VERIFICATION REPORT
OJSC "KRASNODONVUHILLYA"

VERIFICATION OF THE

"Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna"

REPORT NO. UKRAINE/0152/2010

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

Date of first issue: 22/11/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: OJSC "KRASNODONVUHILLYA"	Client ref.: Aleksandr Potapenko

Summary:

Bureau Veritas Certification has made the 3rd periodic verification of "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna"project of OJSC "Krasnodonvuhillya" located in Sukhodilsk town of the Luhansk Region of Ukraine, 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 (CL, 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 ready to generate GHG emission reductions. The GHG emission reduction is calculated without material misstatements, and the ERUs issued totalize 33034 tons of CO2eq for the monitoring period.

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/0152/2010	Subject Group: JI	
Project title: "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna".		
Work carried out by: Igor Antipko – Team Leader, Verifier, Technical Specialist Rostislav Topchiy - Team Member, Verifier Svitlana Gariyenchyk - Team Member, Verifier		
Work reviewed by: Ivan Sokolov - Internal Technical Reviewer		
Work approved by: Flavio Gomes - Operational Manager		
Date of this revision: 24/11/2010	Rev. No.: 01	Number of pages: 33

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1 INTRODUCTION

OJSC "KRASNODONVUHILLYA" has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project the "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna" (hereafter called "the project" in Sukhodilsk town of the Luhansk Region of 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:

Igor Antipko
Bureau Veritas Certification Team Leader, Climate Change Verifier Technical Specialist

Rostislav Topchiy
Bureau Veritas Certification Team Member, Climate Change Verifier

Svitlana Gariyenchyk
Bureau Veritas Certification Team Member, 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 01.1 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) "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna"project version 1.1 dated 16/08/2010 submitted by Global Carbon B.V. and additional background documents related to the project design and baseline, i.e. country Law, 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.
To address Bureau Veritas Certification corrective action and clarification requests, prior to and following the site-visit PPs revised the MR and resubmitted it as version 1.2 on 27/10/2010, which is considered final.

The verification findings presented in this report relate to the Monitoring Reports versions 1.1 and 1.2 and project as described in the determined PDD.

2.2 Follow-up Interviews

On 24 October 2010 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Coal Mine Sukhodilska-Skhidna and Global Carbon B.V. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Coal Mine Sukhodilska-Skhidna	• Project implementation status • Organizational structure • Responsibilities and authorities • Personnel training • Quality management procedures and technology • Records of equipment installation • Control of metering equipment • Metering record keeping system, database • Cross-check of the information provided in the MR with other sources
Global Carbon B.V.	• Baseline methodology • Monitoring plan • Monitoring report • Deviations from PDD

2.3 Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the verification is to raise the 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 reports 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 1 Corrective Action Requests, 6 Clarification Requests, and 4 Forward Action Requests.

3.1 Project approval by Parties involved (90-91)

Written project approvals by the Netherlands and Ukraine have been issued by the DFPs of those Parties when submitting the first verification report for registration. (They are listed among Category 1 Documents in the Reference section of this report)

The abovementioned written approvals are unconditional.

3.2 Project implementation (92-93)

It was assessed by Bureau Veritas verification team during the site visit that the project has been implemented in accordance with the PDD regarding which the determination has been deemed final.
The verification team got open access to all required plans, data, records, drawings and to all relevant facilities.
Project has been implemented as defined in the PDD version 4.9 dated 21 October 2008 and the implementation is evidenced by statements of work completion (see list of verified documents).
There are some delays in the project implementation compared to the schedule determined in the PDD version 4.9.

Outstanding issues related to the Project implementation, PP's response and BV Certification's conclusion is described in Appendix A (refer to CL 01).

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 influencing the baseline emissions and the activity level of the project and the emissions or removals as well as risks associated with the project were taken into account, as appropriate. The exhaustive description and justification of the key factors is provided in Section B.1. of the PDD version 4.9. dated 21October 2008 which is deemed final.

Data sources used for calculating emission reductions such as:

- MMHEAT : Methane (CH4) measured sent to the Boilers (heat plant) (tCH4)
- HEATcons,y: Heat consumed at the site delivered by the project activity in a year y. GJ

The amount of pure CH4 (in m3) is monitored based on four parameters:

- Concentration (%) of CH4 in the CMM gas mixture;
- Flow (m3) of the CMM gas mixture;
- Temperature (℃) of the CMM gas mixture before ori fice;
- Pressure (kPa) of the CMM gas mixture.

