DETERMINATION REPORT

INSTITUTE FOR ENVIRONMENT AND ENERGY CONSERVATION

DETERMINATION OF THE

REVAMPING OF SINTERING AND BLAST-FURNACE PRODUCTION AT OJSC «DNIPROVSKY INTEGRATED IRON AND STEEL WORKS NAMED AFTER DZERZHYNSKY»

REPORT NO.UKRAINE-DET/0206/2011

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Summary:

Bureau Veritas Certification has made the determination of the «Revamping of sintering and blast-furnace production at OJSC «Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky» project of Institute for Environment and Energy Conservation located in the city of Dniprodzerzhynsk, Dnipropetrovsk region, Ukraine, 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.:	Subject Group:
UKRAINE-DET/0206/2011	JI

Project title:

Revamping of sintering and blast-furnace production at OJSC «Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky»

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Abbreviations

AIE	Accredited Independent Entity
BFG	Blast Furnace Gas
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CHP	Combined Heat and Power
CL	Clarification Request
CO_2	Carbon Dioxide
COG	Coke Oven Gas
DIISW	Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky
DFP	Designated Focal Point
DVM	Determination and Verification Manual
EIA	Environmental Impact Assessment
ERU	Emission Reduction Unit
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

Institute for Environment and Energy Conservation has commissioned Bureau Veritas Certification to determine its JI project «Revamping of sintering and blast-furnace production at OJSC «Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky» (hereafter called "the project") in the city of Dniprodzerzhynsk, Dnipropetrovsk region, 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 validated 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:

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

Vera Skitina

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This determination report was reviewed by:

Ivan Sokolov
Bureau Veritas Certification Internal Technical 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 a Accredited Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action, forward action and clarification requests, Institute for Environment and Energy Conservation revised the PDD and resubmitted it as version 2 of 27/01/2011, version 3 of 03.03.2011, version 4 of 30/03/2011, version 5 of 11.04.2011, and version 6 of 10.05.2011 which is deemed final.

The determination findings presented in this report relate to the project as described in the PDD versions 1, 2, 3, 4, 5, and 6.

2.2 Follow-up Interviews

On 30/12/2010 Bureau Veritas Certification conducted a visit to the project site (OJSC «Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky») and performed 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 and OJSC «Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky» were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
OJSC «Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky»	➢ 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, Corrective Action and Forward 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 Requests (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 use the term Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable JI requirements have been met.

Forward action request (FAR) may be issued for informing the project participants of an issue, relating to project implementation but not project design that needs to be reviewed during the first verification of the project.

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

3 PROJECT DESCRIPTION

Open Joint Stock Company «Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky» (DIISW) is one of the largest enterprises in the Ukrainian mining and steelmaking complex and a top six country's leading iron and steel works for production output and sales. The Plant is located in the city of Dniprodzerzhynsk, Dnipropetrovsk region, in the eastern part of Ukraine. DIISW is a part of Industrial Union of Donbass Corporation (IUD). IUD is one of the largest international steelmaking groups known to the world as a leader in the Central and Eastern European iron and steel sector. Apart from DIISW, IUD owns a number of enterprises in Ukraine and the EU, including such assets as OJSC «Alchevsk Iron and Steel Works» (Ukraine), ISD – Huta Częstochowa (Poland), CJSC ISD – Dunaferr (Hungary), and the coke plant OJSC «Alchevskkoks» (Ukraine).

DIISW is an enterprise with full metallurgical cycle. It includes the following production units as sintering, blast-furnace, converter with continuous casting, together with maintenance, energy, transport and supporting units.

Before project implementation DIISW used sinter plant (SP) and blast-furnaces (BF) which were installed in 1950-1970's and have not been changed technologically since their operation start. SP and BFs can be characterized as energy intensive, consuming large quantities of energy resources and causing significant emissions into atmosphere of greenhouse and harmful gases as well as dust. Sinter plant consisted of six sintering machines. BF shop consisted of the following BFs: #8, 9, 101 (further 1M), 11 and 12.

There were not and still do not exist any legal requirements to replace or reconstruct less effective blast furnaces or sinter plant in the country leaving a decision on their replacement at project owner's discretion. Also, the greater presence at the market could be achieved by use of old production technologies, virtually without additional investment. Therefore the baseline for the proposed JI project is preservation of the current

situation: continuation of sinter plant and BFs #8, 9, 11 and 12 operation with BF#1M renewal with commissioning without reconstruction.

In December 2003 both enterprise and IUD Corporation have decided to start development of the enterprise by technical revamping of sintering and BF production (The prior consideration of the project is stated by Minutes of meeting regarding condition of basic production assets of DIISW and development of strategy for its reconstruction and revamping, dated December 26, 2003). The main goal was not only to improve performance of the enterprise, but also to solve environmental problems of production process.

The proposed Joint Implementation project considers complex resource-saving effect related with implementation of new SP and BF#4, gradual reconstruction of the remaining BFs #8, 9, 12 and 1M with application of contemporary technologies and equipment such as:

- pulverized-coal injection system;
- oxygen unit;
- coal drying and grinding units;
- introduction of the automatic and control systems;
- aspiration and gas-purification facilities.

Also, project activity envisages technological improvements in the process of sintering and pig iron production.

The project measures and activities that have been and would be implemented at DIISW pig iron production lead to better productivity of SP and BFs, reduction of specific coke and other fuel and materials consumption and therefore, emission reductions of GHGs. Some of these measures involved improvements in preparation of raw materials at SP which mainly of technological character and also connected with introduction of a new SP that would replace the existing one.

A new SP would be a state of art metallurgical equipment comprising engineering and design achievements with automatic solutions and would lead to lower fuel consumption and emission levels during sintering process. The same effect will be reached after introduction of new BF#4 and radical reconstruction of BF#1M, which would replace less efficient existing BF production.

The SP and BF 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.

The implementation of JI project requires the total investment costs of US$ 1,1 billion.

The possibility to use Kyoto mechanisms contributed to identification of ways to improve energyefficiency and environment at the sintering and blast-furnace process. These mechanisms will allow DIISW 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.

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 17 Corrective Action Requests, 11 Clarification Requests and 1 Forward Action Request.

The numbers 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 been supported by the Government of the host Party (Ukraine), namely by the National Environmental Investment Agency of Ukraine (09.12.2010 National Environmental Investment Agency of Ukraine was renamed by Order of the President of Ukraine; now, it is State Environmental Investment Agency of Ukraine), which has issued a Letter of Endorsement for the Project (Letter of Endorsement №1807/23/7 dated 09/11/2010). 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 (LoA). The written approval by another Parties involved will be obtained later on. It is expected that LoA of a foreign government will be provided either by the Government of Japan (The Liaison Committee for the Utilization of the Kyoto Mechanisms), by the Government of Spain (Ministerio de Medio Ambiente, Medio Rural y Marino Oficina Española de

Cambio Climático), by the Government of Netherlands (Ministry of Economic Affairs) or by the Government of United Kingdom of Great Britain and Northern Ireland (Department of Energy and Climate Change).

As the project has no approvals by the Parties involved, CAR 04 remains pending and will be closed after report finalizing (refer to the Appendix A).

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 type; however, JI Project "Energy Efficiency measures at the "Public Joint Stock Company Azovstal Iron and Steel Works" has been submitted to the accredited independent entity (AIE) in 2010 and already passed a positive determination and received a letter of approval from the Government of Ukraine. It is assuming implementation of technological measures to improve the energy efficiency of blast furnace production as well as its modernisation. This may be treated as similar to the project «Revamping of sintering and blast-furnace production at OJSC «Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky»; therefore its approach can be fully applied to the project in question. Besides, in terms of methodological approach, the project is fully identical to the relevant part of the project registered at UNFCCC 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 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 the current situation: continuation of sinter plant and BFs #8, 9, 11, 12 operation and BF #1M renewal with commissioning without reconstruction.

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-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 DIISW to initiate and realise 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, but renewal of BF#1M, which envisaged insignificant investment, 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 renewal BF#1M, (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 2020 – 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.

Alternative # 2: Revamping of sinter plant and all the blast furnaces without carbon financing.

The project activity includes reconstruction of all the BFs, SP and secondary power generation facilities at the DIISW as well as introduction of the new SP and BFs.

In 2003, when decision was made, there were, and there still are, no legal or regulatory requirements in Ukraine for the adoption of obligatory reconstruction or modernisation 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.

The project activity is itself an integrated energy efficient programme aimed at reduction of energy consumption per tonne of pig iron produced. This can not be done without reconstruction and modernisation 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 programme.

Against the backdrop of the poor economic situation of the DIISW at the beginning of the project implementation and moreover the global crisis whose effects were particularly acute for the whole Ukrainian iron and steel sector, a project requiring the total investment of US$ 1,1 billion would be hard to accomplish, given its current status.

Therefore, considering financial, technical and other barriers, project scenario without the JI component was not the most attractive one, which prevented its further implementation.

Alternative # 3: Realisation of projects on the not blast-furnace iron-making plants at DIISW.

