DETERMINATION REPORT
CARBON MARKETING AND TRADING LTD.

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

REPORT NO. UKRAINE-DET/0250/2011

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

Report No: UKRAINE-DET /0250/2011

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

Date of first issue: 14/04/2011	Organizational unit: Bureau Veritas Certification Holding SAS
Client: Carbon Marketing and Trading Ltd.	Client ref.: Tahir Musayev

Summary:
Bureau Veritas Certification has made the determination of the "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal" project of Carbon Marketing and Trading Ltd. located in the city of Zaporizhia, Ukraine 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 determination scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents, 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 determination report and opinion. The overall determination, from Contract Review to Determination Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the determination process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies Guidance on criteria for baseline setting and monitoring and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.: UKRAINE-DET/0250/2011	Subject Group: JI
Project title: Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal"	
Work carried out by: Svitlana Gariyenchyk – team member, lead verifier Rostislav Topchiy - team member, verifier Denis Pishchalov - team member, financial specialist Vitaliy Minyaylo – team Member, Verifier trainee	
Work reviewed by: Ivan Sokolov - Internal Technical Reviewer	
Work approved by: Flavio Gomes – Operational manager	
Date of this revision: 04/05/2011	Rev. No.: 01 / Number of pages: 75

Bureau Veritas Certification Holding SAS

Indexing terms

Climate Change, Kyoto Protocol, JI, Emission Reductions, Verification

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Abbreviations

AIE	Accredited Independent Entity
AISW	Alchevsk Iron and Steel Works
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CHP	Combined Heat and Power
CL	Clarification Request
CO_2	Carbon Dioxide
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

1 INTRODUCTION

Carbon Marketing and Trading Ltd. has commissioned Bureau Veritas Certification to determine its JI project "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal" (hereafter called "the project") at the city of Zaporizhia, Ukraine.

This report summarizes the findings of the determination 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

The determination serves as project design verification and is a requirement of all projects. The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Determination is a requirement for all JI projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emissions reductions units (ERUs).

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 determination scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

The determination is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 Determination team

The determination team consists of the following personnel:

Svitlana Gariyenchyk
Bureau Veritas Certification, Climate Change Lead Verifier

Rostislav Topchiy
Bureau Veritas Certification, Climate Change Verifier

Denis Pishchalov
Bureau Veritas Certification, Financial Specialist

Vitaliy Minyaylo
Bureau Veritas Certification, Climate Change Verifier trainee

This determination report was reviewed by:

Ivan Sokolov

Bureau Veritas Certification, Internal reviewer

2 METHODOLOGY

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

In order to ensure transparency, a determination 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 determination and the results from determining the identified criteria. The determination protocol serves the following purposes:

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

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

2.1 Review of Documents

The Project Design Document (PDD) submitted by Institute for Environment and Energy Conservation and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for users of the joint implementation project design document form, Approved CDM methodology and/or Guidance on criteria for baseline setting and monitoring, Kyoto Protocol, Clarifications on Determination Requirements to be Checked by an Accredited Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, Institute for Environment and Energy Conservation revised the PDD and resubmitted it on 29/04/2011.

The determination findings presented in this report relate to the project as described in the PDD version(s) 2.

2.2 Follow-up Interviews

On 13/04/2011 Bureau Veritas Certification performed conducted a visit to the project site (JSC "Zaporizhstal") and interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of 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
JSC "Zaporizhstal"	➢ Project history ➢ Project approach ➢ Project boundary ➢ Implementation schedule ➢ Organizational structure ➢ Responsibilities and authorities ➢ Training of personnel ➢ Quality management procedures and technology ➢ Rehabilitation/Implementation of equipment (records) ➢ Metering equipment control ➢ Metering record keeping system, database ➢ Technical documentation ➢ Monitoring plan and procedures ➢ Permits and licenses ➢ Local stakeholder's response.
CONSULTANT: Institute for Environment and Energy Conservation	➢ Baseline methodology ➢ Monitoring plan ➢ Additionality proofs ➢ Calculation of emission reduction.

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the determination 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 project design.

Corrective Action Request (CAR) is issued, where:

(a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;

(b) The JI requirements have not been met;

(c) There is a risk that emission reductions cannot be monitored or calculated.

The determination team may also issue Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable JI requirements have been met.

The determination team may also issue Forward Action Request (FAR), informing the project participants of an issue that needs to be reviewed during the verification.

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

3 PROJECT DESCRIPTION

The project is realized at the territory of the metallurgical plant JSC "Zaporizhstal", which is located in the city of Zaporizhia in Zaporizhia region, southern–east part of Ukraine. JSC "Zaporizhstal" (Zaporizhstal) is the enterprise with the full metallurgical cycle, which produces hot-rolled coils and cold rolled coils and also tinplate.

Zaporizhstal is the producer of agglomerate, pig iron, steel and rolled metal. Marketable products of the enterprise are hot-rolled and cold-rolled steel in sheets and in coils from 0.5 to 8.0 mm thick of carbon, low-alloy, alloy and stainless steels, cold roll-formed sections, hot-dipped tinplate, black plate, steel strip, ingot moulds and stools, granulated slag and broken slag,liquid gases, a wide range of metal, wooden and concrete articles (over 170 items).

While one of the more modern integrated steel works in Ukraine, Zaporizhstal was fairly typical of the Ukrainian iron and steel sector up to 2003 in terms of the vintage of technologies. The facilities of the plant were mainly built in 1930's and 1940's. The plant has high energy intensity, causing significant emissions into the atmosphere of greenhouse and harmful gases as well as dust.

Zaporizhstal consists of the following main units: sintering shop, blast furnace (BF) shop, open-hearth furnace shop, converter shop, plate and

rolling mill shops, slab-casting machines, power plant and auxiliary facilities.

Blast furnaces and sintering machines are operated at the Steel Mill for a long time and have not been changed technologically since their operation start. There were not any legal requirements to replace or reconstruct less effective blast furnace in the country leaving a decision on their replacement at project owner's discretion.

The greater presence at the market could be achieved by use of old production technologies, virtually without additional investment. However, at 25th of December, 2002 the management team of the enterprise has decided to start development of the enterprise by technical revamping of sintering and blast-furnace production. The main goal was not only to improve performance of the enterprise, but also to solve environmental problems of production process (according to the plan of revamping the amount of harmful emissions had to be reduced by more than 41%).

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.

Several project measures and activities have been and would be implemented in Zaporizhstal pig iron production to reduce consumption of coke and other fuel and materials. Some of these measures involved improvements in preparation of raw materials at Sinter Plant which mainly of technological character and also connected with introduction of the new sintering machine.

After implementation of these and other measures of technological character, this would lead to reduction of specific consumption of coke in the blast furnaces and better productivity of blast furnaces.

The sinter plant and blast furnace shop require production of so called secondary energy sources such as compressed air, steam, nitrogen, oxygen etc. These products are produced at the Steel Mill and a major part of them comes from the local power facilities. For a long time the modernization of the energy production has not been done because of absence of incentives into energy saving, uncertainty with market situation, difficulties with mobilizing the credit resources etc.

Without implementation of the proposed project activity Zaporizhstal would continue to operate the SP and BFs without introduction of new

facilities, technical upgrade and improvement of sintering and BF production processes. The baseline scenario of the proposed project activity assumes continuation of the situation existing prior to the project, i.e., continuation of SP and BFs #1,2, 3, 4 and 5.

The implementation of JI project requires the total investment costs of 1876,8 mio. UAH or 170,9 mio.euros.

The possibility to use Kyoto mechanisms contributed to identification of ways to improve energy-efficiency and environment at the sintering and blast-furnace process. These mechanisms will allow Zaporizhstal to receive additional financing needed to expand the JI project boundaries and reduce the period of credit payment and thus enhance the attractiveness of the project.

For a long time a realization of such projects was restrained by the absence of proper methodologies and practice on assessment of greenhouse gas emissions into atmosphere, caused by technological processes to be used in iron and steel sector. Only recently first examples of positive developments of similar JI projects have been demonstrated. It has opened the opportunity for Zaporizhstal to realize the similar JI project based on precedent experience.

4 DETERMINATION CONCLUSIONS

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

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

The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 42 Corrective Action Requests , 15 Clarification Requests and 01 Forward Action Request.

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

4.1 Project approvals by Parties involved (19-20)

The project has already received Letter of Endorsement № 13442/11/10-07 on the JI project "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal" dated 14/12/2007 issued by National Environmental Investment Agency of Ukraine.

Bureau Veritas Certification received this letter from the project participants and does not doubt its authenticity.

As for the time being no written approvals of the project by Parties involved are available. After receiving Determination Report from the Accredited Independent Entity the project documentation will be submitted to the Ukrainian Designated Focal Point (DFP) which is State Environmental Investment Agency of Ukraine, for receiving a Letter of Approval. The written approval by another Parties involved will be obtained later on.

4.2 Authorization of project participants by Parties involved (21)

The official authorization of each legal entity listed as project participant in the PDD by Parties involved will be provided in the written project approvals (refer to 4.1 above).

4.3 Baseline setting (22-26)

The PDD explicitly indicates that using a methodology for baseline setting and monitoring developed in accordance with appendix B of the JI guidelines (hereinafter referred to as JI specific approach) was the selected approach for identifying the baseline.

No applicable approved CDM methodologies are available for this project; however, in 2010 the JI project "Energy Efficiency measures at the "Public Joint Stock Company Azovstal Iron and Steel Works" was registered as a JI project and the project "Revamping of sintering and blast furnace production at OJSC "Alchevsk Iron and Steel Works" has already passed a positive determination by AIE. Both projects assume implementation of technological measures to improve the energy efficiency of blast furnace production as well as its modernization, moreover, the JI project at AISW covers all the components, which are envisaged by the proposed project activity. Both projects are similar to the proposed project activity; therefore their approach can be fully applied to the project in question. Be sides, in terms of methodological approach, the proposed project to the relevant part is alike with the project registered at UNFCC with reference number UA1000022, as it covers basically the same assets as in the proposed JI project - it refers to blast furnace shop and sintering machines as well as secondary energy production. It takes into account all emissions of GHGs related to the process of pig iron and sintering production. Therefore the approach is fully applicable for the proposed project.

The PDD provides a detailed theoretical description in a complete and transparent manner, as well as justification, that the baseline is established:

a) Identifying and listing alternatives to the project activity on the basis of conservative assumptions and taking into account uncertainties.

b) Identifying the most plausible alternatives considering relevant sectoral policies and circumstances, such as economic situation in the steel sector in Ukraine and other key factors that may affect the baseline. The baseline is identified by screening of the alternatives based on the technological and economic considerations for the project developer, as well as on the prevailing technologies and practices in Ukrainian steel industry at the time of the investment decision.

The alternatives have been identified based on national practice and reasonable assumptions with regard to the sectoral legislation and reform, economic situation in the country, availability of raw materials and fuel as well as technologies and logistics etc.

Alternative # 1:

Preservation of situation prior to the JI project activity: continuation of sinter plant and BFs #1,2,3,4 and 5 operations.

