VERIFICATION REPORT
GLOBAL CARBON B.V.

VERIFICATION OF THE
"IMPLEMENTATION OF ENERGY EFFICIENT MEASURES AT "DONETSKSTEEL" – METALLURGICAL PLANT".

INITIAL AND FIRST PERIODIC FOR THE PERIOD

01.01.2008-31.10.2011

REPORT NO. UKRAINE-VER/0332/2011

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BUREAU VERITAS CERTIFICATION

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VERIFICATION REPORT

Date of first issue:	Organizational unit:
04/12/2011	Bureau Veritas Certification Holding SAS
Client:	Client ref.:
Global Carbon B.V.	Lennard de Klerk

Summary:
Bureau Veritas Certification has made the initial and first periodic verification of the "Implementation of energy efficient measures at "Donetsksteel" – metallurgical plant", JI Registration Reference Number 0231, project of PJSC "Donetsksteel" – Iron and Steel Works" located in the city of Donetsk, Ukraine, and applying the JI specific approach, on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

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

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

In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in approved project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project generating GHG emission reductions. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements, and the ERUs to be issued totalize 1 369 211 tonnes of CO2 eq. 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.:	Subject Group:	
UKRAINE-ver/0332/2011	JI	
Project title: "Implementation of energy efficient measures at "Donetsksteel" – metallurgical plant"		
Work carried out by: Kateryna Zinevych - Team Leader, Lead Verifier Sergiy Kustovskyy - Team Member, Verifier Oleksiy Dzhafarov - Team Member, Verifier Vera Skitina – Team Member, Technical specialist		
Work reviewed by: Ivan Sokolov – Internal Technical Reviewer Igor Alekseenko – Technical specialist		
Work approved by: Flavio Gomes – Climate Change Operational Manager		
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1 INTRODUCTION

Global Carbon BV has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project “Implementation of energy efficient measures at "Donetsksteel" – metallurgical plant” (hereafter called “the project”) at Donetsk, 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 submitted monitoring report and is based on determined 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, corrective and/or forward 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:

Kateryna Zinevych
Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Sergiy Kustovskyy
Bureau Veritas Certification Team Member, Climate Change Verifier

Oleksiy Dzhafarov
Bureau Veritas Certification Team Member, Climate Change Verifier

Vera Skitina
Bureau Veritas Certification Technical specialist

This verification report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification, Internal Technical Reviewer.

Igor Alekseenko
Bureau Veritas Certification Technical specialist

2 METHODOLOGY

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

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

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

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

2.1 Review of Documents

The Monitoring Report (MR) submitted by Global Carbon BV 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 version(s) 1.0, 3.1, 3.3, 3.4, 3.5 and 3.6 and project as described in the determined PDD Version 3.4 dated 3/11/2011.

2.2 Follow-up Interviews

On 18/08/2011 Bureau Veritas Certification performed (on-site) interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of "Donetskseel" and Global Carbon BV were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
PJSC "Donetsksteel" – Iron and Steel Works"	➢ Organizational structure. ➢ Responsibilities and authorities. ➢ Training of personnel. ➢ Quality management procedures and technology. ➢ Implementation of equipment (records). ➢ Metering equipment control. ➢ Metering record keeping system, database.
Consultant: Global Carbon B.V.	3 Baseline methodology. 4 Monitoring plan. 5 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 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 Verification Team 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.

The Verification Team will make an objective assessment as to whether the actions taken by the project participants, if any, satisfactorily resolve the issues raised, if any, and should conclude its findings of the verification.

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 10 Corrective Action Requests and 3 Clarification Requests.

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

3.1 Remaining issues and FARs from previous verifications

No FARs were raised during determination.

3.2 Project approval by Parties involved (90-91)

The project obtained approval by the Host party (Ukraine) - Letter of Approval # 3187/23/7 issued by the State Environmental Investment Agency of Ukraine dated 01/11/2011, and written project approval by the party – buyer of the emission reduction units (Netherlands) - Letter of Approval issued by NL Agency, Ministry of Foreign Affairs of Netherlands #2010JI30 dated 07/10/2010.

The abovementioned written approvals are unconditional.

The identified areas of concern as to the Project approval by the parties involved, project participants responses and Bureau Veritas Certification's conclusions are described in Appendix A to this report (refer to CAR 01).

3.3 Project implementation (92-93)

The project activity consists of the energy efficiency measures at PJSC "Donetsksteel" – Iron and Steel Works" by the implementation of two subprojects:

Subproject 1. Implementation of Pulverized Coal Injection (PCI) for Blast Furnace 1 (BF 1). As the result of implementation of this measure due to injection of pulverized coal into the furnace a significant saving of coke was achieved: about 20% reduction in specific consumption of coke per tonne of pig iron. Coke production requires much more energy than PC production. Therefore, positive ecological effect is achieved due to the substitution of coke with pulverized coal;

Subproject 2. Implementation of automatic process control system (APCS) for Open Hearth Furnaces (OHF). In the result of implementation of this measure, significant saving of fuel, electricity and other resources is expected due to technological processes optimization and exclusion of human factor. Implementation of APCS for Open Hearth Furnaces is a unique project which has no analogues in Ukraine. This can be confirmed by relevant patents (No 35552, 26512, 20930), which are owned by CJSC "Donetsksteel" – metallurgical plant".

For both subprojects it is assumed that capacity of furnaces after the project implementation is the same as for the baseline conditions.

Starting date of the project is 05/03/2006. The project was operational from starting date until the end of monitoring period.

No outstanding issues were raised as to the project implementation.

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

The monitoring occurred in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website.

For calculating the emission reductions or enhancements of net removals, key factors, influencing the baseline emissions or net removals 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.

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

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

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

The identified areas of concern as to the compliance of the monitoring plan with the monitoring methodology, project participants responses and Bureau Veritas Certification's conclusions are described in Appendix A to this report (refer to CARs 02 – 04, 08, 09, 10 CL 01).

3.5 Revision of monitoring plan (99-100)

The project participants provided an appropriate justification for the proposed revision.

