine # 5411-k/10/3-10 dated 14.05.07 and from Germany dated 10.07.2009 are provided to AIE. This information on LoAs is added to MR #4 version 02.	The MR is checked The issue is closed

CAR №02 Please compare table implemented energy saving measures with Annexes 2, 3 of PDD and correct	93	It is corrected in MR #4 version 02.	The issue is closed
CAR №03 Please, provide in Monitoring Report calculation of maximum connected load.	95 (b)	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]. These calculations are to be done for each customer (building, etc.), and thus are very complicated and cumbersome. 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. Detailed description of such calculation along with an example is provided to AIE.	The issue is closed based on clarification.

CAR №04 Please, provide in Monitoring Report references to the documents which determine duration of hot water supply period.	95 (b)	The duration of hot water supply period is determined in Agreements for providing service on heating and hot water supply between JSC "Oblteplocomunenergo" and customers. The two main optiona are typical: during whole year with 15-days planned-preventive work, or during the heating period. An example is provided to AIE. Hot water supply service is realized by hot water delivery schedule for every town. For example, in Chernihiv city this schedule is the following: 24 hours during the heating period and 18 hours during the nonheating period).	The issue is closed. Monitoring Report checked.
CAR №05 Please, provide documents, which are indicated that the data monitored and required to ERU calculation, are to be kept for two years after the crediting period.	101 (d)	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. This is indicated in the Order # 14a dated 04.10.2010, on appointment of the responsible person and storage term of documents concerning monitoring of the JI project realization. This information is added to MR #4 version 02. Copy of this order is provided to AIE..	The issue is closed. Monitoring Report checked

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 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.