Ukrainian iron and steel production facilities have inherited process equipment installed during the Soviet era. Iron and steel industry is today in need of a sector sector-wide reform. However innovative development of the nation's iron and steel industry is practically minimal. The reason is that such practical decisions made bumped against lack of reliable financial and institutional support These reasons have also hampered Zaporizhstal to initiate and realize modernisation of the Plant.
Therefore, production of pig iron and steel and expansion of market share based on existing process lines, without introduction of new facilities, would be business-as-usual (BAU) solution fully in line with international steelmaking practices at the time of investment decision, as well as with economy environment of IUD and Ukraine in general. The benefits for the project owner include (i) insignificant capital expenditures due to planned repair and maintenance works, which is common practice at Zaporizhstal , (ii) profit in the short-term perspective amid crisis environment (iii) no need to secure access to significant financing, mostly required to make up operating capital, due to absent investment requirements and known technology, (iv) no need for capital construction, (v) low technical risk due to historical experience, familiarity and confirmed capacity to build, operate the facilities, and to manage related risks, (vi) availability of trained staff, etc.

In fact, the planned pig iron output could have also been secured with existing older BFs, SP and secondary power generation facilities. At the

moment of the investment decision, as well as currently, there were no regulatory or technical limitations for the operation of the older BFs and other steel facilities. Such limitations will continue to be absent at least until 2012 and even in longer term till 2022 - if there persist current Ukrainian economy conditions and intentions for its reform encouraging to hold back administrative barriers before commercial production activity carried out by private entities. However, in order to ensure conservativeness of the assumptions used for the identification of the baseline alternatives, six previous consecutive years before reconstruction start were have been chosen for establishing the baseline. The average data for the 6-year period should be enough to equal the impact of regular maintenance and working renewal of the steel facilities. Therefore the considered alternative does not face any barriers.

Alternative # 2:

Reconstruction of the agglomerate and blast-furnace production without carbon financing.

The project activity includes reconstruction of all the BFs, SP and secondary power generation facilities at Zaporizhstal.
In 2002, when decision was made, there were, and there still are, no legal or regulatory requirements in Ukraine for the adoption of obligatory reconstruction or modernization activities in steel making sector. The proposed project is in line with non-mandatory, general government policies, such as the Restructuring Program of the Iron and Steel Sector and with the long-term Energy Strategy for Ukraine (adopted in 2006).
The project activity is itself an integrated energy efficient program aimed at reduction of energy consumption per tonne of pig iron produced. This cannot be done without reconstruction and modernization of equipment in the Blast Furnace Shop as well in the Sinter Plant and Power Plant that includes other secondary production facilities and therefore without a massive investment program.
Against the backdrop of the poor economic situation of the Zaporizhstal, which proceeded the project implementation and moreover the aftermaths of financial crisis, whose effects influenced all Ukrainian economy sectors, a project requiring the total investment of 170 million Euro would be hard to accomplish.
Therefore, considering financial, technical and other barriers, project scenario without the JI component was not the most attractive one, which prevented its further implementation.

The Alternative #1 is the most likely baseline scenario for a number of reasons, for instance the required quantity and quality of pig iron can be produced without costly and large-scale reconstruction as well as change of historical manufacturing practice and logistics. The above suggests that the Alternative #1 would be the most plausible and credible alternative and it represents the baseline scenario for the proposed

project activity. For the baseline scenario, the full amount of CO2 emissions related to this scenario is accounted for; its monitoring is performed as part of detailed monitoring of steelworks processes required for the Zaporizhstal technical purposes.

Application of the approach chosen

The detailed analysis of the alternatives was given above. Alternative #2 presents the project scenario and in comparison with Alternative #1 that is the baseline required significantly more investments. Therefore continuation of existing practice with gradual planned maintenance and repair does not require additional massive investments as well as change of used process technology and is the most plausible and realistic one.

Consistency with mandatory applicable laws and regulations

As it was also mentioned above the year 2002 was selected as the year when the investment decision was made. All the listed alternatives in the year 2002 were considered to be feasible and did not face any legislative barriers.

Moreover even at the date of PDD preparation situation is still identical. Ukrainian legislation does not regulate CO2e emissions and does not demand reductions of such emissions.

Therefore, the most plausible scenario for the baseline is the Altenative #1. All the information concerning approach for calculation of emission reductions are given below.

Conservative assumptions used for baseline emission calculations have been applied:

a) 6 year base period from 1997 to 2002 has been chosen in order to nullify the impact of annual or periodic repair and maintenance of the equipment;

b) timing of baseline period coincides with gradual improvements at the global steel market. At the same time project line faces negative impact of world financial and economic crisis that makes specific energy consumption rate per tonne of pig iron to be more intensive than under normal operation;

c) in the baseline period natural gas was historically cheaper than in the project line that could cause its replacement on coal and coke with higher emission factor during the project activity. This impact was ignored that makes approach a very conservative.

In order to calculate the project emission reduction units the total pig iron production is accepted as equal to the project production.

All explanations, descriptions and analyses pertaining to the baseline in the PDD were found adequate and the baseline is identified appropriately.

4.4 Additionality (27-31)

The most recent version of the "Tool for the demonstration and assessment of additionality" approved by the CDM Executive Board was used, in accordance with the JI specific approach, defined in paragraph 2 (c) of the annex I to the "Guidance on criteria for baseline setting and monitoring". All explanations, descriptions and analyses are made in accordance with the selected tool.

The PDD provides a justification of the applicability of the approach. Due to the fact that there is no approved CDM baseline and monitoring methodology which is applicable to the project type, the Additionality Tool is applied which is considered as a good practice for additionality justification.

Additionality proofs are provided. Two alternative scenarios to the project activity were identified and proven to be in compliance with mandatory legislation and regulations taking into account the enforcement in the region and Ukraine.

The proposed joint implementation project is not common practice. To-date, similar projects have been implemented at Azovstal (some measures related to technological improvements of BFs operation and reconstruction of BF shop components of the proposed JI project) and at Enakievo Metallurgical Works within the within the framework of one of the mechanisms provided by the Kyoto protocol to UNFCCC. Pursuant to the Tool for the Demonstration and Assessment of Additionality, a project registered under Kyoto mechanism is excluded from common practice analysis, which makes the proposed project the only one of its kind for Ukraine.

So, the program of revamping of sintering and blast-furnace production planned to be implemented at Zaporizhstal is an integrated program that has no predecessors in Ukraine and could not be considered as a common practice. Thus, the overall conclusion is that the project activity meets all additionality criteria, is not the baseline scenario and is additional.

Additionality is demonstrated appropriately as a result of the analysis using the approach chosen.

4.5 Project boundary (32-33)

The project boundary defined in the way to cover all emissions of GHGs related to the project. With respect to organizational structure of Zaporizhstal, project boundary includes directly sinter plant and blast-furnace shop together with all auxiliary power facilities of the plant. Power

grid, natural gas supply network and material supplies such as coke were not included in the project boundary directly; however Ukraine's typical greenhouse gas emission factors for production and/or supply of electricity and gas consumed under baseline and project scenarios have been factored in emission calculations. Thus all CO_2 emissions related to project and baseline cases have been taken into account.

The leakages occur due to JI projects "Reconstruction of the Oxygen Compressor Plant at the JSC "Zaporizhstal", Ukraine" and other JI projects that are currently under development. In case if other projects that are causing energy efficiency effect on agglomerate and blast-furnace production at Zaporizhstal will be registered under JI mechanisms, at the stage of monitoring report development the following emission reductions that are generated due to the specific project will be subtracted from the total volume of emission reductions generated by this project in the specific monitoring period.

N_2O emissions from steelmaking process are unlikely to be significant IPCC does not provide a methodology to calculate N_2O emissions. They will not typically change from baseline to project case. CH_4 emissions are related to sinter and coke production in this type of project and are very minor in comparison with CO_2e emissions. Both types of emissions are excluded from the quantification of baseline and project emissions. The exclusion of CH_4 represents a conservative approach as more sinter and coke is consumed in absolute terms in the baseline in comparison with the project.

Therefore, the project boundary defined in the PDD encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs) that are:

(i) Under the control of the project participants, such as fuels used in the project and baseline, material flow as part of production process;

(ii) Reasonably attributable to the project such as electricity used under the project and baseline scenarios; and

(iii) Significant, i.e., as a rule of thumb, would by each source account on average per year over the crediting period for more than 1 per cent of the annual average anthropogenic emissions by sources of GHGs, or exceed an amount of 2,000 tonnes of CO_2 equivalent, whichever is lower.

The delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD.

4.6 Crediting period (34)

The PDD states the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began, and the starting date is 01/01/2003, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 20 years and 240 months.

The PDD states the length of the crediting period in years and months, which is 16 years and 9 months or 201 months (3 years and 9 months or 45 months for the period before the first commitment period, 5 years or 60 months for the first commitment period and 8 years or 96 months years for the period following the first commitment period), and its starting date as 01/01/2003, which is on the date the first emission reductions or enhancements of net removals are generated by the project.

The PDD states that the crediting period for the issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project.

The PDD states that the extension of its crediting period beyond 2012 is subject to the host Party approval, and the estimates of emission reductions or enhancements of net removals are presented separately for those until 2012 and those after 2012 in all relevant sections of the PDD.

4.7 Monitoring plan (35-39)

The PDD, in its monitoring plan section, explicitly indicates that JI specific approach was the selected.

The monitoring plan describes all relevant factors and key characteristics that will be monitored, and the period in which they will be monitored, in particular also all decisive factors for the control and reporting of project performance, such as statistics reporting forms; quality control (QC) and quality assurance (QA) procedures; detailed guidelines regulating the monitoring procedures and responsibilities; the Investment Plan giving a schedule of construction activities; the operational and management structure that will be applied in implementing the monitoring plan.

The monitoring plan specifies the indicators, constants and variables that are reliable (i.e. provide consistent and accurate values), valid (i.e. be clearly connected with the effect to be measured), and that provide a

transparent picture of the emission reductions or enhancements of net removals to be monitored 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.

The monitoring plan explicitly and clearly distinguishes:

(i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination, such as emission factor for fuel consumption, emission factor of each reducing agent, emission factor of each other input.

(ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination, which are absent.

(iii) Data and parameters that are monitored throughout the crediting period, such as total pig iron output, quantity of each fuel used in making pig iron, 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, quantity of each other input in pig iron production, quantity of each fuel used for balance of process needs, electricity consumed for balance of process needs.

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording, such as direct measurement with scales; gas, water, steam and electricity meters; calculations with different recording frequency such as continuously or monthly and electronic or paper recording method.

The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate.

Baseline emissions:

$BE_i = TCPTPIP_b \times TPII_{p,i}$,

where:
$TCPTPIP_b$ – total CO_2e emissions per 1 tonne of pig iron produced, t CO_2e
$TPII_{p,i}$ – total pig iron production during the particular project period, tonnes
$_i$ = regular data registration interval
$_p$ = project case
$_b$ = baseline

$TCPTPIP_b$ – total CO_2e emissions per 1 tonne of pig iron produced in the baseline scenario (historical data of Zaporizhstal operation regarding pig iron production during the period of 1997 – 2002) – includes total embodied CO_2e from Pig Iron production and total CO_2e in the balance of production processes, which are divided by total volume of pig iron production in the baseline scenario (historical pig iron production at Zaporizhstal during the period of 1997 – 2002).

$TCPTPIP_b = (TCPI_{b,i} + TCBPN_{b,i}) / TPII_{b,i}$,

where:
$TCPI_{b,i}$ = total embodied CO_2e from Pig Iron production, t CO_2e
$TCBPN_{b,i}$ = total CO_2e in the balance of production processes, t CO_2e
$TPII_{b,i}$ = total pig iron production during the baseline period, tonnes

The approach includes 2 clear steps determining the CO_2e emissions from Pig Iron production (Step 1) and emissions from balance of process needs (Step 2) required estimate total CO_2e emissions per 1 tonne of pig iron produced in the baseline scenario.
The equations capture the entire CO_2e impacts of all material and energy flows into the baseline. Therefore the approach is both transparent and justifiable. All the changes, e.g. the potential energy efficiency measures will be directly reflected in the baseline emissions further supporting the conservativeness of the baseline approach.

