VERIFICATION REPORT

INSTITUTE FOR ENVIRONMENT AND ENERGY CONSERVATION LTD.

VERIFICATION OF THE REVAMPING OF SINTERING AND BLAST-FURNACE PRODUCTION AT OJSC "DNIPROVSKY INTEGRATED IRON AND STEEL WORKS NAMED AFTER DZERZHYNSKY"

THIRD PERIODIC
(01/01/2011 – 31/12/2011)

REPORT NO. UKRAINE-VER/0436/2012
REVISION NO. 03

BUREAU VERITAS CERTIFICATION

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30/03/2012	Bureau Veritas Certification Holding SAS
Client:	**Client ref.:**
Institute for Environment and Energy Conservation Ltd.	Vasyl Vovchak

Summary:

Bureau Veritas Certification has made the third periodic verification of the "Revamping of sintering and blast-furnace production at OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky", project of Institute for Environment and Energy Conservation located in the city of Dniprodzerzhynsk, Dnipropetrovsk region, Ukraine, and applying JI specific approach, on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

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

The first output of the verification process is a list of Clarification, Corrective Actions Requests, Forward Actions Requests (CL, CAR and FAR), presented in Appendix A. In summary, Bureau Veritas Certification confirms that the project is implemented as described in approved project design documents. Installed equipment being essential for generating emission reductions run reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reductions are calculated accurately and without material errors, omissions, or misstatements, and the ERUs issued totalize 1 095 693 tonnes of CO_2 equivalent for the monitoring period 01/01/2011 – 31/12/2011.

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

Report No.:	Subject Group:		
UKRAINE-ver/0436/2012	JI		
Project title:			
Revamping of sintering and blast-furnace production at OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky"			
Work carried out by:			
Oleg Skoblyk – Team Leader, Lead Verifier Vera Skitina – Team member, Lead Verifier Iuliia Pylnova – Team member, Lead Verifier Sergey Kustovskiy – Team member, Verifier			
Work reviewed by:			
Ivan Sokolov - Internal Technical Reviewer Igor Alekseenko – Technical specialist		☒	No distribution without permission from the Client or responsible organizational unit
Work approved by:			
Ivan Sokolov - Operational Manager		☐	Limited distribution
Date of this revision:	**Rev. No.:**	**Number of pages:**	
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Abbreviations

AIE	Accredited Independent Entity
BFG	Blast Furnace Gas
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CHP	Combined Heat and Power
CL	Clarification Request
CO_2	Carbon Dioxide
COG	Coke Oven Gas
DIISW	PJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky"
DFP	Designated Focal Point
DVM	Determination and Verification Manual
EIA	Environmental Impact Assessment
ERU	Emission Reduction Unit
AAU	Assigned Amount Unit
GHG	Green House Gas(es)
GWP	Global Warming Potential
I	Interview
IPCC	Intergovernmental Panel on Climate Change
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MP	Monitoring Plan
MoV	Means of Verification
NGO	Non Government Organization
PDD	Project Design Document
UNFCCC	United Nations Framework Convention for Climate Change

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1 INTRODUCTION

Institute for Environment and Energy Conservation Ltd. has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project "Revamping of sintering and blast-furnace production at OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky" (hereafter called "the project") located in the city of Dniprodzerzhynsk, Dnipropetrovsk region, Ukraine.

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

1.1 Objective

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

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

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

1.2 Scope

Verification scope is defined as an independent and objective review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions. The verification is based on the submitted monitoring report and the determined Project Design Document (PDD) including the project's baseline study and monitoring plan, monitoring report, and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications, 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:

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

Vera Skitina
Bureau Veritas Certification Team Member, Climate Change Lead Verifier;

Iuliia Pylnova
Bureau Veritas Certification Team Member, Climate Change Lead Verifier;

Sergey Kustovskiy
Bureau Veritas Certification Team Member, Climate Change Verifier.

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 of this report.

2.1 Review of Documents

The Monitoring Report (MR) submitted by Institute for Environment and Energy Conservation Ltd. and additional background documents related to the project design and baseline, i.e. country Law, PDD, 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, 2 and project as described in the determined PDD.

2.2 Follow-up Interviews

On 13/03/2012 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of PJSC “Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky” (according to the documentation checked, 23.05.2011 PJSC “Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky” was established by changing the name of juridical person OJSC “Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky” to PJSC “Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky”) and Institute for Environment and Energy Conservation Ltd. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
PJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky"	Organizational structure Responsibilities and authorities Roles and responsibilities for data collection and processing Installation of equipment Data logging, archiving and reporting Metering equipment control Metering record keeping system, database IT management Training of personnel Quality management procedures and technology Internal audits and check-ups
Institute for Environment and Energy Conservation Ltd.	Baseline methodology Monitoring plan Monitoring report

2.3 Resolution of Clarification, Corrective and Forward Action Requests

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

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 8 Corrective Action Requests, 7 Clarification Requests, and 0 Forward Action 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

There was one remaining issue (FAR 01) concerning keeping the data monitored for two years after the last transfer of emission reductions units for the project. Now the FAR is closed based on the documentation provided to the verification team.

3.2 Project approval by Parties involved (90-91)

Written project approval by the Netherlands (Declaration of Approval 2011JI15 on the JI project “Revamping of sintering and blast-furnace production at OJSC “Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky” issued by Ministry of Economic Affairs, Agriculture and Innovation dated 10.05.2011) has been issued by the DFP of that Party when submitting the first verification report to the secretariat

for publication in accordance with paragraph 38 of the JI guidelines, at the latest.