In general there is an option to replace blast furnace production and therefore also influence on sintering production.This option is related to the construction of industrial plants for production of reduced iron by Midrex or similar technology. However this option is not fully realistic for the DIISW because the Steel Mill does not have its own access to iron ore resources and fully relies on market condition. The recent problems with iron ore supply have shown the extreme volatility of such a decision upon market conditions. Additionally such a decision could require a significant portion of investments estimated at around more than US$3 billion. In Ukraine so far no company has been able to overcome such investment barriers. The declared project activity by OJSC “Vorskla Steel” in a construction of Midrex-based furnaces has been suspended for an indefinite time. Moreover new technological decisions like not blast-furnace iron making require a replacement of the established logistical scheme which is additional risk for DIISW. Therefore the switch to the new steelmaking technology based on

Midrex technology can not be considered as baseline scenario due to a number of mentioned obstacles.

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 CO_2 emissions related to this scenario is accounted for; its monitoring is performed as part of detailed monitoring of steelworks processes required for the DIISW technical purposes.

Application of the approach chosen

The detailed analysis of the alternatives was given above. Alternative #3 was the least feasible among all 3 alternatives because it required huge investments and complete change of logistical scheme. 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 2003 was selected as the year when the investment decision was made. All the listed alternatives in the year 2003 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 CO_2e 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) 5 year base period from 1999 to 2003 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;

d) DIISW faced no difficulties with supply of raw materials such as ore and coal.

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. Three 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 credible barriers, such as investment (adverse financial situation of DIISW, Backwardness of the Ukrainian Domestic Financial Market, IUD Low Credit Rating) and technological barriers, which would hinder project scenario implementation without additional revenue from Kyoto benefits. No barriers exist to the baseline alternative, the continuation of the situation prior to the implementation of the project activity.
The proposed joint implementation project is not common practice. To-date, a similar project but to incomparable lower scale has been implemented only at Azovstal (some measures related to technological improvements of BFs operation and reconstruction of BF shop components of the proposed JI project) 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 DIISW 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. Additionality is proved mainly due to the barrier analyses (including description of specific barriers, adverse financial situation of DIISW, barriers due to prevailing practice and technological barriers).

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 DIISW, 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.

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. Based on the above assessment, the AIE hereby confirms that the identified boundary and the selected sources and gases are justified for the project activity.

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 26/12/2003, 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 or 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 for the period following the first commitment period), and its starting date as 01/04/2004, which is on the date the first emission reductions 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 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; 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 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 agents, quantity of each other input in Pig Iron Production, emission factor of each other input, quantity of each other input in Pig Iron Production, and 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 emission factor for fuel consumption, emission factor for electricity consumption, emission factor of each reducing agent, and 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 quantity of each fuel used in making pig iron, electricity consumed in producing pig iron, 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, and 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, quarterly, yearly and electronic or paper recording method. The respective information for each monitoring parameter is sufficiently described in the section D of the PDD.

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 CO2e 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 DIISW operation regarding pig iron production during the period of 1999 – 2003) – 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 DIISW during the period of 1999-2003).

$TCPTPIP_b = (TCPI_b + TCBPN_b) / TPII_b$

where:
$TCPI_b$ - total embodied CO_2e from Pig Iron production, t CO_2e
$TCBPN_b$ - total CO_2e in the balance of production processes, t CO_2e
$TPII_b$ - total pig iron production during the baseline period, tonnes

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.

Pig iron production

CO_2e due to the production of Pig Iron ($TCPI_{b,i}$) comes from three sources: fuel (natural gas), electricity, and material inputs, such as coke, anthracite, limestone, dolomite, pellets, etc.

$TCPI_{b,i} = (TCFCPI_{b,i} + TCEPI_{b,i} + TCIPI_{b,i})$

where:
$TCFCPI_{b,i}$ - total CO_2e from fuel consumption in producing Pig Iron, t CO_2e
$TCEPI_{b,i}$ - total CO_2e from electricity consumption in producing Pig Iron, t CO_2e
$TCIPI_{b,i}$ - total CO_2e from Inputs into Pig Iron, t CO_2e

Total CO_2e from fuel consumption in producing Pig Iron ($TCFCPI_{b,i}$) is the quantity of fuel multiplied by the emission factor of the fuel:

$$TCFCPI_{b,i} = \sum_{1}^{fpi} \left(Q_{fpi,b,i} \times EF_{f,b} \right)$$

where:
$_{fpi}b,i$ - fuel used in making pig iron
$Q_{b,i}$ - quantity of fuel $_{fpi}$ used (1000 m³)
$EF_{f,b}$ - tonnes of CO_2e per 1000 m³ of fuel

Emission factor for fuel in this case is based on fixed net calorific value. During the monitoring report development emission factor will be modified by taking into account actual net calorific value of fuel.

Total CO_2e from electricity consumption in producing Pig Iron ($TCEPI_{b,i}$) is the quantity of electricity multiplied by the emission factor of electricity:

$TCEPI_{b,i} = ECPI_{b,i} \times EF_{e,b}$
where:
$ECPI_{b,i}$ - electricity consumed in producing pig iron, MWh
$EF_{e,b}$ - emission factor for electricity, t CO_2e/MWh in the relevant period

$TCIPI_{b,i}$ – the total CO_2e emissions from the material inputs into pig iron – include the CO_2e from fuel and electricity used to prepare iron ore, the total CO_2e from the reducing agents (coke, anthracite etc.) and the total CO2e from limestone, dolomite, pellets etc.

$TCIPI_{b,i} = TCFIO_{b,i} + TCEIO_{b,i} + TCRAPI_{b,i} + TCOIPI_{b,i}$,

where:
$TCFIO_{b,i}$ - total CO_2e from fuel used to prepare iron ore, t CO_2e
$TCEIO_{b,i}$ - total CO_2e from electricity consumption in preparing iron ore, t CO_2e
$TCRAPI_{b,i}$ - total CO_2e from reducing agents, t CO_2e
$TCOIPI_{b,i}$ - total CO_2e from the other consumed inputs, t CO_2e

Total CO_2e from fuel used for Sinter production ($TCFIO_{b,i}$) is the quantity of fuel multiplied by the emission factor of this fuel:

$$TCFIO_{b,i} = \sum_{1}^{fio} \left(Q_{fio,b,i} \times EF_{f,b} \right)$$

where:
$_{fiob,i}$ - fuel used for Sinter production
$Q_{b,i}$ - quantity of fuel fio used (1000 m³)
$EF_{f,b}$ - tonnes of CO_2e per 1000 m³ of fuel

Emission factor for fuel in this case is based on fixed net calorific value. During the monitoring report development emission factor will be modified by taking into account actual net calorific value of fuel.

Total CO_2e from electricity consumption for Sinter production ($TCEIO_{b,i}$) is the quantity of electricity multiplied by the emission factor of electricity:

$TCEIO_{b,i} = ECIO_{b,i} * EF_{e,b}$

where:
$ECIO_{b,i}$ - electricity consumed for Sinter production, MWh
$EF_{e,b}$ - emission factor for electricity, t CO_2e/MWh in the relevant period

Total CO_2e from reducing agents in pig iron production $TCRAPI_{b,i}$ is the quantity of each reducing agent multiplied by the emission factor for the reducing agent:

$$TCRAPI_{b,i} = \sum_{1}^{rapi} \left(Q_{rapi,b,i} \times EF_{ra,b} \right)$$

where:
$_{rapib,i}$ - number of reducing agents in pig iron production
$Q_{b,i}$ - quantity of each reducing agent $_{rapi}$ used (tonnes)
$EF_{ra,b}$ - emission factor for reducing agent, t CO_2e/tonne in the relevant period

The project developers use default factors for coke (emission factor 3.66 t CO_2e/tonne, which includes the default factor for coke burning (3.1 t CO_2e/tonne) and the default factor for coke production (0.56 t CO_2e/tonne)), anthracite (default emission factor 2.62 t CO_2e/tonne). If other reducing agents are to be used, their default emission factors will be applied. In case if actual data on carbon content and the net calorific value of coke and anthracite are available, the emission factor for these parameters will be recalculated and these data would prevail over PDD estimations.

Total CO_2e from the other inputs such as limestone, dolomite, pellets etc. in pig iron production $TCOIPI_{b,i}$ is the quantity of each other input multiplied by the emission factor for that input:

$$TCOIPI_{b,i} = \sum_{1}^{oipi} \left(Q_{oipi,b,i} \times EF_{oi,b} \right)$$

where:
$_{oipib,i}$ - number of the other inputs in pig iron production
$Q_{b,i}$ - quantity of each other input oipi used (tonnes)
$EF_{oi,,b}$ - emission factor for the other inputs, t CO_2e/tonne in the relevant period

Balance of process needs

Total tonnes of CO_2 related to the balance of process needs of the project, namely production of secondary energy at the CHP (that produces blast-furnace blowing, chemically treated water and heat), as well as processes to produce compressed air, steam, oxygen, nitrogen, argon , water, air-free water and treated gas together with its transportation. The relevant parameters are calculated based on the amounts of fuel and electricity consumed by the said processes:

$TCBPN_{b,i}$ - total tonnes of CO_2 related to the balance of process needs, which is the sum of CO_2 emissions from fuel and electricity consumed:

$TCBPN_{b,i} = TCFCBPN_{b,i} + TCEBPN_{b,i}$
where:
$TCFCBPN_{b,i}$ - total CO_2e from fuel consumption for balance of process needs, t CO_2e:
where:
$_{fbpnb,i}$ - fuel used in producing secondary energy used for balance of process needs
$Q_{b,i}$ = quantity of fuel fbpn used (1000 m³)
$EF_{f,b}$ = tonnes of CO_2e per 1000 m³ of fuel

Emission factor for fuel in this case is based on fixed net calorific value. During the monitoring report development emission factor will be modified by taking into account actual net calorific value of fuel.