Project emissions:

Project emissions will equal the total tonnes of CO_2e from the Pig Iron Process and Sintering (Sinter production) added to the total tonnes of CO_2e from the energy consumed for the balance of process needs. The data will be measured regularly. Equations capture the entire CO_2e impact from all material and energy flows into the project. Therefore the approach is both transparent and justifiable. Monitoring approach captures also potential changes in project design.

$PE_i = TCPI_{p,i} + TCBPN_{p,i}$,

where:
$TCPI_{p,i}$ - total embodied CO_2e from Pig Iron production, t CO_2e (project case)
$TCBPN_{p,i}$ - total CO_2e in the balance of production processes, t CO_2e (project case)
$_i$ - regular data registration interval

The approach includes 2 clear steps determining the CO_2e emissions from Pig Iron production (Step 1) and emissions from balance of process needs (Step 2) required estimate total CO_2e emissions in the projectline scenario.
The equations capture the entire CO_2e impacts of all material and energy flows into the projectline. Therefore the approach is both transparent and justifiable. All the changes, e.g. the potential energy efficiency measures will be directly reflected in the projectline emissions further supporting the conservativeness of the projectline approach.

Emission reductions are calculated using the equation:

$ER_i = BE_i – (PE_i + LE_i)$,

where:
ER_i =Emission Reductions
BE_i= Baseline Emissions
PE_i= Project Emissions
LE_i= Leakages of GHG's
$_i$ = regular data registration interval

The monitoring plan presents the quality assurance and control procedures for the monitoring process which are described in the section D.2 of the PDD. This includes, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities. The data required to monitor JI project is routinely collected within the normal operations of the JSC "Zaporizhstal" therefore JI monitoring is integral part of routine monitoring. Data is compiled in (i) day-to-day records, (ii) quarterly records, and (iii) annual records. All records are finally stored in Planning and Economic Department.

The monitoring plan will be implemented by different specialists of the JSC "Zaporizhstal" under supervision of planning and economic department and by the technical director of the Plant. All main production

shops and specialists of the plant will be involved into the preparation of monitoring report under coordination of the planning and economic department.

On the whole, the monitoring report reflects good monitoring practices appropriate to the project type.

The monitoring plan provides, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources (e.g. official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature etc.) but not including data that are calculated with equations.

The monitoring plan indicates that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project.

4.8 Leakage (40-41)

The PDD appropriately describes an assessment of the potential leakage of the project and appropriately explains which sources of leakage are to be calculated, and which can be neglected.

Leakages are generated due to JI project "Installation Reconstruction of the Oxygen Compressor Plant at the JSC Zaporizhstal, Ukraine" and other JI projects that are currently under developement.

There should be no other leakages except the mentioned ones. The emissions from installing the new equipment will not be sign transport of materials will not be significantly higher for the baseline; however this will not be taken into account to secure conservativeness of the analysis.
.

4.9 Estimation of emission reductions or enhancements of net removals (42-47)

The PDD indicates assessment of emissions or net removals in the baseline scenario and in the project scenario as the approach chosen to estimate the emission reductions or enhancement of net removals generated by the project.

The PDD provides the ex ante estimates of:

(a) Emissions for the project scenario (within the project boundary), which are 34 463 906 tons of CO2e for 01/04/2004-2007, 42 673 141 tons of CO2e for 2008-2012, and 93 311 491 tons of CO2e for 2013-2020;

(b) Estimated leakage 9 358 tons of CO2e for 2006-2007, 197 353 tons of CO2e for 2008-2012, and 43 991 tons of CO2e for 2013-2020.

(c) Emissions for the baseline scenario (within the project boundary), which are 36 332 114 tons of CO2e for 01/04/2004-2007, 44 608 646 tons of CO2e for 2008-2012, and 97 464 312 tons of CO2e for 2013-2020.

(d) Emission reductions adjusted by leakage, which are 1 858 850 tons of CO2e for 01/04/2004-2007, 1 738 152 tons of CO2e for 2008-2012, and 3 800 893 tons of CO2e for 2013-2020.

The estimates referred to above are given:

(a) On a annual basis;

(b) From 01/04/2004 to 31/12/2020, covering the whole crediting period;

(c) On a source-by-source/sink-by-sink basis;

(d) For each GHG gas, which are CO2

(e) In tonnes of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol;

The formulas used for calculating the estimates referred above are the same as those used for project monitoring and described in the section 4.7 above. All formulas are consistent throughout the PDD.

For calculating the estimates referred to above, key factors, e.g. e.g. fuel prices and availability, expected market development, etc. influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project were taken into account, as appropriate.

Data sources used for calculating the estimates referred to above, such as feasibility studies, production forecasts, actual historical monitored data, IPCC etc. are clearly identified, reliable and transparent.

Emission factors, such as emission factor for fuel consumption, emission factor for electricity consumption, emission factor of each reducing agent, emission factor of each other input. were selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice.

The estimation referred to above is based on conservative assumptions and the most plausible scenarios in a transparent manner.

The estimates referred to above are consistent throughout the PDD.

The annual average of estimated emission reductions or enhancements of net removals over the crediting period is calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period, and multiplying by twelve.

4.10 Environmental impacts (48)

The PDD lists and attaches documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party (in line with the Laws of Ukraine "On Protection of Environment", "On Environmental Due Diligence", "On Protection of Atmospheric Air", "On Wastes", "On Ensuring Sanitary and Epidemic Welfare of the Population", "On Local Councils of People's Deputies" and "On Local Governance in Ukraine", as well as in line with effective versions of Water Code, Land Code, Forest Code, and Ukraine's State Code of Civil Practice DBN A.2.2-1-2003 etc.), such as EIAs (Environmental Impact Assessments) for such activities as: reconstruction of the BF # 2; installation of PCI facilities at BFs ## 2, 3, 4, 5; reconstruction of oxygen and compressor shop, reconstruction of the sintering machine #1 with introduction technological gas purification. EIAs were developed by Ukrainian State Steelworks Design Institute (Ukrdipromez). The documents provide assessment of impact of the project activity on various components of natural, social, and manmade environment.

The project has transboundary impact on the environmental. Reduction and control over the emissions of hazardous substances is provided by the Protocols to the UN Convention on Long-range Transboundary Air Pollution, which Ukraine has ratified.

According to the EIA project activity will lead to the reduction of hazardous substances by 11 036 tonnes per year, therefore project activity is in compliance with obligations taken by Ukraine.

The PDD provides conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party, if the analysis referred to above indicates that the environmental impacts are considered significant by the project participants or the host Party.

4.11 Stakeholder consultation (49)

Law of Ukraine on environmental expertise defines the procedure of participation of citizens and public organizations in the public environmental expertise.

Public has been informed about the planned economic activities with the goal to identify public attitudes and take opinion in account during environmental impact assessment process.

Public was informed about the project, especially about the following information:

· project name, goals and site;

· legal name and address of project owner and its representative;

· approximate dates of EIAs procedures;

· deadline and formats of submission of public comments;

· when and where EIA documents can be retrieved.

No negative comments from the public were received within the deadlines indicated in these publications. Public hearings have not been organized, because the project site lies within the Zaporizhstal territory and public did not express any interest in the planned activities.

All information on stakeholders' comments is included in the EIAs as a part of FSs completed in accordance with Ukrainian statutory requirements.

5 SUMMARY AND REPORT OF HOW DUE ACCOUNT WAS TAKEN OF COMMENTS RECEIVED PURSUANT TO PARAGRAPH 32 OF THE JI GUIDELINES

No comments, pursuant to paragraph 32 of the JI Guidelines, were received.

6 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal" Project in Ukraine. The determination 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 determination consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final determination report and opinion.

Project participant/s used the latest tool for demonstration of the additionality. In line with this tool, the PDD provides barrier analysis and common practice analysis, to determine that the project activity itself is not the baseline scenario.

Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The determination revealed two pending issues related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party. If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Version 02 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

The review of the project design documentation (02) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

The determination is based on the information made available to us and the engagement conditions detailed in this report.

7 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 "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal", version 1 dated 18/03/2011
/2/ PDD "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal", version 2 dated 14/04/2011
/3/ Register of sorted values calculations. 01-06.2001
/4/ 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.
/5/ JSC "Zaporizhstal". Business-plan. Technical reequipment of agglofactory. Reconstruction of agglomachine No.1. Reg No.539584
/6/ List of immovable's that are transferred into the ownership of JSC "Zaporizzhia Metallurgical Industrial Complex "Zaporizhstal" dated 19.08.2000
/7/ Direction of approval of state technical committee statement No. 678p dated 23.06.2005
/8/ State technical committee statement of putting ready-built object into operation No. 678p dated 23.06.2005
/9/ Business-plan. General overhaul and reconstruction of blast-furnace-2. DT 336456. Volume 4. Reg. No.488408
/10/ List of volumes related to general overhaul of blast-furnace-2 JSC "Zaporizhstal"
/11/ 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"
/12/ Letter of approval of expert conclusion actuality No. 10/7536 dated 14.12.2009
/13/ Petition for expert conclusion duration prolongation dated 19.11.2009 No.33/1569
/14/ Statement of program product delivery No.44.01.01-09 dated 01.01.2009
/15/ Natural gas composition register. Started 2002 - finished 12.2009
/16/ Certificate of physical-chemical parameters of natural gas for the period 01.01.05 - 31.01.05
/17/ Natural gas composition register. Started 2010
/18/ Report for December 2010
/19/ 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

/20/ Rules of gas and liquids wastes measurement using restriction equipment RD 50-213-80
/21/ Gas balance register for the 4th quarter of 2003
/22/ Consumer technical and economic calculation accounting dated 30.11.2009
/23/ Natural and blast-furnace gas register. 2009
/24/ Consumer technical and economic calculation accounting dated 30.11.2009
/25/ Water assessment register for 4th quarter of 2006
/26/ Air, oxygen, nitrogen and argon assessment register for November and December 2008
/27/ Vapor assessment register for November and December 2009
/28/ Actual volumes of production in departments of industrial complex for December 2010
/29/ Report on electric power wastes in metallurgical industrial complex JSC "Zaporizhstal" for December 2010
/30/ Report on work of gas department for December 2010
/31/ Meeting initiated by technical director record dated 25.12.2002
/32/ Conclusion No.161 of state ecological expertise dated 26.12.2002
/33/ Permission No.2310136600-39 for pollutant emission into atmospheric air dated 30.12.2009
/34/ Project of JSC "Zaporizhstal" "General overhaul and reconstruction of blast-furnace-2 DT 336456 Volume 1
/35/ Project of JSC "Zaporizhstal" "General overhaul and reconstruction of blast-furnace-2 DT 336456 Volume 2 Reg. No.488406
/36/ Project of JSC "Zaporizhstal" "General overhaul and reconstruction blast-furnace-2 DT 336456 Volume 2. Statement of ecological consequence
/37/ Project of JSC "Zaporizhstal" "General overhaul and reconstruction blast-furnace-2 DT 336456 Volume 2. Environmental impact assessment
/38/ Information on training, retraining and raising the level of personnel skills of JSC "Zaporizhstal" for 2010
/39/ Goals of personnel training department in the field of quality, environment and labor protection for 2011 dated 31.12.2010
/40/ Information on personnel training of JSC "Zaporizhstal" for 2010
/41/ Quality, environment and labor protection policy of JSC "Zaporizhstal"
/42/ Information on training and raising the level of personnel skills of JSC "Zaporizhstal" for 2010
/43/ Personnel training programm of JSC "Zaporizhstal" for working with equipment for preparation and injection of dust-coal fuel into blast-furnace
/44/ 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
/45/ Certificate of attendance the seminar "Introduction into explosion

proof equipment "ATEX" of hoover facility of product company INTENSIV FILTER" for A.Merezniyk

/46/ Certificate of attendance the seminar "Introduction into explosion proof equipment "ATEX" of hoover facility of product company INTENSIV FILTER" for N.Stakhanova

/47/ Certificate of attendance the seminar LAB-01 for laboratory personnel for N.Povstyana

/48/ Certificate of attendance the group seminar GEN01/PLC01/PLC02/PLC03/POS01 for V.Bublej

/49/ Certificate of attendance the group seminar GEN01/PLC01/PLC02/PLC03/POS01 for A.Gavrylenko

/50/ Certificate of attendance the group seminar GEN01/PLC01/PLC02/PLC03/POS01 for S.Moscalets

/51/ Information on training of personnel of blast-furnace shop PCI section dated 11.04.2011

/52/ Information on training of personnel of blast-furnace shop caused by setting new equipment dated 11.04.2011

/53/ STP 226.01.01-05 Fluxed sinter. Technical requirements and acceptance.