Also, Letter of Approval (LoA #1838/23/7 dated 15/07/2011) on the JI project "Revamping of sintering and blast-furnace production at OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky" issued by State Environmental Investment Agency of Ukraine that is National Focal Point of host Party (Ukarine).

The abovementioned written approvals are unconditional.

3.3 Project implementation (92-93)

The implementation status of the project.

#	Measures	2004	2005	2006	2007	2008	2009	2010	2011
1	**Technological improvements of the BFs operation:** - improvement of blast furnace coke quality; - decreasing the silicon content in the pig iron; - decreasing the BFs idle times and downtime; - partial substitution of the limestone by lime; - improvement of the quality of agglomerate.								
2	**Renewal and reconstruction of BF#1M**								
3	**Implementation of a new oxygen plant AKAp 40/53-4**								
4	**Modernization of the sintering process:** - improvements of solid fuel burning process, which is part of the sintering charge; - increase of the level of steel waste								

	utilization; - implementation of the state-of-the-art dust suppression and gas purification facilities; - optimization of limestone decomposition reaction; - improvement of natural gas burning process, which is supplied to burners for the ignition of sintering charge; - improvements of chemical composition of sinter charge; - reduction of fine fraction content in agglomerate.								

The identified areas of concern as to Project implementation, project participants response and BV Certification's conclusion are described in Appendix A (refer to CAR 02).

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, key indicators, constants and variables such as total pig iron output, quantity of each fuel used in making pig iron, emission factor for fuel consumption, electricity consumed in producing pig iron, emission factor for electricity consumption, quantity of fuel used in sintering process, electricity consumed in sintering process, quantity of reducing agents, emission factor of each reducing agent, quantity of each other input, emission factor of each other input, quantity of fuel used for balance of process needs, and electricity consumed for balance of process needs, 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, as appropriate.

Data sources used for calculating emission reductions 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.

Monitoring report for the project is already using specific values of carbon dioxide emission factors for fuel based on specific carbon content or calorific value of fuel. Emission factors for production of coke, iron pellets, lime and dolomite are based on IPCC data due to the fact that national data are not officially approved by the national designating entity. As soon as they are approved, the corresponding changes will be incorporated into the monitoring reports.

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

The fact that calculation of emission reductions is based on conservative assumptions can be proved by the following facts:

- the price of natural gas in the baseline period was lower than in the project line period. That's why there were no substitutions of natural gas by coal as it was in project line period. As a result, such substitution decreased the total amount of emission reductions;
- the quality of iron-bearing materials in project line period sometimes was lower in comparison with the baseline period. That was the reason of the total amount of emission reductions decrease.

The amount of emission reductions that was actually generated during the year 2011 was lower than it was expected in PDD because of the following reasons. First of all, taking into account that during this monitoring period the quality of raw materials and other inputs consumed under the project activity was low, the actual level of specific fuel and energy resources consumption per unit of output was a bit higher than it was expected in PDD. Secondly, taking into account that such measures as technological improvements of the BFs operation and modernization of the sintering process were not fully implemented as planned, it has also influenced on decrease of actual volumes of emission reductions in comparison with estimations in PDD.

The identified areas of concern as to Compliance of the monitoring plan with the monitoring methodology, project participants response and BV Certification's conclusion are described in Appendix A (refer to CAR 01, CL 03, CL 04, CAR 03, CL 05, CAR 04, and CAR 05).

3.5 Revision of monitoring plan (99-100)

Not applicable.

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 improved list of the monitoring equipment is provided in Annex 1 of the Monitoring Report of the final version. The improvement made is explained by the following information.

Taking into account that the list of monitoring equipment was not in accordance with this monitoring period, the project developer has revised and updated it. The list of monitoring equipment is now in accordance with this specific monitoring period. Revision and update of the monitoring equipment was done by taking into account the following reasons:
1) some monitoring equipment were sent on scheduled or unscheduled verifications/calibrations and were replaced by another monitoring equipment (same type but other serial number);
2) some monitoring equipment were removed from the data accounting and data accounting was conducted on other equipment;
3) after the monitoring equipment were removed from one accounting spot and after verifications/calibrations were conducted, the monitoring equipment were installed at the other accounting spot for data accounting;
4) monitoring equipment were changed on another and sent in order to conduct repairing works;
5) the list of monitoring equipment was improved in comparison with the list for the previous monitoring period by taking into account all inaccuracies that were made in the past.

All facts of monitoring equipment substitution are reflected in the internal journals of monitoring equipment substitution. The journal was checked by the verification team during conducted site-visit.

In case of having problems with certain monitoring equipment, the accounting system is organized in such way that allows double checking of all the data. Ultimately all information can be proven by independent invoices from the third parties.

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

The quality assurance procedures are based on the Plant's ISO 9001:2001 quality management system (QMS), which was further upgraded to the more recent ISO 9001:2008 version. The QMS covers the whole of the Plant's production process. Furthermore, an OHSAS 18001:2007 industrial safety management system and an ISO 14001:2004 environmental management system were implemented in 2009. Compliance audits for the mentioned above standards are performed in accordance with regulatory documents of DIISW "Guidance on quality management systems" and "Standard on internal audits". The bureau of standardized certification is responsible for management, realization and storage of audits data. The audits are conducted on monthly basis in accordance with schedule developed at the beginning of each year by the group of accredited auditors of the bureau of standardized certification. The person responsible for appropriate implementation of the audits is the Chief of technological control of the plant.