Emission factors for consumption of electricity from Ukrainian power grid in 2008 - 2011 were changed from 0.896 tCO_2/MWh to the values presented in Table 6 of this document. The new emission factors were approved for obligatory use in ERUs calculations for JI projects in Ukraine by the Orders of Ukrainian DFP. New estimations of emission factors for 2008-2011 rely on the latest available data across entire Ukrainian power grid and represent the best knowledge on emissions of GHGs. For the future monitoring periods emission factors approved by the Orders of Ukrainian DFP will be used.

AIE opinion: the approach is in the line of the Ukrainian DFP requirements and enhances the accuracy of the emission reductions calculations.

Text representation of calculation formulaes of "carbon dioxide emission factor for limestone, dolomite and magnesite powder consumption" were detailed to reflect more accurately the calculation method applied. The changes didn't influence the calculation method itself.

Text representation of calculation formulae of "emission factor for pig iron production process under the project"; "emission factor for steel production process under the project"; "emission factor for pig iron production process under the baseline" and "emission factor for steel production process under the baseline" was corrected to reflect more accurately the calculation method applied. The changes didn't influence the calculation method itself.

All the revisions to the determined monitoring plan are illustrated in Table 2 of the Monitoring Report version 3.6.

Verification team determined that the proposed revisions improve the accuracy of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans.

No outstanding issues were raised as to revision of monitoring plan.

3.6 Data management (101)

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

The implementation of data collection procedures is in accordance with the monitoring plan, including the quality control and quality assurance procedures. These procedures are mentioned in the section “References” of this report.

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

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

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

The identified areas of concern as to the data management, project participants responses and Bureau Veritas Certification’s conclusions are described in Appendix A to this report (refer to CARs 05 – 07, CLs 02, 03).

3.7 Verification regarding programmes of activities (102-110)

Not applicable.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the first periodic verification of the “Implementation of energy efficient measures at "Donetsksteel" – metallurgical plant” Project in Ukraine, which applies 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 Global Carbon BV 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 changes determined. 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 3.6 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as planned and described in approved project design documents and as per determined changes in monitoring plan. 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 31/10/2011

Baseline emissions	: 10210106	t CO_2 equivalents.
Project emissions	: 8840895	t CO_2 equivalents.
Emission Reductions	: 1369211	t CO_2 equivalents.

5 REFERENCES

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

/1/ Monitoring Report “Implementation of energy efficient measures at "Donetsksteel"– metallurgical plant” version 1.0, dated 28/07/2011.
/2/ Monitoring Report “Implementation of energy efficient measures at "Donetsksteel"– metallurgical plant” version 3.1, dated 27/09/2011.
/3/ Monitoring Report “Implementation of energy efficient measures at "Donetsksteel"– metallurgical plant” version 3.3, dated 12/12/2011.
/4/ Monitoring Report “Implementation of energy efficient measures at "Donetsksteel"– metallurgical plant” version 3.4, dated 05/01/2012.
/5/ Monitoring Report “Implementation of energy efficient measures at "Donetsksteel"– metallurgical plant” version 3.5, dated 27/01/2012.
/6/ Monitoring Report “Implementation of energy efficient measures at "Donetsksteel"– metallurgical plant” version 3.6, dated 14/02/2012
/7/ Project Design Document “Implementation of energy efficient measures at "Donetsksteel"– metallurgical plant” version 3.3 dated 24/06/2011.
/8/ Project Design Document “Implementation of energy efficient measures at "Donetsksteel"– metallurgical plant” version 3.4 dated 03/11/2011.
/9/ Calculation of GHG emission reductions dated 09/09/2011 (Excel file) version 3.1.
/10/ Calculation of GHG emission reductions dated 26/07/2011 (Excel file) version 1.0.
/11/ Calculation of GHG emission reductions dated 27/01/2012 (Excel file) version 3.4.
/12/ Calculation of GHG emission reductions dated 14/02/2012 (Excel file) version 3.6.
/13/ Letter of Approval #3187/23/7 issued by State Environmental Investment Agency of Ukraine dated 01/11/2011
/14/ Letter of Approval #2010JI30 issued by NL Agency, Ministry of Foreign Affairs of Netherlands dated 07/10/2010

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

/1/ Working project "Implementation of APCS on open-hearth furnaces". Environmental impacts assessment. Donetsk 2010.
/2/ Conclusion of state ecological expertise CN#11.04.142 on conformity of project documentation with normative acts related to environment protection.
/3/ Passport on electric power meter СА3У-5009И reg.№0026356 dated 23.10.2008.

/4/ Passport on electric power meter СА3У-5009И, reg.№0026365, dated 29.03.2002.
/5/ Passport on electric power meter СА3У-5009И reg.№0003909 dated 23.10.2006.
/6/ Passport on electric power meter СА3У-5009И reg.№0004423 dated 02.12.2002.
/7/ Passport on electric power meter СА3У-5009И reg.№0051005 dated 02.12.2002.
/8/ Passport on electric power meter СА3У-И670 reg.№079822 dated 11.07.1991.
/9/ Passport on electric power meter СА3У-И670 reg.№098848 dated 26.09.1994.
/10/ Passport on electric power meter СА3У-И670 reg.№112275 dated 07.06.1989.
/11/ Passport on electric power meter СА3У-5009И reg.№1180499 dated 29.03.2002.
/12/ Passport on electric power meter СА3У-И670 reg.№135490 dated 02.03.1988.
/13/ Passport on electric power meter СА3У-И670Д reg.№167599 dated 23.12.2004.
/14/ Passport on electric power meter СА3У-И670Д reg.№167630 dated 23.12.2004.
/15/ Passport on electric power meter СА3У-И670Д reg.№167405 dated 17.06.2003.
/16/ Passport on electric power meter СА3У-И670Д reg.№168234 dated 23.12.2004.
/17/ Passport on electric power meter СА3У-И670М reg.№185259 dated 27.12.1989.
/18/ Passport on electric power meter СА3У-И670М reg.№197141 dated 03.10.1987.
/19/ Passport on electric power meter СА3У-И670 reg.№226900 dated 01.03.1988.
/20/ Passport on electric power meter СА3У-ИТ reg.№291725 dated 19.01.1987.
/21/ Passport on electric power meter СА3У-И670М reg.№376795 dated 23.10.2006.
/22/ Passport on electric power meter СА3У-И670Д reg.№438516 dated 16.08.1989.
/23/ Passport on electric power meter СА3У-И670М reg.№572791 dated 21.09.2007.
/24/ Passport on electric power meter СА3У-И670 reg.№574941 dated 29.08.1988.
/25/ Passport on electric power meter СА3У-И670М reg.№602127 dated 26.05.1992.
/26/ Passport on electric power meter СА3У-И670М reg.№666427 dated 23.10.2006.
/27/ Passport on electric power meter СА3У-И670М reg.№666489 dated 23.10.2006.
/28/ Passport on electric power meter СА3У-И670 reg.№680190 dated 12.09.1986.
/29/ Passport on electric power meter СА3У-И670 reg.№742038 dated 19.06.1989.
/30/ Passport on electric power meter СА3У-И670М reg.№773411 dated 17.09.1986.
/31/ Passport on electric power meter СА3У-И670 reg.№944863 dated 25.09.1990.
/32/ Passport on electric power meter СА3У-И670М reg.№988905 dated