$TCEBPN_{b,i}$ - total CO_2e from electricity consumption for balance of process needs, t CO_2e:

$TCEBPN_{b,i} = ECBPN_{b,i} * EF_{e,p}$
where:
$ECBPN_{b,i}$ - electricity used for production of secondary energy used for the balance of process needs (MWh)
$EF_{e,p}$ - emission factor for electricity, t CO_2e/MWh in the relevant period

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.

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

where:
$TCPI_{p,i}$ - total embodied CO_2e from Pig Iron production, t CO_2e
$TCBPN_{p,i}$ - total CO_2e in the balance of production processes, t CO_2e

$_i$ - regular data registration interval

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.

Pig iron production

CO_2e due to the production of Pig Iron ($TCPI_{p,i}$) comes from three sources: fuel (natural gas), electricity and material inputs, such as coke, anthracite, limestone, dolomite, pellets, etc.

$TCPI_{p,i} = (TCFCPI_{p,i} + TCEPI_{p,i} + TCIPI_{p,i})$
where:
$TCFCPI_{p,i}$ - total CO_2e from fuel consumption in producing Pig Iron, t CO_2e
$TCEPI_{p,i}$ - total CO_2e from electricity consumption in producing Pig Iron, t CO_2e
$TCIPI_{p,i}$ - total CO_2e from Inputs into Pig Iron, t CO_2e

Total CO2e from fuel consumption in producing Pig Iron (TCFCPIp,i) is the quantity of fuel multiplied by the emission factor of the fuel:

$$TCFCPI_{p,i} = \sum_{1}^{fpi} \left(Q_{fpi,p,i} \times EF_{f,p} \right)$$

where:
$_{fpip,i}$ - fuel used in making pig iron
$Q_{p,i}$ - quantity of fuel $_{fpi}$ used (1000 m³)
$EF_{f,p}$ - tonnes of CO_2e per 1000 m³ of fuel

Emission factor for fuel in this case is based on fixed net calorific value. During the monitoring report development emission factor will be modified by taking into account actual net calorific value of fuel.

Total CO_2e from electricity consumption in producing Pig Iron ($TCEPI_{p,i}$) is the quantity of electricity multiplied by the emission factor of electricity:

$TCEPI_{p,i} = ECPI_{p,i} \times EF_{e,p}$
where:
$ECPI_{p,i}$ - electricity consumed in producing pig iron, MWh
$EF_{e,p}$ - emission factor for electricity, t CO_2e/MWh in the relevant period

$TCIPI_{p,i}$ – the total CO_2e emissions from the material inputs into pig iron – include the CO_2e from fuel and electricity used to prepare iron ore, the total CO_2e from the reducing agents (coke, anthracite etc.) and the total CO_2e from limestone, dolomite, pellets etc.

$TCIPI_{p,i} = TCFIO_{p,i} + TCEIO_{p,i} + TCRAPI_{p,i} + TCOIPI_{p,i}$
where:
$TCFIO_{p,i}$ - total CO_2e from fuel used to prepare iron ore, t CO_2e
$TCEIO_{p,i}$ - total CO_2e from electricity consumption in preparing iron ore, t CO_2e
$TCRAPI_{p,i}$ - total CO_2e from reducing agents, t CO_2e
$TCOIPI_{p,i}$ - total CO_2e from the other consumed inputs, t CO_2e

Total CO_2e from fuel used for Sinter production ($TCFIO_{p,i}$) is the quantity of fuel multiplied by the emission factor of this fuel:

$$TCFIO_{p,i} = \sum_{1}^{fio} \left(Q_{fio,p,i} \times EF_{f,p} \right)$$

where:
$fiop,i$ - fuel used for Sinter production
$Q_{p,i}$ - quantity of fuel fio used (1000 m³)
$EF_{f,p}$ - tonnes of CO_2e per 1000 m³ of fuel

Emission factor for fuel in this case is based on fixed net calorific value. During the monitoring report development emission factor will be modified by taking into account actual net calorific value of fuel.

Total CO_2e from electricity consumption for Sinter production ($TCEIO_{p,i}$) is the quantity of electricity multiplied by the emission factor of electricity:

$TCEIO_{p,i} = ECIO_{p,i} * EF_{e,p}$
where:
$ECIO_{p,i}$ - electricity consumed for Sinter production, MWh
$EF_{e,p}$ - emission factor for electricity, t CO_2e/MWh in the relevant period

Total CO_2e from reducing agents in pig iron production $TCRAPI_{p,i}$ is the quantity of each reducing agent multiplied by the emission factor for the reducing agent:

$$TCRAPI_{p,i} = \sum_{1}^{rapi} \left(Q_{rapi,p,i} \times EF_{ra,p} \right)$$

where:

$_{rapip,i}$ - number of reducing agents in pig iron production
$Q_{p,i}$ - quantity of each reducing agent rapi used (tonnes)
$EF_{ra,p}$ - emission factor for reducing agent, t CO_2e/tonne in the relevant period

The project developers use default factors for coke (emission factor 3.66 t CO_2e/tonne, which includes the default factor for coke burning (3.1 t CO_2e/tonne) and the default factor for coke production (0.56 t CO_2e/tonne)), anthracite (default emission factor 2.62 t CO_2e/tonne). If other reducing agents are to be used, their default emission factors will be applied. In case if actual data on carbon content and the net calorific value of coke and coal are available, the emission factor for these parameters will be recalculated and these data would prevail over PDD estimations.

Total CO_2e from the other inputs such as limestone, dolomite, pellets etc. in pig iron production TCOIPIp,i is the quantity of each other input multiplied by the emission factor for that input:

$$TCOIPI_{p,i} = \sum_{1}^{oipi} \left(Q_{oipi,p,i} \times EF_{oi,p} \right)$$

where:

$_{oipip,i}$ - number of the other inputs in pig iron production
$Q_{p,I}$ - quantity of each other input oipi used (tonnes)
$EF_{oi,,p}$ - emission factor for the other inputs, t CO_2e/tonne in the relevant period

Balance of process needs

Total tonnes of CO_2 related to the balance of process needs of the project, namely production of secondary energy at the CHP (that produces blast-furnace blowing, chemically treated water and heat), as well as processes to produce compressed air, steam, oxygen, nitrogen, argon, water, air-free water and treated gas together with its transportation. The relevant parameters are calculated based on the amounts of fuel and electricity consumed by the said processes:

$TCBPN_{p,i}$ - total tonnes of CO_2 related to the balance of process needs, which is the sum of CO_2 emissions from fuel and electricity consumed:

$TCBPN_{p,i} = TCFCBPN_{p,i} + TCEBPN_{p,i}$
where:

$TCFCBPN_{p,i}$ - total CO_2e from fuel consumption for balance of process needs, t CO_2e:

$$TCFCBPN_{p,i} = \sum_{1}^{fbpn} Q_{fbpn,p,i} \times EF_{f,p}$$

where:

$_{fbpnp,i}$ - fuel used in producing secondary energy used for balance of process needs

$_{Qp,i}$ - quantity of fuel $_{fbpn}$ used (1000 m³)

$EF_{f,p}$ - tonnes of CO_2e per 1000 m³ of fuel

Emission factor for fuel in this case is based on fixed net calorific value. During the monitoring report development emission factor will be modified by taking into account actual net calorific value of fuel.

$TCEBPN_{p,i}$ - total CO_2e from electricity consumption for balance of process needs, t CO_2e:

$TCEBPN_{p,i} = ECBPN_{p,i} * EF_{e,p}$

where:

$ECBPN_{p,i}$ - electricity used for production of secondary energy used for the balance of process needs (MWh)

$EF_{e,p}$ - emission factor for electricity, t CO_2e/MWh in the relevant period

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 and made available on request.

Generally quality assurance procedures are based on the Plant's ISO 9001:2001 quality management system (QMS) implemented in 2001. This QMS covers the whole of the Plant's production process. In 2010, the system was upgraded to the more recent ISO 9001:200869 version. Certificates were issued by UkrSEPRO (no. 2.008.04188 dd. 29/01/2010) and TÜV SÜD (no. 12 100 37982 dd. 22/03/2010). Furthermore, an

OHSAS 18000 industrial safety management system and an ISO 14000 environmental management system were implemented in 2009. Relevant certificates were issued by TÜV Thuringen (nos. TIC 1511610202 dd. 02/03/2010 and TIC 1510410697 dd. 02/03/2010, respectively). Compliance audits for the above standards are performed on an annual basis.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities.

The Monitoring Plan will be implemented by different specialists of the DIISW under supervision of Head of Technical Directorate's Technical Department and managed by top management of the Plant. Chief Engineer has overall project responsibility. All the main production shops and specialists of the plant will be involved into the preparation of monitoring report under coordination of Head of Technical Directorate's Technical Department. The Institute for Environment and Energy Conservation will also supervise the implementation of the Monitoring Plan for the project at regular intervals. Detailed information on specialists responsible for monitoring is presented in the Table 5 of the PDD section D.3.

On the whole, the monitoring plan 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, proprietary data, IPCC, commercial and scientific literature).

The monitoring plan (see section D.1 of the PDD) indicates that the data monitored and required for verification are to be kept during the whole crediting period and also during two years after the last transfer of ERUs for the project.