/54/ Main technical characteristics: screening of sinter chemical analysis of the sinter grinding of raw materials. Violation of instructions of Technology (2005 to 2010.)

/55/ Help on the quality of sinter (2008 to 2011.)

/56/ Photo. Passport Disc-250-1121 natural gas consumption № 82670

/57/ Photo. Disc-250-1121 natural gas consumption № 82670

/58/ Photo. Passport transducer DM-3583 № 12560

/59/ Photo. Passport secondary device KSD-3 steam consumption № 195038

/60/ Photo. Secondary device KSD-3 steam consumption № 195038

/61/ Photo. Passport transducer DM-3583 № 5654

/62/ Photo. Passport converter BPL № 5805

/63/ Photo. Passport secondary device Disk-250-1121 airflow № 20327

/64/ Photo. Secondary device Disc-250-1121 airflow № 20327

/65/ Photo. Passport Disc-250-1121 consumption of industrial water № 91467

/66/ Photo. Passport KSD-3 consumption of industrial water № 191712

/67/ Photo. Passport KSD-3 consumption of industrial water № 362835

/68/ Photo. Secondary device. Disc-250-1121 rate of industrial water № 91467

/69/ Photo. Secondary device KSD-3 consumption of industrial water № 191712

/70/ Photo. Secondary device KSD-3 consumption of industrial water № 362835

/71/ Photo. Journal of industrial water balance on sinister workshop

/72/ Photo. Act to withdraw assets from the blast furnace#1 from July 2005

/73/ Photos Act a technical survey of Blast Furnace#1 of 20/01/2005

/74/ Photo Decision about the cancellation of BF#1
/75/ Photo Passport number 45 on the scale electromechanical HR-200000RT with information about the verification
/76/ Photo Passport number 46 on the scale electromechanical HR-200000RT with information on the verification
/77/ Photo Shipped pig iron logbook
/78/ Photo Electromechanical scales HR-200000RT № 45
/79/ Photo Electromechanical scales HR-200000RT № 46
/80/ Photo Passport on the scales 02/16E
/81/ Photo Passport on the scales 02/25E
/82/ Photo Passport on the scales 02/26E
/83/ Photo Passport on the scales 02/27E
/84/ Photo Passport on the scales 02/24E
/85/ Photo Passport on the scales 02/23E
/86/ Photo Passport on the scales 02/22E
/87/ Photo Passport on the scales 02/21E
/88/ Photo Passport on the scales 02/20E
/89/ Photo Passport on the scales 02/19E
/90/ Photo Passport on the scales 02/18E
/91/ Photo Passport on the scales 02/17E
/92/ Photo Passport on the scales 02/29E
/93/ Photo Sensor of the Scales
/94/ Photo Electronic form accounting of electricity consumption by the blast furnace workshop
/95/ Photo Report on energy consumption for active power in November 2010
/96/ Photo Electronic form accounting of electricity consumption in the sinter workshop
/97/ Photo Report on energy consumption for active power in December 2010
/98/ Photo Counting of electricity per day substation M-1 logbook
/99/ Photo monthly report on consumption of electricity
/100/ Photo Daily statement of electricity consumption by substation M-1 for the 31 December 2010.
/101/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103132
/102/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103390
/103/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103359
/104/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103265
/105/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103170
/106/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103184
/107/ Photo installation instructions and a passport multifunction

electricity meter type EvroALFA number 01103186
/108/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103368
/109/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103372
/110/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103293
/111/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103190
/112/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103155
/113/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103161
/114/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103275
/115/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103156
/116/ Photo installation instructions and a passport multifunction electricity meter type EvroALFA number 01103276
/117/ Internal standard of JSC "Zaporizhstal" STP 7.6-01-03 "Metrological support"
/118/ Internal standard of JSC "Zaporizhstal" STP 7.6-03-03 "Procedure for repair of measuring equipment"
/119/ Internal standard of JSC "Zaporizhstal" STP 7.6-04-03 "Procedure for metrological review"
/120/ Internal standard of JSC "Zaporizhstal" STP 7.6-05-03 "Procedure for metrological certification"
/121/ Internal standard of JSC "Zaporizhstal" STP 7.6-06-03 "Procedure for analyze ensuring of technological process"
/122/ Internal standard of JSC "Zaporizhstal" STP 7.6-07-03 "Procedures for verification and calibration"
/123/ Internal standard of JSC "Zaporizhstal" STP 7.6-08-03 "Provisions on liability for condition of measuring equipment in subdivisions"
/124/ Internal standard of JSC "Zaporizhstal" STP 7.6-09-03 "Procedure for developing, manufacturing and operating templates"
/125/ Internal standard of JSC "Zaporizhstal" STP 7.6-10-03 "Metrological supervision of the flowmeters"

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

/1/ Guidelines for Users of the Join Implementation Project Design Document Form, version 04, JISC
/2/ Joint Implementation Project Design Document Form, version 01
/3/ Glossary of JI terms, version 03, JISC.

/4/ Guidance on Criteria for Baseline Setting and Monitoring, version 02, JISC.

/5/ Tool for the demonstration and assessment of additionality, Version 05.2

/6/ JISC "Clarification regarding the public availability of documents under the verification procedure under the Joint Implementation Supervisory Committee." Version 03

/7/ Letter of Endorsement № 13442/11/10-07 on the JI project "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal" dated 14/12/2007 issued by National Environmental Investment Agency of Ukraine.

Persons interviewed:

List persons interviewed during the determination 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 DETERMINATION PROTOCOL

BUREAU VERITAS CERTIFICATION HOLDING SAS

DETERMINATION PROTOCOL

"RECONSTRUCTION OF THE AGGLOMERATE AND BLAST-FURNACE PRODUCTION AT THE JSC "ZAPORIZHSTAL" REPORT NO. UKRAINE-DET/0250/2011

Check list for determination, according JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 01)

