VERIFICATION REPORT
CAMCO CARBON RUSSIA LIMITED

VERIFICATION OF THE "RECONSTRUCTION OF THE OJSC "NIZHNIY TAGIL IRON AND STEEL WORKS" BLAST FURNACES #5 AND #6, RUSSIAN FEDERATION"

REPORT NO. RUSSIA-VER/0089/2010

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

Report No: RUSSIA-ver/0089/2010 rev.01

VERIFICATION REPORT

"Reconstruction of the OJSC "Nizhniy Tagil Iron and Steel Works" blast furnaces #5 and #6, Russian Federation "

Date of first issue: 28/10/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: Camco Carbon Russia Limited	Client ref.: Mr. Maxim Khamaza

Summary:

Bureau Veritas Certification has been commissioned by Camco Carbon Russia Limited to carry out, under JI Track 1 procedure, the initial and 1st periodic verification of GHG emission reduction by the JI project "Reconstruction of the OJSC "Nizhniy Tagil Iron and Steel Works" blast furnaces #5 and #6, Russian Federation" (sectoral scope 09), based on UNFCCC criteria for the JI, as well as criteria given to ensure 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 proposed Joint Implementation project envisages at reconstruction of "NTMK" blast furnaces (BF) #5 and #6 with the introduction of resource saving technologies of molten iron production. The project intends to completely shut down BF # 2, 3, reduce the molten iron production at BF ##1, 4 and ensure the production of molten iron, needed for "NTMK" steelmaking operations, by a more efficient technique with lower fuel consumption.

The verification covers the period from January 1st 2008 to December 31st 2009. The verification is carried out as a combined Initial and 1st Periodic Verification. A risk-based approach has been followed to perform the verification. In the course of verification, 3 Corrective Action Requests (CAR) 3 were raised and successfully closed during the 1st Periodic Verification.

The verification is based on the Monitoring Report (covers January 1st 2008 – December 31st 2009), the Monitoring Plan as set out in the determined PDD, Version 2.0 dated 28 September 2010.

As a result of the Initial Verification, the Bureau Veritas Certification confirms that the project is implemented as planned and described in the PDD, the installed equipment runs reliably and is calibrated appropriately, the monitoring system is in place and functional. The project is ready to continuously generate emission reductions.
As a result of the 1st Periodic Verification, the Bureau Veritas Certification confirms that the GHG emission reductions are calculated without material misstatement in conservative and appropriate manner. Bureau Veritas Certification herewith confirms that the project has achieved emission reductions in the above mentioned reporting period as of 1 072 939 tones CO2-eq.

Report No.: RUSSIA/0089/2010	Subject Group: JI	
Project title: "Reconstruction of the OJSC "Nizhniy Tagil Iron and Steel Works" blast furnaces #5 and #6, Russian Federation"		
Work carried out by: Vera Skitina – Team Leader, Lead verifier		
Work reviewed by: Leonid Yaskin – Internal Technical Reviewer		
Work approved by: Flavio Gomes– Operational Manager		
Date of this revision: 28/10/2010	Rev. No.: 01	Number of pages: 34

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1 INTRODUCTION

Camco Carbon Russia Limited has commissioned Bureau Veritas Certification to carry out the initial and 1st periodic verification of GHG emission reduction by the JI project "Reconstruction of the OJSC "Nizhniy Tagil Iron and Steel Works" blast furnaces #5 and #6, Russian Federation" (hereafter called the project) located in the city of Nizhniy Tagil, the Sverdlovsk region of the Russian Federation.

Camco Carbon Russia Limited (hereafter called Camco) being Monitoring Report developer (together with OJSC "Nizhniy Tagil Iron and Steel Works" (hereafter called NTMK) coordinated the monitoring and verification processes on behalf of the OJSC "Nizhniy Tagil Iron and Steel Works" (legal name of 'NTMK').

The verifier has reviewed the GHG data collected for the period from January 1st 2008 to December 31st 2009.

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:

Vera Skitina
Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

This verification report was reviewed by:

Leonid Yaskin
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 determination protocol is enclosed in Appendix A to this report.