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. List of fixed default values is presented in Table 5 Section B.2.1. of the Monitoring report.

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

Level of uncertainty of data collected is established in the measuring equipment certificates and verified according to established calibration schedules.
During calculation of the GHG emissions the level of uncertainty is taken into account according to the Article 10 part 1 of "Law of Ukraine on Metrology and Metrological Activity", which states the level of uncertainty.

All the calibration procedures are performed according to the detailed calibration plan. On the date of verification, calibration records of the measuring and monitoring equipment have been verified on site. The list of all monitoring equipment with all the serial numbers and calibration dates is presented in the Monitoring Report version 1.2 as well as in the Appendix C of the present Verification Report.

Outstanding issues related to the Compliance of the monitoring plan with the monitoring methodology, PP's response and BV Certification's conclusion is described in Appendix A (refer to CAR 01, FAR 01).

3.4 Revision of monitoring plan (99-100) "Not applicable"

3.5 Data management (101)

The implementation of data collection procedures is in accordance with the monitoring plan, including the quality control and quality assurance procedures. These procedures are specified in sections B and C of the MR and are also mentioned among the Category 2 Documents in Section 5 "References" of this report.
Data necessary for the CO2 emission reductions calculation are clearly defined in the monitoring report, Monitoring Manual and are implemented on-site. The scheme of data flow and a description of reporting procedures are introduced in Monitoring Manual from 07/06/2010.
All operators are responsible for data administration. All relevant data summarized daily and archived electronically and in register records. Besides, operators prepare standardized daily, weekly, monthly and yearly reports.
Volume of the CMM gas mixture at standard conditions (monitored for the project emission calculation) is measured by the flow meter and logged into the computer system. Concentration of methane is measured by the gas-analyzer and logged into the computer system. Data are logged hourly into the computer system and the logbook. Aggregation is done daily,monthly and annual reports are prepared
Heat consumed at the site is calculated annually based on the variables that are logged hourly into the computer system and the logbook.
The company maintains the elaborated calibration plan for the project equipment. The audit team verified the calibration status of all the equipment at the sites sampled for the audit and found them to be in compliance with the plan.
Calibration procedure is conducted by State Center of Metrology and Standardization. The documents that confirmed calibration were provided for the verification team.
The company complies with all legal and statutory requirements of Ukraine. All procedures and routines relating to the quality of emission

reductions are properly documented in the specially designed and implemented "Monitoring Manual" which has been constantly updated and improved to ensure a successful operation of the project and credibility and verifiability of the ERs achieved.
The "MONITORING MANUAL for Coal Mine Sukhodilska-Skhidna" developed at the enterprise, which contains:

- Automated Process Control System
- Formation databases and gas accounting
- Description of the instrumentation. Calibration
- The system of collection and storage
- Skilled workers
- Staff interaction boiler and vacuum pumping station
- Operations in emergency mode
- Contingencies

Introduction of computerized control system allows for efficient on-line monitoring and periodical review of the process and data at the boiler house. Any considerable deviation of monitored data from given work parameters will be promptly noticed and source of such deviation will be easily identified. It is the duty of the head of the shift to efficiently coordinate adjustment actions of his shift subordinates including on-duty technical staff that will improve work process and eliminate such deviations. System of protecting information against unauthorized access and falsification of data is described in Monitoring manual
The responsibilities and authorities are described for each individual in job description and work instruction as required statutorily. The required training was identified in advance and was successfully delivered that was checked onsite.
The methods used to determine GHG emissions reflect the chosen methodology content and are documented in the "Monitoring report". The calculation of the emission reduction is correct.
MR comprises information as for environmental and/or social indicators, which could be necessary to monitor for the success of the project activity.

Outstanding issues related to the Data management, PP's response and BV Certification's conclusion is described in Appendix A (refer to CAR 01, CL 02-06, FAR 02-04)

3.6 Verification regarding programmes of activities (102-110) "Not applicable"

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the third periodic verification of the "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-

Skhidna" Project in Sukhodilsk town of the Luhansk Region of Ukraine. 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.