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
General description of the project				
Title of the project				
-	Is the title of the project presented?	The title of the project is: "Reconstruction of the agglomerate and blast-furnace production at the JSC "Zaporizhstal".	OK	OK
-	Is the sectoral scope to which the project pertains presented?	CAR 01. The project pertains to the sectoral scope 9 (metallurgy). Please, indicate the sectoral scope correctly.	CAR 01	Ok
-	Is the current version number of the document presented?	The current version number of the document is presented. See section A.1.	OK	OK
-	Is the date when the document was completed presented?	The date of completeness of the current version of the project design document is indicated in the PDD section A.1.	OK	OK
Description of the project				
-	Is the purpose of the project included with a concise, summarizing explanation (max. 1-2 pages) of the: a) Situation existing prior to the starting date of	In December 2002 JSC "Zaporizhstal" have decided to start development of the enterprise by technical revamping of sintering and blast-furnace production. The main goal was not only to improve performance of the enterprise, but also to	CAR 02 CL 01 CAR 03 CAR 04	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	the project; b) Baseline scenario; and c) Project scenario (expected outcome, including a technical description)?	improve energy-efficiency and environment at the sintering and blast-furnace process. CAR 02. Section 5 on page 3 contains the phrase "investment costs of this project are described further in this PDD (section A.4.2, Table 1)", but this table only contains the action plan. Please adjust it. CL 01. Please, provide documents proving the project start date. CAR 03. Please specify the exact date and version of the revised PDD. CAR 04. Please, explain what the abbreviation PCI (Table 1, p.6 of the PDD) stands for.		
-	Is the history of the project (incl. its JI component) briefly summarized?	The history of the project (incl. its JI component) is briefly summarized. CAR 05. On page 40 PDD said «the starting date of the project is provided by the Protocol of technical Council of the plant dated 25th December, 2002", while on page 2 indicates 22 December 2002. Please, adjust it.	CAR 05	OK
Project participants				
-	Are project participants and Party(ies) involved in the project listed?	Project participant and parties involved are listed in the Table in section A.3. of the PDD. It is expected LoA will be provided by the United Kingdom of Great Britain and Northern Ireland,	OK	OK
-	Is the data of the project participants presented in tabular format?	The data of the project participants are presented in due tabular format.	OK	OK
-	Is contact information provided in Annex 1 of	Contact information is provided in Annex 1 of the PDD.	CAR 06	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	the PDD?	CAR 06. Please indicate in Annex 1: - Phone and fax or E-mail of JSC "Zaporizhstal", - Mobile of Mr. Lykov.		
-	Is it indicated, if it is the case, if the Party involved is a host Party?	Ukraine is indicated as Host Party.	OK	OK
Technical description of the project				
Location of the project				
-	Host Party(ies)	Ukraine	OK	OK
-	Region/State/Province etc.	Zaporizhia region	OK	OK
-	City/Town/Community etc.	Zaporizhia	OK	OK
-	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	Geographical latitude: 48°52′0″ N. Geographical longitude: 35°09′0″ E. CAR 07. Section A 4.3. shouldn't exceed 1 page. Please, bring this in line with the requirement	CAR 07	OK
Technologies to be employed, or measures, operations or actions to be implemented by the project				
-	Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation schedule described?	PDD Section A.4.3 provides some relevant technical data of main equipment installed and actions to be implemented by the project as well as the project implementation schedule. CAR 08. Please, explain what the abbreviation CDQ (p.9 of the PDD) stands for. CAR 09. Please, explain what the symbol Q in formula (p.9 of the PDD) stands for. CAR 10. Please, explain what the abbreviation PCI (p.10 of the PDD) stands for. CL 02. Please, explain when the PCI installation is scheduled on. CL 03. It is mentioned on p.11 of the PDD that reconstruction of the BFs is planned according to the scheduled. Please provide this schedule. CL 04. Please explain the origin of the the following figures 1,6 mio. m3 and 2,5 ths. tones mentioned on p.12; 163 ths.	CAR 08 CAR 09 CAR 10 CL 02 CL 03 CL 04 CAR 11 CL 05 CL 06 CAR 12 CAR 13	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		tones per year, 4.2%, 27,0 ths tones per year, 20,6 ths. tones per year, 25 ths. tones per year on p.13 of the PDD. CAR 11. On page 15 said "It should be noted that factors presented in the Table 2 are indicative and are of an empirical nature". But Table 2 contains the information on maintenance and equipment repair timing of the blast-furnace shop and does not contain any information on factors. Please, make appropriate corrections CL 05. Please, provide explanation for the following statement: "factors of indicative and of an empirical nature". CL 06. Please, specify the value of the specific EF for the pig iron production mentioned on p.15. of the PDD CAR 12. Please, improve the project implementation schedule indicating the specific date of implementation of listed project activities. CAR 13. Please provide information about the implementation of measures of Table 1: - Reconstruction of BF # 4 - Installation of PCI facility at BF's # # 2,3,4 - Installation of the system of automatic control by BFs - Installation of the new sintering machine # 1 - The commissioning of air aspiration equipment of tail part sintering machine - The construction of the station for heating gas and combustion of air in blast furnace shop		
Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances				
-	Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section	The objective of the proposed project is to reduce energy and materials, mainly coke, consumption during pig iron	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	should not exceed one page)	production. Coke consumption is associated with two sources of emissions of GHGs: 1. During coke production. IPCC set the value of the emission factor for the coke production at the level 0.56 t CO2e/t of coke, and 2. Coke processing in the BF. The emission factor for coke processing is 3.1 t CO2e/t, assuming that default IPCC factor is used.		
-	Is it provided the estimation of emission reductions over the crediting period?	The estimation of emission reductions over the crediting period is provided.	OK	OK
-	Is it provided the estimated annual reduction for the chosen credit period in tCO2e?	The estimated annual reduction for the chosen credit period is provided in tCO2e.	OK	OK
-	Are the data from questions above presented in tabular format?	The data from questions above are presented in tabular format. Refer to Tables in section A.4.3.1.	OK	OK
Estimated amount of emission reductions over the crediting period				
-	Is the length of the crediting period Indicated?	The length of crediting period is indicated in the PDD section A.4.3.1. CAR 14. Please, specify the date of the beginning of the crediting period and make due corrections to the PDD.	CAR 14	OK
-	Are estimates of total as well as annual and average annual emission reductions in tonnes of CO2 equivalent provided?	Total as well as annual and average annual emission reductions in tonnes of CO2 equivalent are provided in accordance with the calculated values in the spreadsheet provided to the verifier. CAR 15. Estimated emission reductions indicated in the PDD differs from the same estimations in the Excel files with ER calculations. Please, make appropriate corrections.	CAR 15	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	CAR 16. The project has no letters of approval of the Parties involved. CL 07. Please, submit LoE issued for the projects by the Host Party	Pending CAR 16 CL 07	Pending
19	Does the PDD identify at least the host Party as a "Party involved"?	Host Party involved is the Ukraine.	OK	OK
19	Has the DFP of the host Party issued a written project approval?	See CAR 16.	Pending (see the previous section of this table).	Pending
20	Are all the written project approvals by Parties involved unconditional?	Yes, the written project approvals by Parties involved are unconditional.	OK	OK
Authorization of project participants by Parties involved				
21	Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through: − A written project approval by a Party involved, explicitly indicating the name of the legal entity? or − Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity?	Party involved Ukraine (host Party), legal entities are JSC "Zaporozhstal"	OK	OK
Baseline setting				
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? − JI specific approach	The baseline scenario was chosen based on project-specific approach in accordance with paragraph 9(a) of the JISC Guidance on Criteria for Baseline Setting and Monitoring" and refers to the Zaporizhstal project-specific conditions and	CAR 17 CAR 18	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	− Approved CDM methodology approach	parameters. CAR 17. The full name of the JISC Guidance should be provided (please, refer to Step 1 on p. 18) CAR 18. Please, explain what the abbreviation DIISW (Section B.1, p.20 of the PDD) stands for.		
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	The theoretical description is provided in the PDD.	OK	OK
23	Does the PDD provide justification that the baseline is established: (a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one? (b) Taking into account relevant national and/or sectoral policies and circumstance? − Are key factors that affect a baseline taken into account? (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors? (d) Taking into account of uncertainties and using conservative assumptions? (e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure? (f) By drawing on the list of standard variables contained in appendix B to "Guidance on	The PDD provides justification that the baseline is established by listing and describing plausible future scenarios on the basis of conservative assumption and selecting the most plausible one. CAR 19. Please, explain what the abbreviation IUD (p.18 of the PDD) stands for, make corrections to the PDD appropriately. CL 08. Please, specify the duration of the project activity as it is mentioned in the table of parameter for TPIIb CL 09. Please, provide explanation for the following monitoring frequency: measured constantly – regular result; continuous with regular tabulation) as they were described in the tables of parameters in Section B.1. of the PDD. CL 10. Provide explanation in what way EF for each fuel type used in making iron pig was calculated based on the fuel calorific value and transportation costs; provide supporting documents. CL 11. Please, provide additional information on the reducing agents used	CAR 19 CL 08 CL 09 CL 10 CL 11 CAR 20	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	criteria for baseline setting and monitoring", as appropriate?	CAR 20. Please, make corrections to the tables of parameters in MP as it was requested to make for the tables of parameters in Section B.1.		
24	If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above?	N/A	N/A	N/A
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	See the PDD section B.1.	OK	OK
Approved CDM methodology approach only				
26 (a)	Does the PDD provide the title, reference number and version of the approved CDM methodology used?	N/A	N/A	N/A
26 (a)	Is the approved CDM methodology the most recent valid version when the PDD is submitted for publication? If not, is the methodology still within the grace period (was the methodology revised to a newer version in the past two months)?	N/A	N/A	N/A
26 (b)	Does the PDD provide a description of why the approved CDM methodology is applicable to the project?	N/A	N/A	N/A
26 (c)	Are all explanations, descriptions and analyses pertaining to the baseline in the PDD made in accordance with the referenced approved CDM methodology?	N/A	N/A	N/A
26 (d)	Is the baseline identified appropriately as a result?	N/A	N/A	N/A
Additionality				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
JI specific approach only				
28	Does the PDD indicate which of the following approaches for demonstrating additionality is used? (a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals; (b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality; (c) Application of the most recent version of the "Tool for the demonstration and assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board".	The PDD section B.2 includes analysis of project additionality and is intended to demonstrate that the project scenario is not part of the identified baseline scenario and that the project will lead to reductions of GHG emissions in comparison to the baseline. The analysis is performed based on the latest version (version 05.2) of the Tool for the Demonstration and Assessment of Additionality approved by CDM Executive Council and accordingly may be fully applied to Joint Implementation Projects.	OK	OK
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	See section 22 of this table.	OK	OK
29 (b)	Are additionality proofs provided?	CAR 21. Please note that Guidelines for objective demonstration and assessment of barriers (Guidline 1) requires that for demonstration of the investment barrier "information should include nature of company, organization and its ownership and financial information". Unfortunately PDD is currently missing the relevant details.	CAR 21 CAR 22 CAR 23 CAR 24	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CAR 22. The developer is correct while mentioning to the rather poor investment profile of Ukraine as the frontier market. At the same time some factual mistakes are present. The average interest rate for the loans denominated in UAH as of the end of 2002 has been 19,5% not 25,35% indicated by the developer. The source: http://bank.gov.ua/Fin_ryn/Pot_tend/2002.zip In addition it would be more appropriate to compare interest rates in the same currency. The interest rates for the loans denominated in EUR or USD were much lower in Ukraine fluctuating around 12%. CAR 23. Please note that the reference to the inferior Ukrainian economical conditions is not sufficient to prove inability to complete the project without JI mechanism. A number of Ukrainian companies made successful IPOs and attracted substantial syndicated loans from the western banks. With this respect it would be beneficial to describe in more detailed manner the investment barriers specific to Zaporizhstal. CAR 24. Please note that as the result of operations in 2003 the company has been able to pay out the dividends amounting to UAH 12 783 900. The dividends in even greater amount were paid out regularly during the several following years as well. http://www.zaporizhstal.com/about/stockholder/meeting/meeting_2004/ This fact clearly confirms good financial standing of the company. The profits accumulated during 2003-2007 were more than sufficient to implement the project without external borrowings, so financial barrier clearly needs more justification in order to show the unavailability of the funds for		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		this particular project.		
29 (c)	Is the additionality demonstrated appropriately as a result?	Conclusion is pending a response to CAR 21-24. The developer has excluded investment barrier from the PDD. While the Guidelines for objective demonstration and assessment of barriers consider the reference to the similar projects as the strong argument supporting the project additionality it is rather difficult to make the parallels between the projects mentioned as they have been implemented in different timescales and by enterprises having different financial standing, so the specific barrier alone can not be considered as the sufficient evidence of the project additionality. In case if the technological barriers are considered strong enough the specific barrier may serve as the additional argument supporting the project additionality.	Pending	OK
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	Yes. See section B.2 of the PDD.	OK	OK
Approved CDM methodology approach only				
31 (a)	Does the PDD provide the title, reference number and version of the approved CDM methodology used?	N/A	N/A	N/A
31 (b)	Does the PDD provide a description of why and how the referenced approved CDM methodology is applicable to the project?	N/A	N/A	N/A
31 (c)	Are all explanations, descriptions and analyses with regard to additionality made in accordance with the selected methodology?	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
31 (d)	Are additionality proofs provided?	N/A	N/A	N/A
31 (e)	Is the additionality demonstrated appropriately as a result?	N/A	N/A	N/A
Project boundary (applicable except for JI LULUCF projects				
JI specific approach only				
32 (a)	Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	The project's spatial boundaries are defined in the PDD. See section B.3. CAR 25. Section B.3. of the PDD should contain the description of anticipated leakages. CL 12. Please explain why the fuel transportation is not included to the project boundary. CAR 26. In Section B.4. the PPs must indicate if the person/entity setting the baseline is also a project participant listed in Annex 1.	CAR 25 CL 12 CAR 26	OK
32 (b)	Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above?	See section 32 (a) of this table.	OK	OK
32 (c)	Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart as appropriate?	The delineation of the project boundary and the gases and sources included described in the PDD by using figure.	OK	OK
32 (d)	Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?	All gases and sources included are explicitly stated; refer to 32 (a) above. All exclusions made are appropriate as a conservative or logic assumption.	OK	OK
Approved CDM methodology approach only				
33	Is the project boundary defined in accordance with the approved CDM methodology?	N/A	N/A	N/A
Crediting period				
34 (a)	Does the PDD state the starting date of the project as the date on which the	The PDD states the starting date of the project as the date on which the implementation or construction or real action of	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	implementation or construction or real action of the project will begin or began?	the project will begin or began, and the starting date is 01/01/2003		
34 (a)	Is the starting date after the beginning of 2000?	Refer to 34 (a).	OK	OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	Operational lifetime is defined as 20 years (240 months).	OK	OK
34 (c)	Does the PDD state the length of the crediting period in years and months?	PDD state the length of the crediting period in years and months.	OK	OK
34 (c)	Is the starting date of the crediting period on or after the date of the first emission reductions or enhancements of net removals generated by the project?	Yes. The starting date of the crediting period is after the date of the first emission reductions.	OK	OK
34 (d)	Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?	Yes. According to the PDD the crediting period for issuance of ERUs does not extend beyond operational lifetime of the project.	OK	OK
34 (d)	If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012?	The estimated emission reductions are provided in the table of the PDD section A.4.3.1.	OK	OK
Monitoring plan				
35	Does the PDD explicitly indicate which of the following approaches is used? − JI specific approach − Approved CDM methodology approach	It is explicitly indicated that a JI specific approach is chosen.	OK	OK
JI specific approach only				