2.1 Review of Documents

The Monitoring Report (MR) submitted by Camco Carbon Russia Limited and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), 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 dated 24.05.10, 1.1 dated 03.11.10 and the project as described in the PDD version 1.04 dated 30.11.2009 and the final PDD 2.0 dated 28.09.10.

2.2 Follow-up Interviews

On 18/10/2010 Bureau Veritas Certification performed off-site interviews with the project stakeholders through teleconference to confirm both selected information obtained through the on-site interviews and assessment during the determination stage, performed by Bureau Veritas Certification, and received by the verifier as supporting documentation to the Monitoring Report, and to resolve issues identified in the document review. Representatives of OJSC "Nizhniy Tagil Iron and Steel Works" and the the Camco consultant were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
OJSC "Nizhniy Tagil Iron and Steel Works"	➢ Status of project equipment ➢ Monitoring plan ➢ Deviations from the monitoring plan ➢ Requirements to competence ➢ Roles and responsibilities for data collection ➢ Training to monitoring procedures ➢ Data to be collected ➢ Measurement equipment (inspection, characteristics, status) ➢ Data logging ➢ Data archiving ➢ Data reporting ➢ Use of calculation tool ➢ Emission calculations ➢ Baseline emission factor ➢ Monitoring report verification and validation ➢ QC and QA procedures ➢ IT management ➢ EMS
CONSULTANT CAMCO	➢ Monitoring plan ➢ Deviations from the monitoring plan ➢ Data to be collected ➢ Data logging ➢ Data archiving ➢ Data reporting ➢ Use of calculation tool ➢ Emission calculations ➢ Baseline emission factor ➢ Monitoring report verification and validation ➢ QC and QA procedures ➢ IT management ➢ EMS
(LOCAL Stakeholder)	N/A

2.3 Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the verification is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the GHG emission reduction calculation.

If the Verification Team, in assessing the monitoring report and supporting documents, identifies issues that need to be corrected, clarified or improved with regard to the monitoring requirements, it should raise these issues and inform the project participants of these issues in the form of:

(a) Corrective action request (CAR), requesting the project participants to correct a mistake that is not in accordance with the monitoring plan;

(b) Clarification request (CL), requesting the project participants to provide additional information for the AIE to assess compliance with the monitoring plan;

(c) Forward action request (FAR), informing the project participants of an issue, relating to the monitoring that needs to be reviewed during the next verification period.

To guarantee the transparency of the verification process, the concerns raised are documented in more detail in the verification protocol in Appendix A.

3 VERIFICATION CONCLUSIONS

In the following sections, the conclusions of the verification are stated.

The findings from the desk review of the original monitoring documents and the findings from interviews during the follow up visit are described in the Verification Protocol in Appendix A.

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 3 Corrective Action Requests.

The number between brackets at the end of each section corresponds to the VVM paragraph.

3.1 Project approval by Parties involved (90-91)

Written project approval by Party B, the United Kingdom of Great Britain and Northern Ireland, to be available when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, has not been provided to AIE.

The abovementioned written approval is unconditional.

3.2 Project implementation (92-93)

The implementation status of the project is as described in Appendix A paragraph 92, and the starting date of operation is September 2006. The verifier has reviewed the GHG data collected for the period from January 1st 2008 to December 31st 2009.

The progress of the proposed JI project achieved is steady. Work under the project implementation including building and commissioning stages has been completed. The blast furnaces #1 and #4 were kept operational during the reconstruction of the blast furnaces #5 and #6 with the introduction of resource saving technologies of molten iron production. Project realization allowed shutting down BF ## 2, 3 and reducing the molten iron production at BF # 1 and #4.

The modernized blast furnace complex includes the following key technological and operational resource saving measures:

- change of furnace line (sectional shape) at BF's;
- introduction of furnace expert control system at BF's;
- installation of Central Bell Less Top with rotary hopper manufactured by "Paul Wurth" within a System of iron-ore raw material charging and modern industrial vacuum cleaners; it allows to significantly reduce the amount of exhausting dust with carbon bearing raw materials;
- installation of the modern shaftless Kalugin stoves at the Stove blocks, which allows to enhance natural gas combustion and decrease CO2 emission in the exhausting gases;
- installation of top-pressure recovery turbine (TPRT) at BF #6 in the System of blast furnace gas extraction and cleaning, which allows to use of furnace gas excess pressure for additional electricity generation for internal usage.

