VERIFICATION REPORT

CARBON MARKETING AND TRADING LTD.

VERIFICATION OF THE

RECONSTRUCTION OF THE AGGLOMERATE AND BLAST-FURNACE PRODUCTION AT THE JSC "ZAPORIZHSTAL"

REPORT NO. UKRAINE-VER/0251/2011

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

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Client: Carbon Marketing and Trading Ltd.	Client ref.: Tahir Musayev

Summary:

Bureau Veritas Certification has made the initial and periodic verification of the JI project "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal", project of Carbon Marketing and Trading Ltd. located in Zaporizhzha, 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 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 Requests, Corrective Actions Requests, Forward Actions Requests (CR, CAR and FAR), presented in Appendix A.

In summary, Bureau Veritas Certification confirms that the project is implemented as planned and described in approved project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is ready to generate GHG emission reductions. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements, and the ERUs issued totalize:

- 469057 tons of CO_2 equivalents for the monitoring period 01.01.2008 - 31.12.2008;

- 279504 tons of CO_2 equivalents for the monitoring period 01.01.2009 - 31.12.2009;

- 297410 tons of CO_2 equivalents for the monitoring period 01.01.2010 - 31.12.2010.

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

Report No.: UKRAINE-ver/0251/2011	Subject Group: JI	
Project title: "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal"		
Work carried out by: Rostislav Topchiy – Team Leader, Lead Verifier Vera Skitina – Team member, Lead Verifier Vitaliy Minyaylo – 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: Flavio Gomes - Operational Manager		☐ Limited distribution
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1 INTRODUCTION

Carbon Marketing and Trading Ltd. has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal" (hereafter called "the project") at Zaporizhzha, 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 submitted monitoring reports and the determined project design document including 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:

Rostislav Topchiy
Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Vera Skitina
Bureau Veritas Certification Team member, Lead Verifier

Vitaliy Minyaylo
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 to this report.

2.1 Review of Documents

The Monitoring reports (MRs) submitted by Carbon Marketing and Trading Ltd. and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), developed JI specific approach and/or Guidance on criteria for baseline setting and monitoring, Host party criteria, Kyoto Protocol, Clarifications on Verification requirements to be checked by an Accredited Independent Entity were reviewed.

The verification findings presented in this report relate to the:

- Annual Monitoring report for the period 01/01/2008 – 31/12/2008 version 01 dated 16.05.2011 and Annual Monitoring report for the period 01/01/2008 – 31/12/2008 version 02 dated 30.05.2011;
- Annual Monitoring report for the period 01/01/2009 – 31/12/2009 version 01 dated 16.05.2011 and Annual Monitoring report for the period 01/01/2009 – 31/12/2009 version 02 dated 30.05.2011;
- Annual Monitoring report for the period 01/01/2010 – 31/12/2010 version 01 dated 16.05.2011 and Annual Monitoring report for the period 01/01/2010 – 31/12/2010 version 02 dated 30.05.2011;
- project as described in the determined PDD.

2.2 Follow-up Interviews

On 13/04/2011 Bureau Veritas Certification during site visit performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of JSC "Zaporizhstal" and Carbon Marketing and Trading Ltd. were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
JSC "Zaporizhstal"	➢ 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 ➢ Monitoring procedure
Carbon Marketing and Trading Ltd.	➢ Baseline methodology ➢ Monitoring plan ➢ Monitoring reports ➢ Deviations from PDD ➢ Emission reduction calculation

2.3 Resolution of Clarification, Corrective and Forward Action Requests

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

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

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

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

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

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

3 VERIFICATION CONCLUSIONS

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

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

The Clarification Requests, Corrective Action Requests 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 17 Corrective Action Requests and 05 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

Forward Action Request 1

A special order on saving and archiving project documentation during the whole crediting period and two years after the last ERU transfer on the project should be issued at the enterprise and communicated to all employees involved in the project.

Conclusion of the verification team

Order on saving and archiving project documentation was provided to verification team for checking.

FAR 1 is closed.

3.2 Project approval by Parties involved (90-91)

Written project approvals by Ukraine and Switzerland has been issued by the DFPs of that Party when submitting the first verification report in accordance with paragraph 38 of the JI guidelines, at the latest.

The abovementioned written approval is unconditional.

3.3 Project implementation (92-93)

JSC "Zaporizhstal" performs the project of reconstruction of the agglomerate and blast-furnace production aimed to improve energy efficiency, reduce greenhouse gases (GHG) emissions and solve other environmental problems of production process.

The proposed Joint Implementation project considers complex resource-saving effect based on introduction of new sintering machine # 1, radical reconstruction of blast furnace #2, retirement from service of blast furnace # 1 and gradual reconstruction of the remaining blast furnaces ## 4 and 5 as well as technological improvements in the process of sintering and pig iron production.