4.8 Leakage (40-41)

Not applicable. The emissions from installing the new equipment will not be significant. The emissions from 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 (42-47)

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

The PDD provides the ex ante estimates of:

(a) Emissions for the project scenario (within the project boundary), which are 31 213 674 tons of CO_2eq for 01/04/2004-2007, 43 807 449 tons of CO_2eq for 2008-2012, and 71 975 796 tons of CO_2eq for 2013-2020;

(b) Estimated leakage for the baseline scenario and project scenarios is considered equal zero tons of CO_2eq.

(c) Emissions for the baseline scenario (within the project boundary), which are 37 458 786 tons of CO_2eq for 01/04/2004-2007, 52 069 838 tons of CO_2eq for 2008-2012, and 90 054 481 tons of CO_2eq for 2013-2020.

(d) Emission reductions adjusted by leakage, which are 6 245 112 tons of CO_2eq for 01/04/2004-2007, 8 262 389 tons of CO_2eq for 2008-2012, and 19 186 230 tons of CO_2eq for 2013-2020.

The estimates referred to above are given:

(a) On an annual basis;

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

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

(d) For each GHG gas, which is, in this case, CO_2;

(e) In tonnes 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;

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. fuel prices and availability, expected market development, etc., influencing the baseline emissions and the activity level of the project and the emissions

as well as risks associated with the project were taken into account, as appropriate.

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

Concerning data sources of emission factors, up to 2008 the carbon emission factor for electricity consumption is based on Assessment of new calculation of CEF, assessed by TÜV SÜD, 2007 . During 2008 the carbon emission factor for electricity consumption is based on the Order of the National environmental investment agency of Ukraine #62 dated 15th of April 2011 . During 2009 the carbon emission factor for electricity consumption is based on the Order of the National environmental investment agency of Ukraine #63 dated 15th of April 2011 . Starting from year 2010 the carbon emission factor for electricity consumption is based on the Order of the National environmental investment agency of Ukraine #43 dated 28th of March 2011 . If any other emission factors will be officially approved, the project developer will make an appropriate modification at the stage of monitoring report development.

2010 the CO_2 emission factor for electricity consumption from the grid is in accordance with mentioned above decree issued by NEIA for the 1st – class electricity consumers and is equal to 1,093 kgCO_2/kWh. The use of the emission factor for the 1st-class electricity consumers is justified by the resolution of National Electricity Regulatory Commission of Ukraine № 1052 of 13 August 1998, according to the resolution the 1st – class electricity consumers are the consumers, who:

1) receive electricity from electricity supplier at the point of sale of electricity with the degree of voltage 27.5 kV and above;

2) connected to the power rails of power plants (except hydroelectric, which produce electricity periodically), as well as to power rails of substations of the electricity grid with voltage of 220 kV and above, regardless voltage level at the point of sale of electricity by the power supplier to consumer;

3) is the industrial enterprise with average monthly rate of electricity consumption - 150 million kWh and above for the technological needs of production, regardless of the voltage level at the point of sale of electricity by the power supplier to consumer.

OJSC “DIISW” meets all the requirements mentioned above, so OJSC “DIISW” refers to the 1st – class electricity consumers.

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 over the crediting period is calculated by dividing the total estimated emission reductions 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. EIAs (for such activities as reconstruction of sintering and blast-furnace production; reconstruction of blast-furnace shop with the introduction of BF # 4M, renewal with the reconstruction of BF # 10; reconstruction of oxygen plant) were developed by Ukrainian State Scientific and Engineering Center for technology and equipment, metals working, environmental protection and secondary resources utilization for metallurgy and machine-building "Energostal". The document provides assessment of impact of the project activity on various components of natural, social, and man-made environment.

Revamping of sintering and blast-furnace production at DIISW will generally have a positive environmental impact. The general environmental impact opinion via the procedure endorsed by the Ukrainian government is that the project will have a positive environmental impact and its foreseeable emergency negative impacts will be insignificant and easily repaired. It may generally be stated that the project activity is in line with the EU best available technology principle. Project activity will cause no harmful transboundary impacts.

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.

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 has been 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. Public hearings have not been organized, because the project site lies within the DIISW 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 «Revamping of sintering and blast-furnace production at OJSC «Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky» 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 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 pending issue related to the current determination stage of the project: the issue of the written approval of the project and of 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 6 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

The review of the project design documentation (version 6) 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 "Revamping of sintering and blast-furnace production at OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky", version 1 dated 26/11/2010.
/2/ PDD "Revamping of sintering and blast-furnace production at OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky", version 2 dated 27/01/2011.
/3/ PDD "Revamping of sintering and blast-furnace production at OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky", version 3 dated 03/03/2011.
/4/ PDD "Revamping of sintering and blast-furnace production at OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky", version 4 dated 30/03/2011.
/5/ PDD "Revamping of sintering and blast-furnace production at OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky", version 5 dated 11/04/2011.
/6/ PDD "Revamping of sintering and blast-furnace production at OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky", version 6 dated 10/05/2011.
/7/ Decree of Cabinet of Ministers of Ukraine #206, dated 22/02/2006
/8/ Guidelines for Users of the Join Implementation Project Design

Document Form, version 04, JISC
/9/ Joint Implementation Project Design Document Form, version 01
/10/ Glossary of JI terms, version 03, JISC.
/11/ Guidance on Criteria for Baseline Setting and Monitoring, version 02, JISC.
/12/ Tool for the demonstration and assessment of additionality, Version 05.2.
/13/ JISC "Clarification regarding the public availability of documents under the verification procedure under the Joint Implementation Supervisory Committee." Version 03.
/14/ Letter of Endorsement № 1807/23/7 on the JI project ''Revamping of sintering and blast-furnace production at OJSC ''Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky'' dated November, 09, 2010 issued by National Environmental Investment Agency of Ukraine.
/15/ Decree #43 on approval of indexes of specific carbon dioxide emissions in the year 2010 issued by NEIA dated 28.03.2011.
/16/ Decree #62 on approval of indexes of specific carbon dioxide emissions in the year 2008 issued by NEIA dated 15.04.2011.
/17/ Decree #63 on approval of indexes of specific carbon dioxide emissions in the year 2009 issued by NEIA dated 15.04.2011.
/18/ Resolution of National Electricity Regulatory Commission of Ukraine № 1052 of 13 August 1998.

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

/1/ Certificate of conformity management system to requirement of standard ISO 14001:2004 OJSC ''Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky''.
/2/ Certificate of conformity management system to requirement of standard BS OHSAS 18001:2007 OJSC ''Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky''.
/3/ Photo. Electronic system for blast-furnace shop control.
/4/ Photo. General view of blast-furnace shop # 10 after reconstruction.
/5/ Gas-purification system of blast-furnace shop # 10.
/6/ Photo. Building site for new blast-furnace shop # 4.
/7/ Photo. General view of oxygen shop.
/8/ Technical report of blast-furnace shop for January 2008.
/9/ Technical report on agglofactory # 2 work for January 2008.
/10/ Technical report of blast-furnace shop for September 1999.
/11/ Technical report of blast-furnace shop for October 2003.
/12/ Technical report on agglofactory # 2 work for November 2001.
/13/ Technical report on agglofactory # 2 work for October 2000.
/14/ Technical report on agglofactory # 2 work for August 1999.
/15/ Certificate on attestation № 06544-5-1-7-КЛ. Registation date

01.02.2010. Valid till 01.02.2013.
/16/ Annex to certificate on attestation № 06544-5-1-7-КЛ dated 01.02.2010.
/17/ Annex to certificate on attestation № 06544-5-1-7-КЛ dated 01.02.2010.
/18/ Annex to certificate on attestation № 06544-5-1-7-КЛ dated 01.02.2010.
/19/ Statement of 22.12.2009 on checking results of conformity of metrology laboratory of OJSC ''Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky'' against attestation criteria for performing measuring tools calibration for own needs.
/20/ Enterprise standard. Quality system. Organization and order of metrological examination performance of normative and technilogical documentation.
/21/ Enterprise standard. Order of procedures development and attestation.
/22/ Enterprise standard. Metrological assurance of measuring tools
/23/ Passport on metrology laboratory.
/24/ Reconstruction of sintering and blast-furnace production. Feasibility study. Environmental impact assessment. Volume 5.
/25/ Feasibility study. Sintering and blast-furnace production. Volume 1. Explanatory note.
/26/ Reconstruction of sintering and blast-furnace production. Feasibility study. Blast-furnace production. Volume 1.
/27/ Reconstruction of blast-furnace shop with building of blast-furnace # 4M. Project. Environmental impact assessment. Volume 5.
/28/ Reconstruction of blast-furnace shop with building of blast-furnace # 4M. Feasibility study. Environmental impact assessment. Volume 5.
/29/ Reconstruction of blast-furnace shop with building of blast-furnace # 4M. Feasibility study. Explanatory note. Volume 1.
/30/ Reconstruction of blast-furnace shop with building of blast-furnace # 4M. Project. Explanatory note. Volume 1.
/31/ Overhaul repair with reconstruction of blast-furnace # 10. Correction of approved part of working project. Environmental impact assessment (correction). ДТ 339590а.
/32/ Overhaul repair with reconstruction of blast-furnace # 10. Correction of approved part of working project. Feasibility study. ДТ 336459.
/33/ Reconstruction of air separation unit of oxygen and compression shop with mounting of unit (ВРУ) АКАр-40/35-4. Environmental impact assessment. ТЕЈ. ДТ 341395.
/34/ Reconstruction of air separation unit of oxygen and compression shop with mounting of unit (ВРУ) АКАр-40/35-4. Explanatory note. Project. ДТ 341395. Volume 1.
/35/ Reconstruction of blast-furnace shop with building of blast-furnace # 4M. Project. Explanatory note. Volume 1.
/36/ Statement of state admission committee on acceptance in operation

