VERIFICATION REPORT

INSTITUTE FOR ENVIRONMENT AND ENERGY CONSERVATION

VERIFICATION OF THE REVAMPING OF SINTERING AND BLAST-FURNACE PRODUCTION AT OJSC "ALCHEVSK IRON AND STEEL WORKS"

THIRD PERIODIC
(01/01/2011 – 30/06/2011)

REPORT NO. UKRAINE-VER/0320/2011
REVISION NO. 03

BUREAU VERITAS CERTIFICATION

Date of first issue:	Organizational unit:
08/09/2011	Bureau Veritas Certification Holding
Client:	Client ref.:
Institute for Environment and Energy Conservation	Vasyl Vovchak

Summary:

Bureau Veritas Certification has made the third periodic verification of the "Revamping of sintering and blast-furnace production at OJSC "Alchevsk Iron and Steel Works", UA1000262, project of Institute for Environment and Energy Conservation located in Alchevsk, Lugansk oblast, 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, 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 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. The GHG emission reduction is calculated accurately and without material errors, omissions, or misstatements, and the ERUs issued totalize 1 029 733 tons of CO2eq for the monitoring period (01/01/2011 - 30/06/2011).
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/0320/2011	JI		
Project title:			
"Revamping of sintering and blast-furnace production at OJSC "Alchevsk Iron and Steel Works"			
Work carried out by:			
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Work approved by:			
Flavio Gomes - Operational Manager		☐	Limited distribution
Date of this revision:	Rev. No.:	Number of pages:	
25/09/2011	03	48	☐ Unrestricted distribution

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
AISW	PJSC “Alchevsk Iron and Steel Works”
DFP	Designated Focal Point
DVM	Determination and Verification Manual
EIA	Environmental Impact Assessment
ERU	Emission Reduction 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 has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project "Revamping of sintering and blast-furnace production at OJSC "Alchevsk Iron and Steel Works" (hereafter called "the project") at Alchevsk, Lugansk oblast, 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 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:

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 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 Report (MR) submitted by Institute for Environment and Energy Conservation and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (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 17/08/2011 Bureau Veritas Certification performed on-site interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of

PJSC “Alchevsk Iron and Steel Works” (according to the documentation checked, 16.05.2011 PJSC “Alchevsk Iron and Steel Works” was established by changing the name of juridical person OJSC “Alchevsk Iron and Steel Works” to PJSC “Alchevsk Iron and Steel Works”) and Institute for Environment and Energy Conservation were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
PJSC “Alchevsk Iron and Steel Works”	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	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 reduction calculation.

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

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

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

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

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

3 VERIFICATION CONCLUSIONS

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

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

The Clarification, Corrective and Forward Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 5 Corrective Action Requests, 7 Clarification Requests, and 2 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 were two FARs: FAR 01 concerning keeping the data monitored for two years after the last transfer of emission reductions units for the project, and FAR 02 concerning indication of the names of the personnel involved in the monitoring should be issued. The FARs are still under consideration. FAR 01 and FAR 02 will be checked during next periodic verification.

3.2 Project approval by Parties involved (90-91)

Written project approval by the Netherlands (Declaration of Approval 2011JI14 on the JI project “Revamping of sintering and blast-furnace production at OJSC “Alchevsk Iron and Steel Works” 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.

The abovementioned written approval is unconditional.

3.3 Project implementation (92-93)

The implementation status of the project:

- installation of pulverized coal injection (PCI) facility at BF # 1 (implementation of this measure was started in October 2006 and was completed in May 2009);
- installation of PCI facility at BF # 5 (implementation of this measure was started in October 2006 and was completed in August 2009);
- installation of PCI facility at BFs ## 3, 4 (implementation of the measure was started in October 2006 and is expected to be completed in the year 2015);
- renewal and reconstruction of BF # 1 (implementation of this measure was started in the first half of 2004 and BF#1 was commissioned on 16th of May 2007);
- renewal and reconstruction of BF # 5 (implementation of this measure was started in 2006 and is expected to be completed during year 2011);
- reconstruction of the oxygen unit # 4 (implementation of this measure was started in 2004 and was completed in December 2005);
- installation of oxygen units # 7 (implementation of this measure was started in 2007 and was completed in 2008).
- installation of oxygen units # 8 (implementation of this measure was started in 2007 and was completed in 2009);
- construction of BF # 2 (implementation of this measure was started in 2007 and was not completed during the monitoring period. For the present time construction of BF # 2 is delayed because of adverse market situation and lack of financing. Construction of BF # 2 will be continued after improvement of market situation and availability of funding. According to the project implementation schedule stated in the PDD, commissioning of the measure is expected in the year 2015);
- construction of new sinter plant (implementation of this measure was started in 2006 and was not completed during the monitoring period. According to the project implementation schedule in the PDD, commissioning of the sinter plant is expected in the year 2016);
- construction of new lime kilns (implementation of this measure was started in 2005 and was not completed during the monitoring period. According to the project implementation schedule commissioning of the lime kilns was expected in the 2nd half of 2010, but to date the construction works are still undergoing. The decline from project implementation schedule was caused by the financial, technical and customs difficulties (the delay of equipment supply). The completion of construction works is expected by the end of 2011). According to the project implementation schedule commissioning of the lime kilns was expected in the 2nd half of 2010, but to date the construction works are still undergoing. The decline from project implementation schedule was