According to the investment plan the project envisaged the following basic phases (steps) of project implementation:

1. Improvement of pig iron production process:
    - 1.1. Radical reconstruction of blast furnace (BF) # 2;
    - 1.2. Reconstruction of BF # 4;
    - 1.3. Reconstruction of BF # 5;
    - 1.4. Installation of pulverized coal injection (PCI) facility at BFs ## 2, 3, 4, 5;
    - 1.5. Installation of the system of automatic control by BFs;
    - 1.6. Measures for BFs technological improvement:
        - a) Improvement of blast furnace coke quality;
        - b) Decreasing of silicon content in the pig iron;
        - c) Decreasing the blast-furnaces idle times and downtime;
        - d) Partitial substitution of the limestone by lime;
        - e) Improvement of the agglomerate quality;
        - f) Replacement of coke by natural gas and coal;
        - g) Oxygen enrichment of blast-furnace blowing etc.
2. Improvement of sintering process:
    - 2.1. Installation of a new sintering machine # 1;
    - 2.2. The commissioning of air aspiration equipment of tail part sintering machine.
3. Improvement of secondary energy resources production process:

3.1. The construction of the station for heating gas and combustion of air in blast furnace shop.
3.2. Efficiency improvement of oxygen and other secondary energy resources production

In general the JI project led to reduction of specific fuel and energy resources consumption per 1 tonne of pig iron output and, therefore, to GHGs emission reductions.

The actual operation of the proposed project is presented bellow.

Phase	Measures	Starting Date	Status of the project at the stage of the project monitoring
1	**Improvement of pig iron production process:**		
1.1.	Radical reconstruction of blast furnace (BF) # 2	01/01/2003	completed 21/11/2004
1.2.	Reconstruction of BF # 4	21/12/2008	was not completed during the monitoring period
1.3.	Retirement from service of BF # 1	17/01/2005	completed 23/12/2005
1.4.	Installation of pulverized coal injection (PCI) facility at BFs ## 2, 3, 4, 5	03/02/2007	was not completed during the monitoring period
1.5.	Installation of the system of automatic control by BF#2	01/01/2003	completed 21/11/2004
2	**Improvement of sintering process:**		
2.1.	The commissioning of air aspiration equipment of tail part sintering machine	07/07/2005	completed 12/12/2007

3	**Improvement of secondary energy resources production process:**		
3.1.	The construction of the station for heating gas and combustion of air in blast furnace shop	01/01/2003	completed 21/11/2004

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 factors, 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 each fuel used in sintering process, electricity consumed in sintering process, quantity of each reducing agent in pig iron production, emission factor of each reducing agent, quantity of each other input in pig iron production, emission factor of each other input, quantity of each fuel used for balance of process needs, electricity consumed for balance of process needs, influencing the baseline emissions and the activity level of the project and the emissions due to the JI project 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, such as (plant records, Statistics of JSC “Zaporizhstal”, IPCC Guidelines for National Greenhouse Inventories) 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 monitoring equipment used for baseline and project emission calculation is present in the Annex 2 of Monitoring Reports.

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 Table 2 (refer to CL 01, CAR 01, CAR 02, CAR 03, CAR 04, CAR 05, CAR 06, CAR 07, CL 02, CL 03, CL 04, CAR 08, CAR 09, CAR 10, CAR 11, CAR 12, CL 05).

3.5 Revision of monitoring plan (99-100)

Not applicable for this verification process.

3.6 Data management (101)

The data and their sources, provided in Monitoring reports, are clearly identified, reliable and transparent (refer to section 3.4 of this report).

Data sources used for calculating emission reductions are clearly identified, reliable and transparent. On site responsible persons register data from the measurement equipments and fixed monitoring data to logbooks, monthly data collected to the technical reports. Moreover, there is electronic database of monitoring data. All roles and responsibilities are described in details in the Monitoring reports.

The procedures of receiving data for monitoring execution and responsibility for its realization at Zaporizhstal will be regulated by the internal normative documents of Zaporizhstal, by internal order regarding "Organization and procedure of metrological supervision conduction to ensure the unity of measurements at the Plant" and by internal order regarding "Metrological department" in accordance with project documentation and monitoring plan.

The monitoring procedures are comprehensible, as they had already been used at Zaporizhstal for measuring input and output production parameters, and also for receiving data on level of fuel and energy resources and raw-materials consumption.

The monitoring of JI project indicators of at JSC "Zaporizhstal" was realized on regular basis where the system of data collection on fuel and energy resources (FER) consumption was used.

The data needed for the monitoring of to the project was collected during the process of normal equipment use.

Information required for MRs is collected by sending to the ACS department technical reports on fuel and energy resources (FER) consumption by Chief energy specialist department, technical reports on production and consumption of carbon content materials by main manufacturing units.

Technical reports are processed (entered into computer) and calculated to get data on cost and specific FER and material consumption per unit of production (pig iron). Data are collected in printed documents and, partially, in the electronic database of Zaporizhstal (ACS department). All those documents are saved in the Production Accounting Unit of General Accounting department Data is systematized in the documents of the daily, monthly and annually registration. To calculate annual emission reductions information from annual cost price calculations for the correspondent year is used.

Monitoring equipment meets the regulatory requirements of Ukraine regarding accuracy and measurement error. All the equipment used for monitoring purposes, are in line with national legislative requirements and standards and also with ISO 9001:2008 standards. The accuracy of devices is guaranteed by the manufacturers; the error was calculated and confirmed by the device certificates. The documented instructions to operate the facilities are stored at the working places. Verification of the equipment have been conducted in accordance with the standard of the plant STP 7.6-07-03 “Organization and procedure of measuring equipment verification”.

All measuring equipment was included in the verification schedule and verified with established periodicity.

Responsibility for maintenance of the facilities and monitoring equipment at JSC Zaporizhstal as well as for their accuracy are determined by the internal standards of the plant: STP 7.6-01-03, STP 7.6-03-03, STP 7.6-04-03, STP 7.6-05-03, STP 7.6-06-03, STP 7.6-07-03, STP 7.6-08-03, STP 7.6-09-03 and STP 7.6-07-10. Chief Metrological Specialist of the plant is the responsible one according to these standards.