During this monitoring period, planned audits on compliance to the standards of ISO 9001:2008, ISO 14001 and OHSAS 18001 (according to the schedule) were conducted. These audits certified the level of accordance of the proved processes to the criteria of standard. The protocols of conducted audits were provided to the verifiers.

Best available techniques are used in order to minimize uncertainties. Uncertainties are generally low - typically below 2% for all parameters that are or will be monitored. All the equipment used for monitoring purposes is in line with national legislative requirements and standards and also with ISO 9001:2001 standards. Details are given in STP 230-35-07 Metrological Support of Measuring Equipment. The data will be cross checked as well as internal audits and corrective actions are taken as defined in STP 230-18-03 Quality Management System Internal Audits.

The reporting risk is rather low. In case of having problems with certain monitoring devices, the accounting system is organized in such way that allows double checking of all the data. Ultimately all information can be proven by independent invoices with the third parties.

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

The identified areas of concern as to Data management, project participants response and BV Certification's conclusion are described in Appendix A (refer to CL 01, CL 02, CL 06, and CAR 06).

3.7 Verification regarding programmes of activities (102-110)

Not applicable.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the third periodic verification of the "Revamping of sintering and blast-furnace production at OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky" 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 monitoring report against project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion.

The management of PJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky" is responsible for the preparation of the GHG emissions data and the reported GHG emission reductions of the project on the basis set out within the project Monitoring Plan indicated in the final PDD version 6. The development and maintenance of records and reporting procedures in accordance with that plan, including the

calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification verified the Project Monitoring Report version 2 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as planned and described in approved PDD. Installed equipment being essential for generating emission reductions 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 reductions are accurately calculated and are free of material errors, omissions, or misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and related to the approved project baseline and monitoring plan, and its associated documents. Based on the information we have seen and evaluated, we confirm, with a reasonable level of assurance, the following statement:

Reporting period: From 01/01/2011 to 31/12/2011

Baseline emissions	: 10 205 232 tonnes of CO_2 equivalents.
Project emissions	: 9 109 539 tonnes of CO_2 equivalents.
Emission Reductions	: 1 095 693 tonnes of CO_2 equivalents.

For the monitoring period (01/01/2011 – 31/12/2011), total amount of emission reductions is 1 095 693 tonnes of CO_2 equivalents.

Project and baseline emissions which are stated above are rounded by monitoring report developers to the whole figure and are based on calculations which are demonstrated in excel file attached to the monitoring report.

5 REFERENCES

Category 1 Documents:

Documents provided by Institute for Environment and Energy Conservation Ltd. that relate directly to the GHG components of the project.

/1/ PDD “Revamping of sintering and blast-furnace production at OJSC “Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky”, version 6 dated 10/05/2011;
/2/ Decree of Cabinet of Ministers of Ukraine #206, dated 22/02/2006;
/3/ Monitoring Report “Revamping of sintering and blast-furnace production at OJSC “Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky” (2011), version 1 dated 01.03.2012;
/4/ Monitoring Report “Revamping of sintering and blast-furnace production at OJSC “Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky” (2011), version 2 dated 20.03.2012;
/5/ Letter of Endorsement № 1807/23/7 on the JI project “Revamping of sintering and blast-furnace production at OJSC “Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky” dated November, 09, 2010 issued by National Environmental Investment Agency of Ukraine;
/6/ Declaration of Approval 2011JI15 on the JI project “Revamping of sintering and blast-furnace production at OJSC “Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky” issued by Ministry of Economic Affairs, Agriculture and Innovation dated 10.05.2011;
/7/ Letter of Approval #1838/23/7 dated 15/07/2011 on the JI project “Revamping of sintering and blast-furnace production at OJSC “Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky” issued by State Environmental Investment Agency of Ukraine;
/8/ Excel-file “Final calculations OJSC DIISW-BE-PE-Monitoring_2011_version 2”;
/9/ Excel-file “Coefficients for coke (DIISW_BF) version 2”.

Category 2 Documents:

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

/1/ Glossary of JI terms, version 03, JISC;
/2/ Guidance on Criteria for Baseline Setting and Monitoring, version 02, JISC;
/3/ JISC "Clarification regarding the public availability of documents under the verification procedure under the Joint Implementation Supervisory Committee." Version 03;
/4/ Passport on power meter type ЕвроАльфа, fabrication # 01132769 (last calibration date–09/02/2006)
/5/ Passport on power meter type ЕвроАльфа, fabrication # 01132770 (last calibration date–09/02/2006)
/6/ Registration card on meter type ИТ, fabrication # 113199 (last calibration date–17/08/2011)
/7/ Registration card on meter type И43, fabrication # 192130 (last calibration date–17/10/2011)
/8/ Registration card on meter type И670, fabrication # 350061 (last calibration date–10/08/2010)
/9/ Registration card on meter type И670, fabrication # 754749 (last calibration date–03/12/2010)
/10/ Registration card on meter type И43, fabrication # 047260 (last calibration date–13/04/2011)
/11/ Registration card on meter type ИТ, fabrication # 691814 (last calibration date–24/03/2010)
/12/ Registration card on meter type И670, fabrication # 233755 (last calibration date–16/01/2012)
/13/ Registration card on meter type И670, fabrication # 690556 (last calibration date–17/08/2011)
/14/ Registration card on meter type И670, fabrication # 232756 (last calibration date–10/03/2011)
/15/ Registration card on meter type И670, fabrication # 233827 (last calibration date–09/04/2010)
/16/ Registration card on meter type И670, fabrication # 361580 (last calibration date–18/03/2011)
/17/ Registration card on meter type И670, fabrication # 905679 (last calibration date–09/02/2011)
/18/ Registration card on meter type И670Д, fabrication # 363453 (last calibration date–16/06/2011)
/19/ Registration card on meter type И670, fabrication # 754589 (last calibration date–17/10/2011)
/20/ Registration card on meter type И670, fabrication # 192034 (last calibration date–16/06/2011)