Bureau Veritas Certification verified the Project Monitoring Report version 1.2 dated 27/10/2010 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as planned and described in approved project design. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions.

Bureau Veritas Certification can confirm that the GHG emission reduction is calculated without material misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the approved project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated, we confirm the following statement:

Reporting period: From 01/01/2009 to 25/07/2010

Baseline emissions	:	36964	t CO2 equivalents.
Project emissions	:	3930	t CO2 equivalents.
Emission Reductions	:	33034	t CO2 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/ PDD "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna"version 4.9, dated 21 October 2008

/2/ Determination Report "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna", dated 07 November 2008 issued by TÜV SÜD Industrie Service GmbH

/3/ Verification Report "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna", dated 15 January 2020 issued by TÜV SÜD Industrie Service GmbH for the monitoring period 01 January 2008 - 31 December 2008

/4/ Third Periodic Annual JI Monitoring Report "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna", version 1.1 dated 16 August 2010

/5/ Third Periodic Annual JI Monitoring Report "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna", version 1.2 dated 27 October 2010

/6/ Verification Report #1325775 "Utilization of Coal Mine Methane at the Coal Mine Sukhodilska-Skhidna" for the period of 07.08.2006-31.12.2007

/7/ Letter of Approval No 1145/32/7 dated 24 December 2008 issued by National Environmental Investment Agency of Ukraine

/8/ Declaration of Approval dated 25 February 2009 issued by Netherlands' Ministry of Economic Affaires

/9/ CDM methodology ACM0008 version 04 "Consolidated baseline methodology for coal bed methane and coal mine methane capture and use for power (electrical or motive) and heat and/or destruction by flaring"

/10/ "Tool for the demonstration and assessment of additionality" version 02

/11/ "Tool to determine project emissions from flaring gases containing Methane" version 1

/12/ Monitoring Manual issued on June 07, 2010

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

/1/ Photo 1: Monitoring Manual (07.06.2010)

/2/ Photo 2,3: Gas-Analyzer "Gamma-100" («Гамма-100»)

/3/ Photo 4: Pressure Sensor "Sapfir 22 DI" («Сапфир 22 ДИ»)
/4/ Photo 5: Differential Pressure Sensor "Sapfir 22 DD" («Sapfir 22 DD »)
/5/ Photo 6: Interferometer "SHI-12" (ШИ-12)
/6/ Temperature Sensor TSPU-002 (ТСПУ-002)
/7/ Computer monitoring
/8/ Knowledge testing log. The rules technical operation of thermal systems, networks, and regulatory documents on labor protection.
/9/ The scheme of gas distribution pipelines substation
/10/ Results of operator training. (ID number 1084)
/11/ Operational log. Gas boiler KE 10/14 and boiler DKVR20/13 at boiler site. (from 22.12.2008)
/12/ Operational log. Gas boiler KE 10/14 operation at site boiler (20.01.2009 – 13.04.2009)
/13/ Operational log. Gas boiler KE 10/14 operation at site boiler (17.04.2009 – 22.01.2010)
/14/ Operational log. Gas boiler KE 10/14 operation at site boiler (27.01.2010 – 16.04.2010)
/15/ Operation manual on gas control point, of the boiler-site at "Sukhodolskaya East Mine", which was transferred to burning methane and air mixture
/16/ Operation manual on gas control point at "Sukhodolsk Eastern" mine`s headquarters, which uses capture gas.
/17/ Manual on interaction between the boiler site staff and vacuum-pumping station staff which provide MAM (methane air mixture) to the mine`s boiler site "Sukhodolskaya East Mine".
/18/ Manual on steam-boiler KE-10/14 at boiler-site of the mine`s headquarters "Sukhodolsk Eastern" which uses capture gas.
/19/ Operation manual for "Gas Analyzer GAMMA-100"
/20/ Metrological certificate "Gas Analyzer GAMMA-100" (up to 15/12/2011)
/21/ Operating Manual 'Boiler KE 10-14-C'
/22/ Passport SAPPHIRE 22 № 339358 (metrological checking of 30/06/2010)
/23/ Passport SAPPHIRE 22 № 703568.(metrological checking of 30/06/2010)
/24/ Handbook "Theoretical Foundations of Heat Engineering. Thermal experiments "Moscow Energoatomizdat 1988 Book 2
/25/ Letter number 398 / 1 dated 28.07.2009 from ZAO Kotloenergoproekt "" On the description of the flow meter to the boiler MAS KE 10/14S boiler mine Sukhodolskaya eastern "
/26/ List of contractors
/27/ Explanation of the conservative approach
/28/ LoA #1145/23/7 of 24/12/2008
/29/ LoA of 25/02/2009
/30/ The act of analyzing the performance of the boiler KE 10/14 of 12/31/2009
/31/ The act of analyzing the performance of the boiler KE 10/14 of