The measurement results had been used by the economic planning department, Chief power-engineering specialist department, other services and technical staff of the plant. The procedure of their usage is reflected in the technological instructions of production processes regime and also in the internal order regarding “Metrological department” and internal standard of the plant STP 7.6-06-03 “Organization and procedure of analysis of technological processes metrological provision.

The monitoring data reports and calculations are under the competence of the Chief of laboratory for environmental protection in accordance to the interior orders of the plant.

During site visit, all passports of measurement equipments that used in the JI project were provided for revision. Thus, 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. Furthermore, internal audits and checking measures are carried out regularly as was planned.

Difference in the results of the emission reductions calculation provided in PDD and MRs is caused by two factors:
- In MRs there were applied new emission factors for the electricity consumption (more detailed explanation is added in provisions 5.2 of MRs);
- In MRs there was taken into account actual data about leakages from two other JI projects.

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

The identified areas of concern as to Data management, project participants response and BV Certification's conclusion are described in Appendix A Table 2 (refer to CAR 13, CAR 14, CAR 15, CAR 16, CAR 17).

3.7 Verification regarding programmes of activities (102-110)

Not applicable.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the initial and periodic verification of the JI project "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal" in Zaporizhzha, 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 Carbon Marketing and Trading Ltd. is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring and Verification Plan indicated in the final PDD version 02. 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 reports version 02 for the reporting periods as indicated below. Bureau Veritas Certification confirms that the project is implemented as planned and described in approved project design documents. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions.

Bureau Veritas Certification can confirm that the GHG emission reduction is accurately calculated and is free of material errors, omissions, or misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the approved project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated, we confirm, with a reasonable level of assurance, the following statement:

Reporting period from 01/01/2008 to 31/12/2008

Baseline emissions	: 9 189 136	t CO_2 equivalents
Project emissions	: 8 684 474	t CO_2 equivalents
Leakages	: 35 606	t CO_2 equivalents
Emission reductions (Year 2008)	: 469 057	t CO_2 equivalents

Reporting period from 01/01/2009 to 31/12/2009

Baseline emissions	: 7 650 171	t CO_2 equivalents
Project emissions	: 7 324 650	t CO_2 equivalents
Leakages	: 46 017	t CO_2 equivalents
Emission reductions (Year 2009)	: 279 504	t CO_2 equivalents

Reporting period from 01/01/2010 to 31/12/2010

Baseline emissions	: 7 734 181	t CO_2 equivalents
Project emissions	: 7 387 027	t CO_2 equivalents
Leakages	: 49 744	t CO_2 equivalents
Emission reductions (Year 2010)	: 297 410	t CO_2 equivalents

5 REFERENCES

Category 1 Documents:
Documents provided by Carbon Marketing and Trading Ltd. that relate directly to the GHG components of the project.

/1/ PDD of the JI project "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal" version 02 dated 14/04/2011
/2/ Monitoring report for the period 01/01/2008 – 31/12/2008 of JI project "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal" version 01 dated 16/05/2011
/3/ Monitoring report for the period 01/01/2009 – 31/12/2009 of JI project "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal" version 01 dated 16/05/2011
/4/ Monitoring report for the period 01/01/2010 – 31/12/2010 of JI project "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal" version 01 dated 16/05/.2011
/5/ Monitoring report for the period 01/01/2008 – 31/12/2008 of JI project "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal" version 02 dated 30/05/2011
/6/ Monitoring report for the period 01/01/2009 – 31/12/2009 of JI project "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal" version 02 dated 30/05/2011
/7/ Monitoring report for the period 01/01/2010 – 31/12/2010 of JI project "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal" version 02 dated 30/05/2011
/8/ Letter of Approval from National Environmental Investment Agency of Ukraine № 1386/23/7 dated 31/05/2011
/9/ Letter of Approval from Swiss DFP - Federal Office for the Environment № J294-0485 dated 27/04/2011
/10/ Determination report #UKRAINE-det/0250/2011 of the JI project "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal" dated 04/05/2011

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

/1/ Order on saving and archiving project documentation #211 dated 28/04/2011
/2/ Report of the air protection for 2008. Form 2TP (air).
/3/ Report of the air protection for 2009. Form 2TP (air).
/4/ Report of the air protection for 2010. Form 2TP (air).
/5/ Help the class-voltage electricity consumed in the agglomerate and blast-furnace production 2008-2010.