The modernized blast furnace complex is put into operation according to the project schedule.

From 01.01.2008 the blast furnace complex is in operation with the deviation of the achieved emission reduction (1 072 939 tonnes of CO2 equivalent) from that estimated for the 1st monitoring period 01/01/08 –

31/12/09 (711 493 tonnes of CO2 equivalent). Refer to PDD Section A.4.3.1 and MR Annex 2. The deviation is explicitly justified by the plant's management in the Monitoring Report as response to the issued CAR 03.

3.3 Compliance of the monitoring plan with the monitoring methodology (94-98)

The monitoring occurred in accordance with the monitoring plan which was not revised against that provided in the PDD regarding which the determination has not been deemed final as the project has not received the approval by the host Party (refer to CAR 01 in [2]).

Monitoring of GHG emission reductions was carried out as per the monitoring plan of the PDD version 1.4 and 2.0 without deviations.

For calculating the emission reductions, key factors, as those listed in 23 (b) (i)-(vi) DVM, influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account (refer to Appendix A para 95 (a). Refer to PDD, Annex 2).

Other key factors which influence project emissions were taken into account such as the project BFS specific consumption of materials, fuel and energy carriers and iron output by blast furnace complex (refer to MR Table 3.1).

Data sources used for calculating emission reductions, as provided in Appendix A para 95 (b) are clearly identified, reliable and transparent.

Emission factors, including default emission factors, are selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice. The applied emission factors, including default emission factors, used for calculating the emission reductions are selected, basically based on IPCC 2006 data and Operational Guidelines for Project Design Documents of Joint Implementation Projects (refer to PDD Annex 2 and MR, Table 3.2).

The calculation of emission reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner as described in Appendix A paragraph 95 (d).

3.4 Revision of monitoring plan (99-100)

N/A

3.5 Data management (101)

The data and their sources, provided in monitoring report, are clearly identified, reliable and transparent. All parameters were monitored as prescribed. The complete data is stored electronically and documented. The monitoring plan data should be stored for at least 2 years after the end of the crediting period.

The implementation of data collection procedures is in accordance with the monitoring plan, which includes the quality control and quality assurance procedures of monitoring of greenhouse gas emissions. The operational and management monitoring system based on the existing "NTMK" certified Quality Management System (QMS) for collecting and processing data and is presented in PDD Section D.3 and MR Section 3.1.3.2, figure 3.1 [1]. The QMS, along with the set procedures for the technological processes' monitoring according to the Russian state standards and norms (GOSTs), ensures the acquisition of accurate data on the quality of technology and energy processes under the Project implementation at "NTMK" with low level of uncertainty.

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.

According to Chapter 3 Articles 9 and 12, Chapter 4 Articles 1-3 of the Russia Federation Law #102-FZ dated 26.06.08 "On provision of uniformity of measurements" measurement results can be used in case if appropriate characteristics of errors and uncertainty are justified. Such parameters are presented in passports of measuring equipments. The level of uncertainty is considered as low that is why it can be neglected in the calculations.

Project comprises the 41 monitoring parameters. Some of the parameters that are used in the calculation of the baseline and project emissions are measured directly with the use of special equipment while others are estimated with the use of appropriate coefficients.

Verification of the calculation of emission reductions is based on internal data. The origin of those data was explicitly checked. Entering and processing of those data in the monitoring Excel spreadsheet [1] where predefined algorithms compute the annual value of the emission reductions as well as all equations and algorithms used in the spreadsheet were checked. Inspection of calibration and maintenance

records for key equipment was performed by the verifier for all relevant meters during the determination stage.

