VERIFICATION REPORT

PJSC "YASYNIVSKYI COKE PLANT"

VERIFICATION OF THE

UTILIZATION OF SURPLUS COKE OVEN GAS WITH THE ELECTRICITY GENERATION AT JSC "YASYNIVSKYI COKE PLANT"

THIRD PERIODIC

(01 JANUARY 2011 – 31 DECEMBER 2011)

REPORT NO. UKRAINE-VER/0430/2012

REVISION NO. 03

BUREAU VERITAS CERTIFICATION

Date of first issue: 04/08/2012	Organizational unit: Bureau Veritas Certification Holding SAS
Client: PJSC "Yasynivskyi Coke Plant"	Client ref.: Viktor Chalenko

Summary:
Bureau Veritas Certification has made the 3rd periodic verification of the "Utilization of surplus coke oven gas with the electricity generation at JSC "Yasynivskyi Coke Plant", JI Registration Reference Number UA1000185, project of PJSC "Yasynivskyi Coke Plant" located in Makiyivka, Donetsk region, Ukraine, and applying the methodology ACM0012 version 03.1, 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 monitoring report against 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 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. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements, and the ERUs issued totalize 71179 tonnes of CO_2equivalent for the monitoring period from 01/01/2011 to 31/12/2011.

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

Report No.: UKRAINE-ver/0430/2012	Subject Group: JI	
Project title: Utilization of surplus coke oven gas with the electricity generation at JSC "Yasynivskyi Coke Plant"		*Climate Change, Kyoto Protocol, JI, Emission Reductions, Verification*
Work carried out by: Oleg Skoblyk – Team Leader, Lead Verifier Iuliia Pylnova – Team member, Verifier Olena Manziuk – Team member, Verifier		
Work reviewed by: Ivan Sokolov – Internal Technical Reviewer		☒ No distribution without permission from the Client or responsible organizational unit
Work approved by: Ivan Sokolov - Operational Manager		☐ Limited distribution
Date of this revision: 21/09/2012	Rev. No.: 03	Number of pages: 39
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Bureau Veritas Certification Holding SAS

Abbreviations

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

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1 INTRODUCTION

PJSC ”Yasynivskyi Coke Plant” (PJSC “Yasynivskyi Coke Plant” was established by changing the name of juridical person JSC “Yasynivskyi Coke Plant” to PJSC “Yasynivskyi Coke Plant”) has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project “Utilization of surplus coke oven gas with the electricity generation at JSC ”Yasynivskyi Coke Plant” (hereafter called “the project”) in Makiyivka, Donetsk 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, monitoring plan and monitoring report, 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

Iuliia Pylnova
Bureau Veritas Certification Climate Change Verifier

Olena Manziuk
Bureau Veritas Certification Climate Change Verifier

This verification report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification, Internal Technical Reviewer

2 METHODOLOGY

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In order to ensure transparency, a verification protocol was customized for the project, according to the version 01 of the Joint Implementation Determination and Verification Manual, issued by the Joint Implementation Supervisory Committee at its 19 meeting on 04/12/2009. The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from verifying the identified criteria. The verification protocol serves the following purposes:

- It organizes, details and clarifies the requirements a JI project is expected to meet;
- It ensures a transparent verification process where the verifier will document how a particular requirement has been verified and the result of the verification.

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

2.1 Review of Documents

The Monitoring Report (MR) submitted by PJSC ”Yasynivskyi Coke Plant” and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), Approved CDM methodology ACM0012 (version 03.1), Tool for the demonstration and assessment of additionality and 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 versions 1.0, 1.1 and 2.0, and project as described in the determined PDD version 4.

2.2 Follow-up Interviews

On 22/02/2012 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 PJSC “Yasynivskyi Coke Plant” and Environmental (Green) Investments Fund LTD were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
PJSC “Yasynivskyi Coke Plant”	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 IT management Training of personnel Quality management procedures and technology Internal audits and check-ups

Environmental (Green) Investments Fund LTD	Baseline methodology Monitoring plan Monitoring report

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 Requests and Corrective Action Requests are stated, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 6 Clarification Requests, 6 Corrective and 0 Forward Action Requests are arisen.

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 approvals by Ukraine, Host party, (Letter of Approval of National Environmental Investment Agency of Ukraine No 1282/23/7, issued on 27/08/2010) and Switzerland (Approval of the Federal Office for the Environment (FOEN) of Switzerland No J294-0485, issued on 23/08/2010) have been issued by the DFP of that Party when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest.
The abovementioned written approval are unconditional.