/6/ Register of sorted values calculations. 01-06.2001
/7/ The protocol the meeting with Technical Director on the state of basic production assets Zaporizhstal and prepare a strategy for its reconstruction and technical upgrading dated 25 december 2002.
/8/ JSC "Zaporizhstal". Business-plan. Technical reequipment of agglofactory. Reconstruction of agglomachine No.1. Reg No.539584
/9/ List of immovable's that are transferred into the ownership of JSC "Zaporizzhia Metallurgical Industrial Complex "Zaporizhstal" dated 19.08.2000
/10/ Direction of approval of state technical committee statement No. 678p dated 23.06.2005
/11/ State technical committee statement of putting ready-built object into operation No. 678p dated 23.06.2005
/12/ Business-plan. General overhaul and reconstruction of blast-furnace-2. DT 336456. Volume 4. Reg. No.488408
/13/ List of volumes related to general overhaul of blast-furnace-2 JSC "Zaporizhstal"
/14/ Job description of planimeterist of rules for technical operation bureau of technical and economic calculation accounting of chief power engineering specialist department of JSC "Zaporizhstal"
/15/ Letter of approval of expert conclusion actuality No. 10/7536 dated 14.12.2009
/16/ Petition for expert conclusion duration prolongation dated 19.11.2009 No.33/1569
/17/ Statement of program product delivery No.44.01.01-09 dated 01.01.2009
/18/ Natural gas composition register. Started 2002 - finished 12.2010
/19/ Certificate of physical-chemical parameters of natural gas for the period 2008-2010
/20/ Natural gas composition register for the period 2008-2010
/21/ Report for December 2008, 2009, 2010
/22/ Detailed design "Complex of objectives for fuel accounting, taking into consideration the new requirements for procedure of settlement and automation of receiving new forms of reporting" dated 03.12.1998
/23/ Rules of gas and liquids wastes measurement using restriction equipment RD 50-213-80
/24/ Gas balance register for the period 2008-2010
/25/ Consumer technical and economic calculation accounting dated 30.11.2009
/26/ Natural and blast-furnace gas register. 2008-2010
/27/ Consumer technical and economic calculation accounting
/28/ Water assessment register for the period 2008-2010
/29/ Actual volumes of production in departments of industrial complex for 2008-2010
/30/ Report on electric power wastes in metallurgical industrial complex

JSC "Zaporizhstal" for December 2008-2010
/31/ Report on work of gas department 2008-2010
/32/ Meeting initiated by technical director record dated 25.12.2002
/33/ Conclusion No.161 of state ecological expertise dated 26.12.2002
/34/ Permission No.2310136600-39 for pollutant emission into atmospheric air dated 30.12.2009
/35/ Project of JSC "Zaporizhstal" "General overhaul and reconstruction of blast-furnace-2 DT 336456 Volume 1
/36/ Project of JSC "Zaporizhstal" "General overhaul and reconstruction of blast-furnace-2 DT 336456 Volume 2 Reg. No.488406
/37/ Project of JSC "Zaporizhstal" "General overhaul and reconstruction blast-furnace-2 DT 336456 Volume 2. Statement of ecological consequence
/38/ Project of JSC "Zaporizhstal" "General overhaul and reconstruction blast-furnace-2 DT 336456 Volume 2. Environmental impact assessment
/39/ Information on training, retraining and raising the level of personnel skills of JSC "Zaporizhstal" for 2008,2009,2010
/40/ Goals of personnel training department in the field of quality, environment and labor protection for 2008,2009,2010
/41/ Information on personnel training of JSC "Zaporizhstal" for 2008,2009,2010
/42/ Quality, environment and labor protection policy of JSC "Zaporizhstal"
/43/ Information on training and raising the level of personnel skills of JSC "Zaporizhstal" for 2008,2009,2010
/44/ Personnel training programm of JSC "Zaporizhstal" for working with equipment for preparation and injection of dust-coal fuel into blast-furnace
/45/ Second stage of training according appendix B to the contract No. 1323.37515.06.64I dated 08.12.06 between JSC "Zaporizhstal" and Kuttner GmbH & Co. KG
/46/ Certificate of attendance the seminar "Introduction into explosion proof equipment "ATEX" of hoover facility of product company INTENSIV FILTER" for A.Merezniyk
/47/ Certificate of attendance the seminar "Introduction into explosion proof equipment "ATEX" of hoover facility of product company INTENSIV FILTER" for N.Stakhanova
/48/ Certificate of attendance the seminar LAB-01 for laboratory personnel for N.Povstyana
/49/ Certificate of attendance the group seminar GEN01/PLC01/PLC02/PLC03/POS01 for V.Bublej
/50/ Certificate of attendance the group seminar GEN01/PLC01/PLC02/PLC03/POS01 for A.Gavrylenko
/51/ Certificate of attendance the group seminar GEN01/PLC01/PLC02/PLC03/POS01 for S.Moscalets
/52/ Main technical characteristics: screening of sinter chemical

analysis of the sinter grinding of raw materials. Violation of instructions of Technology (2005 to 2010.)
/53/ Help on the quality of sinter (2008 to 2011.)
/54/ Photo. Passport Disc-250-1121 natural gas consumption № 82670
/55/ Photo. Disc-250-1121 natural gas consumption № 82670
/56/ Photo. Passport transducer DM-3583 № 12560
/57/ Photo. Passport secondary device KSD-3 steam consumption № 195038
/58/ Photo. Secondary device KSD-3 steam consumption № 195038
/59/ Photo. Passport transducer DM-3583 № 5654
/60/ Photo. Passport converter BPL № 5805
/61/ Photo. Passport secondary device Disk-250-1121 airflow № 20327
/62/ Photo. Secondary device Disc-250-1121 airflow № 20327
/63/ Photo. Passport Disc-250-1121 consumption of industrial water № 91467
/64/ Photo. Passport KSD-3 consumption of industrial water № 191712
/65/ Photo. Passport KSD-3 consumption of industrial water № 362835
/66/ Photo. Secondary device. Disc-250-1121 rate of industrial water № 91467
/67/ Photo. Secondary device KSD-3 consumption of industrial water № 191712
/68/ Photo. Secondary device KSD-3 consumption of industrial water № 362835
/69/ Photo. Journal of industrial water balance on sinister workshop
/70/ Photo. Act to withdraw assets from the blast furnace#1 from July 2005
/71/ Photos Act a technical survey of Blast Furnace#1 of 20/01/2005
/72/ Photo Decision about the cancellation of BF#1
/73/ Photo Passport number 45 on the scale electromechanical HR-200000RT with information about the verification
/74/ Photo Passport number 46 on the scale electromechanical HR-200000RT with information on the verification
/75/ Photo Shipped pig iron logbook
/76/ Photo Electromechanical scales HR-200000RT № 45
/77/ Photo Electromechanical scales HR-200000RT № 46
/78/ Photo Passport on the scales 02/16E
/79/ Photo Passport on the scales 02/25E
/80/ Photo Passport on the scales 02/26E
/81/ Photo Passport on the scales 02/27E
/82/ Photo Passport on the scales 02/24E
/83/ Photo Passport on the scales 02/23E
/84/ Photo Passport on the scales 02/22E
/85/ Photo Passport on the scales 02/21E
/86/ Photo Passport on the scales 02/20E
/87/ Photo Passport on the scales 02/19E
/88/ Photo Passport on the scales 02/18E
/89/ Photo Passport on the scales 02/17E