29.12.2009
/32/ The act of analyzing the performance of the boiler KE 10/14 of 12/09/2009
/33/ The act of analyzing the performance of the boiler KE 10/14 of 30.03.2009
/34/ The act of analyzing the performance of the boiler KE 10/14 of 28/02/2009
/35/ Passport TSPU 002 № 4617 of 15.06.2009
/36/ Metrological certificate interferometer № 268 to 22/10/2010
/37/ Composition of gas from the degassing pipeline Mines Sukhodolskaya East of 01.04.2009
/38/ The act of analyzing the performance of the boiler KE 10/14 of 25/06/2010
/39/ The act of analyzing the performance of the boiler KE 10/14 of 11/02/2010
/40/ The act of analyzing the performance of the boiler KE 10/14 of 03/29/2010
/41/ The act of analyzing the performance of the boiler KE 10/14 of 27/01/2010
/42/ The act of analyzing the performance of the boiler KE 10/14 of 18.04.2010
/43/ Certificate of metrological certification TSPU 002 number 4617 to 12/08/2011
/44/ Technical Report on the Supplement to the inventory of emission sources of pollutants
/45/ Standard ecological form 2TP-Air for 2009
/46/ Standard ecological form 2TP-Air for 1 quarter 2010
/47/ Standard ecological form 2TP-Air for 2 quarter 2010
/48/ SE "Luhansk Regional Scientific and Production Center of Standardization, Metrology and Certification" Certificate of Attestation issued for the Environmental Protection Laboratory "Firma Priroda" No РЬ 258/2007 of 23/11/2007, valid till 23/11/2011
/49/ Declaration of approval, Netherlands
/50/ Declaration of approval of joint implementation project "Utilization of mine methane at mine "Sukhodilska-Skhidna"
/51/ Monitoring guidance, Joint Imlementation project "Utilization of mine methane at mine "Sukhodilska-Skhidna"
/52/ Luhansk regional state administration, License,Series AB, # 326772, Small private enterprice "Firma Pryroda''
/53/ Technical report on control metering of contaminants in atmosphere on the territory JE "Sukhodilska-Skhidna'' during 2009 year.
/54/ Gas-analyzer Gamma-200 0705, Operating Manual # 294
/55/ State committee of Ukraine for technical regulating and consumer policy, Certificate of recognition, Approval of type of measuring equipment № UA -MI/3p-783-2005.Issued in 9.08.2005
/56/ Transformer measuring explosion, Sapfir 22 Ex, Passport

08919177 ПС
/57/ Transformer measuring, Sapfir 22, Passport 08919030 ПС
/58/ Annex # 1, Table 4
/59/ Description of flowmeter MBC
/60/ Information on companies involved in the construction/instsllation works at mine ''Sukhodilska-Skhidna''
/61/ Instruction on operation of steam boiler КЕ 10-14-С ст.№ 4 from mine "Sukhodilska-Skhidna'', transformed on mine methane burning
/62/ Explanation of conservative approach
/63/ National environmental investment agency of Ukraine, Order # 13 from 23.03.2009, Kyiv, On approval of joint implementation project under national procedure
/64/ Statement of anasysis of operational parameters of boiler КЕ 10/14 № 4 from 31.12.2009
/65/ Warranty
/66/ Luhansk Regional Research and Production Center of Standardization, Metrology and Certification, Certificate on state verification of measurement means # 268.Valid to 29.04.2010
/67/ Ministry of Coal Industry of Ukraine, results of precombustion gases, taken 28.11.06, 07.10.08 and 25.02.09
/68/ Producer report
/69/ List of documents, statements, notes, their account on unplanned measures
/70/ State Committee of Ukraine on standardization, metrology and certification, Certificate on metrological attestation # 1139 from 12.06.2009
/71/ SE '' Luhanskstandartmetrologiya'', Passport ME of parameters and environmental characteristics
/72/ SE '' Luhanskstandartmetrologiya'', Passport ME of parameters and environmental characteristics
/73/ Luhansk Regional Research and Production Center of Standardization, Metrology and Certification, Certificate on verification of measuring equipment working unit # 542, Valid to 04.06.2010
/74/ State committee of Ukraine for technical regulating and consumer policy, Certificate on verification of measuring equipment working unit # 193, Valid to 15.12.2011
/75/ State Committee of Ukraine on standards, LLC ''Zavod girnychoryatuvalnoi tehniky "Goryzont''", Certificate on state verification of interferometer ШИ -12. Valid to 22.10.2010