caused by the financial, technical and customs difficulties (the delay of equipment supply). The completion of construction works is expected by the end of 2011).

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 03, CL 01, and CL 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 in pig iron production, 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.

Taking into account that the project boundary of the JI project "Installation of a new waste heat recovery system at Alchevsk Coke Plant, Ukraine" (UA1000130[*] - registered under Track 1) includes blast-furnaces of AISW with respect to particular volumes of consumed dry blast-furnace coke, the CO_{2e} emission reductions that were generated during the period of 01/01/2011 – 30/06/2011[†] due to component three (3)[‡] of mentioned above JI project were attributed to the leakages of GHG's.

[*] http://ji.unfccc.int/JIITLProject/DB/1D4N29Y8OQJEF2BPYY0WSRW4WWDWGT/details

[†] Leakages were generated starting from the 1st of October 2007 when the CDQ facility was launched and the first volumes of dry blast-furnace coke were consumed at the blast-furnaces of AISW.

[‡] Component three consists in reduction of coke input per unit of pig iron production at the blast furnaces of Alchevsk Iron and Steel Works (AISW) as the result of high-quality coke production at the CDQ facility.

Leakages of GHG emissions from the JI project “Installation of a new waste heat recovery system at Alchevsk Coke Plant, Ukraine” were calculated by subtracting total project line emissions from the baseline emissions that were generated by the component 3 of the mentioned above project. After that, leakages of GHG emissions were subtracted from the total volume of emission reductions associated with this project during this monitoring period.

Leakages during first half-year of 2011 are equal to 64 872 tonnes CO_{2e}.

Mentioned above volume of leakages is based on actual data which are proved by initial data from AISW and Alchevsk Coke Plant.
By taking into consideration that the mentioned above volume is still not verified yet within the framework of periodic verification of the JI project “Installation of a new waste heat recovery system at Alchevsk Coke Plant, Ukraine”, all information concerning the leakages as the part of emission reductions at Alchevsk Coke Plant are now checked by the verification team, and these emission reductions (component (3) for the first half-year of 2011) are verified within the framework of periodic verification of JI project “Revamping of sintering and blast-furnace production at OJSC “Alchevsk Iron and Steel Works”. The excel file with calculation of leakages together with initial data provided to the verifiers were found satisfactory and sufficient to confirm leakages provided in the Monitoring Report.

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 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, CAR 02, CL 03, CL 04, CL 05, and CL 06).

3.5 Revision of monitoring plan (99-100)

In the course of the monitoring period (01/01/2011 – 30/06/2011) the original monitoring plan described in the final version (4) of the PDD was modified by the project participants. The project participants provided an appropriate justification for the proposed revision which was caused by certain reasons: application of formulas for calculating coke emission factor based on carbon content of coke to ensure accuracy and transparency of applied approach.

Now, in order to calculate emission factor for coke due to its production and consumption based on actual carbon content, the following formula is used:

$EF_{ra} = (C_{coke} * 44/12) + 0,56$

where:

EF_{ra} – emission factor for coke, tonnes CO_{2e}/tonne of coke;
C_{coke} – carbon content of coke, %;
0,56 – CO_{2e} emission factor for coke production, tonnes CO_{2e}/tonne of coke produced.

The carbon content of coke is calculated by the following formula:

$C_{coke} = 100 – (C_{ash} + C_{sulphur} + C_{volatile\ matters})$

where:

C_{ash} – ash content of coke, %;
$C_{sulphur}$ – sulfur content of coke, %;
$C_{volatile\ matters}$ – volatile matters content of coke, %.

The proposed revision improves the accuracy and 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.