18.10.1988.
/33/ Passport №115 on weights ВТВ-25Д reg.№23 dated 12.10.2006.
/34/ Passport №178 on weights ВВ-200-50-2М reg.№020805240/020906077 dated 29.11.2006.
/35/ Passport №142 on weights ВВ-250-50-2М reg.№020805258/030100798 dated 07.12.2006.
/36/ Passport №306 on weights ВТВ-25Д reg.№33 dated 29.08.2006.
/37/ Passport №102 on weights ВВ-200-50-2М reg.№050200979/050200985 dated 14.03.2006.
/38/ Passport №1250 on weights ВВ-250-50-2М reg.№020906324/020906325 dated 06.06.2006
/39/ Passport on weights ВТБ-2 reg.№01 dated 11.03.2009.
/40/ Passport on weights ВТБ-2 reg.№02 dated 11.03.2009.
/41/ Passport on weights ВТБ-2 reg.№04 dated 05.12.2007.
/42/ Passport on weights ВТБ-2 reg.№03 dated 05.12.2007.
/43/ Passport on weights ТП250х9 reg.№2 dated 12.03.2009.
/44/ Passport on weights ВА-60-15-2 reg.№011206127 dated 14.12.2006.
/45/ Passport on slab length counter "Simens" reg# n/n dated 17.05.2010.
/46/ Passport on weight measuring complex for vagon scales ВИК-ВВ2/4 reg.№7 dated 28.02.2008.
/47/ Passport on weight measuring complex for vagon scales ВИК-ВВ2/4 reg.№5 dated 05.12.2007.
/48/ Passport on weight measuring complex for vagon scales ВИК-ВВ2/4 reg.№3 dated 24.12.2008.
/49/ Passport on weight measuring complex for vagon scales ВИК-ВВ2/4 reg.№2 dated 24.12.2008.
/50/ Register №72-26 of electric power meters replacement at plant's workshops.
/51/ Register of natural gas accounting for August 2011.
/52/ Register of oxigen accounting for August 2011.
/53/ Environmental impact assessment on overhaul reconditioning of blast furnace #1 on OJSC "Donetsk metallurgical plant". Explanatory note. Kharkiv 2002.
/54/ Conclusion of state ecological expertise CN#04.12.090 on confirmity of project documentation with normative acts related to environment protection.
/55/ Letter about permission on emission #13-3867 dated 09.06.2011.
/56/ Permission #1 410137700-43 for polutants emission into the athmospheric air from stationary sources from 03.06.2009 to 03.06.2014
/57/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for January 2011.
/58/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for Fabruary 2011
/59/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for March 2011
/60/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for April

2011.

/61/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for May 2011.

/62/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for January 2010.

/63/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for Fabruary 2010.

/64/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for March 2010.

/65/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for April 2010.

/66/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for May 2010.

/67/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for June 2010.

/68/ Faxogram for senior power engineer about calorific value of natural gas for July 2010 dated 23.07.2010 #28-4489.

/69/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for August 2010.

/70/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for September 2010.

/71/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for October 2010.

/72/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for November 2010.

/73/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for December 2010.

/74/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for January 2009.

/75/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for Fabruary 2009.

/76/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for March

2009.

/77/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for April 2009.

/78/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for May 2009.

/79/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for June 2009.

/80/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for August 2009.

/81/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for September 2009.

/82/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for October 2009.

/83/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for November 2009

/84/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for December 2009

/85/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for June 2009.

/86/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for January 2008.

/87/ Faxogram for senior power engineer about calorific value of natural gas for Fabruary 2008 dated 22.02.2008 #28-880.

/88/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for March 2008.

/89/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for April 2008.

/90/ Faxogram for senior power engineer about calorific value of natural gas for May 2008 dated 26.05.2008 #28-2167.

/91/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for June 2008.

/92/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for August 2008.

/93/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for September 2008.
/94/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for October 2008.
/95/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for November 2008
/96/ Faxogram for senior power engineer about calorific value of natural gas for November 2008 dated 25.11.2008 #28-5200.
/97/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for June 2008.
/98/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for January 2007.
/99/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for Fabruary 2007.
/100/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for March 2007.
/101/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for April 2007.
/102/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for May 2007.
/103/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for June 2007.
/104/ Passport of physical and chemical parameters of natural gas transferred to OJSC "Donetsk metallurgical plant" through GRS-1 of Donetsk city for August 2007.
/105/ Faxogram for senior power engineer about calorific value of natural gas for September 2007 dated 26.09.2007 #28-4603.
/106/ Faxogram for senior power engineer about calorific value of natural gas for November 2007 dated 23.11.2007 #28-5676.
/107/ Faxogram for senior power engineer about calorific value of natural gas for October 2007 dated 24.10.2007 #28-5155.
/108/ Faxogram for senior power engineer about calorific value of natural gas for December 2007 dated 25.12.2007 #28-6215.
/109/ Register of electric power accounting for August 2011.
/110/ Register of adduced balances for 2008.
/111/ Register of adduced balances for 2007.
/112/ Balance of natural gas at CJSC "Donetsksteel" for January 2008.