/90/ Photo Passport on the scales 02/29E
/91/ Photo Sensor of the Scales
/92/ Photo Electronic form accounting of electricity consumption by the blast furnace workshop
/93/ Photo Report on energy consumption for active power
/94/ Photo Electronic form accounting of electricity consumption in the sinter workshop
/95/ Photo Report on energy consumption for active power
/96/ Photo Counting of electricity per day substation M-1 logbook
/97/ Photo monthly report on consumption of electricity
/98/ Photo Daily statement of electricity consumption by substation M-1
/99/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103132
/100/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103390
/101/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103359
/102/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103265
/103/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103170
/104/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103184
/105/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103186
/106/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103368
/107/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103372
/108/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103293
/109/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103190
/110/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103155
/111/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103161
/112/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103275
/113/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103156
/114/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103276
/115/ Internal standard of JSC “Zaporizhstal” STP 7.6-01-03 “Metrological support”
/116/ Internal standard of JSC “Zaporizhstal” STP 7.6-03-03 “Procedure for repair of measuring equipment”

/117/ Internal standard of JSC “Zaporizhstal” STP 7.6-04-03 “Procedure for metrological review”
/118/ Internal standard of JSC “Zaporizhstal” STP 7.6-05-03 “Procedure for metrological certification”
/119/ Internal standard of JSC “Zaporizhstal” STP 7.6-06-03 “Procedure for analyze ensuring of technological process”
/120/ Internal standard of JSC “Zaporizhstal” STP 7.6-07-03 “Procedures for verification and calibration”
/121/ Internal standard of JSC “Zaporizhstal” STP 7.6-08-03 “Provisions on liability for condition of measuring equipment in subdivisions”
/122/ Internal standard of JSC “Zaporizhstal” STP 7.6-09-03 “Procedure for developing, manufacturing and operating templates”
/123/ Internal standard of JSC “Zaporizhstal” STP 7.6-10-03 “Metrological supervision of the flowmeters”

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/ Inna Kholina – head of environmental laboratory, JSC “Zaporizhstal”
/2/ Roman Sundukov – deputy head of foreign trade company, JSC “Zaporizhstal”
/3/ Aleksandr Grabko – head of automation and metrology bureau, JSC “Zaporizhstal”
/4/ Vladimir Yarysh – deputy head of power engineering department, JSC “Zaporizhstal”
/5/ Roman Zelenkov – head of planning and economic department, JSC “Zaporizhstal”
/6/ Anatoliy Reysher – deputy chief accountant, JSC “Zaporizhstal”
/7/ Natalia Kril – head of production accounting department, JSC “Zaporizhstal”
/8/ Nikolay Nechyporuk – deputy head of personnel training department, JSC “Zaporizhstal”
/9/ Svitlana Rubanovich – head of personnel training department, JSC “Zaporizhstal”
/10/ Pavel Shevchenko – deputy head of blast-furnace workshop, JSC “Zaporizhstal”
/11/ A. Siora – Electrician of scales workshop in blast-furnace workshop, JSC “Zaporizhstal”
/12/ D. Soin - Electrician of scales workshop in blast-furnace workshop, JSC “Zaporizhstal”
/13/ Marina Kazachenko - Head of Technical Bureau workshop of networks and substations, JSC “Zaporizhstal”
/14/ Pavel Sidelnikov Head of sintering workshop, JSC “Zaporizhstal”
/15/ Vitaly Shibko Head of sintering group Central quality laboratory,

JSC “Zaporizhstal”

/16/ Evgeniy Gonchar Senior Master of metrological department (sintering workshop), JSC “Zaporizhstal”

/17/ Dmitry Kosenkov Senior Master of quality department (sintering workshop), JSC “Zaporizhstal”

/18/ Dmitry Danilchenko Acting Master of quality department (sintering workshop), JSC “Zaporizhstal”

/19/ Valentin Sereduk – ecology department director, Institute for Environment and Energy Conservation

/20/ Tahir Musayev – Director of Carbon Marketing and Trading Ltd.