3.2 Project implementation (92-93)

According to the registered PDD (version 4) the implementation status of the project consists of several phases:

- 2004 – beginning of the project investment stage;
- 2006 – launch of reconstructed coke oven battery #1 and installed first PT-12 turbogenerator;
- 2012 – launch of reconstructed coke oven battery #4, installed additional steam boiler BK-50, and installed second PT-12 turbogenerator.

Implementation of the project activity is realized according to the project implementation schedule. There are no deviations or revisions to the determined PDD (version 4).

The actual implementation status of the proposed project is operation of reconstructed coke oven battery #1 and installed first PT-12 turbogenerator.

The identified areas of concern as to Project implementation, project participants response and BV Certification's conclusion are described in

Appendix A (refer to CAR 01, CL 01, CL 02, CL 03, CAR 03, CAR 05, and CAR 06).

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, key factors, e.g., CO_2 emission factor for coke, CO_2 emission factor for electricity grid of Ukraine; production level, fuel consumption, market situation and other risks associated with the project (that can influence baseline and project emissions) were taken into account, as appropriate.

Data sources used for calculating emission reductions, such as appropriately calibrated measuring equipment, the study of standardized emission factors for the Ukrainian electricity grid, IPCC guidelines, laboratory analysis, 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.

As regards the value of emission factor for electricity generation in the year 2011, for this monitoring period emission factor for Ukrainian electricity grid is fixed according to the latest Decree of the National Environmental Investment Agency. Decree #75 of NEIA from May 12, 2011 sets specific carbon dioxide emissions values for 2011 electricity generation by thermal power plants connected to the electricity system of Ukraine, which was calculated and approved in accordance with the Methodology for specific carbon dioxide emissions calculation from electricity generation by thermal power plants and its consumption. Pursuant to this Decree the value was set at 1,063 kg CO_2/kWh and recommended for applying during annual monitoring reports preparation.

The approach for calculation of specific carbon dioxide emissions from electricity generation by an indicated group of thermal power plants connected to the electricity system of Ukraine, provided in the Methodology, corresponds to the option A1 for calculation of the operating margin emission factor $EF_{grid\ OMsimple\ y}$, according to the methodological tool “Tool to calculate the emission factor for an electricity system”,

version 02, approved by the CDM Executive Board, United Nations Framework Convention on Climate Change.

For the monitoring report provided for verifier, EF applicable for supply-side projects was applied for the reasons that were described in PDD (please see section B.2 of PDD, version 4). The special feature of the electricity supply scheme at PJSC «YCP» is that the enterprise has to supply a part of project-generated energy to the grid, wherefrom it is delivered to consumers of PJSC «YCP» via power step down transformer. The conservative baseline suggests that all the electricity produced due to the project activity is supplied to the grid. To calculate emissions reduction it is necessary to use emissions factor which is defined for energy displacement in the National Energy System of Ukraine for the energy, produced during the project activity. The emission factor value set for 2011 in accordance with the Methodology for specific carbon dioxide emissions calculation from electricity generation by thermal power plants and its consumption is higher than the emission factor value used for calculation of expected emissions reduction in PDD. Thus amount of emission reductions reached in 2011 is higher than it was planned during PDD preparation.

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

The identified areas of concern as to Compliance of the monitoring plan with the monitoring methodology, project participants response and BV Certification's conclusion are described in Appendix A (refer to CAR 02, CAR 04, CL 05, and CL 06).

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

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

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.
Key monitoring activities are described (in the section B of the Monitoring report) as follows.

Accounting of energy production
Reading of meters for the produced energy is conducted on unit-to-unit basis every 12 hours and is entered into the log book. The data is aggregated into the monthly and annual reports and is stored in paper and electronic formats.
Data collection is carried out by a shift caretaker of the Main control board. The responsible person for the collection and archiving of the data is the head of the electricity area.
Meters check is conducted according to the verification methodology certified by the Ukrainian state scientific-production centre for standardization, metrology and certification (UkrCSM). The Electrotechnical laboratory of the enterprise is responsible for meeting the meters checks deadlines.
The amount of electricity consumed for the PT-12 own needs is determined by monthly calculations in consideration of the working auxiliary equipment load factor, as well as its capacity. The data is archived and stored in paper and electronic formats. The responsible person for the collection and archiving of the data is the head of the electricity area.