/21/ Registration card on meter type И670, fabrication # 188830 (last calibration date–16/06/2011)
/22/ Registration card on meter type И670, fabrication # 473710 (last calibration date–19/07/2010)
/23/ Registration card on meter type И670, fabrication # 552166 (last calibration date–16/06/2011)
/24/ Registration card on meter type И670М, fabrication # 130498 (last calibration date–19/07/2010)
/25/ Registration card on meter type И670, fabrication # 584132 (last calibration date–19/07/2010)
/26/ Registration card on meter type И670М, fabrication # 011918 (last calibration date–19/08/2011)
/27/ Registration card on meter type И670, fabrication # 062944 (last calibration date–16/01/2012)
/28/ Registration card on meter type И670М, fabrication # 036772 (last calibration date–16/01/2012)
/29/ Registration card on meter type И670, fabrication # 095716 (last calibration date–19/07/2010)
/30/ Registration card on meter type И670, fabrication # 193831 (last calibration date–25/01/2011)
/31/ Registration card on meter type И670, fabrication # 130180 (last calibration date–04/10/2010)
/32/ Registration card on meter type И670М, fabrication # 096018 (last calibration date–09/04/2010)
/33/ Registration card on meter type И670, fabrication # 649492 (last calibration date–16/02/2012)
/34/ Registration card on meter type И670М, fabrication # 506019 (last calibration date–10/08/2010)
/35/ Registration card on meter type И670М, fabrication # 869032 (last calibration date–10/08/2010)
/36/ Registration card on meter type И670М, fabrication # 157116 (last calibration date–10/08/2010)
/37/ Registration card on meter type И670М, fabrication # 644511 (last calibration date–10/08/2010)
/38/ Registration card on meter type И670М, fabrication # 643487 (last calibration date–10/08/2010)
/39/ Registration card on meter type И670, fabrication # 793273 (last calibration date–10/08/2010)
/40/ Registration card on meter type ИТ, fabrication # 111336 (last calibration date–09/04/2010)
/41/ Attestation certificate # 06544-5-1-26/3 ГОМС dated 01/02/2010, valid till 01/02/2013, on OJSC “Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky” Metrological Laboratory
/42/ License # 585747, Series AB issued to OJSC “Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky” by the

Ministry of Education and Science, Youth and Sports of Ukraine, valid from 25/05/2011 till 25/05/2014

/43/ Certificate TIC1511610202 on management system conformity to the requirements of BS OHSAS 18001:2007 standard, issued by TÜV Thüringen e. V., valid from 02/03/2010 до 01/03/2013

/44/ Certificate TIC1510410697 on management system conformity to the requirements of EN ISO 14001:2004 standard, issued by TÜV Thüringen e. V., valid from 02/03/2010 до 01/03/2013

/45/ Audit report # 3330/2ENV/B0 dated 12/01/2011 on ISO 14001 standard, issued by TÜV Thüringen e. V.

/46/ Internal audit report dated 28/02/2011 on conformity to the requirements of ISO 14001 standard

/47/ Internal audit report dated 31/03/2011 on conformity to the requirements of ISO 14001 standard

/48/ Internal audit report dated 29/04/2011 on conformity to the requirements of ISO 14001 standard

/49/ Internal audit report dated 31/08/2011 on conformity to the requirements of ISO 14001 standard

/50/ Order # 2 dated 02/01/2011 on general plan of improving the level of labour protection technical revamping, production injuries and professional illnesses prevention in 2011

/51/ Annex 14 to the order # 2 dated 04/01/2011. Schedule on internal audits on conformity to the requirements of OHSAS 18001 and ISO 14001 for 2011

/52/ Information on personnel training in 2011

/53/ Instruction # 60 dated 07/03/2012 on training organization

/54/ Annex 1 to the Instruction # 60 dated 07/03/2012. List of Blast Furnace Shop technical personnel required to undergo training

/55/ Annex 2 to the Instruction # 60 dated 07/03/2012. Classes schedule of Blast Furnace Shop technical personnel training