36 (a)	Does the monitoring plan describe: − All relevant factors and key characteristics that will be monitored? − The period in which they will be monitored?	The monitoring plan describes: - data to be monitored: total pig iron output, quantity of each fuel used in making pig iron, electricity consumed in producing pig iron, quantity of each fuel used in sintering	CAR 27 CAR 28 CL 13 CAR 29	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	− All decisive factors for the control and reporting of project performance?	process, electricity consumed in sintering process, quantity of each reducing agent in pig iron production, quantity of each other input in pig iron production, quantity of each fuel used for balance of process needs, electricity consumed for balance of process needs. - the period in which they will be monitored: continuously or/and monthly; - all decisive factors for the control and reporting of project performance: 2tp statistics forms; quality control (QC) and quality assurance (QA) procedures; the operational and management structure that will be applied in implementing the monitoring plan. CAR 27. In Section D.4. the PPs must indicate if the person/entity establishing the monitoring plan is also a project participant listed in Annex 1. CAR 28. Please indicate in Section D.1. which of the two approaches was applied for establishing MP. CL 13. Please, explain what the table under item 12 in Section D.1. refer to. CAR 29. Please submit additional documentation to support the MP listed on p.48 of Section D.1. CAR 30. Please, provide additional explanations on how the monitoring frequency is defined in accordance with approved graphs of analytical and departmental control. Include this information in the MR.	CAR 30	
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored?	The monitoring plan specifies variables used. It provides transparent picture of the emission reductions.	OK	OK
36 (b)	If default values are used:	Constants used are the default values of the parameters as	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	− Are accuracy and reasonableness carefully balanced in their selection? − Do the default values originate from recognized sources? − Are the default values supported by statistical analyses providing reasonable confidence levels? − Are the default values presented in a transparent manner?	follows: emission factor of each fuel used in making pig iron, emission factor for electricity consumption, emission factor of each reducing agent, emission factor of each other input, The default values originate from recognized sources and are presented in a transparent manner.		
36 (b) (i)	For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified?	The monitoring plan indicates how the values are to be selected and justified.	OK	OK
36 (b) (ii)	For other values, − Does the monitoring plan clearly indicate the precise references from which these values are taken? − Is the conservativeness of the values provided justified?	CAR 31. Please specify which versions of the IPCC are used in the preparation of PDD.	CAR 31	OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	FAR 01. 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	FAR01	The issue will be checked on the first verification.
36 (b) (iv)	Are International System Unit (SI units) used?	SI units are used. Also there are data units used in accordance with the applied JI specific approach.	OK	OK
36 (b) (v)	Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to	See section B.1 of the PDD. CAR 32. Provide, please, laboratory historic data of COG net	CAR 32	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	calculate baseline emissions or net removals but are obtained through monitoring?	calorific value.		
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	There is consistency between parameters, coefficients, variables, etc. used in baseline and monitoring plan.	OK	OK
36 (c)	Does the monitoring plan draw on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"?	The monitoring plan draws on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring".	OK	OK
36 (d)	Does the monitoring plan explicitly and clearly distinguish: (i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination? (ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination? (iii) Data and parameters that are monitored throughout the crediting period?	See the PDD section D.1. The data and parameters that are monitored throughout the crediting period are clearly indicated in the PDD (section D.1. and Annex 3).	OK	OK
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	In the table of the PDD section D.1.1 the time of monitoring (frequency) and the source of data to be used are indicated for all the monitored parameters and data.	OK	OK
36 (f)	Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of	All algorithms and formulae used for the estimation of baseline and project emissions are indicated and explained in the PDD.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	emission reductions from the project, leakage, as appropriate?			
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	The underlying rationale for the algorithms/formulae is explained.	OK	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Consistent variables, equation formats, subscripts etc. are used.	OK	OK
36 (f) (iii)	Are all equations numbered?	Yes.	OK	OK
36 (f) (iv)	Are all variables, with units indicated defined?	Yes.	OK	OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	The conservativeness of the algorithms/procedure is indicated in the PDD.	OK	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	Uncertainty level of data is indicated in the table of Quality control and quality assurance (QA) procedures undertaken for the data monitored (see section D.2 of the PDD).	OK	OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured?	There is consistency between the elaboration on the baseline scenario and calculating the baseline emission in the monitoring plan and on spreadsheet.	OK	OK
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	The formulae used in the PDD are sufficiently described.	OK	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	Relevant national and/or sectoral policies and circumstances are taken into account in the project.	OK	OK
36 (f) (vii)	Are references provided as necessary?	CAR 33. Please correct the reference to Table 3 on page 15 in the first paragraph.	CAR 33	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	All key assumptions are explained in a transparent manner if needed.	OK	OK
36 (f) (vii)	Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed?	See section 36 (f) (v) of this table.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
36 (f) (vii)	Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided?	See section 36 (f) (v) of this table.	OK	OK
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project? Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?	Relevant national and/or sectoral policies and circumstances are taken into account while developing the monitoring plan for this project.	OK	OK
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	See section D of the PDD.	OK	OK
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request?	Uncertainty level of data is indicated in the table of Quality control and quality assurance (QA) procedures undertaken for the data monitored. Also, in the PDD it is indicated that Zaporizhstal uses the accredited system of quality regulation according to the requirements of the ISO 9001:2008 standard. The Guiding Metrological Instructions were developed in accordance with ISO 9001:2008. They secure required level of accuracy by using monitoring equipment and by the possibility to crosscheck the data adequacy. Information on calibration procedures were checked during site-visit and found satisfactory. CAR 34. Please, provide the supporting documents to prove that the metering requirements are in line with the national norms and regulations, as well as with the Plant's internal	CAR 34 CL 14 CAR 35 CAR 36 CAR 37 CAR 38	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		procedures. CL 14. Please submit the internal order regarding "Organization and procedure of metrological supervision conduction to ensure the unity of measurements at the Plant" and internal order regarding "Metrological department" were developed in accordance with national Ukrainian legislation and ISO 9001:2008. CAR 35. Please, provide the list of monitoring equipment and include it in the MP. CAR 36. Please, provide documents to prove the error level is low for all parameters (less than 2%) and include this information to the MR. CAR 37. Please, identify scales of raw materials and pig iron in blast furnace workshop. CAR 38. Please provide information about the measurement instruments used in the blast furnace workshop to account for consumption of energy resources.		
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	CAR 39. The overall management structure, the roles of the employees assigned to conduct monitoring are described insufficiently. Please, include this information to the MR with the descriptions of the roles and responsibilities assigned, as well as the names of the employees involved.	CAR 39	OK
36 (k)	Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type? If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?	Monitoring techniques are in line with current operation routines at the enterprise.	OK	OK
36 (l)	Does the monitoring plan provide, in tabular form, a complete compilation of the data that	CAR 40. It should be stated whether Table D.1.1.1. is left blank on purpose.	CAR 40	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations?			
36 (m)	Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project?	Yes.	OK	OK
37	If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above?	See section D of the PDD.	OK	OK
Approved CDM methodology approach only				
38 (a)	Does the PDD provide the title, reference number and version of the approved CDM methodology used?	N/A	N/A	N/A
38 (a)	Is the approved CDM methodology the most recent valid version when the PDD is submitted for publication? If not, is the methodology still within the grace period (was the methodology revised to a newer version in the past two months)?	N/A	N/A	N/A
38 (b)	Does the PDD provide a description of why the approved CDM methodology is applicable to the project?	N/A	N/A	N/A
38 (c)	Are all explanations, descriptions and analyses pertaining to monitoring in the PDD made in accordance with the referenced approved CDM	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	methodology?			
38 (d)	Is the monitoring plan established appropriately as a result?	N/A	N/A	N/A
Applicable to both JI specific approach and approved CDM methodology approach				
39	If the monitoring plan indicates overlapping monitoring periods during the crediting period: (a) Is the underlying project composed of clearly identifiable components for which emission reductions or enhancements of removals can be calculated independently? (b) Can monitoring be performed independently for each of these components (i.e. the data/parameters monitored for one component are not dependent on/effect data/parameters to be monitored for another component)? (c) Does the monitoring plan ensure that monitoring is performed for all components and that in these cases all the requirements of the JI guidelines and further guidance by the JISC regarding monitoring are met? (d) Does the monitoring plan explicitly provide for overlapping monitoring periods of clearly defined project components, justify its need and state how the conditions mentioned in (a)-(c) are met?	N/A	N/A	N/A
Leakage				
JI specific approach only				
40 (a)	Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?	CL 15. Please, explain in what way the amount of ERs received from another JI projects will be deducted from the project under consideration CAR 41. It is stated in Section D.1.3.2. that Leakages are generated due to JI projects "Installation Reconstruction of	CL 15 CAR 41 CAR 42	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		the Oxygen Compressor Plant at the JSC "Zaporizhstal", Ukraine" (UA1000189) and "Effective Utilization of the Blast-furnace Gas and Waste Heat at the JSC "Zaporizhstal", Ukraine" (UA1000222). Please, fill out the table D.1.3.1. or state whether it was left blank on purpose. CAR 42. The format of the table used to describe leakages connected to project can't be used there. Please, provide their narrative description		
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	See the section 40 (a) of this table.	OK	OK
Approved CDM methodology approach only				
41	Are the leakage and the procedure for its estimation defined in accordance with the approved CDM methodology?	N/A	N/A	N/A
Estimation of emission reductions or enhancements of net removals				
42	Does the PDD indicate which of the following approaches it chooses? (a) Assessment of emissions or net removals in the baseline scenario and in the project scenario (b) Direct assessment of emission reductions	Assessment of emissions in the baseline scenario and in the project scenario is chosen.	OK	OK
43	If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	PDD provides ex ante estimates of: (a) Emissions for the project scenario (Section E.1); (b) Leakage (Section E.2); (c) Emissions for the baseline scenario (Section E.4); (d) Emission reductions adjusted by leakage (Section E.6).	OK	OK
44	If the approach (b) in 42 is chosen, does the	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	PDD provide ex ante estimates of: (a) Emission reductions or enhancements of net removals (within the project boundary)? (b) Leakage, as applicable? (c) Emission reductions or enhancements of net removals adjusted by leakage?			
45	For both approaches in 42 (a) Are the estimates in 43 or 44 given: (i) On a periodic basis? (ii) At least from the beginning until the end of the crediting period? (iii) On a source-by-source/sink-by-sink basis? (iv) For each GHG? (v) In tones of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? (b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate? (d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent? (e) Are emission factors (including default	(a) Estimates in 43 are given on the periodic basis, from the beginning until the end of the crediting period, in tones of CO2 equivalent, on a source-by-source basis, for each GHG. (b) The formulae used in PDD are consistent. (c) Key factors influencing the baseline emissions and the activity level of the project and the project emissions are taken into account, as appropriate. (d) Data sources used for calculating the estimates are clearly identified, reliable and transparent. (e) Default values are taken from identified sources. (f) Estimation in 43 is based on conservative assumptions and the most plausible scenario in a transparent manner. (g) Estimates in 43 are consistent throughout the PDD. The annual average of estimated emission reductions calculated by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period and multiplying by twelve.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	emission factors) if used for calculating the estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice? (f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner? (g) Are the estimates in 43 or 44 consistent throughout the PDD? (h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?			
46	If the calculation of the baseline emissions or net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation?	Illustrative ex-ante estimation of emission reduction is made on the excel spreadsheet made available to AIE.	OK	OK
Approved CDM methodology approach only				
47 (a)	Is the estimation of emission reductions or enhancements of net removals made in accordance with the approved CDM methodology?	N/A	N/A	N/A
47 (b)	Is the estimation of emission reductions or enhancements of net removals presented in the PDD: − On a periodic basis? − At least from the beginning until the end of the crediting period? − On a source-by-source/sink-by-sink basis?	N/A	N/A	N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	− For each GHG? − In tones of CO_2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? − Are the formula used for calculating the estimates consistent throughout the PDD? − Are the estimates consistent throughout the PDD? − Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?			
Environmental impacts				
48 (a)	Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	Yes. For more detailed information, please, see section F.1 of the PDD. The project has transboundary impact on the environmental. Reduction and control over the emissions of hazardous substances is provided by the Protocols to the UN Convention on Long-range Transboundary Air Pollution, which Ukraine has ratified. According to the EIA project activity will lead to the reduction of hazardous substances by 11 036 tonnes per year, therefore project activity is in compliance with obligations taken by Ukraine.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
48 (b)	If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party?	In terms of potential environmental impact, the project activities can be divided into two further groups. The first one does not require a preparation of an environmental impact assessment (EIA). The activities of the first group are of technological character that involves specific improvements in pig iron and sintering technological processes. The second group requires EIAs and contains activities related to introduction of new steel facilities or the reconstructions of old ones. According to the Ukrainian legislation EIAs are developed as a part of mandatory feasibility studies (FSs). As for today, FSs have been completed together with EIAs for such activities as: reconstruction of BF #2; installation of PCI facilities at BFs # 2, 3, 4, 5 and aspiration system of the tail parts of sintering machines. In 2007 the commissioning of air aspiration equipment of tail part sintering machine at the sinter plant was completed. A number of studies have been prepared as a part of official FS for a new sinter plant. However, EIA has not been completed yet because FS is at its final stage of completion and expected to be formulized in 2012. EIA for such measures as reconstruction of BF # 4, # 5 will be developed during the process of preparation of FS of the BFs reconstruction. EIAs together with FSs that are not developed till this time will be developed during 2011-2014 years. All formal EIAs were undertaken in accordance with the applicable legislation and regulations of Ukraine. These include: the Laws of Ukraine "On Protection of Environment", "On Environmental Due Diligence", "On Protection of Atmospheric Air", "On Wastes", "On Ensuring Sanitary and	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Epidemic Welfare of the Population", "On Local Councils of People's Deputies" and "On Local Governance in Ukraine", as well as in line with effective versions of Water Code, Land Code, Forest Code, and Ukraine's State Code of Civil Practice DBN A.2.2-1-2003 etc.		
Environmental impacts				
49	If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide: (a) A list of stakeholders from whom comments on the projects have been received, if any? (b) The nature of the comments? (c) A description on whether and how the comments have been addressed?	Law of Ukraine on environmental expertise defines the procedure of participation of citizens and public organizations in the public environmental expertise. Public has been informed about the planned economic activities with the goal to identify public attitudes and take opinion in account during environmental impact assessment process. Public was informed about the project, especially about the following information: · project name, goals and site; · legal name and address of project owner and its representative; · approximate dates of EIAs procedures; · deadline and formats of submission of public comments; · when and where EIA documents can be retrieved. No negative comments from the public were received within the deadlines indicated in these publications. Public hearings have not been organized, because the project site lies within the AISW territory and public did not express any interest in the planned activities. All information on stakeholders' comments is included in the EIAs as a part of FSs completed in accordance with Ukrainian statutory requirements.	OK	OK
Determination regarding small-scale projects (additional elements for assessment)_Paragraphs 50 - 57_Not applicable				
Determination regarding land use, land-use change and forestry projects _Paragraphs 58 – 64(d)_Not applicable				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Determination regarding programmes of activities_Paragraphs 66 – 73_Not applicable				