Accounting of coal consumption of CHP boilers
The amount of coal, consumed by the boilers, is determined when coal is supplied to the CHP by using the electro-mechanical scales. Data on the amount of coal is entered into the logbook. The responsible person is the head of the production department.
The net caloric value of coal supplied to the CHP and combusted in the boilers is determined according to the technical specifications У 10.1-23472138-161:2005 for coal sort G, belonging to which was established by state enterprise “Luganskstandartmetrology”.

Accounting of the coke oven gas consumption in CHP boilers

Accounting of the coke oven gas consumption in CHP is determined by the meter on gas-flow inlet to the boiler house (pie chart). The pie chart

readings is conducted manually every 24 hours by shift caretaker of Control, Measurement and Automation department, reduced to the normal conditions and entered into logbooks and electronic data base. The responsible person for the collection and archiving of the data is the head of Control, Measurement and Automation department.

A couple of monitoring equipment (i.e. Coke oven gas flow meter “KSD-3” and Coke oven gas temperature meter “KSMz-P”) that takes part in measuring of the parameters such as Amount of coke oven gas consumed by CHP and Temperature of coke oven gas consumed by CHP were calibrated with some deviation from calibration schedule. The deviation is seven days, and it is caused by the plant internal reasons. As a result of data analysis, no significant fluctuation of the parameter values for the monitoring period is discovered. So the calibration deviation within the 7 days period did not influence the monitoring results and is considered as insignificant.

Coke oven gas NCV is determined monthly by the Central plant laboratory. The results are entered into the logbook.

Besides, at PJSC “Yasynivskyi Coke Plant” was introduced and applied a quality management system ISO 9001:2008. This fact is evidenced by a certificate issued by TÜV Thüringen e.V. (valid until 23/07/2012). The registration number is TIC 15 100 96386. This certification provides for regular supervisory audits. Last supervisory audit was conducted 11-14 of May, 2010, and the validity of the certificate was confirmed. Procedures for dealing with data gaps and uncertainty conducts with accordance to this standard. E.Sova, the chairman of the quality, was responsible for the quality audit conducting.

Every day persons responsible for the present and valid “Instruction on monitoring of the project “Utilization of surplus coke oven gas with the electricity generation at JSC “Yasynivskyi Coke Plant” (dated 06/05/2006) fulfilment reports to the Vice-chief of heat and power sector of the plant about any malfunctioning. So, in case of any meter failure, data discrepancy will be found within one day. The meter will be substituted by working one. CO_2 emissions reduction will be calculated by cross-checking method for this period. If any inappropriateness of monitored data is revealed, corrective measures will be conducted either on the monitoring system for the item specified above. In such case, monitored data will be corrected in a conservative manner. All the information of corrective measures taken on the monitoring system and monitored data itself will be archived along with original monitored data for future verification of emission reductions.

Therefore, the Monitoring Report version 2.0 provides sufficient information on the assigning roles, responsibilities and authorities for implementation and maintenance of monitoring procedures including control of data. The verification team confirms effectiveness of the existing management and operational systems and found them eligible for reliable project monitoring.

The identified areas of concern as to Data management, project participants response and BV Certification's conclusion are described in Appendix A (refer to CL 04).

3.6 Verification regarding programmes of activities (102-110)

Not applicable.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the 3rd periodic verification of the "Utilization of surplus coke oven gas with the electricity generation at JSC "Yasynivskyi Coke Plant" project in Ukraine, which applies the approved consolidated methodology ACM0012 version 03.1. 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 monitoring report against 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 PJSC "Yasynivskyi Coke Plant" 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 Plan indicated in the final PDD version 4. 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 2.0 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 01/01/2011 to 31/12/2011

Baseline emissions	: 71179 tonnes of CO_2 equivalent.
Project emissions	: 0 tonnes of CO_2 equivalent.
Emission Reductions	: 71179 tonnes CO_2 equivalent.