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 monitoring of JI project indicators at AISW was realized on regular basis where the system of data collection on FER consumption was being used. The data needed for the monitoring of the project were collected during the process of normal equipment use. The production facilities of the plant were equipped with the measuring devices such as scales, meters and gas, water, steam, electricity consumption meters. The monitoring of the project formed an organic part of routine monitoring of manufacturing process. This allowed receiving data regarding the project continuously.

AISW used the accredited system of quality regulation according to the requirements of the ISO 9001 standard. In order to ensure the appropriate quality management system implementation the internal audits are conducted at the plant on monthly basis based on the AISW order # 864 of 27.12.2010. The department of quality management is responsible for the internal audit implementation at the plant and for the storage of the Reports on the results of the audits.

The Guiding Metrological Instructions were developed in accordance with ISO 9001. They secured required level of accuracy by using monitoring equipment and by the possibility to crosscheck the data adequacy.

Monitoring equipment met the regulatory requirements of Ukraine regarding accuracy and measurement error. All the equipment used for monitoring purposes, were in line with national legislative requirements and standards and also with ISO 9001 standards. The accuracy of devices was guaranteed by the manufacturers; the error was calculated and confirmed by device certificates. All monitoring equipment was covered by the detailed verification (calibration) plan. The verification process was under strict control. All measuring equipment was included in the verification schedule and verified with established periodicity. According to the schedule of verification, all devices were in satisfactory condition. The documented instructions to operate the facilities were stored at the working places. Also the environmental management standard ISO 14001 has been implemented and certified at AISW. The standard determines the procedures related to collection and archiving of data on environmental impacts within activity of the plant and, accordingly, the proposed project activity.

The monitoring procedures were quite comprehensible, because they had already been used at AISW for measuring input and output production parameters, and also for receiving data on level of FER and raw-materials consumption. The most effective accessible methods were used for the error minimization. Generally the error level was low for all parameters (less than 2%) that were subjected to the monitoring. Thus, the measurements uncertainty level corresponded with technologies, used in the production process, and was taken into the account when the data were taken from devices.

The procedures of receiving data for monitoring execution and responsibility for its realization at AISW were regulated by the normative documents of AISW and by the “Guiding Meteorological Instructions” in accordance with project documentation and monitoring plan.

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.

The identified areas of concern as to Data management, project participants response and BV Certification's conclusion are described in Appendix A (refer to CAR 04, CAR 05, CL 07, FAR 01, and FAR 02).

3.7 Verification regarding programmes of activities (102-110)

Not applicable.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the second periodic verification of the "Revamping of sintering and blast-furnace production at OJSC "Alchevsk Iron and Steel Works" Project in Ukraine, which applies JI specific approach. The verification was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

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

The management of PJSC "Alchevsk Iron and Steel Works" is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring and Verification Plan indicated in the final PDD version 4. 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 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 01/01/2011 to 30/06/2011

Baseline emissions	: 5 682 893 t CO_2 equivalents.
Project emissions	: 4 588 288 t CO_2 equivalents.
Leakages	: 64 872 t CO_2 equivalents.
Emission Reductions	: 1 029 733 t CO_2 equivalents.

For the monitoring period (01/01/2011 – 30/06/2011), total amount of emission reductions is 1 029 733 CO_2 equivalents.

Project emissions 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 that relate directly to the GHG components of the project.

/1/ PDD "Revamping of sintering and blast-furnace production at OJSC "Alchevsk Iron and Steel Works", version 4 dated 14/04/2011
/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 "Alchevsk Iron and Steel Works" (2010), version 1 dated 01.08.2011.
/4/ Monitoring Report "Revamping of sintering and blast-furnace production at OJSC "Alchevsk Iron and Steel Works" (2010), version 2 dated 14.09.2011.
/5/ Letter of Endorsement № 1806/23/7 on the JI project "Revamping of sintering and blast-furnace production at OJSC "Alchevsk Iron and Steel Works" dated November, 09, 2010 issued by National Environmental Investment Agency of Ukraine.
/6/ Declaration of Approval 2011JI14 on the JI project "Revamping of sintering and blast-furnace production at OJSC "Alchevsk Iron and Steel Works" issued by Ministry of Economic Affairs, Agriculture and Innovation dated 10.05.2011.
/7/ Letter of Approval #1155/23/7 on the JI project "Revamping of sintering and blast-furnace production at OJSC "Alchevsk Iron and Steel Works" issued by National Environmental Investment Agency of Ukraine dated 11.05.2011.
/8/ Excel-file "Leakages_AISW_BF_SP_first half 2011-ver 1"
/9/ Excel-file "Revamping of sintering an blast-furnace production at AISW"