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/ Denys Prusakov – consultanat Global Carbon
/2/ Marina Frolova – Chief miner for support of projects under the

Kyoto Protocol JSC "Krasnodonugol"

/3/ Sergey Zhelezniak – chief technologist supervision boilers JSC "Krasnodonugol"

/4/ Tatiana Bondareva – Lead engineer for support of projects under the Kyoto Protocol Coal Mine Sukhodilska-Skhidna

/5/ Guguev Michail - The chief boiler Coal Mine Sukhodilska-Skhidna

/6/ Borodina Natalia – ecologist Coal Mine Sukhodilska-Skhidna

APPENDIX A: COMPANY PROJECT VERIFICATION PROTOCOL

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

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
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?	Written project approvals by the Netherlands and Ukraine have been issued by the DFPs of those Parties when submitting the first verification report for publication in accordance with paragraph 38 of the JI guidelines. (They are listed among Category 1 Documents in the Reference section of this report)			OK
91	Are all the written project approvals by Parties involved unconditional?	The above mentioned written approvals are unconditional constituting the authorization by the DFPs of the legal entity to participate in the JI project under consideration			OK

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
Project implementation					
92	Has the project been implemented in accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	There are some delays in the project implementation compared to the schedule determined in the PDD version 4.9.	**CL 01.** Please provide information about the changes in terms in MR 1.1 on "Commissioning of the second CMM fuelled boiler", which is different from PDD version 4.9.	The second CMM fuelled boiler is already installed and final control and operation systems needs to be installed. The delay compared to the figures in the PDD version 4.9 is due to the global financial crisis and associated credit crunch.	OK
93	What is the status of operation of the project during the monitoring period?	On the whole project has been implemented as defined in the PDD version 4.9 dated 21 October 2008 and the implementation is evidenced by statements of work completion (see list of verified documents).			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?	There are changes in the monitoring plan. The computer system used for monitoring since the 1st of January 2007 has been upgraded			OK

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
		with the temperature sensor TSPU-002 before orifice meter for CMM flow rate standardization and normalization purposes. New metering devices have been substituted, and additions have been made to provide safety of parameters monitored. Calibration of all these devices has been performed (see below).Parameters as well as formulas have not been changed.			
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?	The exhaustive description and justification of the key factors is provided in Section B.1. of the PDD version 4.9. dated 21 October 2008 which is deemed final.			OK
95 (b)	Are data sources used for calculating emission reductions or enhancements of net	All operators are responsible for data	**CAR 01.** In MR 1.1, section B 2.1, table 5.1 the exact	References have been included as	OK

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
	removals clearly identified, reliable and transparent?	administration. All relevant data summarized daily and archived electronically and in register records. Besides, operators prepare standardized daily, weekly, monthly and yearly reports.	reference to the data source must be indicated.	footnotes in the table 5, Section B.2.1. MR ver. 1.2.	
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 presented in Section B.2.1. of the MR	**FAR 01.** In order to meet the JISC requirements on data saving and archiving, an Order on archiving of all project related documentation for two years after the last ERU transmission should be developed and included to the Emission Monitoring Manual. All persons responsible for data collection and monitoring should be aware of the provisions of this Order.	The Monitoring Manual will be updated accordingly. Specific instructions will be issued by the project participants to ensure that all data monitored and required for determination areto be kept for two years after the last transfer of ERUs for the project.	To be checked under the subsequent periodic verification
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	N/A	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
	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	N/A
97 (b)	*If the determination was conducted on the basis of an overall monitoring plan,* have the project participants submitted a common monitoring report?	N/A	N/A	N/A	N/A
98	*If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods,* Are the monitoring periods per component of the project clearly specified in the monitoring report? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past?	N/A	N/A	N/A	N/A
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	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	N/A
Data management					
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	All data necessary for the CO2 emission reductions calculation is			To be checked under the subsequent