The collection, preparation and processing of initial data for calculating the emission reduction is fulfilled by Chief of Environmental Protection Department (EPD), who fulfills the monitoring information in the forms to prepare the report on the CO2 emissions monitoring and hands the forms over to Camco. The person, responsible for monitoring, ensures the storage of data, needed for the calculation of the emission reduction units, on the electronic and paper media until 2014 in the order, which will be established by the plant "Regulations for the order of CO2 emissions monitoring at "NTMK".

Chief of Environmental Protection Department (EPD) provides initial internal verification of accounting data and calculation of emissions based on yearly monitoring data base. Independent the verifier (Camco consultant) provides external verification of both the source data and calculation results. Persons responsible for implementation of monitoring activities within the departments (refer to MR Section 3.1.3.2, figure 3.1) are appointed (refer to "References", "Persons interviewed" [1-17]. Heads of departments are responsible for the quality, completeness and reliability of the information provided.

The monitoring process is managed by EPD. Head of EPD is responsible for the quality and timeliness of performing tasks and functions for monitoring GHG emissions.

Production Director is responsible for the general management of the monitoring process and internal validation of the Monitoring Report.

In the PDD version 2.0, the emission reduction is estimated as 711 493 tonnes of CO2 equivalent while in the Monitoring report version 02 the amount of ERU's for the first monitoring period 01/01/08–31/12/09 is 1 072 939 tonnes of CO2 equivalents. The deviation of the achieved emission reduction from that calculated based on monitoring data is justified in the Monitoring Report by the project participants.

The verifier confirms that emission reduction calculations have been properly performed according to the revised Monitoring Plan.

3.6 Verification regarding programmes of activities (102-110)

Not applicable.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the initial and 1st periodic verification of the "Reconstruction of the OJSC "Nizhniy Tagil Iron and Steel Works" blast furnaces #5 and #6, Russian Federation" project, which applies the JI specific approach. The verification was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The verification consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion.

The management of OJSC "Nizhniy Tagil Iron and Steel Works" is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring and Verification Plan indicated in the final PDD version 2.0. 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 1.1 dated 03.11.2010 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as per determined changes. 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 01/01/2008 to 31/12/2009
Baseline emissions : 14 435 711 t CO2 equivalents.
Project emissions : 13 362 772 t CO2 equivalents.
Emission Reductions (2008-2009) : 1 072 939 t CO2 equivalents.

5 REFERENCES

Category 1 Documents:
Documents provided by Type the name of the company that relates directly to the GHG components of the project.

/1/ Monitoring Report (Versions 1.0 dated 24.05.10 and 1.1 (English) 03.11.10) "Reconstruction of the OJSC "Nizhniy Tagil Iron and Steel Works" blast furnaces #5 and #6, Russian Federation". Monitoring period 01.01.2008 – 31.12.2009.
Excel spreadsheet with calculation of emission reduction. Provided by PDD Developer.

/2/ Technical Protocol of Board of Directors of "NTMK" meeting "Decision about the project of BF#6 reconstruction (first stage)" dated 03.06.02.

/3/ Technical Protocol of the conference concerning the BF#5 reconstruction dated 14.08.03.

/4/ Technical Protocol of the conference concerning the BF#6 reconstruction dated 05.07.01.

/5/ Evraz Holding. Order #682 "About an installation a working group to JI Project realization in Evraz Holding "dated 28.09.05.

/6/ Common Environmental Program "NTMK" for 2001-2005, June 2001.

/7/ Positive Safety conclusion of State Russian Safety Board Rostekhnadzor to BF#6 of "NTMK", #04-15/7637 dated 27.08.08.

/8/ Positive State Opinion on the BF Complex reconstruction #06-199/1u dated 28/09/05.

/9/ Permit to commissioning of the BF#5 issued by Local State Authority of the city Nizhny Tagil in 19.05.07.

/10/ Document confirming final acceptance of executed reconstruction work at BF#6 issued by the acceptance board, dated 2003.

/11/ Contract to BFA/16-01.2003, dated 14.02.08. Training of the "NTMK" personnel.