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	Determination team conclusion
CAR 01 The project pertains to the sectoral scope 9 (metallurgy). Please, indicate the sectoral scope correctly.	-	The sectoral scope has been indicated correctly.	Necessary corrections have been made. The issue is closed.
CAR 02 Section 5 on page 3 contains the phrase "investment costs of this project are described further in this PDD (section A.4.2, Table 1)", but this table only contains the action plan. Please adjust it.	-	Table 1 of the PDD contains now the investment costs of project measures. The appropriate corrections were made in PDD.	Due to the amendments made in the PDD, CAR 02 is closed.
CL 01. Please, provide documents proving the project start date.	-	The project start date is provided in the Protocol of technical Council of the plant dated 25th of December, 2002 which is attached to the determination protocol.	The response to CL 01 was found satisfactory. CL 01 is closed.

CAR 03 Please specify the exact date and version of the revised PDD.		Revised PDD version 2 dated 29/04/2011	The PDD has been corrected. CAR 03 is closed.
CAR 04 Please, explain what the abbreviation PCI (Table 1, p.6 of the PDD) stands for.	-	The abbreviation PCI stands for pulverized coal injection. The explanation has been given in the PDD.	Based on the explanation received, CAR 04 is closed.
CAR 05 Please indicate in Annex 1: Phone and fax or E-mail of JSC "Zaporizhstal", Mobile of Mr. Lykov.	-	Contact information of JSC Zaporizhstal is now included in the PDD.	The PDD has been corrected. CAR 05 is closed.
CAR 06. On page 40 PDD said «the starting date of the project is provided by the Protocol of technical Council of the plant dated 25th December, 2002", while on page 2 indicates 22 December 2002. Please, adjust it.		The appropriate corrections have been made in PDD. The starting date of the project is provided by the Protocol of technical Council of the plant dated 25th December, 2002.	Necessary corrections have been made. The issue is closed.
CAR 07. Section A 4.3. shouldn't exceed 1 page. Please, bring this in line with the requirement	-	Section A 4.3. does not exceed 1 page now. Appropriate corrections have been done in the PDD.	Necessary corrections have been made. The issue is closed.
CAR 08. Please, explain what the abbreviation CDQ (p.9 of the PDD) stands for.	-	The abbreviation CDQ stands for coke dry quenching. The explanation has been given in the PDD.	Based on the explanation received, CAR 08 is closed.

CAR 09. Please, explain what the symbol Q in formula (p.9 of the PDD) stands for.	-	Q is heat in kJ. In other words it is additional energy that is needed for that chemical reaction.	Based on the explanation received, CAR 09 is closed.
CAR 10. Please, explain what the abbreviation PCI (p.10 of the PDD) stands for.	-	The abbreviation PCI stands for pulverized coal injection. The explanation has been given in PDD.	The PDD has been corrected. CAR 10 is closed.
CL 02. Please, explain when the PCI installation is scheduled on.	-	Installation of PCI equipment was scheduled to be started at the beginning of 2007 and to be completed by the end of 2010. The appropriate corrections were done in the PDD.	Based on the information added to the PDD, CL 02 is closed.
CL 03. It is mentioned on p.11 of the PDD that reconstruction of the BFs is planned according to the scheduled. Please provide this schedule.	-	The schedule is provided at page 6 of the PDD. It is the Table 1 of the PDD.	The issue is closed due to the information added to the PDD.
CL 04. Please explain the origin of the following figures 1,6 mio. m3 and 2,5 ths. tones mentioned on p.12; 163 ths. tones per year, 4.2%, 27,0 ths tones per year, 20,6 ths. tones per year, 25 ths. tones per year on p.13 of the PDD.	-	This figures were taken from feasibility studies and environmental impact assessments (from appropriate passports), that can be provided by the request of AIE.	CL 04 is closed based on the explanation received.

CAR 11. On page 15 said "It should be noted that factors presented in the Table 2 are indicative and are of an empirical nature". But Table 2 contains the information on maintenance and equipment repair timing of the blast-furnace shop and does not contain any information on factors. Please, make appropriate corrections.	-	The case is about the Table 3. The mistake with the number of the Table was corrected in PDD.	Issue is closed due to the amendments made in the PDD.
CL 05. Please, provide explanation for the following statement: "factors of indicative and of an empirical nature".	-	The impact of each mentioned factor is impossible to determine at actual production process. Special laboratory test is needed to determine the impact of each mentioned factors. However mentioned factors are justified by a number of scientific research as well as special investigation done in 1986 in the former Soviet Union by relevant Ministry.	CL 05 is closed based on the explanation received.
CL 06. Please, specify the value of the specific EF for the pig iron production mentioned on p.15. of the PDD	-	The value of the specific EF for the pig iron production was specified. The relevant corrections were included in the PDD.	Based on the corrections made, CL 06 is closed.
CAR 12. Please, improve the project implementation schedule indicating the specific date of implementation of listed project activities.	-	There was no special date of implementation of listed project activities in the project implementation schedule by the time of PDD completion. It will be provided in monitoring reports.	The issue will be checked on the first verification.

CAR 13. Please provide information about the implementation of measures of Table 1: - Reconstruction of BF # 4 - Installation of PCI facility at BF's # # 2,3,4 - Installation of the system of automatic control by BFs - Installation of the new sintering machine # 1 - The commissioning of air aspiration equipment of tail part sintering machine - The construction of the station for heating gas and combustion of air in blast furnace shop	-	The detailed explanations will be provided in monitoring reports.	The issue will be checked on the first verification.
CAR 14. Please, specify the date of the beginning of the crediting period and make due corrections to the PDD.	-	The date of the beginning of the crediting period is 1st of April 2004. The appropriate corrections were done in the modified version of the PDD.	Necessary amendments were made. The issue is closed.
CAR 15.Estimated emission reductions indicated in the PDD differs from the same estimations in the Excel files with ER calculations. Please, make appropriate corrections.	-	ER calculations were modified, appropriate corrections were made in Excel file and PDD. Last version of estimations in Excel file will be submitted to the verifier.	The issue is closed due to the amendments made in Excel files with emission reductions calculations.

CAR 16. The project has no letters of approval of the Parties involved.	19	The project has already received Letter of Endorsement from the Government of Ukraine #13442/11/10-07 of 14.12.2007 issued by the Ministry of Environmental Protection of Ukraine. As for today no written approvals of the project by Parties involved are available. After receiving Determination Report from the Accredited Independent Entity the project documentation will be submitted to the Ukrainian Designated Focal Point (DFP) which is State Environmental Investment Agency of Ukraine, for receiving a Letter of Approval. The written approval by other Parties involved will be obtained later on.	Pending.
CL 07. Please, submit LoE issued for the projects by the Host Party.	19	LoE will be submitted to the AIE.	The response to CL 07 was found satisfactory. CL 07 is closed.
CAR 17. The full name of the JISC Guidance should be provided (please, refer to Step 1 on p. 18).	22	The full name of the JISC Guidance was added to the PDD.	The PDD has been corrected. CAR 17 is closed.
CAR 18. Please, explain what the abbreviation DIISW (Section B.1, p.20 of the PDD) stands for.		The mechanical mistake was made. The PDD no longer contains the abbreviation DIISW was corrected in PDD.	CAR 18 is closed due to the corrections made in the PDD.

CAR 19. Please, explain what the abbreviation IUD (p.18 of the PDD) stands for, make corrections to the PDD appropriately.	23	The modifications in the PDD were done as follows: Therefore, production of pig iron and steel and expansion of market share based on existing process lines, without introduction of new facilities, would be business-as-usual (BAU) solution fully in line with international steelmaking practices at the time of investment decision, as well as with economy environment of Zaporizhstal and Ukraine in general.	The issue is closed based on the modifications made in the PDD.
CL 08 Please, specify the duration of the project activity as it is mentioned in the table of parameter for TPIIb.	23	Information regarding monitoring frequency of parameter TPIIb is now included in the PDD.	Due to the corrections made in the PDD, the issue is closed.
CL 09. Please, provide explanation for the following monitoring frequency: measured constantly – regular result; continuous with regular tabulation) as they were described in the tables of parameters in Section B.1. of the PDD.	23	More detailed information regarding monitoring frequency of project parameters is now included in the PDD.	CL 09 is closed due to the amendments made in the PDD.