/113/ Balance of coke oven gas at CJSC "Donetsksteel" for January 2008.
/114/ Balance of blast-furnace gas at CJSC "Donetsksteel" for January 2008.
/115/ Balance of blast-furnace gas at CJSC "Donetsksteel" for January 2008.
/116/ Actual balance of oxigen consumption at CJSC "Donetsksteel" for January 2008
/117/ Balance of natural gas at CJSC "Donetsksteel" for January 2007.
/118/ Balance of blow-off air at CJSC "Donetsksteel" for January 2007.
/119/ Balance of blast-furnace gas at CJSC "Donetsksteel" for January 2007.
/120/ Actual balance of oxigen consumption at CJSC "Donetsksteel" for January 2007.
/121/ Balance of natural gas at CJSC "Donetsksteel" for January 2009.
/122/ Balance of coke oven gas at CJSC "Donetsksteel" for January 2009.
/123/ Balance of blast-furnace gas at CJSC "Donetsksteel" for January 2009.
/124/ Actual balance of oxigen consumption at CJSC "Donetsksteel" for January 2009.
/125/ Record on electricity consumption of the plant for 15.08.2011.
/126/ Technical report on alternate current at networks and substations shop for June 2011.
/127/ Technical report on direct current at networks and substations shop for July 2011.
/128/ Order on recalibration periods setting of measurement devices at CJSC "Donetsksteel".
/129/ Register of natural gas accounting for August 2011.
/130/ Register of oxigen accounting for August 2011.
/131/ Record of energy materials consumption on UPPUT of blast-furnace workshop for 16.08.2011.
/132/ Protocol of calibration of pressure gage Metran 100–DD 1440 reg.№155135 dated 18.04.2011.
/133/ Passport of measurement device of parameter and ambient characteristics Safir M 5410 reg.№07390014.
/134/ Protocol of calibration of measurement device Safir-M 5440K reg.№07390014 dated 03.02.2011.
/135/ Passport of measurement device Safir-M 5410 reg.№09113231.
/136/ Protocol of calibration of pressure gage Safir-M 5410 reg.№09113231 dated 19.05.2010.
/137/ Passport of measurement device of parameter and ambient characteristics Safir-M 5420I reg.№10234183.
/138/ Protocol of calibration of pressure gage Safir-M 5420I reg.№10234183 dated 08.02.2010.
/139/ Passport of measurement device Sapfir-22DD 2420 reg.№205978 dated 21.04.2010.
/140/ Protocol of calibration of pressure gage Sapfir-22DD 2420 reg.№205978 dated 21.04.2010.
/141/ Passport of measurement device of parameter and ambient characteristics Safir M 5420 reg.№11604896.
/142/ Protocol of calibration of pressure gage Safir M 5420 reg.№11604896 dated 21.07.2010.
/143/ Passport of measurement device of parameter and ambient characteristics Safir

M 5420 reg.№11526821.

/144/ Protocol of calibration of pressure gage Safir M 5420 reg.№11526821 dated 21.07.2010.

/145/ Passport of measurement device of parameter and ambient characteristics Sapfir 22DI 2430 reg.№672001.

/146/ Protocol of calibration of pressure gage Sapfir 22DI 2430 reg.№672001 dated 20.09.2010.

/147/ Passport of measurement device of parameter and ambient characteristics Safir M 5410 reg.№09813045.

/148/ Protocol of calibration of pressure gage Safir M 5410 reg.№09813045 dated 20.09.2010.

/149/ Passport of measurement device of parameter and ambient characteristics Safir M 5420 reg.№09480066.

/150/ Protocol of calibration of pressure gage Safir M 5420 reg.№09480066 dated 22.09.2010.

/151/ Passport of measurement device of parameter and ambient characteristics Safir M 5420 reg.№09457065.

/152/ Protocol of calibration of pressure gage Safir M 5420 reg.№09457065 dated 21.09.2010.

/153/ Passport of measurement device of parameter and ambient characteristics Safir M 5420 reg.№07102486.

/154/ Passport of measurement device of parameter and ambient characteristics Safir M 5430 reg.№07033467.

/155/ Protocol of calibration of pressure gage Safir M 5430 reg.№07033467 dated 19.08.2010.

/156/ Passport of measurement device of parameter and ambient characteristics Sapfir 22DD 2420 reg.№205608.

/157/ Protocol of calibration of pressure gage Sapfir 22DD 2420 reg.№205608 dated 15.07.2010.

/158/ Passport of measurement device of parameter and ambient characteristics Sapfir-M 22DD 2420 reg.№672059.

/159/ Protocol of calibration of pressure gage Sapfir-M 22DD 2420 reg.№672059 dated 29.03.2010.

/160/ Passport of measurement device of parameter and ambient characteristics Sapfir 22DD 2430 reg.№902160.

/161/ Protocol of calibration of pressure gage Sapfir 22DD 2420 reg.№902160 dated 29.03.2010.

/162/ Passport of measurement device of parameter and ambient characteristics Metran 22-DD 2440 reg.№56194.

/163/ Protocol of calibration of pressure gage Metran 22-DD 2440 reg.№56194 dated 13.07.2011.

/164/ Passport of measurement device of parameter and ambient characteristics Metran 100-DD 1411 reg.№154013.

/165/ Protocol of calibration of pressure gage Metran 100-DD 1411 reg.№154013 dated 11.10.2010.

/166/ Passport of measurement device of parameter and ambient characteristics Metran 100-DD 1430 reg.№151632.