/12/ The Environmental Impact Assessment (OVOS); document prepared by the "Nikomproekt" design institute (T-69735-P32) for BF #6 reconstruction, and by the LLC 'Metpromproekt" (MPP-01-RP-PZ.3) for BF #5 reconstruction project.

/13/ Training Programs for BF - maintenance operating personnel.

/14/ Environmental permissions and limits issued for "NTMK" by Interregional Department of Rostekhnadzor for Ural Federal Okrug. All valid on the date of the site visit.

/15/ State statistic environmental form 2-tp (air) of "NTMK" in 2008, 2009

/16/ Technical Data of the cast iron volume production in the years 2008, 2009

/17/ Technical Data of the daily cast iron volume production. Extract Records for 2008, 2009

/18/ Technical restricted plan for BF's in BFS of "NTMK".

/19/ Quality Certificates of cast iron produced at BF#5, "NTMK", 2008, 2009.

/20/ Quality Certificate of fuel liquid oil for NTMK, 2008, 2009.

/21/ Monthly Technical Reports of BFS, "NTMK", 2008, 2009

/22/ Measuring appliances records of BFS, "NTMK": Protocol#E372-09 (measuring transducer #265DS650 2000855/118, BF#6); calibration records electricity meters: SAZU-I670M, SR4U-I673MB and SET-4TMO2.2, electricity meter SET-4TM; #08051487 #P459-09, #9224213-278; technical passport for electricity meter #520317, #091462, #021879, #851625

/23/ Wagon weighbridge VESTO-SD20, AVP-VP-SD Weighbridge, hopper-type scales measuring appliances records

/24/ SITRANS transformer calibration records

/25/ Plant Order #29 from 25.01.2010 "Monitoring of GHG emission reductions at OJSC "NTMK" #29 from 25.01.2010", approved by Executive directors of OJSC "NTMK"

/26/ Business letter from Chief Power Engineer Office (CPEO) to Chief of Environmental Protection Department (EPD) # 188-55-1111 dated 18.08.10 "Factual production Data for electricity generation at BF #6 TPRT (GUBT) in 2008, 2009 by months"

/27/ Business letter from Chief Power Engineer Office (CPEO) to Chief of Environmental Protection Department (EPD) dated 17.03.10 "Net calorific value of the natural gas, supplied to "NTMK" in 2008, 2009 by months"

/28/ Business letter from Water Supply Shop (WSS) to Chief of Environmental Protection Department (EPD) dated 17.03.10 "Usage of recirculated water at "NTMK" in 2008, 2009 by months"

Category 2 Documents:

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

/1/ "Reconstruction of the OJSC "Nizhniy Tagil Iron and Steel Works" blast furnaces #5 and #6, Russian Federation", PDD Versions 1.04 dated 30.11.2009 and 2.0 dated 28.09.2010.

/2/ Final Determination Report RUSSIA/0033-2/2010 v.02 dated 28.09.2010

/3/ JISC Guidance on criteria for baseline setting and monitoring. Version 02.

/4/ 2006 IPCC Guidelines on National Greenhouse Gas Inventories.

/5/ Operational Guidelines for Project Design Documents of Joint Implementation Projects. Volume 1: General guidelines. Version 2.3. Ministry of Economic

Affairs of the Netherlands. 2004.

/6/ Tool to calculate project or leakage CO2 emissions from fossil fuel combustion, version 02.

/7/ CDM AM0068 Methodology for improved energy efficiency by modifying ferroalloy production facility --- Version 1

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/ S.Druzhynin– "NTMK" Chief Power Engineer Office

/2/ S.Permyakov – "NTMK" Head of Department for environment protection

/3/ M.Tkachenko - "NTMK" Deputy Head of Department for environment protection, Coordinator of JI project

/4/ Y.Khamlov – Main Specialist in agglomerative and blast furnace production

/5/ M.Gel'manov –Head of BFS

/6/ V.Galchenkov –Production Director

/7/ O.Knittel – BFS supervising foreman

/8/ E.Rybakova - BFS Economist

/9/ M.Shtan'ko – Economist of Economic Bureau of BFS and steel production, Planning and Economic Department of Economic Directorate