Category 2 Documents:
Background documents related to the design and 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 dated 22/03/2011 on pressure difference transducer type Сафир, serial number #02320193
/5/ Measuring equipment conditions dated 21/01/11 on gas flow meters type Сафир, serial number #05900228(first meter) and type Диск-250, serial number #22526(second meter)
/6/ Passport dated 18/01/2011 on register devices type Диск-250,

serial number #22526(first meter) and type Сафир, serial number #05900228(second meter)

/7/ Measuring equipment conditions and characteristics passport dated 16/09/2010 on gas meters type Сафир,serial number #09942204(first meter) and type Диск-250, serial number #52206(second meter)

/8/ Passport dated 16/09/2010 on gas meter type Диск-250, serial number #52206(first meter) and type Сафир, serial number #09942204(second meter)

/9/ Passport dated 23/08/2010 on gas meter type Метран, serial number #000225 (first meter) and type Диск, serial number #10334 (second meter)

/10/ Passport dated 5/08/2011 on register devices type Диск-250, serial number #10384 (first meter) and type Метран, serial number #000225(second meter)

/11/ Measuring equipment conditions and characteristics passport dated 23/08/2010 on gas meters type Диск-250,serial number #10334(first meter) and type Метран, serial number #000225(second meter)

/12/ Passport dated 11/02/2011 on pressure converters type Сафир,serial number #01522624(first meter)
And type Диск-250, serial number #51458(second meter)

/13/ Measuring equipment conditions and characteristics passport dated 11/02/2011 on gas meters type Диск-250,serial number #51458(first meter) and type Сафір, serial number #01522426(second meter)

/14/ Passport dated 17/02/2010 on gas meter type Диск-250, serial number #51458 (first meter) and type Сафір, serial number #01522624 (second meter)

/15/ Measuring equipment conditions and characteristics passport dated 16/11/2010 on gas meters type Метран,serial number #295314 (first meter) and type Диск-250, serial number #93038 (second meter)

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/17/ Measuring equipment conditions and characteristics passport dated 21/04/2010 on gas meters type Метран, serial number #295315 (first meter) and type Диск-250, serial number #93041 (second meter)

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And type 150Э/2СД, serial number #0227(second meter)
/38/ Passport dated 14/06/2011 on stain-gauge wagon balance type ВЭТВ, serial number #213(first meter)
And type 50Д, serial number #0226(second meter)
/39/ Passport dated 14/06/2011 on stain-gauge wagon balance type 2361ВВ, serial number #61(first meter)
And type 80Э/1Д, serial number #0231(second meter)
/40/ Audit schedule of integrated management system operation of Quality Management System in the shops and plant's departments on 2011
/41/ Order dated 27/12/2011 for audit of integrated management system operation of Quality Management System
/42/ Consumption of blast furnace coke of dry quenching by AIISW blast furnaces for the first half-year of 2011
/43/ Excel-file "Quality indicators of coke for the first half-year of 2011".

/44/ Excel-file “Net calorific value of coal used in blast-furnace and sintering shops”
/45/ Passport for scales #1434 of coke shop #3. Date of the last verification: 24.09.2010
/46/ Passport for active and reactive energy meter LZQM 411.02-534, ser.#64811
/47/ Passport for active and reactive energy meter LZQM 411.02-534, ser.#64812
/48/ Passport for active and reactive energy meter LZQM 411.02-534, ser.#64812
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/51/ Passport #196 for weighing coke, ser. #1222. BF#1. Date of the last verification: 11.01.2011
/52/ Passport #197 for weighing coke, ser. #1223. BF#1. Date of the last verification: 11.01.2011
/53/ Passport #190 for weighing coke, ser. #1217. BF#3. Date of the last verification: 06.01.2011
/54/ Passport #191 for weighing coke, ser. #1218. BF#3. Date of the last verification: 06.01.2011
/55/ Passport #193 for weighing coke, ser. #1220. BF#4. Date of the last verification: 13.01.2011
/56/ Passport #192 for weighing coke, ser. #1221. BF#4. Date of the last verification: 13.01.2011.
/57/ Passport #194 for weighing coke, ser. #1219. BF#4. Date of the last verification: 13.01.2011
/58/ Passport #195 for weighing coke, ser. #1224. BF#4. Date of the last verification: 13.01.2011
/59/ Technical report. Pig iron. Blast-furnace shop. May 2011
/60/ Technical report. Pig iron. Blast-furnace shop. April 2011
/61/ Technical report. Pig iron. Blast-furnace shop. March 2011
/62/ Technical report. Pig iron. Blast-furnace shop. February 2011
/63/ Technical report. Pig iron. Blast-furnace shop. January 2011
/64/ Passport 28-1101315. ПС. Coke-sample drum. БКП1-22М. Alchevsk Coke Plant
/65/ Quality indicators of coke production. 14.01.2011. Alchevsk Coke Plant
/66/ Quality indicators of coke production. 6.02.2011. Alchevsk Coke Plant
/67/ Quality indicators of coke production. 12.08.2011. Alchevsk Coke Plant