/56/ Order # 7 dated 03/01/2012 on cooperation with personnel in 2012

/57/ Annex 1 Order # 7 dated 03/01/2012. Programme of personnel training in 2012

/58/ Protocol # 420 dated 09/02/2011 on qualification commission session

/59/ Protocol # 781 dated 22/04/2011 on qualification commission session

/60/ Protocol # 1332 dated 28/06/2011 on qualification commission session

/61/ Protocol # 1767 dated 14/10/2011 on qualification commission session

/62/ Protocol # 1772 dated 17/10/2011 on qualification commission session

/63/ Protocol # 254 dated 06/12/2011 on qualification commission session

/64/ Protocol # 537 dated 08/02/2011 on qualification commission session
/65/ Protocol # 1463 dated 21/06/2011 on qualification commission session
/66/ Protocol # 1109 dated 14/04/2011 on qualification commission session
/67/ Attestation to the certificate # 543, issued to Olha Zavhorodnia by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology
/68/ Certificate # 543 dated 29/04/2011, issued to Olha Zavhorodnia by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology
/69/ Attestation to the certificate # 542, issued to Andrii Yevtushenko by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology
/70/ Certificate # 542 dated 29/04/2011, issued to Andrii Yevtushenko by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology
/71/ Certificate # 832 dated 24/06/2011, issued to Iryna Bohdanovych by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology
/72/ Attestation to the certificate # 401, issued to Oleksandr Darchuk by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology
/73/ Certificate # 401 dated 15/04/2011, issued to Oleksandr Darchuk by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology
/74/ Attestation to the certificate # 1593, issued to Anna Bohdanovych by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology
/75/ Certificate # 1593 dated 23/12/2011, issued to Anna Bohdanovych by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology
/76/ Letter # 103/04-1774 dated 26/04/2011
/77/ Attestation to the certificate # 749, issued to Yulia Novikova by the Institute for Personnel Training in the Field of Quality

Management, Standardization, Conformity Assessment and Metrology

/78/ Certificate # 749 dated 23/12/2010, issued to Yulia Novikova by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology

/79/ Certificate # 748 dated 23/12/2010, issued to Svitlana Kuchuk by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology

/80/ Attestation to the certificate # 748, issued to Svitlana Kuchuk by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology

/81/ Attestation to the certificate # X 1929, issued to Dmytro Naboishchykov by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology

/82/ Certificate # X 1929 dated 16/10/2009, issued to Svitlana Kuchuk by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology

/83/ Attestation to the certificate # X 1930, issued to Oleksandr Dziuba by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology

/84/ Certificate # X 1930 dated 16/10/2009, issued to Oleksandr Dziuba by the Institute for Personnel Training in the Field of Quality Management, Standardization, Conformity Assessment and Metrology

/85/ Logbook on energy consumption from 16.00 to 16.00 since 02/01/2011

/86/ CHP electrical department operational logbook

/87/ Electricity consumption by GSU-CHP for December 2011

/88/ Electricity distribution by GSU-CHP for December 2011

/89/ Logbook on electricity consumption, started 01/12/2007

/90/ General plan of OJSC “Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky” Metrological Laboratory Э-МО-12-ГП

/91/ Passport on pressure transducer type Сафир-М, fabrication # 03981694 (last calibration date–14/04/2010)

/92/ Passport on pressure transducer type Сафир-М, fabrication # 03484802 (last calibration date–03/06/2010)

/93/ Passport on pressure transducer type Сафир-М, fabrication # 02619588 (last calibration date–15/04/2010)

/94/ Passport on pressure transducer type Сафир-М, fabrication

03483807 (last calibration date–07/07/2010)
/95/ Passport on pressure transducer type Сафир-М, fabrication # 03393821 (last calibration date–06/04/2010)
/96/ Passport on pressure transducer type Сафир-М, fabrication # 03850732 (last calibration date–12/07/2010)
/97/ Passport on pressure transducer type Метран-100, fabrication # 135282 (last calibration date–15/06/2011)
/98/ Passport on pressure transducer type Метран-100, fabrication # 133425 (last calibration date–02/09/2011)
/99/ Passport on pressure transducer type Сафир-М, fabrication # 03493886 (last calibration date–06/07/2010)
/100/ Passport on pressure transducer type Сафир-М, fabrication # 07173694 (last calibration date–06/07/2010)
/101/ Passport on pressure transducer type АИР-20, fabrication # 20-31275 (last calibration date–12/07/2011)
/102/ Passport on pressure transducer type Сафир-М, fabrication # 10612957 (last calibration date–12/07/2010)
/103/ Photo–pressure transducer type Сафир-М, fabrication # 03484802
/104/ Photo–pressure transducer type Сафир-М, fabrication # 02619588
/105/ Photo–pressure transducer type Сафир-М, fabrication # 03981694
/106/ Photo–pressure transducer type Сафир-М, fabrication # 02800644
/107/ Operational passport # 17 on scales type 2329ВВ-50 Е/1Д, fabrication # 29, inventory # 0616034 (last calibration date–11/11/2011)
/108/ Operational passport # 16 on scales type 2390ВВ-200Е/1С, fabrication # 90, inventory # 0615611 (last calibration date–11/11/2011)
/109/ Technical passport # 0123 on car scales type 2370ВВ-150Е/2С, fabrication # 70, inventory # 0617272 (last calibration date–15/02/2012)
/110/ Actual calculations for 2011, sintering shop
/111/ Analysis of sinter net cost for 2011
/112/ Analysis of pig iron net cost for 2011
/113/ Technical report of sinter shop # 2 for December 2011
/114/ Technical report of blast furnace shop for December 2011
/115/ Technical report of sinter shop # 2 for August 2011
/116/ Technical report of blast furnace shop for August 2011
/117/ Schedule of QMS internal audits for 2011 (approved of 23/12/2010)
/118/ Passport on physical and chemical characteristics of natural gas for the period from 01/11/2011 to 30/11/2011
/119/ Passport on physical and chemical characteristics of natural gas for the period from 01/03/2011 to 31/03/2011
/120/ Passport on physical and chemical characteristics of natural gas for the period from 01/02/2011 to 28/02/2011
/121/ Balance sheet on blast furnace, natural, coke gases at the