/167/ Protocol of calibration of pressure gage Metran 100-DD 1430 reg.№151632 dated 14.04.2011.
/168/ Verification certificate of working ethalone №220. Portative pressure calibrator Metran 501 PKD-R reg.№1340.
/169/ Verification protocol №220. Portative pressure calibrator Metran 501 PKD-R reg.№220 dated 07.06.2011.
/170/ Verification certificate of working ethalone №02.04-526. Portative multifunctional calibrator Metran 501 PKD-R reg.№1340.
/171/ Verification protocol №37 Portative pressure calibrator Metran 501 PKD-R reg.№37 dated 30.05.2011.
/172/ Periodic verification schedule for measurement devices. Measurement of flow, consumption, volume parameters. Dated 23.12.2010.
/173/ Repairment, verification and calibration schedule of thermotechnical measurement devices and measurement diaphragms of technological agreegates for 2011..
/174/ Certificate of qualification confirmation of K.Semukova dated 08.06.2007. Reg.#K1130.
/175/ Certificate of qualification compliance of K. Semukova. Addition to certificate №K1130.
/176/ Certificate of qualification confirmation of M.Nebogatykh dated 25.12.2009. Reg.#1710.
/177/ Certificate of qualification compliance of M.Nebogatykh. Addition to certificate №1710.
/178/ Certificate of qualification compliance of G.Irakieva. Addition to certificate №K1985.
/179/ Certificate of qualification compliance of T. Kotova. Addition to certificate №K1984.
/180/ Certificate of qualification confirmation of G.Irakieva dated 07.12.2007. Reg.#K1985.
/181/ Certificate of qualification confirmation of T.Kotova dated 07.12.2007. Reg.#K1984.
/182/ Order №3 about the results of personnel education in 2010 dated 04.01.2011.
/183/ Plan-request of blast-furnace workshop on technical education of workers for 2011.
/184/ Plan-request of open-hearth furnace workshop on technical education of workers for 2011.
/185/ Request of blast-furnace workshop for qualification improvement of managers and specialists for 2011.
/186/ Licence AB №529180 for educational services providing, issued to CJSC "Donetsksteel" dated 11.03.2010.
/187/ Protocol №138 of qualification committee meeting dated 15.03.2011.
/188/ Protocol №335 of qualification committee meeting dated 11.05.2011.
/189/ Labour contract №1185 dated 11.05.2011.
/190/ Direction #76 dated 23.03.2011.
/191/ Concusion on traineeship passing of Y. Rudakov dated 23.04.2011.
/192/ Protocol №15 of qualification committee meeting dated 05.01.2011.
/193/ Protocol №683 of qualification committee meeting dated 25.11.2010.

/194/ Protocol №685 of qualification committee meeting dated 23.11.2010.
/195/ Protocol №686 of qualification committee meeting dated 25.11.2010.
/196/ Protocol №684 of qualification committee meeting dated 25.11.2010.
/197/ Labour contract №549 of open-hearth furnace workshop dated 18.10.2010.
/198/ Direction of open-hearth furnace workshop #1613 dated 18.10.2010.
/199/ Register of theoretical lectures for managers and specialists of open-hearth furnace workshop Gr №1.
/200/ Register №2 of theoretical lectures for managers and specialists of open-hearth furnace workshop.
/201/ Register №3 of theoretical lectures for managers and specialists of open-hearth furnace workshop.
/202/ Register №4 of theoretical lectures for managers and specialists of open-hearth furnace workshop.
/203/ Register №5 of theoretical lectures for managers and specialists of open-hearth furnace workshop.
/204/ Protocol №150 of qualification committee meeting dated 06.12.2007. Blast-furnace workshop..
/205/ Protocol №1367 of qualification committee meeting dated 15.01.2007. Blast-furnace workshop.
/206/ Protocol №49 of qualification committee meeting dated 20.12.2007. Open-hearth furnace workshop.
/207/ Protocol №275 of qualification committee meeting dated 20.02.2008. Open-hearth furnace workshop.
/208/ Protocol №150 of qualification committee meeting dated 14.10.2008. Open-hearth furnace workshop.
/209/ Protocol №535 of qualification committee meeting dated 24.09.2009. Open-hearth furnace workshop.
/210/ Protocol №721 of qualification committee meeting dated 21.12.2009. Open-hearth furnace workshop.
/211/ Protocol №58 of qualification committee meeting dated 12.01.2009. Blast-furnace workshop.
/212/ Protocol №148 of qualification committee meeting dated 25.06.2008. Blast-furnace workshop.
/213/ Protocol №728 of qualification committee meeting dated 18.12.2009. Blast-furnace workshop.
/214/ Protocol №278 of qualification committee meeting dated 21.06.2009. Open-hearth furnace workshop.
/215/ Protocol №235 of qualification committee meeting dated 12.05.2010. Open-hearth furnace workshop.
/216/ Protocol №597 of qualification committee meeting dated 06.12.2010. Open-hearth furnace workshop.
/217/ Protocol №791 of qualification committee meeting dated 13.04.2009. Blast-furnace workshop.
/218/ Protocol №125 of qualification committee meeting dated 04.03.2010. Blast-furnace workshop.
/219/ Protocol №550 of qualification committee meeting dated 27.09.2010. Blast-furnace workshop.

/220/ Register DP#1. August 2011.
/221/ Report on materials consumption in furnace-charge of blast-furnace #1 for 18.08.2011.
/222/ Register 1RDO.
/223/ Shedule of steel-temper ports repair for August 2011.
/224/ Register of mixer activity started 12.05.2011.
/225/ Actual balances of oxigen consumption for January-December 2007.
/226/ Actual balances of oxigen consumption for January-December 2008.
/227/ Actual balances of oxigen consumption for January-December 2009.
/228/ Actual balances of oxigen consumption for January-December 2010.
/229/ Actual balances of oxigen consumption for January-November 2011.
/230/ Certificate for management system in accordence with ISO 14001 : 2009 №44104061810.
/231/ Order #343 dated 16.08.2010 on storage of information necessary for Joint Implementation projects realization..
/232/ Photo. Control desk. Workshop #10.
/233/ Photo. Diaphragm for natural gas.
/234/ Photo. Diaphragm for coke oven gas.
/235/ Photo. Diaphragm for blast-furnace gas.
/236/ Photo. Electromotor ЗДСТР-135-4,0-150-У2 №04177.
/237/ Photo. Electro-magnetic valve КЭН-6.
/238/ Photo. Electronic balances of natural gas. Blast-furnace workshop.
/239/ Photo. Electronic balances of natural gas. Open-hearth furnace workshop.
/240/ Photo. APCS. Blast-furnace workshop.
/241/ Photo. Pressure gage Metran 22-DD. Reg.#56194.
/242/ Photo. Pressure gage Metran 100-DD. Reg.#154013.
/243/ Photo. Pressure gage Metran 100-DD. Reg.#151632.
/244/ Photo. Pressure gage Safir M 5420 reg.№09480066.
/245/ Photo. Pressure gage Safir M 5410 reg.№09813045
/246/ Photo. Pressure gage Safir M 5420 reg.№11604896
/247/ Photo. Pressure gage Safir M 5410 reg.№07390014
/248/ Photo. Electric power meter СА3У-5009И reg.№0026356
/249/ Photo. Electric power meter СА3У-5009И reg.№0026365
/250/ Photo. Electric power meter СА3У-5009И reg.№0003909
/251/ Photo. Electric power meter СА3У-5009И reg.№0004423
/252/ Photo. Electric power meter СА3У-5009И reg.№0051005
/253/ Photo. Motor #4 CVS.
/254/ Photo. Transformer №1. Blast-furnace №1.
/255/ Photo. Transformer №2. Blast-furnace №1.
/256/ Photo. Electric airblower TP-PN #1.
/257/ Photo. Electric power meter СА3У-И670 reg.№098848.
/258/ Photo. Electric power meter СА3У-И670 reg.№112275.
/259/ Photo. Electric power meter СА3У-И670 reg.№079822.
/260/ Photo. Electric power meter СА3У-И670М reg.№185259.
/261/ Photo. Electric power meter СА3У-И670М reg.№197141.
/262/ Photo. Electric power meter СА3У-И670 reg.№226900
/263/ Statement on control overview of electricity measurement devices СА3У-