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/ R. Zaporozhets – metrology engineer of control measurement equipments and apparatus shop at PJSC “AISW”
/2/ P. Sydorov – chief metrologist, head of control measurement equipments and apparatus shop at PJSC “AISW”
/3/ O. Tymoshenko – deputy head of the shop of weighted economy and technologies
/4/ L. Iaroshenko – engineer on metrology of central weighting economy
/5/ O. Adamchuk – engineer of central quality laboratory
/6/ S. Sbitniev – deputy head of technical department at PJSC “AISW”
/7/ A. Skliar – deputy head of sinter laboratory
/8/ M. Krasnonos – head of environmental protection department
/9/ S. Bondar – deputy chief power engineer
/10/ V. Komarov – head of electrical and technical laboratory
/11/ S. Medkova – training department
/12/ T. Goncharenko – lead specialist of planned-economic department
/13/ G. Bremze – deputy chief engineer at PJSC “AISW”
/14/ S. Kaltaiev – lead specialist of greenhouse gas accounting department of State Environmental Investment Agency of Ukraine
/15/ Y. Linnik – chief specialist of Institute for Environment and Energy Conservation Ltd.

APPENDIX A: COMPANY PROJECT 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?	The DFP of Netherlands has issued a written project approval for the project (Ministry of Economic Affairs, reference: 2011JI14 of 10.05.2011).	OK	OK
91	Are all the written project approvals by Parties involved unconditional?	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	The project has been implemented in accordance with the PDD of the final version listed on the UNFCCC JI website.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	UNFCCC JI website?			
93	What is the status of operation of the project during the monitoring period?	The Monitoring Report provides the list of project activities including their implementation status: - installation of pulverized coal injection (PCI) facility at BF#1 (implementation of this measure was started in October 2006 and was completed in May 2009); - installation of PCI facility at BF # 5 (implementation of this measure was started in October 2006 and was completed in August 2009); - installation of PCI facility at BFs ## 3,4 (implementation of the measure was started in October 2006 and is expected to be completed in the year 2015); - renewal and reconstruction of BF # 1 (implementation of this measure was started in the first half of 2004 and BF#1 was commissioned on 16th of May 2007); - renewal and reconstruction of BF # 5 (implementation of this measure was started in 2006 and is expected to be completed during year 2011); - reconstruction of the oxygen unit # 4 (implementation of this measure was		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		started in 2004 and was completed in December 2005); - installation of oxygen units # 7 (implementation of this measure was started in 2007 and was completed in 2008). - installation of oxygen units # 8 (implementation of this measure was started in 2007 and was completed in 2009); - construction of BF # 2 (implementation of this measure was started in 2007 and was not completed during the monitoring period. According to the project implementation schedule stated in the PDD, commissioning of the measure is expected in the year 2015); - construction of new sinter plant (implementation of this measure was started in 2006 and was not completed during the monitoring period. According to the project implementation schedule in the PDD, commissioning of the sinter plant is expected in the year 2016); - construction of new lime kilns (implementation of this measure was		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		started in 2005 and was not completed during the monitoring period. According to the project implementation schedule commissioning of the lime kilns was expected in the 2nd half of 2010, but to date the construction works are still undergoing. The decline from project implementation schedule was caused by the financial, technical and customs difficulties (the delay of equipment supply). The completion of construction works is expected by the end of 2011). **CL 01.** Please, explain the actual status of the project activity mentioned in the paragraph #9 of MR section 4. **CL 02.** Please, clarify the abbreviation "LED" given in the MR section 3.	CL 01 CL 02	OK OK
Compliance with monitoring plan				
94	Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	The monitoring occurs in accordance with the PDD of the final version listed on the UNFCCC JI website.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
95 (a)	For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) above, influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project taken into account, as appropriate?	For calculating the emission reductions, key factors were taken into account.	OK	OK
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	Data sources used for calculating emission reductions are identified in the Monitoring Report.	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 03.** Please, explain the use of the value of carbon emission factor for coal based on carbon content of anthracite. Indicate is it correct in respect to the PDD of final version? **CL 04.** Please, give more clear names for default emission factors mentioned in the table with projectline and baseline data variables.	CL 03 CL 04	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CL 05. Please, explain how calorific value of natural gas for the first half-year of 2011 is calculated in the MR section 5.	CL 05	OK
		CL 06. Please, explain the appearance of formulas for calculating emission factor for coke as these formulas were not included in the PDD of final version.	CL 06	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.		
		CAR 01. Please, give detail information (justification) concerning the amount of leakages of GHG emissions for this monitoring period (provide the reference to the Monitoring Report for the relevant period).	CAR 01	OK
		CAR 02. Please, explain the difference between amount of emission reductions calculated at the PJSC "AISW" (the Excel-file provided by deputy chief engineer of PJSC "AISW" on the site-visit) and amount of Emission Reductions stated in the Monitoring Report provided.	CAR 02	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CAR 03. The estimated amount of emission reductions provided in the PDD for the year 2011 is 1 254 763 tonnes of CO_2 equivalent; but in the Monitoring Report 1 029 733 tonnes of CO_2 equivalent is already stated as actual emission reductions only for the first *half-year* of 2011. Please, explain (in the Monitoring Report) the reason of such increasing emission reductions within the project.	CAR 03	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