enterprise for 2011
/122/ Scheme of DIISW substations power supply
/123/ Report on generated, transferred and consumed active energy from 1 to 31 December 2011
/124/ Balance sheet of active energy for January 2011
/125/ Balance sheet of active energy for April 2011
/126/ Balance sheet of energy for January 2011
/127/ Balance sheet of energy for April 2011
/128/ Balance sheet of energy for August 2011
/129/ Balance sheet of energy for September 2011
/130/ Energy consumption by PJSC “Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky” for 2011
/131/ Calibration schedule for 2011
/132/ Photo–Blast furnaces 1м, 8
/133/ Logbook on meters replacement
/134/ Photo–oxygen plant
/135/ Photo–pulverized coal injection system site
/136/ Operational logbook on gas and coke consumption
/137/ Operational logbook on energy consumption
/138/ Passport on power meter type ET, fabrication # 8876 (last calibration date–08/09/2006)
/139/ Order # 327 dated 23/03/2012 on arrangement and storage of JI project data within Kyoto protocol
/140/ Photo–power meter type ИТ, fabrication # 691814
/141/ CO_2 emissions reduction calculation for 2011
/142/ Passport on power meter type ЕвроАльфа, fabrication # 01132768 (last calibration date–09/02/2006)
/143/ Passport on power meter type ЕвроАльфа, fabrication # 01132773 (last calibration date–09/02/2006)
/144/ Passport on power meter type ЕвроАльфа, fabrication # 01132775 (last calibration date–09/02/2006)
/145/ Passport on power meter type ЕвроАльфа, fabrication # 01132784 (last calibration date–09/02/2006)
/146/ Passport on power meter type ЕвроАльфа, fabrication # 01132786 (last calibration date–09/02/2006)
/147/ Passport on power meter type ЕвроАльфа, fabrication # 01132789 (last calibration date–09/02/2006)
/148/ Passport on power meter type ЕвроАльфа, fabrication # 01132791 (last calibration date–09/02/2006)
/149/ Operational logbook on meters replacement at sinter shop-2 for the period 30/10/2011-03/12/2011
/150/ Operational logbook on meters replacement at DRZ-6 substation for the period 21/07/2010-01/10/2010
/151/ Operational logbook on meters replacement at DRZ-9 substation for the period 19/09/2011-27/11/2011

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/ Zadorskaya A. H. – head of planning and economic department DIISW
/2/ Korolenko A.V. - Department of External Economic Relations DIISW
/3/ Rod A.H. – specialist of steelmaking shop DIISW
/4/ Hurii Y. V. – specialist of blast furnace shop DIISW
/5/ Krupyi V. H. – chief blast furnace worker DIISW
/6/ Turkyn M. B. – deputy chief power engineer DIISW
/7/ Iehorov Iu. V. – chief metrologist, head of the control measuring equipment and facilities shop DIISW
/8/ Motsnyi V. V. – head of the technical department DIISW
/9/ Shabanova I. R. – head of the personnel technical education and training department DIISW
/10/ Hrytsan I. V. – deputy head of the planning and economic department DIISW
/11/ Bairak Iu. M. – acting head of the environmental protection service DIISW
/12/ Rudenko Iu. R. – deputy head of the sintering and blast furnace production technical department DIISW
/13/ Honcharenko S. H. – head of the technical department re-equipment DIISW

APPENDIX A: VERIFICATION PROTOCOL

BUREAU VERITAS CERTIFICATION HOLDING SAS

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

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project approvals by Parties involved				
90	Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	**CAR 08.** There is no written project approval from Parties involved indicated in the Monitoring Report. Please, correct.	CAR 08	OK
91	Are all the written project approvals by Parties involved unconditional?	The written project approvals by Parties involved are unconditional.	OK	OK
Project implementation				
92	Has the project been implemented in accordance with the PDD regarding which the determination	Implementation of the project activity is based on the project implementation schedule included in the PDD.	OK	OK

	has been deemed final and is so listed on the UNFCCC JI website?			
93	What is the status of operation of the project during the monitoring period?	Monitoring report indicates the current status of the project activity implementation. 1. Technological improvements in the BFs operation: - improvement of blast furnace coke quality; - decreasing the silicon content in the pig iron; - decreasing the BFs idle times and downtime; - partial substitution of the limestone by lime; - improvement of the quality of agglomerate. 2. Renewal and reconstruction of BF#1M. 3. Implementation of a new oxygen plant AKAp 40/53-4. 4. Modernization of the sintering process: - improvements of solid fuel burning process, which is part of the sintering charge; - increase of the level of steel waste utilization; - implementation of the state-of-the-art dust suppression and gas purification facilities; - optimization of limestone decomposition	OK	OK

		reaction; - improvement of natural gas burning process, which is supplied to burners for the ignition of sintering charge; - improvements of chemical composition of sinter charge; - reduction of fine fraction content in agglomerate.		
Compliance with monitoring plan				
94	Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	The monitoring is based on actual data (mentioned in the reporting documents) of output production, and FER (fuel and energy resources) consumption under the projectline and baseline scenarios as it is required by the JI PDD.	OK	OK
95 (a)	For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) above, influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project taken into account, as	According to the monitoring report, key factors and other risks associated with the project (that can influence baseline and project emissions) are taken into account. **CL 06.** Please, provide information concerning reporting risks and include this information in the Monitoring Report. Also, please, clarify whether there are possibilities of redundant data monitoring in	CL 06	OK