of completed construction object dated 09.11.2007.
/37/ Statement of state admission committee on acceptance in operation of completed construction object dated 12.03.2008.
/38/ Project. Environmental Impact Assessment. Volume 5. 2008.
/39/ Environmental Impact Assessment (EIA). Major repairs with reconstruction of blast furnace #10. Correction of approved part of the working project. 2007.
/40/ Revamping of sintering and blast-furnace production. Feasibility study. Environmental Impact assessment (EIA). Volume 5. 2007.
/41/ Major repairs with reconstruction of blast furnace #10. Correction of approved part of the working project. 2004.
/42/ Reconstruction of air-separating area of oxygen-compressor workshop with installation unit (ВРУ) АКАр-40/45-4. Environmental impact assessment (EIA). FS ДТ 34139. 2006.
/43/ Reconstruction of air-separating area of oxygen-compressor workshop with installation unit (ВРУ) АКАр-40/45-4. Explanatory note.Project. 2006.
/44/ Reconstruction of blast furnace workshop with construction of blast furnace #4. Project. Explanatory note. Volume 1. 2008.
/45/ Reconstruction of blast-furnace and sinter production. Feasibility study. Volume 1. Explanatory note. 2007.
/46/ Report on produced, transferred and used active electrical energy at OJSC “DIISW” for January of 2011.
/47/ The minutes of meeting regarding condition of basic production assets of DIISW and development of strategy for its reconstruction and revamping, dated December 26, 2003.
/48/ DIISW Order # 1792 of 29.12.2003 to the minutes of meeting regarding condition of basic production assets of DIISW and development of strategy for its reconstruction and revamping, dated December 26, 2003.
/49/ Report on generated, transferred and consumed electroenergy at “DIISW” for 01/12/2010 – 31/12/2010.

Persons interviewed:

List persons interviewed during the validation or persons that contributed with other information that are not included in the documents listed above.

/1/ V.I. Romanenko - chief engineer

/2/ G.F. Borovikov - deputy general director for reconstruction and capital construction
/3/ O.I. Benidze - HR manager, head of environmental committee of town council
/4/ I. R. Shabanova - head of personnel training department

/5/ V.A. Sudak - chief engineer
/6/ M.B. Turkin - deputy chief engineer for energy-saving

/7/ Y.V. Gyrin - chief agglomerate man

/8/ Y.V. Yegorov - chief metrologist, head of department for control equipment and instrumentation

/9/ V.A. Evtushenko - head of metrology laboratory

/10/ Y.M. Bajrak - head of airspace environment protection laboratory of environmental protection service

/11/ I.V. Grytsan - deputy head of planned-economic department

/12/ I.R. Rudenko - head of blast-furnace and sinter bureau of technical department

/13/ V.V. Motsnyj - head of technical depatment

/14/ S.S. Goncharenko - head of technical reequipment department

/15/ N.A. Olejnik - head of planning department

/16/ L.A. Brezhnyev - deputy of district council

/17/ V.V. Vovchak - director of Institute for Environment and Energy Conservation

APPENDIX A: JI PROJECT DETERMINATION PROTOCOL

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

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
A.1	Is the title of the project presented?	Title of the project: Revamping of sintering and blast-furnace production at OJSC "Revamping of sintering and blast-furnace production at OJSC «Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky".	OK	OK
	Is the sectoral scope to which project pertains presented?	Corrective Action Request (CAR) 14 The project pertains only to the sectoral scope 9 (metallurgy). Please, indicate the sectoral scope correctly.	The issue is closed based on the corrections made.	OK
	Is the current version number of the document presented?	The current version of the project 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 is presented.	OK	OK
A.2	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 the project;	In December 2003 OJSC «Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky" (DIISW) and IUD Corporation have decided to start development of DIISW by technical revamping of sintering and BF production. The main goal was not only to		

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	b) Baseline scenario; and c) Project scenario (expected outcome, including a technical description). Is the history of the project (incl. its JI component) briefly summarized?	improve performance of the enterprise, but also to solve environmental problems of production process. Section A.2 of the PDD includes description of the situation existing prior to the starting date of the project; brief explanation of baseline and project scenarios and short summary of the project history. <u>Corrective Action Request (CAR) 17</u> Project starting date 1st January 2004 coincides with the start of crediting period. Please, explain what can be implemented to allow reductions generation.	Necessary corrections are made in the PDD. The issue is closed.	OK
A.3	Are project participants and Party(ies) involved in the project listed? Is contact information provided	Project participants and parties involved are listed in the Table in section A.3. of the PDD. Parties involved: Ukraine (host Party), Japan, Netherlands, Spain, the United Kingdom of Great Britain and Northern Ireland. <u>Corrective Action Request (CAR) 01</u> Please, preserve the format of the table in the PDD section A.3 Contact information on the project participants is provided in Annex 1 of the PDD.	Based on the corrections made, CAR 01 is closed.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	in Annex 1 of the PDD?	Corrective Action Request (CAR) 15 Please, make the information on the project participants consistent throughout the whole PDD (in the section A.3 and Annex 1).	The issue is closed due to the amendments made.	OK
A.4.1	Location of the project	The site of the DIISW is located in the northern part of the town of Dniprodzerzhynsk located on the right side of the Dnipro river, 12 km from Baglei station of Transdnipro Railways, serving deliveries of materials to the Plant and shipments of its finished products. The site is limited by the Dnipro river from the north, urban areas from the south, sites of Dniprodzerzhynsk HPP and cement factory from the west, and coke plant from the east.	OK	OK
A.4.1.1	Host Party(ies)	Ukraine is a host Party.	OK	OK
A.4.1.2	Region/State/Province etc.	Dnipropetrovsk region.	OK	ОКБ
A.4.1.3	City/Town/Community etc.	Dniprodzerzhynsk.	OK	OK
A.4.1.4	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	Dniprodzerzhynsk is one of the Ukraine's largest industrial centres. Established in 1897, it covers both sides of the Dnipro river and its global position is 48°30′N – 34°37′E. The town has the area of approximately 138 square kilometres	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		and the population of 251.4 thousand people. See section A.4.1.4 of the PDD.		
A.4.2	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?	The proposed project activity consists of three main components as follows: 1) technological improvements of BFs operation; 2) reconstruction of BF shop with an introduction of the new blast furnace #4; 3) modernization of sintering process with an introduction of the new SP. The implementation schedule is presented in the PDD section A.4.2.	OK	OK
A.4.3	Is it explained briefly how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page.)	The objective of the proposed project is to reduce energy and materials, mainly coke, consumption during pig iron 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 CO_2e/t of coke, and 2. Coke processing in the BF. The emission factor for coke processing is 3.1 t CO_2e/t, assuming that default IPCC factor is used. The PDD section A.4.3 shows the measures by which the reduction in coke consumption can be achieved.	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
A.4.3.1	Is the length of the crediting period indicated? Are estimates of total as well as annual and average annual emission reductions in tonnes of CO_2 equivalent provided?	The length of crediting period is indicated in the PDD section A.4.3.1. Corrective Action Request (CAR) 02 The total estimated emission reductions for the periods 01/04/2004-2007, 2008-2012, 2013-2020 are incorrectly calculated. Also annual average of estimated emission reductions for the period 2013-2020 is incorrectly calculated.	Conclusion on response #1 Total estimated emission reductions for the periods 01/04/2004-2007, 2008-2012, 2013-2020 were corrected. Nevertheless, tables with information on estimated project emissions, baseline emissions and estimated emission reductions are not provided in the section E of PDD version 2 dated 27/01/2011. This issue remains open. Also, please, revise the formula #14 for calculating emission reductions (in the PDD section D.1.4) and provide correct interpretation of the formula. Conclusion on response #2 The PDD section E is partly corrected. However, it is also	