И670М №018025, Merkuriy 230AR00 №01070793 dated 19.10.2010.
/264/ Passport of measurement device of parameter and ambient characteristics Safir-M 5440K, reg.№10741216
/265/ Passport of measurement device of parameter and ambient characteristics Safir-M 5415, reg.№08537694
/266/ Passport AAH3. Electric power meter «Energiya-9» reg.№33867.

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/ Genadiy Doroshenko - Head of environmental protection department
/2/ Anna Vilde – Global Carbon BV JI consultant
/3/ Dmytro Komkov - Head of energy inspection service group
/4/ Yaroslava Kuchko - specialist of direction of investment and innovation projects financing
/5/ Svitlana Fandeeva - boiler machinist
/6/ Olga Popova - Electrical repairman
/7/ Liudmyla Skrypka - head of bureau of electric supply and electric using reliability
/8/ Natalya Nikolaeva - master-repairman. Metrology department
/9/ Iryna Nesterenko - head of energy resources accounting group
/10/ Kateryna Semakova - acting control master
/11/ Olena Safronova - acting head of bureau of technical education
/12/ Anatoliy Yakovenko - consultant of energy inspection service
/13/ Dmytro Gorin - acting deputy head of blast-furnace workshop
/14/ Roman Boshkatov - acting deputy head of Open Hearth Furnace workshop
/15/ Volodymyr Strebkov - head of telemechanists group

APPENDIX A: COMPANY PROJECT VERIFICATION PROTOCOL

BUREAU VERITAS CERTIFICATION HOLDING SAS

VERIFICATION PROTOCOL

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

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project approvals by Parties involved				
90	Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	Corrective Action Request (CAR) 01. Please provide the copies of the Letters of Approval. Please also add the information (such as number and date) on the Letters of Approval issued by the Parties involved into the MR.	CAR 01	OK
91	Are all the written project approvals by Parties involved unconditional?	See CAR 01 above.	OK	OK
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 project has been implemented in accordance with the PDD regarding which the determination has been deemed final.	OK	OK
93	What is the status of operation of the project during the monitoring period?	Project has been operational for the whole monitoring period.	OK	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	Emission factors for consumption of electricity from Ukrainian power grid in 2008 - 2011 were changed. Corrective Action Request (CAR) 02.	CAR 02 CL 01	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	and is so listed on the UNFCCC JI website?	In section A.8 of the MR it is stated that new values of emission factors for consumption of electricity from Ukrainian power grid are presented in Table 7. However Table 7 does not consist this information. Please make the corrections and provide relevant information. Clarification Request (CL) 01. Please provide the copy of contract with gas supplier for the additional verification of gas supply process.		
95 (a)	For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) above, influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project taken into account, as appropriate?	Yes, for calculating the emission reductions or enhancements of net removals, 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 were taken into account.	OK	OK
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	Corrective Action Request (CAR 03). In table 5 there are 2 references to IPCC, Volume 3, table 4.3. Still the referred document do not consist the provided values. Please explain the origin of these values.	CAR 03	OK
95 (c)	Are emission factors, including default emission factors, if used for calculating the emission reductions or enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?	Yes, all emission factors used for calculating the emission reductions or enhancements of net removals, are selected by carefully balancing accuracy and reasonableness, and appropriately justified.	OK	OK
95 (d)	Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and the most plausible scenarios in a transparent manner?	Corrective Action Request (CAR) 04. The calculation of emission reduction for July 2011 is absent. Please provide this information. Corrective Action Request (CAR) 08. In formulae 3 of the MR some parameters are missed. Please make formulae 3 consistent with the formulae that was provided in the excel model. Please describe this	CAR 04 CAR 08 CAR 09 CAR 10	OK OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		changes in section A.8 of the MR. Corrective Action Request (CAR) 09. In formulae 7 of the MR some parameters are missed. Please make formulae 7 consistent with the formulae that was provided in the excel model. Please describe this changes in section A.8 of the MR. Corrective Action Request (CAR) 10. The values of ERUs in the MR differ from the corresponding values in the PDD. Please provide explanation of the origin of the difference.		
Applicable to JI SSC projects only				
96	Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis? If the threshold is exceeded, is the maximum emission reduction level estimated in the PDD for the JI SSC project or the bundle for the monitoring period determined?	N/A	OK	OK
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	OK	OK
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	OK	OK
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	N/A	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	See CAR 02 above.	OK	OK
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?	See CAR 02 above.	OK	OK
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?	Corrective Action Request (CAR) 05. As it is stated in the passports for electricity meters that are listed in Table 4 of the MR, the calibration period is 3 years. Still in documentation it is stated that 12 meters were not calibrated in line with this requirement. For example, electricity meter reg.№071512 was not calibrated from 2004 until 2009, electricity meter reg.№125543 was not calibrated from 2000 until 2010. The same problem is actual for electricity meters reg.№№098848, 167599, 167405, 168234, 197141, 438516, 773411, 786366, 896752, 944863. Please justify the level of data accuracy for the period from 01/01/2008 until the date of last calibration of these meters. Corrective Action Request (CAR) 06. The electricity meter Reg.№365322 was installed in 2010. Please provide information on what meter was used in the period from 01/01/2008 until the installation of this meter. Corrective Action Request (CAR) 07. Please provide the calibration certificates for electricity meters reg.№01015399, 680795, 227733, 397701, 585438,	CAR 05 CAR 06 CAR 07 CL 02 CL 03	OK OK OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		567124, for scales reg.№050200986/050200968, for flow meters reg.№ 450178, 149329, 154012, 59886, 59887, 205603, 203985. Clarification Request (CL) 02. For Table 3 of the MR please make the same font size for all columns. Clarification Request (CL) 03. For Table 5 please round the values to the same order. If the values should be rounded until the 4th mark, than the value for magnesite powder should be 0.522.		
101 (b)	Is the function of the monitoring equipment, including its calibration status in order?	See CAR 05, 06, 07 above.	OK	OK
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	See CAR 05, 06, 07 above.	OK	OK
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	See CAR 05, 06, 07 above.	OK	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	OK	OK
103	Is the verification based on the monitoring reports of all JPAs to be verified?	N/A	OK	OK
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	N/A	OK	OK
104	Does the monitoring period not overlap with previous monitoring periods?	N/A	OK	OK
105	If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?	N/A	OK	OK
Applicable to sample-based approach only				