CL 10. Provide explanation in what way EF for each fuel type used in making iron pig was calculated based on the fuel calorific value and transportation costs; provide supporting documents.	23	Information regarding identification and calculation of EF for each fuel based on the fuel calorific value and carbon content is now included in the PDD.	The issue is closed due to the information added to the PDD.
CL 11. Please, provide additional information on the reducing agents used.	23	Under the project activity such reducing agents as coke and coal are being used. This information is now included in the PDD.	Based on the amendments made, CL 11 is closed.
CAR 20. Please, make corrections to the tables of parameters in MP as it was requested to make for the tables of parameters in Section B.1.	23	All corrections to the tables of key parameters, as it was requested regarding Section B.1., are now made. Please see modified PDD.	Based on the information added to the PDD, CAR 20 is closed.
CAR 21. Please note that Guidelines for objective demonstration and assessment of barriers (Guideline 1) requires that for demonstration of the investment barrier "information should include nature of company, organization and its ownership and financial information". Unfortunately PDD is currently missing the relevant details.	29 (b)	The additionality has been proven by using the instrument of specific barriers. The paragraph on presence of investment barriers in the previous version of PDD has been deleted in order to avoid misinterpretation of the project additionality. Therefore the relevant CAR is not relevant to updated version of the PDD	Based on the explanation received, CAR 21 is closed.

CAR 22. The developer is correct while mentioning to the rather poor investment profile of Ukraine as the frontier market. At the same time some factual mistakes are present. The average interest rate for the loans denominated in UAH as of the end of 2002 has been 19,5% not 25,35% indicated by the developer. The source: http://bank.gov.ua/Fin_ryn/Pot_tend/2002.zip In addition it would be more appropriate to compare interest rates in the same currency. The interest rates for the loans denominated in EUR or USD were much lower in Ukraine fluctuating around 12%.	29 (b)	The additionality has been proven by using the instrument of specific barriers. The paragraph on presence of investment barriers in the previous version of PDD has been deleted in order to avoid misinterpretation of the project additionality. Therefore the relevant CAR is not relevant to updated version of the PDD	Based on the explanation received, CAR 22 is closed.
CAR 23. Please note that the reference to the inferior Ukrainian economical conditions is not sufficient to prove inability to complete the project without JI mechanism. A number of Ukrainian companies made successful IPOs and attracted substantial syndicated loans from the western banks. With this respect it would be beneficial to describe in more detailed manner the investment barriers specific to Zaporizhstal.	29 (b)	The additionality has been proven by using the instrument of specific barriers. The paragraph on presence of investment barriers in the previous version of PDD has been deleted in order to avoid misinterpretation of the project additionality. Therefore the relevant CAR is not relevant to updated version of the PDD	Based on the explanation received, CAR 23 is closed.

CAR 24. Please note that as the result of operations in 2003 the company has been able to pay out the dividends amounting to UAH 12 783 900. The dividends in even greater amount ware paid out regularly during the several following years as well. http://www.zaporizhstal.com/about/stockholder/meeting/meeting_2004/ This fact clearly confirms good financial standing of the company. The profits accumulated during 2003-2007 were more than sufficient to implement the project without external borrowings, so financial barrier clearly needs more justification in order show the unavailability of the funds for this particular project.	29 (b)	The additionality has been proven by using the instrument of specific barriers. The paragraph on presence of investment barriers in the previous version of PDD has been deleted in order to avoid misinterpretation of the project additionality. Therefore the relevant CAR is not relevant to updated version of the PDD	Based on the explanation received, CAR 24 is closed.

CAR 25. Section B.3. of the PDD should contain the description of anticipated leakages.	32 (a)	The leakages occur due to JI projects: "Installation Reconstruction of the Oxygen Compressor Plant at the JSC "Zaporizhstal", Ukraine" (UA1000189*) and other JI projects that are currently under development. In case if other projects that are causing energy efficiency effect on agglomerate and blast-furnace production at JSC "Zaporizhstal" that will be registered under JI mechanisms, at the stage of monitoring report development the following emission reductions that are generated due to the specific project will be subtracted from the total volume of emission reductions generated by this project in the specific monitoring period.	Based on the explanation received, CAR 25 is closed.
CL 12. Please explain why the fuel transportation is not included to the project boundary.	32 (a)	The fuel transportation was excluded from the project activity; therefore in the emission reduction calculation fuel transportation is not accounted.	The explanation was received and found satisfactory. CL 12 is closed.
CAR 26. In Section B.4. the PPs must indicate if the person/entity setting the baseline is also a project participant listed in Annex 1.	32 (a)	The requested modifications were done in the PDD.	All the corrections required have been made. The issue is closed.

* http://ji.unfccc.int/JIITLProject/DB/DHPBSAFIRHMN55DS7FFABELK8NAVMP/details

CAR 27. In Section D.4. the PPs must indicate if the person/entity establishing the monitoring plan .is also a project participant listed in Annex 1.	36 (a)	The person/entity responsible for the monitoring plan establishment is also a project participant.	All the corrections required have been made. The issue is closed.
CAR 28. Please indicate in Section D.1. which of the two approaches was applied for establishing MP.	36 (a)	The approach is based on parameters that will be monitored and, partially, by using historical and/or average Zaporizhstals' data. The Section D.1. is now modified. Please see revised PDD.	CAR 28 is closed due to the corrections made in the PDD.
CL 13. Please, explain what the table under item 12 in Section D.1. refer to.	36 (a)	The table under item 12 is now excluded from the PDD.	Due to the corrections made in the PDD, the issue is closed.
CAR 29. Please submit additional documentation to support the MP listed on p.48 of Section D.1.	36 (a)	The additional documentation to support the MP is now provided to the verifier.	Due to the information provided, the issue is closed.
CAR 30. Please, provide additional explanations on how the monitoring frequency is defined in accordance with approved graphs of analytical and departmental control. Include this information in the MR.	36 (a)	The monitoring frequency of project key parameters is conducted on monthly basis. Such information is now included in the PDD.	The issue is closed due to the corrections made.
CAR 31. Please specify which versions of the IPCC are used in the preparation of PDD.	36 (b) (ii)	The revised version of IPCC 1996 and IPCC 2006 were used during PDD preparation.	Due to the corrections made in the PDD, the issue is closed.

FAR 01. 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	36 (b) (iii)	The special order on saving and archiving project documentation during the whole crediting period and two years after the last ERU transfer will be provided at the stage of monitoring.	The issue will be checked on the first verification.
CAR 32. Provide, please, laboratory historic data of COG net calorific value.	36 (b) (v)	Net calorific value for COG is based on fixed value which is in accordance with Zaporizhstals' average data. Actual monitoring of the net calorific value of COG may be conducted at the stage of monitoring report development. Such information is now included in the PDD.	CAR 32 is closed due to the amendments made in the PDD.
CAR 33. Please correct the reference to Table 3 on page 15 in the first paragraph.	36 (f) (vii)	The reference was corrected.	Based on the information added to the PDD, CAR 33 is closed.
CAR 34. Please, provide the supporting documents to prove that the metering requirements are in line with the national norms and regulations, as well as with the Plant's internal procedures.	36 (i)	Will be submitted to the AIE during the verification process.	The issue will be checked on the first verification.

CL 14. Please submit the internal order regarding "Organization and procedure of metrological supervision conduction to ensure the unity of measurements at the Plant" and internal order regarding "Metrological department" were developed in accordance with national Ukrainian legislation and ISO 9001:2008.	36 (i)	The documents are now provided to the verifier.	Based on the documents received, CL 14 is closed.
CAR 35. Please, provide the list of monitoring equipment and include it in the MP.	36 (i)	The list of monitoring equipment will be provided to the verifier at the stage of verification process conduction.	The issue will be checked on the first verification.
CAR 36. Please, provide documents to prove the error level is low for all parameters (less than 2%) and include this information to the MR.	36 (i)	The information regarding error level can be found in passports for the monitoring equipment. The list of monitoring equipment will be provided to the verifier during verification process.	The issue will be checked on the first verification.
CAR 37. Please, identify scales of raw materials and pig iron are in blast furnace workshop.	36 (i)	Information regarding scales that are used for raw materials and pig iron weighting will be provided to the verifier at the stage of verification process conduction.	The issue will be checked on the first verification.
CAR 38. Please provide information about the measurement instruments used in the blast furnace workshop to account for consumption of energy resources.	36 (i)	Information regarding measurement instruments used in the blast furnace workshop will be provided to the verifier at the stage of verification process conduction.	The issue will be checked on the first verification.

CAR 39. The overall management structure, the roles of the employees assigned to conduct monitoring are described insufficiently. Please, include this information to the MR with the descriptions of the roles and responsibilities assigned, as well as the names of the employees involved.	36 (j)	Information regarding roles and responsibilities assigned, as well as the names of the employees involved is now included in the PDD.	Based on the information added to the PDD, CAR 39 is closed.
CAR 40. It should stated whether Table D.1.1.1. is left blank on purpose.	36 (l)	The Table D.1.1.1. is left blank on purpose because the tables of key parameters under the project activity was included in PDD. The text that states that the Table D.1.1.1. is left blank on purpose is now included in the PDD.	Based on the information added to the PDD, CAR 40 is closed.

CL 15. Please, explain in what way the amount of ERs received from another JI projects will be deducted from the project under consideration	40 (a)	The leakages occur due to JI projects: "Installation Reconstruction of the Oxygen Compressor Plant at the JSC "Zaporizhstal", Ukraine" (UA1000189*) and other JI projects that are currently under development. In case if other projects that are causing energy efficiency effect on agglomerate and blast-furnace production at JSC "Zaporizhstal" that will be registered under JI mechanisms, at the stage of monitoring report development the following emission reductions that are generated due to the specific project will be subtracted from the total volume of emission reductions generated by this project in the specific monitoring period.	Based on the explanation received, CL 15 is closed.
CAR 41. It is stated in Section D.1.3.2. that Leakages are generated due to JI projects "Installation Reconstruction of the Oxygen Compressor Plant at the JSC "Zaporizhstal", Ukraine" (UA1000189) and "Effective Utilization of the Blast-furnace Gas and Waste Heat at the JSC "Zaporizhstal", Ukraine" (UA1000222). Please, fill out the table D.1.3.1. or state whether it was left blank on purpose	40 (a)	The Table D.1.3.1. is left blank on purpose because the table for leakages of GHG was included in PDD. The text that states that the Table D.1.3.1. is left blank on purpose is now included in the PDD. Together with this information regarding leakages of GHG is now revised. Please see modified PDD.	Issue is closed due to the amendments made in the PDD.

* http://ji.unfccc.int/JIITLProject/DB/DHPBSAFIRHMN55DS7FFABELK8NAVMP/details

CAR 42. The format of the table used to describe leakages connected to project can't be used there. Please, provide their narrative description	40 (a)	The narrative description regarding leakages of GHG was included in the PDD. The format of the table that is used to describe leakages connected to the project was confirmed by Bureau Veritas in the other JI project*. Please see modified PDD.	Issue is closed due to the amendments made in the PDD.

* Revamping of sintering and blast-furnace production at OJSC "Alchevsk Iron and Steel Works"