	appropriate?	case of having problems with the used monitoring equipment. **CAR 02.** Please, give detailed clarification concerning the difference between amount of emission reductions provided in the PDD and in the Monitoring Report. Please, make necessary amendments in the MR.	CAR 02	OK
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	Data sources used for calculating emission reductions are identified in the Monitoring report. Data were collected in the electronic database of DIISW and in printed documents. Also data were systematized in the documents of the daily, monthly and annually registration. All those documents were saved in the planning-economic department. **CAR 01.** Please, confirm all the values (in the tables on projectline parameters monitored) by providing appropriate documents (calculations). **CL 04**. Please, make the unit name “tonne” consistent throughout the whole Excel file	CAR 01 CL 04	OK OK

		provided for the verification team. **CL 03.** Please, make the unit name "tonne" consistent throughout the whole MR (please, replace the word "tones" by more appropriate "tonnes" in the tables (for parameters P-23 and B-23) on pg.7 and pg.9 of MR). **CAR 05.** Please, provide calculation of carbon content of coke in the Excel file.	CL 03 CAR 05	OK 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?	**CL 07**. Please, clarify the use of emission factors from IPCC while the latest values of national emission factors (in accordance with National Inventory of Greenhouse Gases) are available. **CL 05.** Please, clarify the default factors (name of default factors) indicated in the tables on pg.7-9. **CAR 04.** Please, explain why emission factor for natural gas consumption based on fixed calorific value of natural gas consumption, not on actual calorific value. Please, correct/clarify.	CL 07 CL 05 CAR 04	OK OK OK

95 (d)	Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and the most plausible scenarios in a transparent manner?	The calculation of emission reductions is based on conservative assumptions.	OK	OK
Applicable to JI SSC projects only				
96	Is the relevant threshold to be classified as JI SSC project not exceeded during the monitoring period on an annual average basis? 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	N/A	N/A
Applicable to bundled JI SSC projects only				
97 (a)	Has the composition of the bundle not changed from that is stated in F-JI-SSCBUNDLE?	N/A	N/A	N/A
97 (b)	If the determination was conducted on the basis of an	N/A	N/A	N/A

	overall monitoring plan, have the project participants submitted a common monitoring report?			
98	If the monitoring is based on a monitoring plan that provides for overlapping monitoring periods, are the monitoring periods per component of the project clearly specified in the monitoring report? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past?	N/A	N/A	N/A
Revision of monitoring plan **Applicable only if monitoring plan is revised by project participant**				
99 (a)	Did the project participants provide an appropriate justification for the proposed revision?	N/A	N/A	N/A
99 (b)	Does the proposed revision improve the accuracy and/or applicability of information collected compared to the original monitoring plan without changing	N/A	N/A	N/A

	conformity with the relevant rules and regulations for the establishment of monitoring plans?			
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?	Procedures of data collection are implemented in compliance with the monitoring plan. **CL 01.** Please, add to the MR information on audits on compliance to the standards ISO 9000, ISO 14000, and ISO 18000 conducted during the monitoring period (2011); please, mention report on compliance audits. **CL 02.** Please, give (in the section 5 of the MR) information on trainings/seminars organized by DIISW just during the monitoring period (2011). The year 2010 is not included in this monitoring period.	CL 01 CL 02	OK OK
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	The monitoring equipment is properly calibrated. **CAR 03.** Please, prepare more improved and clearer list of monitoring equipment by	CAR 03	OK

		revising and updating present one. Please, provide passports for the replaced meters and the replacement confirmation.		
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	Monitoring data is collected into electronic database of DIISW as well as in paper format. Data is further compiled in (i) day-to-day records, (ii) quarterly records, and (iii) annual records. All records are finally stored in Planning Department. **CAR 06.** The data to be monitored and required for determination are to be kept for two years after the last transfer of emission reductions units for the project. The order concerning the procedure for keeping monitoring data should be issued by DIISW.	CAR 06	OK
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 in accordance with the monitoring plan. **CAR 07.** At the DIISW the order concerning indication of the names of the personnel involved in the monitoring should be issued.	CAR 07	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	N/A	N/A
103	Is the verification based on the monitoring reports of all JPAs to be verified?	N/A	N/A	N/A
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each N/A JPA?	N/A	N/A	N/A
104	Does the monitoring period not overlap with previous monitoring periods?	N/A	N/A	N/A
105	If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?	N/A	N/A	N/A
Applicable to sample-based approach only				
106	Does the sampling plan prepared by the AIE: (a) Describe its sample selection,	N/A	N/A	N/A

	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?			

107	Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation?	N/A	N/A	N/A
108	Has the AIE made site inspections of at least the square root of the number of total JPAs, rounded to the upper whole number? If the AIE makes no site inspections or fewer site inspections than the square root of the number of total JPAs, rounded to the upper whole number, then does the AIE provide a reasonable explanation and justification?	N/A	N/A	N/A
109	Is the sampling plan available for submission to the secretariat for the JISC.s ex ante assessment? (Optional)	N/A	N/A	N/A

110	If the AIE learns of a fraudulently included JPA, a fraudulently monitored JPA or an inflated number of emission reductions claimed in a JI PoA, has the AIE informed the JISC of the fraud in writing?	N/A	N/A	N/A