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
97 (b)	If the determination was conducted on the basis of an overall monitoring plan, have the project participants submitted a common monitoring report?	N/A	N/A	N/A
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	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	original monitoring plan without changing 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?	**FAR 01.** 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 PJSC "Alchevsk Iron and Steel Works". **FAR 02**. At the PJSC "Alchevsk Iron and Steel Works" the order concerning indication of the names of the personnel involved in the monitoring should be issued. **CL 07.** Please, mention in the Monitoring Report that AISW is certified according to the requirements of the ISO 14001 standard mentioning the conformity audits conducting.	FAR 01 FAR 02 CL 05	Pending Pending OK
101 (b)	Is the function of the monitoring	**CAR 04.** Please, provide passports for	CAR 04	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	equipment, including its calibration status, is in order?	electricity supply meters which are the project monitoring equipment or prove accuracy of the meters readings by other means. **CAR 05.** Please, indicate correct frequency of verification/calibration for BF-5 natural gas consumption meter ДИСК МЕТРАН 1033 4000225, natural gas consumption meter ДИСК-250 Метран 93038 295314, and natural gas consumption meter ДИСК-250 Метран 93041 295315 (the frequency indicated in the Annex 1 of the Monitoring Report differs from the frequency stated in the passports provided to the verifiers). Please, prove that all these meters are calibrated at the proper time.	CAR 05	OK
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	See FAR 01 of this table.	See FAR 01	Pending
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	The data collection and management system are envisaged by the monitoring plan.	OK	OK
Verification regarding programs of activities (additional elements for assessment)				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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 JPA?	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, taking into account that: (i) For each verification that uses a sample-based approach, the sample selection shall be	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	publication through the secretariat along with the verification report and supporting documentation?			
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	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	writing?			

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, give detail information (justification) concerning the amount of leakages of GHG emissions for this monitoring period (provide the reference to the Monitoring Report for the relevant period).	95 (d)	Response #1. Taking into account that the project boundary of the JI project "Installation of a new waste heat recovery system at Alchevsk Coke Plant, Ukraine" (UA1000130 - registered under Track 1) includes blast-furnaces of AISW with respect to particular volumes of consumed dry blast-furnace coke, the CO2e emission reductions that were generated during the period of 01/01/2011 – 30/06/2011 due to component three (3) of mentioned above JI project were attributed to the leakages of GHG's. Leakages of GHG emissions from the JI project "Installation of a new waste heat recovery system at Alchevsk Coke Plant, Ukraine" were calculated by subtracting total project line emissions from the baseline emissions that were generated by the component 3 of the	Conclusion on response #1. In case if some deviation will occur in comparison with the verified emission reductions generated due to the component three (3) of mentioned above JI project, it will be impossible for the developer (accordingly) to add or subtract the difference of leakages in the following monitoring reports because these leakages concern only to this (the first half-year of 2011) monitoring period.

		mentioned above project. After that, leakages of GHG emissions were subtracted from the total volume of emission reductions associated with this project during this monitoring period. Leakages during first half-year of 2011 are equal to 64 872 tonnes CO_{2e}. Mentioned above volume of leakages is based on actual data which can be proved by initial data from AISW and Alchevsk Coke Plant. By taking into consideration that the mentioned above volume is still not verified yet and in case if some deviation will occur in comparison with the verified emission reductions generated due to the component three (3) of mentioned above JI project, the project developer will accordingly add or subtract the difference of leakages in the following monitoring reports. The excel file with calculation of	

		leakages together with initial data is now provided to the verifier. Response #2. Necessary corrections now are made in the Monitoring Report.	Conclusion on response #2. Required amendments now are made in the Monitoring Report. Based on checking all the information concerning leakages provided to the verifiers be AISW and Alchevsk Coke Plant, the issue is closed.