5 REFERENCES

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

/1/ PDD "Utilization of surplus coke oven gas with the electricity generation at JSC «Yasynivskyi Coke Plant" version 4 dated 11/12/2009.
/2/ Monitoring Report "Utilization of surplus coke oven gas with the electricity generation at JSC «Yasynivskyi Coke Plant" version 1.1 dated 13/02/2012.
/3/ Monitoring Report "Utilization of surplus coke oven gas with the electricity generation at JSC «Yasynivskyi Coke Plant" version 2.0 dated 02/03/2012.
/4/ Calculation of Emission Reductions – Excel-file "Emissions calc. (monitor) 2011 dated 13/02/2012.
/5/ Letter of Approval of National Environmental Investment Agency of Ukraine No 1282/23/7 dated 27/08/2010.
/6/ Approval of the Federal Office for the Environment (FOEN) of Switzerland No J294-0485 dated 23/08/2010.
/7/ Decree #75 on approval of indexes of specific carbon dioxide emissions in the year 2011 issued by NEIA dated 12/05/2011.

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

/1/ Conclusion of the state sanitary and hygiene examination of legal acts # 5.05.07-419/6982 dated 19/01/99, certificate # 100/006655 dated 24/12/1999, developed by the Department of the Analytical Control, Standardization and Metrology of Ukrainian State Coal and Chemistry Research Institute
/2/ USSR State Standard ГОСТ 22667-82 (СТ СЭВ 3359-81). Natural combustible gases. Calculation method of determining the calorific value, relative density and Wobbe number
/3/ USSR State Standard ГОСТ 5439-76. Natural combustible and synthetic gases. Method of determining the fractional composition using gas analyzer type ГХЛ
/4/ Attestation certificate # 06544-5-1-125-ВЛ dated 07/10/2009 issued to the JSC "Yasynivskyi Coke Plant" Central Laboratory, valid till 07/10/2012

/5/ Logbook on coke gas fractional composition, PSC “Yasynivskyi Coke Plant” Central Laboratory, started–02/01/2009, finished–30/12/2011, storage period–5 years
/6/ Technical registration card on bell-type differential pressure gauge type ДКО, # 1411 (back-up device–КСДЗ, # 299048)
/7/ Passport dated 23/06/2008 on bell-type differential pressure gauge type ДКО, # 1411 (back-up device–КСДЗ, # 299048). Last calibration date–10/11/2011.
/8/ Technical registration card on automatic bridge type КСМЗ-П-У3, # 368319
/9/ Passport dated 27/02/2008 on automatic bridge type КСМЗ-П-У3, # 368319. Last calibration date–30/06/2011.
/10/ Calibration certificate dated 10/11/2011 on flow-meter type ДМ, # 28527 (back-up device–КСДЗ, # 142677)
/11/ Daily diagram on coke gas consumption for 03/12/2011
/12/ Daily diagram on coke gas pressure for 03/12/2011
/13/ Daily diagram on coke gas temperature for 03/12/2011
/14/ Register on steam generation for December 2011. Started–08/12/2011, finished–31/12/2011
/15/ Photo–Power meter type Indigo+, serial # UA015673, inventory # 104307391
/16/ Photo–Active power meter type SAZU-I687, serial # 278124
/17/ Photo–Active power meter type SAZU-I687, serial # 278116
/18/ Logbook on energy evening maximum recording, started–21/08/2011
/19/ Logbook on energy consumption by JSC “YCP” CHP, started–01/05/2007
/20/ Photo–Automatic control system, inventory # 104101855
/21/ Annex to the Attestation certificate # 06544-5-1-173-ВЛ dated 13/11/2009
/22/ Passport on electromechanical railway carriage scales VV-150E-1 (last calibration date–21/09/2011)
/23/ Calibration protocol dated 16/01/2012 on three phase power meter, serial # UA015673
/24/ Report # 33302CY0D0 on ISO 9001:2008 management system audit, issued by TÜV Thüringen e. V. System and Personnel Certification Body
/25/ Instruction dated 06/05/2006 on “Utilization of surplus coke oven gas with the electricity generation at JSC “Yasynivskyi Coke Plant” project monitoring
/26/ Annex 1. Data on equipment used for produced energy amount measurement