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
CAR 01. Please, confirm the values (in the tables on projectline parameters monitored) by providing appropriate documents (calculations).	95 (b)	All appropriate documents (calculations) that confirm the values of project parameters monitored are now provided to the verifier.	The issue is closed based on the information received.
CAR 02. Please, give detailed clarification concerning the difference between amount of emission reductions provided in the PDD and in the Monitoring Report. Please, make necessary amendments in the MR.	95 (a)	The amount of emission reductions that was actually generated during the year 2011 was lower than it was expected in PDD because of the following reasons. First of all, taking into account that during this monitoring period the quality of raw materials and other inputs consumed under the project activity was low, the actual level of specific fuel and energy resources consumption per unit	CAR 02 is closed due to explanation provided.

		of output was a bit higher than it was expected in PDD. Secondly, taking into account that such measures as technological improvements of the BFs operation and modernization of the sintering process were not fully implemented as planned, it has also influenced on decrease of actual volumes of emission reductions in comparison with estimations in PDD.	
CL 01. Please, add to the MR information on audits on compliance to the standards ISO 9000, ISO 14000, and ISO 18000 conducted during the monitoring period (2011); please, mention report on compliance audits.	95 (b)	Information concerning conducted audits on compliance to the standards ISO 9000 ISO, 14000 and ISO 18000 during this monitoring period is now provided in the modified MR.	Based on modification made in the MR, the issue is closed.
CL 02. Please, give (in the section 5 of the MR) information on trainings/seminars organized by DIISW just during the	101 (a)	During this monitoring period (year 2011) the direction of DIISW has organized appropriate staff trainings/seminars to operate the project equipment. Necessary information is	Due to information added to the MR, the issue is closed.

monitoring period (2011). The year 2010 is not included in this monitoring period.		now included in the modified MR.	
CL 03. Please, make the unit name "tonne" consistent throughout the whole MR (please, replace the word "tones" by more appropriate "tonnes" in the tables (for parameters P-23 and B-23) on pg.7 and pg.9 of MR).	95 (b)	Necessary corrections are now made. Please see modified MR.	The issue is closed based on the corrections made.
CL 04. Please, make the unit name "tonne" consistent throughout the whole Excel file provided for the verification team.	95 (b)	Necessary amendments are now made in the whole Excel-file, which was provided to the verification team. Please see modified Excel-file.	Based on the amendments made, CL 04 is closed.
CAR 03. Please, prepare more improved and clearer list of monitoring equipment by revising and updating present one. Please, provide passports for the replaced meters and the replacement confirmation.	101 (b)	**Response #1.** The list of monitoring equipment is now revised and updated. Please see modified MR. All necessary passports for the monitoring equipment are now provided to the verification team.	**Conclusion on response #1.** Please, provide passports for the monitoring equipment of all types (mentioned in

		Response #2. Necessary passports are now provided to the verifier.	the MR Annex 1). **Conclusion on response #2.** The issue is closed.
CL 05. Please, clarify the default factors (name of default factors) indicated in the tables on pg.7-9.	95 (c)	Default factors are now clarified. Please see modified MR.	Due to the amendments made in the MR, the issue is closed.
CL 06. Please, provide information concerning reporting risks and include this information in the Monitoring Report. Also, please, clarify whether there are possibilities of redundant data monitoring in case of having problems with the used monitoring equipment.	95 (a)	In case of having problems with certain monitoring devices, the accounting system is organized in such way that allows double checking of all the data. Ultimately all information can be proven by independent invoices with the third parties. However, such a risk is very low and was not appeared in the suggested monitoring period.	The issue is closed based on the information provided.
CAR 04. Please, explain why emission factor for natural gas consumption based on fixed calorific value of natural gas consumption, not on actual calorific value. Please,	95 (c)	During this monitoring period emission factor for natural gas consumption is based on conservative fixed calorific value for natural gas because in 2011 the data regarding actual calorific value of natural gas was not received at	Based on the explanation received, CAR 04 is closed.

correct/clarify.		DIISW regularly. In order to follow the conservative approach, the project developer has fixed calorific value of natural gas based on the most recent average data of DIISW. The fixed value is rather lower than the calorific value, which is in accordance with the most recent average data of DIISW. All necessary documents are now provided to the verifier.	
CAR 05. Please, provide calculation of carbon content of coke in the Excel file.	95 (b)	The Excel file with calculation of carbon content of coke is now provided to the verification team.	Required information is now provided. CAR 05 is closed.
CAR 06. The data to be monitored and required for determination are to be kept for two years after the last transfer of emission reductions units for the project. The order concerning the procedure for keeping monitoring data should be issued by DIISW.	101 (c)	The order concerning the procedure for keeping monitoring data #327 dated 23/03/2012 was issued by DIISW and is now provided to the verification team.	Based on the documentation provided, the issue is closed.

CAR 07. At the DIISW the order concerning indication of the names of the personnel involved in the monitoring should be issued.	101 (d)	The order concerning indication of the names of the personnel involved in the monitoring #327 dated 23/03/2012 was issued by DIISW and is now provided to the verification team.	CAR 07 is closed due to the documentation provided.
CAR 08. There is no written project approval from Parties involved indicated in the Monitoring Report. Please, correct.	90	Necessary information is added to the PDD.	The issue is closed based on the amendments made.
CL 07. Please, clarify the use of emission factors from IPCC while the latest values of national emission factors (in accordance with National Inventory of Greenhouse Gases) are available.	95 (c)	Monitoring report is already using specific values of carbon dioxide emission factors for fuel based on specific carbon content or calorific value of fuel. Emission factors for production of coke, iron pellets, lime and dolomite are based on IPCC data due to the fact that national data are not officially approved by the national designating entity. As soon as they are approved, the corresponding changes will be incorporated into the monitoring reports.	Based on the explanation provided, the issue is closed.