CAR 02. Please, explain the difference between amount of emission reductions calculated at the PJSC "AISW" (the Excel-file provided by deputy chief engineer of PJSC "AISW" on the site-visit) and amount of Emission Reductions stated in the Monitoring Report provided.	95 (d)	The difference between amount of emission reductions (ER) calculated in the Excel-file provided by deputy chief engineer of PJSC "AISW" during the site-visit and amount of ER stated in the MR was caused by the difference in baseline emissions. The reason for such difference is that Excel-file presented by PJSC "AISW" contained outdated emission factors for baseline emissions calculation. Despite that fact, specific volumes of FER consumption fully correlate between these two files. This proves correctness of calculations which are provided in the MR.	Based on the explanation received, CAR 02 is closed.

CAR 03. The estimated amount of emission reductions provided in the PDD for the year 2011 is 1 254 763 tonnes of CO_2 equivalent; but in the Monitoring Report, 1 029 733 tonnes of CO_2 equivalent is already stated as actual emission reductions only for the first *half-year* of 2011. Please, explain (in the Monitoring Report) the reason of such increasing emission reductions within the project.	95 (d)	Response #1. The amount of emission reductions that were actually generated during the first half-year of 2011 is higher than it was expected in PDD because of the following reason. The baseline of the project is developed based on the real steel manufacturing process as well as project line. Taking into account the implication of economy of scale and the fact that loading factor for baseline was much lower than for project line, the emission reductions were more sensitive to change of specific energy consumption per 1 t of pig iron produced than actually envisaged in the PDD. However this influence was beyond of project participants' control and fully based on market situation and requirements. Response #2. The explanation regarding	Conclusion on response #1. Please, include the explanation provided in the section 7 of the Monitoring Report. Conclusion on response #2.

		amount of actual emission reductions increase in comparison with estimations in PDD is now provided in the section 7 of the modified Monitoring Report.	The issue is closed based on the amendments made in the Monitoring Report.

CAR 04. Please, provide passports for electricity supply meters which are the project monitoring equipment or prove accuracy of the meters readings by other means.	101 (b)	Response #1. List of monitoring equipment provided by AISW that states the accuracy of electricity supply meters together with copies of passports for different types of electricity supply meters which are used under the project activity are now provided to the verifier. Passports for the rest of electricity supply meters will be provided to the verifier during the next verification. Response #2. Necessary information now is provided to the verification team.	Conclusion on response #1. Please, pay attention to the date of last calibration for the meters LZQM 64812, LZQM 64811, LZQM 64839, and LZQM 64832 with regard to the frequency stated in the passports for these meters. Since March 2010 till now the meters have been being with expired calibration status. Please, clarify and provide evidences how the measurement accuracy of these meters were ensured at least during the monitoring period. Conclusion on response #2. The issue is closed due to the documentation provided.

CAR 05. Please, indicate correct frequency of verification/calibration for BF-5 natural gas consumption meter ДИСК МЕТРАН 1033 4000225, natural gas consumption meter ДИСК-250 Метран 93038 295314, and natural gas consumption meter ДИСК-250 Метран 93041 295315 (the frequency indicated in the Annex 1 of the Monitoring Report differs from the frequency stated in the passports provided to the verifiers). Please, prove that all these meters are calibrated at the proper time.	101 (b)	Response #1. Correct verification/calibration frequencies of natural gas consumption meters (ДИСК МЕТРАН 1033 4000225, ДИСК-250 Метран 93038 295314, and ДИСК-250 Метран 93041 295315) are now provided in the modified monitoring report. The passports for mentioned above natural gas consumption meters are now provided to the verifier in order to prove that these consumption meters are verified/calibrated in time. Response #2. The required explanation is provided to the verification team.	Conclusion on response #1. Please, explain indicated (in the Annex of Monitoring Report) double frequency of verification (calibration) for meters ДИСК-250 Метран 93041 295315, and ДИСК-250 Метран 93038 295315). Conclusion on response #2. The issue is closed.