/27/ Annex 2. Data on equipment used for coal consumed by CHP amount measurement
/28/ Annex 3. Data on equipment used for coke gas consumed by CHP amount measurement
/29/ Certificate # ПК010-2009 dated 17/07/2009 on Donetsk Scientific and Production Centre for Standardization, Metrology and Certification State Enterprise, valid till 17/07/2014
/30/ Vetting form # 31858 dated 01/02/2012 on Agreement # 24/2148/9/58
/31/ Agreement # 24/2148/9/58 dated 29/12/2011 on metrological services
/32/ Certificate # 1148 dated 14/10/2011, issued to Yuliia Tesnykova on personnel training
/33/ Order # 498 dated 19/07/2010 on monitoring data storage
/34/ Order # 491 dated 14/07/2010 on Monitoring Instructions execution
/35/ Annex to the Attestation certificate # 06544-5-1-173-ВЛ dated 13/11/2009 on JSC “Yasynivskyi Coke Plant” Electric and Technical Laboratory, valid till 13/11/2012
/36/ Calibration schedule for CHP meters
/37/ Actual fuel consumption on certain types of goods and works production. Form # 11-МТП (fuel) (annual)
/38/ Generation and consumption of secondary energy resources for 2011. Form # 11-МТП (ser) (annual)
/39/ Energy balance, power units composition, report on power station operation (energy generation units) for 2011. Form # 24-energy (annual)
/40/ Report on fuel, heat and electricity consumption. Form # 11-МТП (fuel) (annual)
/41/ Statement dated 05/01/2012 on calibration and sealing of electricity measuring units
/42/ Calibration protocol dated 27/12/2011 on three phase power meter, serial # UA015677

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/ O. Sevastyanov - deputy chief engineer,
/2/ E. Okhrymenko – head of the Central plant laboratory,
/3/ O. Tesnikov – deputy head of the Central plant laboratory,
/4/ D. Bogdanov – head of the electricity area,
/5/ L. Krivaya – chief metrologist of the plant,
/6/ O.Gonchar – head of the Electrotechnical laboratory,
/7/ S.Skybyk – inventory and project expert, Environmental (Green) Investments Fund LTD.

BUREAU VERITAS CERTIFICATION HOLDING SAS

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?	Letter of approval (LoA) of the Swiss Designated Focal Point has been issued when submitting the first verification (Issue date of the LoA is 23/08/2010).	OK	OK
91	Are all the written project approvals by Parties involved unconditional?	The written project approvals by Parties involved are unconditional.	OK	OK
Project implementation				
92	Has the project been implemented in accordance with the PDD regarding which the determination has been deemed	Implementation of the project activity is realized according to the project implementation schedule. There are no deviations or revisions to the		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	final and is so listed on the UNFCCC JI website?	determined PDD. **CAR 01.** Please, correct the issuance date of Monitoring Report version 1.1 (instead of the year 2011 should be the year 2012).	CAR 01	OK
93	What is the status of operation of the project during the monitoring period?	According to the PDD, there are several phases of the JI project implementation: - 2004 – beginning of the project investment stage; - 2006 – launch of reconstructed coke oven battery #1 and installed first PT-12 turbogenerator; - 2012 – launch of reconstructed coke oven gas battery #4, installed additional steam boiler BK-50, and installed second PT-12 turbogenerator. Monitoring report indicates the current status of the project activity implementation. **CL 01.** Please, indicate the monitoring period on the top page of the Monitoring Report.	CL 01	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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 process at PJSC "Yasynivskyi Coke Plant" (according to the documentation checked, 13/10/2010 PJSC "Yasynivskyi Coke Plant" was established by changing the name of juridical person JSC "Yasynivskyi Coke Plant" to PJSC "Yasynivskyi Coke Plant") is carried out in accordance with the monitoring plan included in the registered PDD version 4 dated 11/12/2009.		
		CL 02. Please, indicate the abbreviation (abbreviated name of Environmental (Green) Investments Fund LTD) for better comprehension (MR section A.10, pg. 3).	CL 02	OK
		CAR 05. Please, correct the name of the plant on pg. 23 (Annex 1 of the MR) as the type of ownership has been changed.	CAR 05	OK
		CAR 06. Please, add Annex 1 to the table of contents in the MR.	CAR 06	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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?	According to the monitoring report, key factors such as CO_2 emission factor for coke, CO_2 emission factor for electricity grid of Ukraine; production level, fuel consumption, market situation and other risks associated with the project are taken into account.	OK	OK
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	Data sources used for calculating emission reductions are identified in the Monitoring report. See section B of the Monitoring report. Information from meters is saved continuously. All data are archived electronically in month and annual reports. Electronically archived data and handwritten journals will be stored until the end of crediting period plus two years.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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, including default emission factors, are selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice. For the monitoring report provided for verifiers, new value of specific carbon dioxide emissions (in the year 2011) for electricity generation by thermal power plants connected to the electricity system of Ukraine is used (according to the latest Decree #75 of NEIA dated 12/05/2011) In accordance with the Decree, emission factor for Ukrainian electricity grid was fixed as 1,063 kg CO_2/kWh and recommended for applying during annual monitoring reports preparation. **CAR 04.** Please, correct the reference to the corresponding PDD section on the pg. 11 of the MR (instead of the PDD section D.1.3 should be indicated the PDD section D.1.1.3).	CAR 04	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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 is based on conservative assumptions and the most plausible scenarios. As a result of documents examination, all data connected to estimation of emission reductions is presented in the Monitoring report and Excel spreadsheet with calculation. **CL 06.** Please, clarify the difference between the amount of ERUs for the year 2011 which is indicated in the PDD (63261 tCO_2eq) and the amount of ERUs for the same monitoring period which is stated in the Monitoring report (71179 tCO_2eq). Please, add explanation of the reason for this difference to the section D.3 of Monitoring Report.	CL 06	OK
Applicable to JI SSC projects only				
96	Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis?	N/A	N/A	N/A