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
		collected. The scheme of data flow and a description of reporting procedures introduced in Monitoring Manual from 07/06/2010.			periodic verification
		Training logbook and Results of operator training were presented to the verification team during the site visit.	**FAR 02 .** The training plans and procedures should be described in Monitoring Manual.	The Monitoring Manual will be updated accordingly.	
		Position and roles of each person in the GHG data management process are clearly defined in the monitoring report, Monitoring Manual and are implemented on-site. Introduction of computerized control system allows for efficient on-line monitoring and periodical review of the data collection process	**FAR 03.** Job descriptions and working instructions for data collection should be part of the monitoring manual.	The Monitoring Manual will be updated accordingly.	

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	Calibration is conducted by State Center of Metrology and Standardization. The documents that confirmed calibration were provided for the verification team.	**FAR 04.** In monitoring manual a specific frequency of cross-checking and the staff responsible for this must be provided. **CL 02.** Please, provide information whether there are any procedures which will be applicable if there is no access to relevant external data?	The Monitoring Manual will be updated accordingly. Following information has been added to the section B.3. of the MR ver. 1.2. "All relevant external data are fixed ex-ante and are available in this monitoring report. References to the sources of these data are provided. Sources of the external data are mostly reports and guidelines published by the Intergovernmental Panel on Climate Change (IPCC) and which are available on the website of IPCC www.ipcc.ch. Some data that were developed and published under the United Framework	To be checked under the subsequent periodic verification OK

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
				Convention on Climate Change (UNFCCC) are also used. These data are also referenced and available from the website of the UNFCCC www.unfccc.int. These websites are generally accessible worldwide 24 hours per day, 7 days a week. In case these data are not available from the websites directly due to downtime or other malfunctions that prevent access to relevant external data values provided in this monitoring report shall be used."	
		It is stated in PDD version 4.9 that environmental performance of the project will be monitored in the framework of procedures existing at Mine.	**CL 03.** Please clarify were there any analysis as for the project's impacts on air, water resources, waste treatment, noise impact on labour conditions performed?	The analysis of the impacts on environment has been performed by the local developer MPP "Firma Priroda" which is a licensed company for EIA preparation – see	

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
				supporting document SD54. (SD54 contains copy of the license for MPP "Firma Priroda" to perform EIA and conduct laboratory measurements). This EIA has not been formally approved but thekey findings of the study have been added to the MR ver. 1.2 Section B.2.6"The environmental impacts of the project have been considered in the EIA study performed by the local developer MPP «Firma Priroda». The key findings are summarized below: 1) Impact on the air is insignificantly negative. Small amounts of CO, NO2, N2O, CO2, CH4 are emitted through the chimneys. Possibility	

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
				of emergency emissions that will be higher than maximum allowable concentration (MAC) is insignificant. Analysis of the computer emissions dispersion model shows that the MAC will not be exceeded within the safety zone of the new installation and also beyond this zone. The impact on air will be less severe than in the case of the boiler house running on coal. 2) Impact on soil and land resources. No negative impact is expected on land and soil. Minimum impact on soil during construction will be reversed after the construction has been finished. 3) Impact on microclimate, flora and fauna. No	

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
				negative impacts expected. 4) Impact on reserves and protected areas. No impact expected. 5) Impact on water. Minimum impact is expected. Water will be supplied by existing on-site network. Sewage and drainage is also provided by existing on-site networks. 6) Noise impact. Noise levels are within the allowed standards. The positive impact of the project contributes to better environmental effects due to the operation of boiler house on gaseous fuel and not on coal, improved safety and decreased coal consumption."	
			CL 04. Please provide information on monitoring	Periodic monitoring of emission levels	OK