APPENDIX A: COMPANY PROJECT VERIFICATION PROTOCOL

Table 1 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?	DFP of Switzerland have issued written project approval (LoA) when submitting the first verification report for publication in accordance with paragraph 38 of the JI guidelines.	OK	OK
91	Are all the written project approvals by Parties involved unconditional?	Yes, all the written project approvals by Parties involved are unconditional.	OK	OK
Project implementation				
92	Has the project been implemented in accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	Implementation of the project activity was realized according to the project implementation schedule described in the project design document. There are no deviations or revisions to the determined PDD.	OK	OK
93	What is the status of operation of the project during the monitoring period?	Monitoring reports indicated the current status of the project activity implementation. Based on provided materials, there is known that all project equipments were operational in the reporting period.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		On the whole project has been implemented as defined in the PDD and the implementation is evidenced by statements of work completion (see list of verified documents).		
Compliance with monitoring plan				
94	Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	The monitoring process at JSC "Zaporizhstal" is carried out in accordance with the monitoring plan included in the registered PDD version 02 dated 14.04.2011. Data used for calculation of emissions reduction based on information that confirmed by JSC "Zaporizhstal" documents. CL 01. Please explain the difference in the titles of projects identified in the PDD and the front page of MRs. CAR 01. Please correct the cover page of English version of the MRs – "Joint Implementation project".	CL 01 CAR 01	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	All 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 for calculating the emission reductions or enhancements of net removals. CAR 02. Please correct the dimension of the	CAR 02 CAR 03 CAR 04 CAR 05 CAR 06 CAR 07 CL 02	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	risks associated with the project taken into account, as appropriate?	factor P-22 in Table 5, Ukrainian version of MRs. CAR 03. Please correct the name of the factors P-25 and P-26 in Table 5, Ukrainian version of MRs. CAR 04. In the Ukrainian version of the MRs (Table 5, P-24, table 6, B-24) has inscriptions in Latin. Please, make appropriate corrections. CAR 05. Please correct the dimension “CO2” in text of MRs. CAR 06. Please describe in detail the name of the data P-19 and P-22 in Table 5. CAR 07. In Table 9 incorrectly calculated percent deviation (2008 - 8,1% 2009 - 12,2%, 2010 - 4,5%). Please, make appropriate corrections. CL 02. Please, provide the Information about voltage class electricity consumed in the agglomerate and blast-furnace process.		
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 clearly identified, reliable and transparent. On site responsible persons register data from the measurement equipments and fixed monitoring data to	CL 03 CL 04 CAR 08 CAR 09	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		logbooks, monthly data collected to the technical reports. All roles and responsibilities are described in details in the Monitoring reports. CL 03. Please explain the value of variable data of peat - 1,03 and the difference between the values specified in the data source (reference 3). CL 04. Please explain the value of variable data of residual oil - 3,1 and the difference between the values specified in the data source (reference 9). CAR 08. Emission factor of reducing agent (reference 4) indicated is not correct. Please, make appropriate corrections. CAR 09. Reference 17 and reference 4 (IPCC 2006) is not working. Please, make appropriate corrections.		
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	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	CAR 10	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	choice?	CAR 10. In Table 8 and Table 9 is necessary to round up to whole numbers. Please, make appropriate corrections.		
95 (d)	Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and the most plausible scenarios in a transparent manner?	The calculation of emission reductions is based on conservative assumptions and the most plausible scenarios in a transparent manner. As a result of documents revision, all data connected with estimation of emission reduction are consistent through the Monitoring reports and excel spreadsheets with calculation. CAR 11. Please, provide the formula for calculating emission reductions and include it in the MRs. CL 05. Please explain the difference between the calculated values of reduction referred to in the PDD and specified in the MRs of the actual values. CAR 12. Please, provide the detailed calculation of leakage and explain the difference between the values of leakage in PDD and MRs.	CAR 11 CAR 12 CL 05	OK
Applicable to JI SSC projects only				
96	Is the relevant threshold to be	Not applicable	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?			
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?	Not applicable	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 reports?	Not applicable	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 reports? Do the monitoring periods not overlap with those for which verifications were already deemed final in the past?	Not applicable	OK	OK
Revision of monitoring plan				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Applicable only if monitoring plan is revised by project participant				
99 (a)	Did the project participants provide an appropriate justification for the proposed revision?	Not applicable	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?	Not applicable	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?	Procedures of data collection are implemented in compliance with the approved monitoring plan. Monitoring data of the project is monitored in compliance with scheduled frequency approved in the developed monitoring plan and monitoring procedure. The quality control and quality assurance procedures realised due to performing of internal audits and checking measures, participation of third parties, and carrying out of procedures of emergencies finding. CAR 13. Please specify in the monitoring reports information about responsible for reports developing.	CAR 13 CAR 14	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CAR 14. Please describe in detail process of collecting and analyzing information in the MRs.		
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	All monitoring equipments have calibration. It is calibrated with periodic frequency (passport states the calibration frequency for every device) according to the national regulations. During site visit verifiers received and reviewed passports and/or certificates on calibration of all measurement equipments. CAR 15. On page 5 said “ДСТУ ISO 9001-2001”, but this version of ISO is repealed. Please, make appropriate corrections. CAR 16. Please, provide the information about verification of monitoring equipment. CAR 17. Please, provide the list of monitoring equipment and include it in the MRs.	CAR 15 CAR 16 CAR 17	OK
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	The evidence and records used for the monitoring are maintained on site of some devices and in responsible departments in a traceable manner.	OK	OK
101 (d)	Is the data collection and management system for the project	The data collection and management system for the project is in accordance with the	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	in accordance with the monitoring plan?	approved monitoring plan. Implementation of monitoring system was checked through site visit, and concluded that monitoring system is completely in accordance with the monitoring plan. This fact is also confirmed by the documents.		
Verification regarding programs of activities (additional elements for assessment)				
102	Is any JPA that has not been added to the JI PoA not verified?	Not applicable	OK	OK
103	Is the verification based on the monitoring reports of all JPAs to be verified?	Not applicable	OK	OK
103	Does the verification ensure the accuracy and conservativeness of the emission reductions or enhancements of removals generated by each JPA?	Not applicable	OK	OK
104	Does the monitoring period not overlap with previous monitoring periods?	Not applicable	OK	OK
105	If the AIE learns of an erroneously included JPA, has the AIE informed the JISC of its findings in writing?	Not applicable	OK	OK
Applicable to sample-based approach only				
106	Does the sampling plan prepared by the AIE:	Not applicable	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	(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			