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?			
Applicable to bundled JI SSC projects only				
97 (a)	Has the composition of the bundle not changed from that is stated in F-JI-SSCBUNDLE?	N/A	N/A	N/A
97 (b)	If the determination was conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report?	N/A	N/A	N/A
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	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	N/A	N/A	N/A
99 (b)	Does the proposed revision improve the accuracy and/or applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans?	N/A	N/A	N/A
Data management				
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control	Procedures of data collection are implemented in compliance with the monitoring plan. The data collection procedures is also in		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	and quality assurance procedures?	accordance with "Instruction on monitoring of the project "Utilization of surplus coke oven gas with the electricity generation at JSC "Yasynivskyi Coke Plant" dated 06/05/2006. See section C of the Monitoring Report. **CAR 03.** Please, correct the phrase *Info on NCV for coke oven* by adding the word *gas* at the end of the phrase (please, see Figure 1 in the section B.2 of the MR).	CAR 03	OK
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	The monitoring equipment is properly calibrated. Passports for monitoring equipment and the date of its last calibration were checked by verifiers on the site-visit. **CAR 02.** Please, state correct number of the electricity meter of type Indigo+ (Table 3, pg. 6) as for this monitoring period the meter Indigo+ UA015673 was used (not the meter Indigo+ UA015677). Nevertheless,	CAR 02	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		please, mention the fact of the meter replacement (by indicating the corresponding act on replacement). **CL 03.** Please, make the name of Ukrainian state scientific-production center for standardization, metrology and certification consistent throughout the whole Monitoring Report. **CL 05.** Please, make amendments in the list of monitoring equipment types (please, see section B.1 of the English version of the MR) because concerning the electricity meter “Indigo+” there is only one meter of this type used for the project monitoring; also, please, pay attention to section Б.1 of the Ukrainian version of the MR as there are two meters of type “SAZU-I 687” used (not one) for the project monitoring, please, use the plural form of the corresponding word.	CL 03 CL 05	OK OK
101 (c)	Are the evidence and records	Information from coke oven gas flow	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	used for the monitoring maintained in a traceable manner?	meters and electric meters is saved continuously. The archiving period for the log files is at least one year. All data are archived electronically in monthly and annual reports. Electronically archived data and handwritten journals will be stored until the end of crediting period plus two years, that was enjoined by the plant order #498 dated 14/08/2010.		
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	The data collection and management system for the project in accordance with the monitoring plan. All data are archived electronically in month and annual reports. Electronically archived data and handwritten journals will be stored until the end of crediting period plus two years, that was enjoined by the plant order #498 dated 14/08/2010. The vice-chief of heat and power sector of the plant is responsible for the keeping of the monitoring data. **CL 04.** Please, specify the trainings	CL 04	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		conducted at PJSC "Yasynivskyi Coke Plant" during the monitoring period and documentary confirm this information.		
Verification regarding programs of activities (additional elements for assessment)				
102	Is any JPA that has not been added to the JI PoA not verified?	N/A	N/A	N/A
103	Is the verification based on the monitoring reports of all JPAs to be verified?	N/A	N/A	N/A
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	N/A	N/A	N/A
104	Does the monitoring period not overlap with previous monitoring periods?	N/A	N/A	N/A
105	If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?	N/A	N/A	N/A
Applicable to sample-based approach only				
106	Does the sampling plan prepared	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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 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			