CL 01. Please, explain the actual status of the project activity mentioned in the paragraph #9 of MR section 3.	93	Response #1. For the present time construction of BF # 2 is delayed because of adverse market situation and lack of financing. Construction of BF # 2 will be continued after improvement of market situation and availability of funding. Response #2. Information concerning the actual status of the BF # 2 implementation is now provided in the paragraph #9 (section 3) of the modified MR.	Conclusion on response #1. Please, add the information provided to the corresponding subsection of the MR section 3. Conclusion on response #2. Based on the amendments made in the Monitoring Plan, the issue is closed.
CL 02. Please, clarify the abbreviation "LED" given in the MR section 1.	93	LED means light-emitting diode. Definition of such abbreviation is now provided in the modified MR.	Due to the amendments made, the issue is closed.
CL 03. Please, explain the use of the value of carbon emission factor for coal based on carbon content of anthracite. Indicate is it correct in respect to the PDD of final version?	95 (c)	Response #1. Taking into account that the most of coal that was consumed under the project activity, had common quality characteristics and calorific value to anthracite, it was decided to apply default emission factor for anthracite,	Conclusion on response #1. Please, provide additional documentation from PJSC "AISW", which proves quality characteristics and calorific value of coal.

		which is in accordance with IPCC data and consistent with the PDD. The additional documentation from PJSC "AISW", which proves quality characteristics and calorific value of coal, may be provided to the verifier upon his request. Response #2. Documentation that proves quality characteristics of coal is now provided to the verifier.	Conclusion on response #2. The issue is closed based on the information provided.
CL 04. Please, give more clear names for default emission factors mentioned in the table with projectline and baseline data variables.	95 (c)	Appropriate corrections are now made in the modified MR.	The issue is closed based on the amendments made.
CL 05. Please, explain how calorific value of natural gas for the first half-year of 2011 is calculated in the MR section 5.	95 (c)	Response #1. The calorific value of natural gas for the first half-year of 2011 is calculated based on actual calorific value which is provided by the natural gas supplier. The emission factor for natural gas is calculated based on actual calorific value and on default carbon emission factor which is	Conclusion on response #1. Please, include the explanation provided in the section 5 of the PDD.

		in accordance with IPCC data. Response #2. The explanation concerning calorific value of natural gas is now provided in the section 5 of the modified MR.	Conclusion on response #2. The issue is closed based on the amendments made in the PDD.

CL 06. Please, explain the appearance of formulas for calculating emission factor for coke as these formulas were not included in the PDD of final version.	95 (c)	Response #1. In the PDD it was indicated that in the emission factor for coke will be calculated based on actual carbon content of coke in case if such information will be available. As soon as mentioned above data was provided from AISW, appropriate amendments were made and additional formulas were included in the monitoring report to calculate emission factor to ensure transparency of applied approach. During this monitoring period the carbon emission factor for coke is calculated based on actual carbon content which can be proved by AISW documents (may be provided upon verifiers' request). Response #2. In the PDD it was indicated that in the emission factor for coke will be calculated based on actual carbon content of coke in case if such information will be	Conclusion on response #1. Specifying the method for calculating coke emission factor (appearance of formulas for calculating emission factor for coke) should be considered as revision to the Monitoring Plan. Conclusion on response #2. Please, draw up the revision to the Monitoring Plan as a separate section of the Monitoring Report.

		available. Taking into account that during this monitoring period such information was available, appropriate amendments were made and additional formulas were included in the monitoring report to demonstrate how the emission factor is calculated. Application of such formulas ensures transparency of applied approach. This insignificant deviation can be considered as a revision to the Monitoring Plan in PDD. Such information is now included in the modified monitoring report. Response #3. Necessary corrections are made.	Conclusion on response #3. The issue is closed.
CL 07. Please, mention in the Monitoring Report that AISW is certified according to the requirements of the ISO 14001 standard mentioning the conformity audits conducting.	101 (a)	Information that states that AISW is certified according to the requirements of the ISO 14001 is now included in the modified MR.	The information provided based on the information received.

FAR 01. 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 PJSC "Alchevsk Iron and Steel Works".	101 (a)	The order concerning the procedure for keeping monitoring data is prepared but will be signed at PJSC "Alchevsk Iron and Steel Works" before the next verification.	Pending
FAR 02. At the PJSC "Alchevsk Iron and Steel Works" the order concerning indication of the names of the personnel involved in the monitoring should be issued.	101 (a)	The order concerning the personnel responsible for the monitoring is prepared but will be signed at PJSC "Alchevsk Iron and Steel Works" before the next verification.	Pending