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
			necessary to entitle the tables (in the PDD section E) with information on estimations for post-Kyoto period; also, please, do not divide the tables (connected to post-Kyoto period) into two parts. Conclusion on response #3 Due to the corrections made in the PDD, the issue is closed.	OK
		Corrective Action Request (CAR) 03 The duration of post-Kyoto period in the PDD (2013-2020) differs from the duration of the post-Kyoto period indicated in the Excel-file where ERs are calculated only till the year 2020.	CAR 03 is closed based on the amendments made in the PDD.	OK
		Clarification Request (CL) 11 Please, entitle Excel files with calculations of baseline and project emissions, and emission reductions calculations; also, please, correct the name of the Excel sheets in the files.	Due to the corrections made, the issue is closed.	OK
		Corrective Action Request (CAR) 16 “Assigned amount units (AAUs)” cannot be generated as they are assigned. Please, replace	The issue is closed due to the amendments made.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		the phrase (in the section A.4.3.1) with "emission reductions".		
A.5	Is written project approvals by the Parties involved attached?	Corrective Action Request (CAR) 04 The project has no letters of approval of the Parties involved. Clarification Request (CL) 01 Please, in the PDD section A.5 specify the name of the DFPs (of Parties involved) which will issue written approvals.	Pending Necessary information is added to the PDD.	Pending OK
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	See section A.5 of this table. Clarification Request (CL) 02 Please, indicate (in the PDD) the number of LoE (Letter of Endorsement) issued by the Government of Ukraine for this project.	Based on the amendments made, CL 02 is closed.	OK
19	Does the PDD identify at least the host Party as a "Party involved"?	Party involved Ukraine is a host Party.	OK	OK
19	Has the DFP of the host Party issued a written project approval?	The host Party (Ukraine) has not issued a written project approval. See section A.5 of this table.	OK	OK
20	Are all the written project approvals by Parties involved unconditional?	All the written project approvals by Parties involved will be unconditional.	OK	OK
21	Is each of the legal entities	Party involved 1: Ukraine (host Party), legal	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	entities are OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerzhynsky" and Institute for Environment and Energy Conservation. Party involved 2: Japan, legal entity is Sumitomo Corporation. Party involved 3: Netherlands, Stichting Carbon Finance (SCF). Party involved 4: Spain, legal entity Stichting Carbon Finance (SCF). Party involved 5: The United Kingdom of Great Britain and Northern Ireland, Deutche Bank AG, (*London branch*).		
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? − JI specific approach − Approved CDM methodology approach	The PDD indicates the approach used for establishing the baseline, additionality and monitoring plan (JI specific approach which is fully identical to approach applied to the project registered at UNFCCC with reference number UA1000022). Clarification Request (CL) 03 Please, explain in detail why the approach used for the project UA1000022 also can be applicable in the case of the project "Revamping of sintering and blast-furnace production at OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerhynsky".	The provided explanation was found satisfactory. The issue is closed.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Corrective Action Request (CAR) 05 Please, in the PDD section B.4 provide date of baseline setting in the following format: DD/MM/YYYY.	Based on the amendments made in the PDD, the issue is closed.	OK
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	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. Clarification Request (CL) 04 Please, clarify (in the PDD section B.1) which data was selected as the baseline data (data through the year 2003 or averaged data through the period 1999-2003).	CL 04 is closed based on the explanation provided and amendments made in the PDD.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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 criteria for baseline setting and monitoring", as appropriate?			
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?	See section 22 of this table. Corrective Action Request (CAR) 06 Please, give references (in the PDD) to the 1996 IPCC Guidelines for National Greenhouse Gas Inventories not to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. For the present, 1996 IPCC Guidelines is the only one approved.	CAR 06 is closed due to the explanation provided and amendments made in the PDD.	OK
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	See the PDD section B.1.	OK	OK
26 (a)	Does the PDD provide the title, reference number and version	N/A	N/A	N/A

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	of the approved CDM methodology used?			
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
28	Does the PDD indicate which of the following approaches for demonstrating additionality is used? (a) Provision of traceable and	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	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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".	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.		
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and	See section 22 of this table.	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	transparent description?			
29 (b)	Are additionality proofs provided?	Corrective Action Request (CAR) 07 The developer in general provides extensive information regarding inferior investment background in Ukraine. At the same time the PDD section B.2 lacks data regarding the barriers facing this particular project. Please, make necessary amendments in the PDD.	Conclusion on response #1 There is still not enough information on the barriers facing this particular project. Conclusion on response #2 The issue is closed based on the information added to the PDD.	OK
29 (c)	Is the additionality demonstrated appropriately as a result?	See section 29 (b) of this table.	OK	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
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,	N/A	N/A	N/A

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	descriptions and analyses with regard to additionality made in accordance with the selected methodology?			
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
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 boundary is determined in the PDD section B.3.	OK	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	The delineation of the project boundary and the gases and sources included described in the PDD by using flow chart.	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	chart as appropriate?			
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?	Clarification Request (CL) 05 Please, revise the name of the fourth column of the table 4 (the PDD section B.3). It is better to replace the name "Included?" by more appropriate "Inclusion/Exclusion".	Due to the corrections made in the PDD, the issue is closed.	OK
33	Is the project boundary defined in accordance with the approved CDM methodology?	N/A	N/A	N/A
34 (a)	Does the PDD state 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?	According to the Guidelines for Users of the JI PDD form (ver. 04), the starting date of the JI project is the date on which the implementation or construction or real action of the project begins. Corrective Action Request (CAR) 08 In the PDD section C.1 give evidence proving the starting date of the project.	Based on the information added to the PDD, the issue is closed.	OK
34 (a)	Is the starting date after the beginning of 2000?	The starting date after the beginning of 2000 (starting date of the project is 26/12/2003).	OK	OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	The operational lifetime of the project is at least 20 years.	OK	OK
34 (c)	Does the PDD state the length of the crediting period in years	See section C.3 of the PDD.		

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	and months?	Corrective Action Request (CAR) 09 Please, state the length of crediting period not only in years, but also in months (as per Guidelines for Users of JI PDD form); and clearly indicate the time constraints of the post-Kyoto period. Also please, take into account that 1 January 2008 – 31 December 2012 is the length of the first commitment period (it is only the part of the crediting period), but not the length of the whole period.	Conclusion on response #1 The length of the crediting period was revised, and the format of the crediting period was corrected. Also, please, state the operational lifetime of the project in the correct format (in years and months). Conclusion on response #2 Now the length of the operational lifetime of the project is correctly stated.	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	For the period 01/04/2004-2007 Early Credits	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	will be claimed to be transferred through Article 17 of the Kyoto Protocol. 2008 – 2012 is the crediting period, prolongation: January 2013 - December 2020. The estimated emission reductions are provided in the table of the PDD section A.4.3.1 and Excel-files.		
35	Does the PDD explicitly indicate which of the following approaches is used? − JI specific approach − Approved CDM methodology approach	JI specific approach is used for baseline setting, additionality justification, monitoring plan; but it is not clearly explained in the PDD.	OK	OK
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? − All decisive factors for the control and reporting of project performance?	This Monitoring Plan is identical to the relevant part of Monitoring Plan used for the “Revamping and Modernisation of the Alchevsk Steel Mill” Joint Implementation Project, Project Registration Number UA 1000022. This means the complete correlation between project and baseline scenarios of the proposed project and the said JI Project in Alchevsk. The monitoring approach developed for this specific project is consistent with the assumptions and procedures adopted in the baseline approach. This monitoring approach		

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		requires monitoring and measurement of variables and parameters necessary to quantify the baseline emissions and project emissions in a conservative and transparent way. Clarification Request (CL) 06 Please, indicate the justification of parameter choice for all the parameters used.	Based on the information added to the PDD, CL 06 is closed.	OK
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: − 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	Please, give references (in the PDD) to the 1996 IPCC Guidelines for National Greenhouse Gas Inventories not to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. For the present, 1996 IPCC Guidelines is the only one approved. See CAR 06. See section 36 (b) of this table.	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	See section 24 of this table. The conservativeness of the values provided is justified.	OK	OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	See section D of the PDD. Clarification Request (CL) 07 Please, note (in the PDD) that data to be monitored and required for determination are to be kept for two years after the last transfer of ERUs for the project. The order concerning the procedure for keeping monitoring data should be issued by OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerhynsky". See FAR 01.	Forward Action Request (FAR) 01 The order concerning the procedure for keeping monitoring data should be issued by OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerhynsky". This issue will be checked during the first verification.	The issue remains open.

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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 calculate baseline emissions or net removals but are obtained through monitoring?	See section B.1 of the PDD.	OK	OK
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	The use of parameters, coefficients and variables are consistent between the baseline and monitoring plan. Establishing of baseline and the monitoring plan is based on the approach which is fully identical to the relevant part of the project registered at UNFCCC with reference number UA1000022.	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 is established taking into account "Guidance on criteria for baseline setting and monitoring".	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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	All algorithms and formulae used for the		

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	elaborate 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?	estimation of baseline and project emissions are indicated and explained in the PDD. Corrective Action Request (CAR) 10 Please, fill the PDD section D.1.1 with the tables of key information and data used for project case identification. Also, please, provide in the section D.1.1.2 formulas to calculate project emissions. Clarification Request (CL) 08 Please, describe balance of process needs (step 2 in the PDD section D.1.1.4) specifically for the case of this project; and exactly indicate (in the PDD section D) the parameters used for monitoring of CO_2 emissions related to the balance of process needs.	The issue is closed based on the corrections made in the PDD. The issue is closed due to the information added to the PDD.	OK OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	See section 36 (f) of this table.	OK	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Corrective Action Request (CAR) 11 Please, clarify the use of 1,093 kg CO_2/kWh as emission factor for electricity consumption by OJSC "DIISW" starting from 2010 (Also, please, justify that OJSC "DIISW" is an electricity consumer of the 1st type).	The issue is closed due to the explanation provided and amendments made in the PDD.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
36 (f) (iii)	Are all equations numbered?	All equations are numbered.	OK	OK
36 (f) (iv)	Are all variables, with units indicated defined?	Yes. See section D of the PDD.	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?	See section B of the PDD.	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?	Please, give references (in the PDD) to the 1996 IPCC Guidelines for National Greenhouse Gas Inventories not to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. For the present, 1996 IPCC	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Guidelines is the only one approved. See CAR 06.		
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	Key assumptions are indicated in the PDD.	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
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	Relevant national and/or sectoral policies and circumstances are taken into account while developing the monitoring plan for this project.	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	provide a reference as to where a detailed description of the standard can be found?			
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. Generally quality assurance procedures will be based on the Plant's ISO 9001:2001 quality management system (QMS) implemented in 2001. This QMS covers the whole of the Plant's production process. In 2010, the system was upgraded to the more recent ISO 9001:2008 version. Certificates were issued by UkrSEPRO (no. 2.008.04188 dd. 29/01/2010) and TÜV SÜD (no. 12 100 37982 dd. 22/03/2010). Furthermore, an OHSAS 18000 industrial safety management system and an ISO 14000 environmental management system were implemented in 2009. Relevant certificates were issued by TÜV Thuringen (nos. TIC 1511610202 dd. 02/03/2010 and TIC 1510410697 dd. 02/03/2010, respectively).		