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	JPAs being verified; − The number of JPAs for which emission reductions are being verified; − The length of monitoring periods of the JPAs being verified; and − The samples selected for prior verifications, if any?			
107	Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation?	N/A	N/A	N/A
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	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	number, then does the AIE provide a reasonable explanation and justification?			
109	Is the sampling plan available for submission to the secretariat for the JISC.s ex ante assessment? (Optional)	N/A	N/A	N/A
110	If the AIE learns of a fraudulently included JPA, a fraudulently monitored JPA or an inflated number of emission reductions claimed in a JI PoA, has the AIE informed the JISC of the fraud in writing?	N/A	N/A	N/A

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. Please, correct the issuance date of Monitoring Report version 1.1 (instead of the year 2011 should be the year 2012).	92	Necessary correction is made.	CAR 01 is closed based on the correction made.
CL 01. Please, indicate the monitoring period on the top page of the Monitoring Report.	93	Now required modification is made.	The issue is closed based on the
CL 02. Please, indicate the abbreviation (abbreviated name of Environmental (Green) Investments Fund LTD) for better comprehension (MR section A.10, pg. 3).	94	Amendments required are made in the MR of the final version.	The issue is closed based on the amendments made.

CL 03. Please, make the name of Ukrainian state scientific-production center for standardization, metrology and certification consistent throughout the whole Monitoring Report.	101 (b)	The full name of UkrCSM was corrected throughout the whole Monitoring report for "Ukrainian Centre for Standardization and Metrology". Please see Monitoring report (v.2.0).	Due to the amendments performed, the issue is closed.
CAR 02. Please, state correct number of the electricity meter of type Indigo+ (Table 3, pg. 6) as for this monitoring period the meter Indigo+ UA015673 was used (not the meter Indigo+ UA015677). Nevertheless, please, mention the fact of the meter replacement (by indicating the corresponding act on replacement).	101 (b)	Necessary corrections are now made in the Monitoring report of the final version.	CAR 02 is closed based on the corrections made.
CAR 03. Please, correct the phrase *Info on NCV for coke oven* by adding the word *gas* at the end of the phrase (please, see Figure 1 in the section B.2 of the MR).	101 (a)	Required amendments are made.	The issue is closed due to the amendments made.

CAR 04. Please, correct the reference to the corresponding PDD section on the pg. 11 of the MR (instead of the PDD section D.1.3 should be indicated the PDD section D.1.1.3).	95 (c)	Necessary reference is given in the Monitoring report of the final version.	Based on the correction made, CAR 04 is closed.

CL 04. Please, specify the trainings conducted at PJSC "Yasynivskyi Coke Plant" during the monitoring period and documentary confirm this information.	101 (d)	Monitoring report (v.2.0) was corrected. Please see section C.1.2: "In 2011, for the employees of the factory's metrological service quality extension courses at a distance from production was organized in the group: "Ensuring that calibration and measurement laboratories meet certification criteria of state metrological system, preparation for certification" in the Ukrainian Research and Training Center for Standardization, certification and quality of Derzhspozhyvstandard of Ukraine. Upon completion of courses employees receive the appropriate certificate".	CL 04 is closed due to the information added to MR.

CAR 05. Please, correct the name of the plant on pg. 23 (Annex 1 of the MR) as the type of ownership has been changed.	94	Required amendments are made.	The issue is closed.
CAR 06. Please, add Annex 1 to the table of contents in the MR.	94	Corrected. Please see table of contents in Monitoring report (v.2.0).	CAR 06 is closed based on the modification made in the MR.
CL 05. Please, make amendments in the list of monitoring equipment types (please, see section B.1 of the English version of the MR) because concerning the electricity meter “Indigo+” there is only one meter of this type used for the project monitoring; also, please, pay attention to section Б.1 of the Ukrainian version of the MR as there are two meters of type “SAZU-I 687” used (not one) for the project monitoring, please, use the plural form of the corresponding word.	101 (b)	Necessary amendments now are made in the MR.	Due to the amendments made, the issue is closed.

CL 06. Please, clarify the difference between the amount of ERUs for the year 2011 which is indicated in the PDD (63261 tCO_2eq) and the amount of ERUs for the same monitoring period which is stated in the Monitoring report (71179 tCO_2eq). Please, add explanation of the reason for this difference to the section D.3 of Monitoring Report.	95 (d)	Required explanation is provided.	The issue is closed based on the information added to the MR.