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
			emissions from the boiler room during the monitoring period.	due to the boiler operation is conducted by local company MPP "Firma Priroda". Evidence is provided in the supporting document SD55_Emissions2009 which is the technical report of the periodic measurements of hazardous emissions.	
			CL 05. Please provide information about the organization which conducts the emission monitoring	Periodic monitoring of emission levels due to the boiler operation is conducted by local company MPP "Firma Priroda". For the license – see supporting document SD54. (SD54 contains copy of the license for MPP "Firma Priroda" to perform EIA and conduct laboratory measurements).	OK
			CL 06. Please clarify what	The data on project	OK

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
			quality assurance procedures are applied for data on project environmental impact?	environmental impact are assessed by the licensed subcontractor. See supporting document SD54. (SD54 contains copy of the license for MPP "Firma Priroda" to perform EIA and conduct laboratory measurements). The results of the EIA will be submitted to the relevant authorities of Ukraine for the approval.	
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	Data collection are clearly defined in the monitoring report, Monitoring Manual and are implemented on-site.			OK
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	All data necessary for the CO2 emission reductions calculation is collected. The scheme of data flow and a description of the management system is introduced in Monitoring Manual from 07/06/2010.			OK

DVM Paragraph	Check Item	Initial finding	Action requested to project participants	Review of project Participants' action	Conclusion
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	N/A
103	Is the verification based on the monitoring reports of all JPAs to be verified?	N/A	N/A	N/A	N/A
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	N/A	N/A	N/A	N/A
104	Does the monitoring period not overlap with previous monitoring periods?	N/A	N/A	N/A	N/A
105	*If the AIE learns of an erroneously included JPA,* has the AIE informed the JISC of its findings in writing?	N/A	N/A	N/A	N/A
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 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;	N/A	N/A	N/A	N/A

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

Appendix B: Verifiers CV's

Work carried out by:

Igor Antipko (Mining Electro-Mechanics)
Team Leader, Bureau Veritas Ukraine Technical Specialist, Climate Change Verifier

Graduated from Stahanov College of Mines, specialist in Mining Electro-Mechanics (Automation processes of production of minerals, development of the circuits of electrosupply of mines, management of chisel and explosive works in mines). Completed full course of the Labour protection and Safety, was employed at the position of the Mine mechanic on repair of the equipment, Mine underground electromechanic (service and repair of mechanisms and equipment, lines of transportation of the electric power in mine of extraction stone coal, service and repair of gas analyzer of methane, monitoring and repair mine of air control devices).

Topchiy Rostislav, Ecology Specialist

Team Member, Climate Change Verifier
Bureau Veritas Ukraine Health, Safety and Environment Department, Project Manager.

Has received extensive training in the CDM and JI validation (determination) processes. He has an academic background in chemical and ecological engineering. He is also auditor for ISO 9000, ISO 14000 and OHSAS 18001.

Svitlana Gariyenchyk, Ecology Specialist
Team Member, Climate Change Verifier
Bureau Veritas Ukraine Health, Safety and Environment Department, Project Manager.

She has 8 year working experience as a Project Manager, Head of Investment, Environmental Programs and Training Department in the company operating in the sphere of ecological audit, management and certification. She is experienced in European Union programs as an environmental protection expert.

She followed study and training course within TACIS program on training of managers in the sphere of environmental protection. She has completed intensive training course "Lead verifier of JI projects". She is involved in the determination/verification of 9 JI projects.

The verification report was reviewed by:

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)
Climate Change Lead Verifier
Bureau Veritas Ukraine Health, Safety and Environment Department Manager.
Ivan Sokolov 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 Systems (IRCA registered), Quality Management Systems (IRCA registered), Occupational Health and Safety Management Systems, and Food Safety Management Systems. Mr. I.Sokolov has performed over 140 audits since 1999. He is a Lead Tutor of IRCA registered ISO 14000 EMS Lead Auditor Training Course, Lead Tutor of IRCA registered ISO 9000 QMS Lead Auditor Training Course. Ivan Sokolov is also a Tutor of Join Implementation/Clean Development Lead Verifier Training Course and has performed determination/verification of more that 50 JI projects.