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

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	reasonable explanation and justification?			
109	Is the sampling plan available for submission to the secretariat for the JISC.s ex ante assessment? (Optional)	N/A	OK	OK
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	OK	OK

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
Corrective Action Request (CAR) 01. Please provide the copies of the Letters of Approval. Please also add the information (such as number and date) on the Letters of Approval issued by the Parties involved into the MR.	90	Copies of the Letters of Approval were provided to the AIE. Information about them was added to the MR version 3.1.	CAR is closed. Letters of Approval were provided to the verification team.
Corrective Action Request (CAR) 02. In section A.8 of the MR it is stated that new values of emission factors for consumption of electricity from Ukrainian power grid are presented in Table 7. However Table 7 does not consist this information. Please make the corrections and provide relevant information.	94	Emission factors for consumption of electricity from Ukrainian power grid were added to Table 5 of MR version 3.1 (please, see p 18).	The necessary information was provided. Issue is closed.

Corrective Action Request (CAR 03). In table 5 there are 2 references to IPCC, Volume 3, table 4.3. Still the referred document do not consist the provided values. Please explain the origin of these values.	95 (b)	The references mentioned refer to emission factors for limestone and dolomite consumption. These factors are calculated based on material specific carbon contents (taken from IPCC, Volume 3, table 4.3) multiplied by carbon dioxide/carbon molecular weight ratio (44/12). Calculation formulae for these two emission factors were added to MR version 3.1 (please, see p 30, 32-33).	CAR is closed due to the appropriate explanation provided in the MR.
Corrective Action Request (CAR) 04. The calculation of emission reduction for July 2011 is absent. Please provide this information.	95 (d)	July 2011 data were added to calculation of emission reduction in MR version 3.1 (please, see p 22-23, 30, 33, 34), calculation file version 3.1. Copies of monthly reports were provided to AIE.	CAR is closed based on the information added to the calculation file version 3.1.
Corrective Action Request (CAR) 05. As it is stated in the passports for electricity meters that are listed in Table 4 of the MR, the calibration period is 3 years. Still in documentation it is stated that 12 meters were not calibrated in line with this requirement. For example, electricity meter reg.№071512 was not calibrated from 2004 until 2009, electricity meter reg.№125543 was not calibrated from 2000 until 2010. The same problem is actual for electricity meters reg.№№098848, 167599, 167405, 168234, 197141, 438516, 773411, 786366, 896752, 944863. Please justify the level of data accuracy for the period from 01/01/2008 until the date of last calibration of these meters.	101 (a)	According to results of the testing during calibration process, recorded in calibration journal, errors of the electricity meters mentioned were within their accuracy class. In cases when error of the power meter exceeds it, the meter is usually replaced by the new one. The fact that those meters remained at their places after last calibrations in 2009-2010 shows that they were in good technical condition. Consequently, the accuracy level of the data used for ERU calculation was proper. Copies of the letter from Donetsksteel Metrological Department and calibration journal were provided as a proof to AIE.	CAR is closed due to the appropriate explanation.

Corrective Action Request (CAR) 06. The electricity meter Reg.№365322 was installed in 2010. Please provide information on what meter was used in the period from 01/01/2008 until the installation of this meter.	101 (a)	In the period from 01/01/2008 until 2010 the same meter was used. Date 2010 appears because old passport was worn out and the new passport was created to replace it. Previous calibration date is 15/02/2005. Results of testing showed that readings of the meter are within its accuracy class, which is recorded in calibration journal (p. 5-6). Copy of the previous passport of the meter and copy of calibration journal was provided to AIE.	CAR is closed.
Corrective Action Request (CAR) 07. Please provide the calibration certificates for electricity meters reg.№01015399, 680795, 227733, 397701, 585438, 567124, for scales reg.№050200986/050200968, for flow meters reg.№ 450178, 149329, 154012, 59886, 59887, 205603, 203985.	101 (a)	Due to misunderstanding between project owner and project developer at MR preparation stage, initially provided list of the monitoring equipment contained mistakes. The mentioned meters either contain misprint in their numbers, or measure partial consumption of power or natural gas by an installation or are included to the list by mistake (e.g. reg.№01015399 is a meter installed in CHP-SAS). Therefore, there is no relation between the mentioned registration numbers and project monitoring equipment. The list was corrected in MR version 3.1 (please, see p. 12-15).Passports of the meters and their calibration certificates were checked by AIE during site visit.	Information was corrected . Issue is closed.