/10/ A.Ermakov- Chief of NTMK Central Electrotechnology Laboratory

/11/ S.Sladkov – Chief of Gas production unit

/12/ E.Dudin – Chief of Centralization of control Laboratory

/13/ I.Kurshin – Deputy Head of technical automatic production unit

/14/ N.Pshenichnikov – Senior supervising foreman of technical automatic production unit

/15/ V.Rostovshikov – Chief of Energy Saving and Perspective Development Department

/16/ D.Shikhaleev – Director of NTMK and VGOK investment activity

/17/ Oleg Ryumin – PDD developer, Camco Carbon Russia Limited manager

APPENDIX A: COMPANY PROJECT VERIFICATION PROTOCOL FOR THE JI PROJECT "MODERNIZATION OF STEEL PRODUCTION AT SEVERSKY PIPE PLANT"

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

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
Project approvals by Parties involved					
90	Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	**CAR 01** in [2]. **CAR 02.** A written project approval from Party B involved was not provided to AIE.	Response to CAR 01: Approval of the project by the Russian Government is issued in the decree of the Ministry of Economic Development N326 dated 23 July 2010. The project is listed under number 7 in the list of approved projects. Relevant information was presented in the PDD v2.0 (Section A.5) and the final determination report was issued by Bureau Veritas with CAR 01 closed. Reference to the PDD v2.0 is added to		Pending

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
			monitoring report Section 1.3. Response to CAR 02: A written project approval from Party B involved will be issued before submitting the first verification report to the secretariat for publication.		
91	Are all the written project approvals by Parties involved unconditional?	Please refer to CAR 01 and CAR 02 above.	Please refer to the project partisipant response to CAR 01 and CAR 02 above.		Pending
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?	The determination has not been deemed final as the project has not received the approval of the host Party following the determination of the project. Refer to CAR 01 in [2]. The project has been implemented in accordance with the PDD Section A.2 with one reservation (refer to CAR 03). The blast furnace complex with auxiliary equipment supporting its operation is commissioned and operating in line with implementation schedule [1]. Equipment	Response to CAR 03: In accordance with PDD, the expected annual amount of ERUs is 711 493 t CO2. The volume of ERUs monitored for 2008-2009 totalled 1 072 939 t CO2, which is appr. 51% higher than the expected one.		

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
		is put into operation according to the modernization project schedule. The general operational workflow of the blast furnace and auxiliary shops and subdivisions – suppliers of the BF operations, does not change thereat. The project technology is based on the advanced metallurgical technique of upgrading the existing blast furnace shops with the introduction of resource saving technologies of molten production. Project realization allowed the reduction of CO2 emissions into the atmosphere primarily due to the decrease of coke consumption, which is produced in the course of "NTMK" coke-chemical operations from the coking coal and used as fuel in the blast furnaces. The coke consumption at the reconstructed BF #5 and #6 was reduced to 433kg/t of molten iron as compared to the baseline 495kg/t on the average for BF ##1-5. The main resource saving technical solutions, implemented in the course of project realization at "NTMK" BF #5 and #6 are presented in MR Table 2.1.	The main reason for the difference is reduction of the coke consumption at the reconstructed BF #5 and #6 to 433kg/t of molten iron in 2009. According to the PDD project coke consumption was estimated as 450 kg/t of molten iron based on 2006-2008 average historical data. Greater coke consumption reduction is linked with: Increase of BF #5 and #6 molten iron production from 3.2 mln.t in 2008 to 4.2 mln.t in 2009 (see PDD, tables B.8-9) which led to the more economic BF operation mode in the		

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
		All reconstruction facilities are located on the existing premises of "NTMK". No additional land was requisitioned. **CAR 03.** Please justify the deviation of the achieved emission reduction (1 072 939 tonnes of CO2 equivalent) from that estimated for the 1st monitoring period 01/01/08 – 31/12/09 (711 493 tonnes of CO2 equivalent). Refer to PDD Section A.4.3.1 and MR Table 4.5.	context of fuel consumption; - BF #5 and #6 expert control system which was implemented as a part of the project accumulates and analyzes significant data amount by 2009. As a result expert system improves BF #5 and #6 control and reaches extra coke consumption reduction.		
93	What is the status of operation of the project during the monitoring period?	The verifier confirms that, the installation works has been completed in September 2006. In the 1st monitoring period 01/01/08 – 31/12/09 the blast furnace complex with a complex of auxiliary equipment supporting its operation was operated. The emission reductions have been generated and monitored from 01.01.2008.			OK
Compliance with monitoring plan					
94	Did the monitoring occur in	The determination has not been deemed	Please refer to the		Pending