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		These certificates (ISO 18000 and ISO 14000) were available during the site-visit. Compliance audits for the above standards are performed on an annual basis. Clarification Request 09 Please, provide a copy of the certificate on compliance of management system with requirements of the standard ISO 9001:2008.	Based on the information provided. CL 09 is closed.	OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	The Monitoring Plan will be implemented by different specialists of the DIISW under supervision of Head of Technical Directorate's Technical Department and managed by top management of the Plant. Chief Engineer has overall project responsibility. All the main production shops and specialists of the plant will be involved into the preparation of monitoring report under coordination of Head of Technical Directorate's Technical Department. The Institute for Environment and Energy Conservation will also supervise the implementation of the Monitoring Plan for the project at regular intervals. Corrective Action Request (CAR) 12 The PDD section D.1 states that responsibilities of monitoring are defined in Table 6 of the section A.4.2; but in fact, it is not true. Please, revise and make necessary amendments.	Due to the amendments made in the PDD, the issue is closed.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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?	The monitoring plan presented in the PDD reflects good monitoring practices appropriate to the project type.	OK	OK
36 (l)	Does the monitoring plan provide, 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 but not including data that are calculated with equations?	Corrective Action Request (CAR) 13 The PDD section D.1.5 gives reference to the section F.1. but in the section F.1 there is no data on collection and archiving information on environmental impacts of the project and references to the host Party regulations. Please, take into account that section D.1.5. of the PDD requires from the PPs consideration of procedures on the collection and archiving information on environmental impacts of the project and references to the host Party regulations. Please, make necessary amendments in the PDD.	CAR 13 is closed based on the information added to the PDD.	OK
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?	Please, note (in the PDD) that data to be monitored and required for determination are to be kept for two years after the last transfer of ERUs for the project. See CL 07 and FAR 01.	See FAR 01.	The issue remains open.
37	If selected elements or	See section D of the PDD.	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?			
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,	N/A	N/A	N/A

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	descriptions and analyses pertaining to monitoring in the PDD made in accordance with the referenced approved CDM methodology?			
38 (d)	Is the monitoring plan established appropriately as a result?	N/A	N/A	N/A
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	This Monitoring Plan is identical to the relevant part of Monitoring Plan used for the “Revamping and Modernisation of the Alchevsk Steel Mill” Joint Implementation Project, Project Registration Number UA 1000022. This means the complete correlation between project and baseline scenarios of the proposed project and the said JI Project in Alchevsk. See the PDD sections B and D of the PDD.	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?			
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?	See section D.1.3.2 of the PDD.	OK	OK
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
41	Are the leakage and the procedure for its estimation defined in accordance with the	N/A	N/A	N/A

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	approved CDM methodology?			
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	In the PDD indicated the approach of assessment of emissions in the baseline scenario and in the project scenario.	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?	Estimated baseline emissions are indicated in the PDD section E.4.	OK	OK
44	If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emission reductions or	N/A	N/A	N/A

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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 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? (b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD?	The estimates are given on the periodic basis (from the beginning until the end of crediting period). Estimates of CO_2 emission reductions are based on source-by-source basis. The estimates of emission reductions for each year are indicated in tones of CO_2 equivalent. $ER_i = BE_i – (PE_i + LE_i)$ is a formula used for calculating estimations of emission reductions (where: ER_i = Emission Reductions	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		BE_i = Baseline Emissions PE_i = Project Emissions LE_i = Leakages of GHG's $_i$ = regular data registration interval). See the PDD section E.1 and tables 27 and 28 of the PDD Annex 3.	OK	OK
	(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 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	See section 24 of this table. See section 36 (f) (ii) of this table.		

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	Conservative assumptions are taken into account while estimating emission reductions. See section A.4.3.1 of this table. The annual average emission reductions are be 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
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?	Baseline emissions are estimated on the basis of the JI specific approach which is fully identical to approach applied to the project registered at UNFCCC with reference number UA1000022.	OK	OK
47 (a)	Is the estimation of emission reductions or enhancements of net removals made in accordance with the approved	N/A	N/A	N/A

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	CDM methodology?			
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? − 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	N/A	N/A	N/A

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?			
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 (pay attention to table 12 of the section F.1.) Furthermore, project activity will cause no harmful transboundary impacts (See the end of the PDD section F.2). Clarification Request (CL) 10 Please, revise the table 12 (the PDD section F.1). It is better to combine the second and the third columns into one.	The issue is closed due to the amendments made in the PDD.	OK
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	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 processes. The second group requires EIAs and contains activities related to	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	accordance with the procedures as required by the host Party?	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). FSs for this project have been completed together with EIAs for such activities as: reconstruction of sintering and blast-furnace production; reconstruction of blast-furnace shop with the introduction of BF # 4M, renewal with the reconstruction of BF # 10; reconstruction of oxygen plant. 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 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.		
49	If stakeholder consultation was undertaken in accordance with	Law of Ukraine on environmental expertise defines the procedure of participation of citizens	OK	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	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 has been 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. Public hearings have not been organized, because the project site lies within the DIISW 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.		

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by determination team	Ref. to check-list question in the table	Summary of project owner response	Determination team conclusion
Corrective Action Request (CAR) 01 Please, preserve the format of the table in the PDD section A.3	A.3	The format of the table in the PDD section A.3 was appropriately modified (PDD version 6 of 10/05/2011).	Based on the corrections made, CAR 01 is closed.
Corrective Action Request (CAR) 02 The total estimated emission reductions for the periods 01/04/2004-2007, 2008-2012, 2013-2020 are incorrectly calculated. Also annual average of estimated emission reductions for the period 2013-2020 is incorrectly calculated.	A.4.3.1	Response #1 The total estimated emission reductions for the periods 01/04/2004-2007, 2008-2012, 2013-2020 were calculated correctly. Such text is now included in the modified PDD: "Project emissions, baseline emissions together with emission reductions (which are provided in this section) are rounded to the whole figure (1t) and are based on calculations which are demonstrated in attached excel file. This file is provided to the verifier". Please, see PDD version 2 dated 27/01/2011. Response #2 The corrections were done as per the conclusion on response #1.	Conclusion on response #1 Total estimated emission reductions for the periods 01/04/2004-2007, 2008-2012, 2013-2020 were corrected. Nevertheless, tables with information on estimated project emissions, baseline emissions and estimated emission reductions are not provided in the section E of PDD version 2 dated 27/01/2011. This issue remains open. Also, please, revise the formula #14 for calculating emission reductions (in the PDD section D.1.4) and provide correct interpretation of the formula. Conclusion on response #2 The PDD section E is partly corrected. However, it is also necessary to entitle the tables (in the PDD section E) with information on estimations for post-Kyoto period;

Draft report clarifications and corrective action requests by determination team	Ref. to check-list question in the table	Summary of project owner response	Determination team conclusion
		Response #3 All necessary tables in Section E are now entitled. The tables for post-Kyoto period are now merged together. Please see modified PDD version 6, dated 10.05.2011.	also, please, do not divide the tables (connected to post-Kyoto period) into two parts. Conclusion on response #3 The issue is closed due to the amendments made.
Corrective Action Request (CAR) 03 The duration of post-Kyoto period in the PDD (2013-2020) differs from the duration of the post-Kyoto period indicated in the Excel-file where ERs are calculated only till the year 2020.	A.4.3.1	The duration of post-Kyoto period in the PDD was modified. Correct duration of post-Kyoto period is 2013-2020. Please see the modified PDD version 6 dated 10/05/2011.	Due to the corrections made in the PDD, the issue is closed.
Corrective Action Request (CAR) 04 The project has no letters of approval of the Parties involved.	A.5	The project has already received Letter of Endorsement (LoE) from the Government of Ukraine #1807/23/7 of 09.11.2011 issued by the State Environmental Investment Agency of Ukraine. The final version of the Project Design Document shall be submitted to the State Environmental Investment Agency of Ukraine along with a positive determination report for the Letter of Approval (LoA), which is usually expected within 30 days. The LoA of a foreign government is usually provided within 30 days along with a positive determination report. It is expected that LoA of a foreign government will be provided either by the Government of Japan (The	Pending.