Corrective Action Request (CAR) 08. In formulae 3 of the MR some parameters are missed. Please make formulae 3 consistent with the formulae that was provided in the excel model. Please describe this changes in section A.8 of the MR.	95 (d)	Formula 3 was made consistent with the calculation model provided. Changes to the formulae were described in section A.8 of the MR version 3.4: "In order to improve accuracy of representation of the applied calculation method calculation formula of "emission factor for pig iron production process under the project" and "emission factor for steel production process under the project" (see formulae 3 and 7 respectively in Section D.1.1.2. of PDD version 3.4 dated 3 November 2011) was corrected (see formulae 3 and 7 respectively in Section D.3.1. of the current monitoring report). It didn't influence the calculation model and resulting amount of ERUs."	Issue is closed based on the amendments made in the MR.
Corrective Action Request (CAR) 09. In formulae 7 of the MR some parameters are missed. Please make formulae 7 consistent with the formulae that was provided in the excel model. Please describe this changes in section A.8 of the MR.	95 (d)	Formula 7 was made consistent with the calculation model provided. Changes to the formulae were described in section A.8 of the MR version 3.4: "In order to improve accuracy of representation of the applied calculation method calculation formula of "emission factor for pig iron production process under the project" and "emission factor for steel production process under the project" (see formulae 3 and 7 respectively in Section D.1.1.2. of PDD version 3.4 dated 3 November 2011) was corrected (see formulae 3 and 7 respectively in Section D.3.1. of the current monitoring report). It didn't influence the calculation model and resulting amount of ERUs."	Issue is closed based on the amendments made in the MR.

<table>
<tr>
<td>Corrective Action Request (CAR) 10.
The values of ERUs in the MR differ from the corresponding values in the PDD. Please provide explanation of the origin of the difference.</td>
<td>95(d)</td>
<td>Actually achieved emission reductions by the project are 52% higher than expected according to PDD. Increase above the expected emission reductions is presented in the following table:
<table>
<tr><th>Sub-project</th><th>2008</th><th>2009</th><th>2010</th><th>Oct. 2011</th><th>Total</th></tr>
<tr><td>BF1</td><td>19%</td><td>21%</td><td>57%</td><td>4%</td><td>26%</td></tr>
<tr><td>OHF</td><td>88%</td><td>39%</td><td>157%</td><td>82%</td><td>92%</td></tr>
<tr><td>Total</td><td>49%</td><td>27%</td><td>95%</td><td>34%</td><td>52%</td></tr>
</table>
Table A. Increase of actually achieved emission reductions over expected in PDD.

The reasons for the difference in expected and estimated emission reductions are using actual data instead of conservative forecasts, recalculating emission factor for steel production in baseline and change of one default value compared to original monitoring plan. As can be seen from the table above most of the ER increase is contributed by the sub-project 2: Implementation of automatic process control system (APCS) for Open Hearth Furnaces (OHF). More precise explanation of increase factors follows:</td>
<td>CAR is closed based on the appropriate explanation of the difference between ERUs values in the MR and those in the determined PDD.</td>
</tr>
</table>

		• **Using country specific value of net calorific value of coal instead of IPCC default value (21.59 GJ/t instead of 26.70 GJ/t).** The proposed revision improves the accuracy of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans. The new value applied was published in National Inventory Report of Ukraine, which was not available at the time of PDD development. • **Using actual data for calculating project emission factors for pig iron production in 2010 and 2011**. In order to forecast project emissions of sub-project 1 in 2010 and 2011 a rough estimation of possible future emission factor was used. The result obtained after calculations with actual monitored data was lower because of decrease in electricity consumption, zero consumption of sinter and significantly reduced consumption of natural gas in comparison to previous years on which PDD projection is based. This happened even regardless considerable increase of emissions due to grid electricity consumption because of applying new recalculated emission factor for Ukrainian power grid. Comparison of emission factors for pig-iron production in PDD and MR	

is provided below.

Source	Units	2008	2009	2010	2011
PDD	tCO_2e/t iron	2.323	2.305	2.310	2.310
MR	tCO_2e/t iron	2.278	2.254	2.152	2.229

Table B. Comparison of emission factors for pig-iron production in

Therefore, the resulting project emissions of sub-project 1 in the MR are lower than in PDD which leads to increase of the achieved emission reductions.

- **Applying conservative approach to forecasting project emissions from subproject 2 in PDD.**

As can be seen from the next table, calculated project emission factors for steel production are higher in PDD. One of the parameters used for calculation of this emission factor is emission factor for pig iron production. In PDD the latter is taken conservatively equal to 2.560 tCO_2e/t iron (which is a baseline value). In MR emission factor for pig iron production is derived from actual operational data and the resulting value is lower than the one used in PDD (see table 3). Consequently, the resulting project emissions of sub-project 2 in the MR are lower than in PDD which leads to increase of the achieved emission reductions.

Source	Units	2008	2009	2010	2011
PDD	tCO_2e/t steel	1.607	1.529	1.529	1.529
MR	tCO_2e/t steel	1.511	1.465	1.228	1.267

Table C. Project emission factor for steel production used for calculation of expected project emissions from sub-project 2.

Source	Units	2008	2009	2010	2011
PDD	tCO_2e/t iron	2.560	2.560	2.560	2.560
MR	tCO_2e/t iron	2.278	2.254	2.152	2.229

Table D. Emission factor for pig iron production used for calculation of expected project emissions from sub-project 2.

- **Increased value of emission factor for steel production process under the baseline after adjustment in MR.**

In accordance with the determined monitoring plan emission factor for steel production process under the baseline was recalculated. The resulting value is higher than in PDD because of incorrect reference in PDD calculation model.

		<table><tr><th>Source</th><th>Units</th><th>2008</th></tr><tr><td>PDD</td><td>tCO_2e/t steel</td><td>1.731</td></tr><tr><td>MR</td><td>tCO_2e/t steel</td><td>1.745</td></tr></table> **Table E. Change of emission factor for steel production process under the baseline.**	
Clarification Request (CL) 01. Please provide the copy of contract with gas supplier for the additional verification of gas supply process.	94	Copy of the contract with Naftogaz Ukraine Affiliate Company "Ukrtransgas" was provided to AIE. Title of the company was changed in MR version 3.1 (please, see p 4, 7, 12, 14)	The documentation was provided. Issue is closed.
Clarification Request (CL) 02. For Table 3 of the MR please make the same font size for all columns.	101 (a)	Table 3 was corrected in MR version 3.1 (please, see p 12-13).	CL is closed
Clarification Request (CL) 03. For Table 5 please round the values to the same order. If the values should be rounded until the 4th mark, than the value for magnesite powder should be 0.522.	101 (a)	Values were rounded to the same order in Table 5 in MR version 3.1 (please, see p. 18).	Issue is closed.