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
	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?	final as the project has not obtained the approval of the host Party following the determination of the project. Refer to CAR 01 in [8]. The Monitoring System is in place and operational with one reservation (refer to CAR 03). Monitoring of GHG emission reductions was carried out as per the Monitoring Plan included in the determined PDD.	project partisipant response to CAR 01 and CAR 02 above.		
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 verifier confirms that for calculating the emission reductions, key factors, those listed in 23 (b) (i)-(vi) DVM, influencing the baseline emissions and the activity level of the project as well as risks associated with the project were taken into account (refer to PDD Section B.2)			OK
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	All the data sources used for calculating emission reductions clearly identified, reliable and transparent. The company has installed and operates Quality management system meeting international standards ISO 9001:2008			OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
		requirements. Collection of all key parameters, required to calculate greenhouse gas emissions, is undertaken in compliance with the established practice of OJSC "NTMK". The relevant monitoring points are defined in PDD Section D.1.1.1, D.1.1.3 and MR Table 3.1 and include 41 parameters: - electricity consumption for: • BF electrical equipment operation; • Coke-chemical operations; • Air separation plant for oxygen generation; • Water supply shop for BF supply with recycle water; • TTP-steam blower for blast air generation; - fossil fuel burning (in the blast furnace and lime production); - use of carbon-containing materials (for iron melting). Annual production data are used for the annual Monitoring Report. Annual data			

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
		are formed on the basis of monthly technical data forms internally when reporting. The procedure for collection of all key parameters, required to calculate emission reductions, is specified in the Plant Order #29 from 25.01.2010. Input data can be divided into two types: 1. Measured: the data metering and control - fixed either daily or for each shipment/transfer within the factory. Measurements are performed using high-precision standard measuring tools that undergo periodic calibration. 2. Estimated: (1) standard emission factors, applied for the emissions' calculation (natural gas emission factor , emission factor during power generation in the RF energy system; (2) the specific natural gas consumption for steam generation at TPP-steam blower, specific consumption of electricity for coke production , specific electricity consumption for oxygen generation (also includes electricity consumption for nitrogen			

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
		generation), specific electricity consumption for the BFS recycle water supply , specific electricity consumption for air blast generation; (3) carbon content in limestone; (4) the calorific value of natural gas (refer to MR Table 3.1 and PDD section D.1.1.1 and D.1.1.3). For calculating are used computational techniques. The technique and instructions developed by the specialized organizations and approved in the established order. Graphic scheme of monitoring points is provided. Data are collected on a three-tier scheme: 1. Recorded daily meter readings (or electronic) and recorded in data registers. 2. Data registers are processed monthly and the data are recorded in the monthly form. 3. Annual data are formed by summing the data of monthly reporting forms.			