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	verifications, if any?			
107	Is the sampling plan ready for publication through the secretariat along with the verification report and supporting documentation?	Not applicable	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 reasonable explanation and justification?	Not applicable	OK	OK
109	Is the sampling plan available for submission to the secretariat for the JISC.s ex ante assessment? (Optional)	Not applicable	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?	Not applicable	OK	OK

Table 2 Resolution of Corrective Action Requests 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
CL 01. Please explain the difference in the titles of projects identified in the PDD and the front page of MRs.	Table 1, 94	Appropriate corrections have been done.	CL 01 is closed based on due corrections made to the MRs.
CAR 01. Please correct the cover page of English version of the MRs – "Joint Implementation project".	Table 1, 94	Appropriate corrections have been done.	CAR 01 is closed based on due corrections made to the MRs.
CAR 02. Please correct the dimension of the factor P-22 in Table 5, Ukrainian version of MRs.	Table 1, 95 (a)	Appropriate corrections have been done.	CAR 02 is closed based on due corrections made to the MRs.
CAR 03. Please correct the name of the factors P-25 and P-26 in Table 5, Ukrainian version of MRs.	Table 1, 95 (a)	Appropriate corrections have been done.	CAR 03 is closed based on due corrections made to the MRs.
CAR 04. In the Ukrainian version of the MRs (Table 5, P-24, table 6, B-24) has inscriptions in Latin. Please, make appropriate corrections.	Table 1, 95 (a)	Appropriate corrections have been done.	CAR 04 is closed based on due corrections made to the MRs.

CAR 05. Please correct the dimension "CO2" in text of MRs.	Table 1, 95 (a)	Appropriate corrections have been done.	CAR 05 is closed based on due corrections made to the MRs.
CAR 06. Please describe in detail the name of the data P-19 and P-22 in Table 5.	Table 1, 95 (a)	Appropriate corrections have been done.	CAR 06 is closed based on due corrections made to the MRs
CAR 07. In Table 9 incorrectly calculated percent deviation (2008 - 8,1% 2009 - 12,2%, 2010 - 4,5%). Please, make appropriate corrections.	Table 1, 95 (a)	Appropriate corrections have been done.	CAR 07 is closed based on due corrections made to the MRs
CL 02. Please, provide the Information about voltage class electricity consumed in the agglomerate and blast-furnace process.	Table 1, 95 (a)	According to the Information provided by the Chief energy specialist department about voltage class of electricity, during monitoring periods in the production process of the sinter plant and blast-furnace shop, CHP, gas and water supply shops there was consumed 2-nd class electricity and in oxygen compressor shop – 1st class. This Information is additionally provided to the verifier.	CL 02 is closed based on the explanation provided.

CL 03. Please explain the value of variable data of peat - 1,03 and the difference between the values specified in the data source (reference 3).	Table 1, 95 (b)	Emission factor of peat is calculated according to this formula: EFpeat = NCV * EFCO2 combustion / 1 000 000,, where: NCV – default net calorific value (see 2006 IPCC, Volume 2, Chapter 1, Table 1.2, page 18 (http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_1_Ch1_Introduction.pdf) $EF_{CO2\ combustion}$ – default CO2 emission factor for combustion (see 2006 IPCC, Volume 2, Chapter 1, Table 1.4 (continued), page 1.24 (http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_1_Ch1_Introduction.pdf) As the result we have EF as follows: EFpeat = 9.76 Tj/Gg (NCV) * 106 000 kg CO2e/Tj (EFCO2 combustion) / 1 000 000 = 1.03 tonnes CO2e/tonne	CL 03 is closed based on the explanation provided.

CL 04. Please explain the value of variable data of residual oil - 3,1 and the difference between the values specified in the data source (reference 9).	Table 1, 95 (b)	Emission factor of residual oil is calculated according to this formula: EFresidual oil = NCV * EFCO2 combustion / 1 000 000,, where: NCV – default net calorific value (see 2006 IPCC, Volume 2, Chapter 1, Table 1.2, page 18 (http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_1_Ch1_Introduction.pdf) $EF_{CO2\ combustion}$ – default CO2 emission factor for combustion (see 2006 IPCC, Volume 2, Chapter 1, Table 1.4, page 1.23 (http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_1_Ch1_Introduction.pdf) As the result we have EF as follows: EFpeat = 40.4 Tj/Gg (NCV) * 77 400 kg CO2e /Tj (EFCO2 combustion) / 1 000 000 = 3.1 tonnes CO2e/tonne	CL 04 is closed based on the explanation provided.

CAR 08. Emission factor of reducing agent (reference 4) indicated is not correct. Please, make appropriate corrections.	Table 1, 95 (b)	Emission factor of reducing agent (coke) is calculated according to this formula: EFcoke = EFcoke production + EFcoke consumption where: EFcoke production – default emission factor for coke production (see 2006 IPCC, Volume 3, Chapter 2, Table 2-12, page 2.26 http://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch2ref2.pdf) EFcoke consumption – default emission factor for coke consumption (see 1996 IPCC, Volume 3, Chapter 4, Table 4.1, page 4.25 http://www.ipcc-nggip.iges.or.jp/public/2006gl/pdf/3_Volume3/V3_4_Ch4_Metal_Industry.pdf) As the result we have EF as follows: EFcoke = 0.56 tonnes CO2e/tonne + 3.1 tonnes CO2e/tonne = 3.66 tonnes CO2e/tonne	CAR 08 is closed based on the explanation provided.