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	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?	The applied emission factors, including default emission factors, used for calculating the emission reductions are selected, basically based on IPCC 2006 and the Operational Guidelines for Project Design Documents of JI Projects, Vol.1, 2004, Netherlands Data (refer to PDD Annex 2 and MR, Table 3.2): - the fuel emission factors for natural gas both for baseline and project scenario is used as conservative with reference to IPCC Guidelines for National Greenhouses Gas Inventories, 2006, Vol. 2, Ch. 2;the emission factor for power generation both for baseline and project scenario is used as conservative from the Operational Guidelines for Project Design Documents of JI Projects, Vol.1, 2004, Netherlands.			OK
95 (d)	Are the calculations of emission reductions or enhancements of net removals based on conservative assumptions and the most plausible scenarios in a transparent manner?	The calculations of emission reductions are based on conservative assumptions and the most plausible scenarios in a transparent manner: - the fuel emission factors for natural gas both for baseline and project			OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
		scenario is used as conservative with reference to IPCC Guidelines for National Greenhouses Gas Inventories, 2006, Vol. 2, Ch. 2; - the emission factor for power generation both for baseline and project scenario is used as conservative from the Operational Guidelines for Project Design Documents of JI Projects, Vol.1, 2004, Netherlands. - carbon content in limestone - (input) by blast furnaces (refer to MR, Table 3.2, ID number P- 41) is assumed according to the «2006 IPCC Guidelines for National Greenhouse Gas Inventories» (2006 IPCC Guidelines for National Greenhouse Gas Inventories. Volume 3. Chapter 4: Metal Industry Emissions. p. 4. for the value of the most relevant material following conservativeness.			
Applicable to JI SSC projects only					
96	Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring	N/A			

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
	period on an annual average basis? If the threshold is exceeded, is the maximum emission reduction level estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined?				
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			
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			
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	N/A			

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
	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			
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			
Data management					

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	An information/process flow diagram, describing the entire process from raw data to reported totals is developed at the stage of PDD determination and is fulfilled without changes. The company has installed and operates certified Quality management system meeting international standard ISO 9001:2008 requirements. Within OJSC "NTMK" structure there is the Environmental Protection Department (EPD). In its operations this department is governed by the active legislation, orders and instructions from the OJSC "NTMK" General Director and the regulations of the Service of State Environmental Control of Natural Resources Committee. EPD includes well-trained personnel, does not require additional technical equipment and is well able to facilitate the proper production environmental monitoring of the project. The procedure for collection of all key parameters, required to calculate emission reductions, is specified in the Plant Order #29 from 25.01.2010			OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
		"Monitoring of GHG emission reductions at OJSC "NTMK" #29 from 25.01.2010", approved by Executive directors of OJSC "NTMK". Position and role of relevant persons, including senior management, in the GHG data management process are defined and implemented through the Order. The Chief of the Environmental Protection Department (EPD) is accountable for execution of this order.			
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	Measurements are performed using high-precision standard measuring tools that undergo periodic calibration. Techniques developed and duly approved by specialized institutions are used for calculating the operating indicators of equipment. For monitoring purposes, calculation techniques and guidelines for filling out forms of intra-corporate reporting are used.			
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	Requirements for documented data trails are defined and implemented as per Order #29. All documents with the primary data are available. Primary data are directly entered into the report form. All			OK

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
		assumptions and the references to original data sources are indicated in the Monitoring report. The head of Environmental Protection Department (Mr. Permyakov S.A.) is responsible for the data management in the electronic and hard copy form according to the Regulation and the Order #29 from 25.01.2010.			
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 is developed at the stage of PDD determination and is fulfilled without changes in accordance with the monitoring plan. A special Plant Order #29 from 25.01.2010 "Monitoring of GHG emission reductions at OJSC "NTMK" #29 from 25.01.2010", approved by Executive directors of OJSC "NTMK" was launched to manage the process.			OK
Verification regarding programs of activities (additional elements for assessment)					
102	Is any JPA that has not been added to the JI PoA not verified?	N/A			
103	Is the verification based on the monitoring reports of all JPAs to be verified?	N/A			
103	Does the verification ensure the	N/A			

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
	accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?				
104	Does the monitoring period not overlap with previous monitoring periods?	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			
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:	N/A			

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
	− The types of JPAs; − The complexity of the applicable technologies and/or measures used; − The geographical location of each JPA; − The amounts of expected emission reductions of the JPAs being verified; − The number of JPAs for which emission reductions are being verified; − The length of monitoring periods of the JPAs being verified; and − The samples selected for prior verifications, if any?				
107	Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation?	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	N/A			

DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project participants' response	Conclusion
	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?				
109	Is the sampling plan available for submission to the secretariat for the JISC.s ex ante assessment? (Optional)	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			

Bureau Veritas Certification Holding SAS
28 October 2010

Vera Skitina – Team leader, Lead Verifier