CAR 09. Reference 17 and reference 4 (IPCC 2006) is not working. Please, make appropriate corrections.	Table 1, 95 (b)	Reference 17 was corrected. Reference 4 is working, but with casual problems.	CAR 09 is closed based on due corrections made to the MRs
CAR 10. In Table 8 and Table 9 is necessary to round up to whole numbers. Please, make appropriate corrections.	Table 1, 95 (c)	Appropriate corrections have been done.	CAR 10 is closed based on due corrections made to the MRs
CAR 11. Please, provide the formula for calculating emission reductions and include it in the MRs.	Table 1, 95 (d)	The formula for calculating emission reductions is additionally provided in provisions 5.2 of MRs.	CAR 11 is closed based on due corrections made to the MRs.
CL 05. Please explain the difference between the calculated values of reduction referred to in the PDD and specified in the MRs of the actual values.	Table 1, 95 (d)	Difference in the results of the emission reductions calculation provided in PDD and MRs is caused by two factors: - In MRs there were applied new emission factors for the electricity consumption (more detailed explanation is added in provisions 5.2 of MRs) ; In MRs there was taken into account actual data about leakages from two other JI projects.	CL 05 is closed based on the explanation provided.

CAR 12. Please, provide the detailed calculation of leakage and explain the difference between the values of leakage in PDD and MRs.	Table 1, 95 (d)	1) detailed calculation of leakage is presented in excel file, which is provided to the verifier. 2) in PDD for the estimation of leakages we took information about anticipated amounts of emission reductions for the correspondent periods from PDDs of both projects, and in monitoring reports for the estimation of leakages we took actual information about emission reductions for the correspondent periods from monitoring reports of both projects	CAR 12 is closed based on the explanation provided.
CAR 13. Please specify in the monitoring reports information about responsible for reports developing.	Table 1, 101 (a)	Project Developer is the Director of «Carbon Marketing and Trading Ltd» - Tahir Musaev. This information is added to the monitoring reports.	CAR 13 is closed based on due corrections made to the MRs.

CAR 14. Please describe in detail process of collecting and analyzing information in the MRs.	Table 1, 101 (a)	Information required for MRs is collected by sending to the department ACS technical reports on fuel and energy resources (FER) consumption by Chief energy specialist department, technical reports on production and consumption of carbon content materials by main manufacturing units. Technical reports are processed (entered into computer) and calculated to get data on cost and specific FER and material consumption per unit of production (pig iron). Data are collected in printed documents and, partially, in the electronic database of Zaporizhstal (ACS department). All those documents are saved in the Production Accounting Unit of General Accounting department Data is systematized in the documents of the daily, monthly and annually registration. To calculate annual emission reductions information from annual cost price calculations for the correspondent year is used.	CAR 14 is closed based on due corrections made to the MRs.
CAR 15. On page 5 said “ДСТУ ISO 9001-2001”, but this version of ISO is repealed. Please, make appropriate corrections.	Table 1, 101 (b)	Appropriate corrections have been done.	CAR 15 is closed based on due corrections made to the MRs.

CAR 16. Please, provide the information about verification of monitoring equipment.	Table 1, 101 (b)	Appropriate corrections have been done.	CAR 16 is closed based on due corrections made to the MRs.
CAR 17. Please, provide the list of monitoring equipment and include it in the MRs.	Table 1, 101 (b)	Appropriate corrections have been done.	CAR 17 is closed based on due corrections made to the MRs.

APPENDIX B: VERIFICATION TEAM

Rostislav Topchiy (chemical and ecological engineering)
Team Leader, Climate Change Verifier
Bureau Veritas Ukraine Health, Safety and Environment Project Manager

He is a Lead auditor of Bureau Veritas Certification for Environment Management System, Quality Management System, Occupational Health and Safety Management System. He performed over 180 audits since 2004. He has successfully completed Climate Change Verifier Training Course and he participated as verifier in the verification of 10 JI projects.

Vitaliy Minyaylo (chemical and ecological engineering)
Team member, Climate Change Verifier
Bureau Veritas Ukraine,
Health, Safety and Environment Department Project Manager

He has successfully completed IRCA registered Lead Auditor Training Course for Environment Management Systems, Quality Management Systems, Occupational Health and Safety Management System. He has successfully completed Climate Change Verifier Training Course and he participated as verifier in the verification of 2 JI projects.

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)

Internal Technical Reviewer, Climate Change Lead Verifier, Bureau Veritas Certification Holding SAS Local Climate Change Product Manager for Ukraine

Acting CEO Bureau Veritas Black Sea District

He has over 25 years of experience in Research Institute in the field of biochemistry, biotechnology, and microbiology. He is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered), Quality Management System (IRCA registered), Occupational Health and Safety Management System, and Food Safety Management System. He performed over 140 audits since 1999. Also he is Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and Lead Tutor of the IRCA registered ISO 9000 QMS Lead Auditor Training Course. He is Lead Tutor of the Clean Development Mechanism /Joint Implementation Lead Verifier Training Course and he was involved in the determination/verification over 60 JI/CDM projects.