Draft report clarifications and corrective action requests by determination team	Ref. to check-list question in the table	Summary of project owner response	Determination team conclusion
		Liaison Committee for the Utilization of the Kyoto Mechanisms), by the Government of Spain (Ministerio de Medio Ambiente, Medio Rural y Marino Oficina Española de Cambio Climático), by the Government of Netherlands (Ministry of Economic Affairs), or by the Government of the United Kingdom of Great Britain and Northern Ireland (Department of Energy and Climate Change).	
Corrective Action Request (CAR) 05 Please, in the PDD section B.4 provide date of baseline setting in the following format: DD/MM/YYYY.	22	Date of baseline setting was modified to appropriate format in the PDD version 6 of 10/05/2011.	Based on the amendments made in the PDD, the issue is closed.
Corrective Action Request (CAR) 06 Please, give references (in the PDD) to the 1996 IPCC Guidelines for National Greenhouse Gas Inventories not to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. For the present, 1996 IPCC Guidelines is the only one approved.	24	Carbon emission factors from anthracite, coke, coal, natural gas, limestone, and dolomite combustion are now modified in accordance with Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories (IPCC 1996). Please, see the modified PDD version 5, dated 11/04/2011. Apart from this, IPCC 1996 and National Greenhouse Gas Inventory for Ukraine have a lack of data regarding the project parameters that are used in PDD. Therefore, in case of data absence in IPCC 1996 some parameters are covered by IPCC 2006 Guidelines for National Greenhouse Gas Inventories (IPCC 2006),	CAR 06 is closed due to the explanation provided and amendments made in the PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to check-list question in the table	Summary of project owner response	Determination team conclusion
		because it is developed more precisely and considered to be more conservative. In accordance with the text mentioned above, emission factor for anthracite combustion is identified based on net calorific value (NCV) which is provided in the IPCC 2006 because IPCC 1996 does not provide any data regarding NCV of anthracite. Together with this, 2 JI projects are using emission factors for different fuel and energy resources production which are based on IPCC 2006 guidelines in their calculations. Alternatively, we believe that that the mentioned above emission factors can be calculated based on actual production data from coke and pellets producers in Ukraine, but it is too complicated to conduct this process. Accordingly and taking into account that IPCC 1996 does not provide any data concerning CO_2 emissions from different fuel and energy resources production, it was decided to use emission factors from coke and pellets production based on IPCC 2006 guidelines.	
Corrective Action Request (CAR) 07 The developer in general provides extensive information regarding inferior investment background in Ukraine. At the same time the PDD section B.2 lacks data regarding the barriers	29 (b)	Response #1 The following information regarding the barriers facing this particular project was added to the modified PDD (version 2 dated 27/01/2011): At the beginning of the project activity, in the year 2004, the investment required for the project was	Conclusion on response #1 There is still not enough information on the barriers facing this particular project.

Draft report clarifications and corrective action requests by determination team	Ref. to check-list question in the table	Summary of project owner response	Determination team conclusion
facing this particular project. Please, make necessary amendments in the PDD.		estimated at the level of US$ 1 billion, which was difficult to attract under the existing circumstances at DIISW, which were described above. By the year 2004 there were no similar projects in Ukraine implemented of such scale and requiring such amount of investment. Also, at the beginning of project activity one of the most significant barriers for DIISW was of technological character – lack of prevailing practice (as further described in the technological barriers of the project), mainly related with reduction of coke consumption in steel production which has never been implemented in Ukraine before. The main revenues of the plant result from sales of slabs. Slab prices prognosis for the years 2004 to 2007 were above of long-term estimated prices, which made the project unattractive to invest as the slab prices have the most important impact on the project attractiveness highlighting the financial risks of such a large scale investment in a context of the increased volatility of steel products and semi-products. <u>Response # 2</u> In the PDD version 6, dated 10.05.2011 section B.2 was modified. More data was added regarding the barriers facing this particular project.	<u>Conclusion on response #2</u> The issue is closed based on the information added to the PDD.
<u>Corrective Action Request (CAR) 08</u>	34 (a)	In the PDD version 6 of 10/05/2011, section C.1	Based on the information added to

Draft report clarifications and corrective action requests by determination team	Ref. to check-list question in the table	Summary of project owner response	Determination team conclusion
In the PDD section C.1 give evidence proving the starting date of the project.		the evidence proving starting date of the project was provided. The referenced documents are attached.	the PDD, the issue is closed.
Corrective Action Request (CAR) 09 Please, state the length of crediting period not only in years, but also in months (as per Guidelines for Users of JI PDD form); and clearly indicate the time constraints of the post-Kyoto period. Also please, take into account that 1 January 2008 – 31 December 2012 is the length of the first commitment period (it is only the part of the crediting period), but not the length of the whole period.	34 (c)	Response #1 The requested corrections were done in the PDD version 2, dated 27/01/2011. Response #2 The operational lifetime of the project was modified in the correct format (in years and months).	Conclusion on response #1 The length of the crediting period was revised, and the format of the crediting period was corrected. Also, please, state the operational lifetime of the project in the correct format (in years and months). Conclusion on response #2 Now the length of the operational lifetime of the project is correctly stated.
Corrective Action Request (CAR) 10 Please, fill the PDD section D.1.1 with the tables of key information and data used for project case identification. Also, please, provide in the section D.1.1.2 formulas to calculate project emissions.	36 (f)	The tables of key information and data used for project case identification are now included in section D.1.1 (Please see modified PDD, version 6 dated 10/05/2011).	The issue is closed based on the corrections made in the PDD.
Corrective Action Request (CAR) 11 Please, clarify the use of 1,093 kg CO_2/kWh as emission factor for electricity consumption by OJSC "DIISW" starting from 2010 (Also, please, justify that OJSC "DIISW" is an electricity	36 (f) (ii)	On March 28, 2011 the Order of the National Environmental Investment Agency of Ukraine (NEIA) № 43 regarding approval of specific indicators of carbon dioxide emissions for the year 2010 was issued.	The issue is closed due to the explanation provided and amendments made in the PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to check-list question in the table	Summary of project owner response	Determination team conclusion
consumer of the 1st type).		Starting from year 2010 the CO_2 emission factor for electricity consumption from the grid is in accordance with mentioned above decree issued by NEIA for the 1st – class electricity consumers and is equal to 1,093 kgCO_2/kWh. The use of the emission factor for the 1st-class electricity consumers is justified by the resolution of National Electricity Regulatory Commission of Ukraine № 1052 of 13 August 1998, according to the resolution the 1st – class electricity consumers are the consumers, who: 1) receive electricity from electricity supplier at the point of sale of electricity with the degree of voltage 27.5 kV and above; 2) connected to the power rails of power plants (except hydroelectric, which produce electricity periodically), as well as to power rails of substations of the electricity grid with voltage of 220 kV and above, regardless voltage level at the point of sale of electricity by the power supplier to consumer; 3) is the industrial enterprise with average monthly rate of electricity consumption - 150 million kWh and above for the technological needs of production, regardless of the voltage level at the point of sale of electricity by the power supplier to consumer.	

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		Based on the information stated above, DIISW refers to the 1st – class electricity consumers, which is proven by additional documents provided. Such information is now included in the PDD version 6 dated 10/05/2011.	
Corrective Action Request (CAR) 12 The PDD section D.1 states that responsibilities of monitoring are defined in Table 6 of the section A.4.2; but in fact, it is not true. Please, revise and make necessary amendments.	36 (j)	Mistake is now corrected. (Please see modified PDD version 6 dated 10/05/2011).	Due to the amendments made in the PDD, the issue is closed.
Corrective Action Request (CAR) 13 The PDD section D.1.5 gives reference to the section F.1. but in the section F.1 there is no data on collection and archiving information on environmental impacts of the project and references to the host Party regulations. Please, take into account that section D.1.5. of the PDD requires from the PPs consideration of procedures on the collection and archiving information on environmental impacts of the project and references to the host Party regulations. Please, make necessary amendments in the PDD.	36 (l)	Section D.1.5 was modified as follows in the PDD version 6, dated 10/05/2011: DIISW has historical experience in dealing with environmental impacts by different steelmaking processes. Environmental activity is one of the core activities of the plant due to location of the plant in the quite populated city Dniprodzerzhynsk. Within DIISW's structure there is a special environmental department (SED) which is in charge of the monitoring for various kinds of environmental impacts within the plant activity, data collection, analysis and archiving, which is a routine activity of DIISW. It shall be noted that the project activity does not lead to aggravation of environmental situation, but rather opposite -	CAR 13 is closed based on the information added to the PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to check-list question in the table	Summary of project owner response	Determination team conclusion
		reduces load on environment. In its operation SED is regulated by the national and local documents. Overall environmental influence is under manageable control and fully in compliance with national and local regulations. The environmental management standard ISO 14001 is implemented and certified at DIISW. The monitoring frequency is in accordance with approved graphs of analytical and departmental control.	
Corrective Action Request (CAR) 14 The project pertains only to the sectoral scope 9 (metallurgy). Please, indicate the sectoral scope correctly.	A.1	The sectoral scope was modified as requested.	CAR 14 is closed due to the corrections made.
Corrective Action Request (CAR) 15 Please, make the information on the project participants consistent throughout the whole PDD (in the section A.3 and Annex 1).	A.3	The information on the project participants was made consistent throughout the PDD.	Based on the amendments made, the issue is closed.
Corrective Action Request (CAR) 16 "Assigned amount units (AAUs)" cannot be generated as they are assigned. Please, replace the phrase (in the section A.4.3.1) with "emission reductions".	A.4.3.1	The PDD was modified according to the request – "assigned amount units" was replaced by "emission reductions" in the modified the PDD, version 6 of 10.05.2011.	The issue is closed due to the amendments made.
Corrective Action Request (CAR) 17 Project starting date 1st April 2004 coincides with the start of crediting period. Please, explain what can be implemented to allow reductions generation.	A.2	The starting date of project now shall be considered 26th of December 2003 as it is the date when implementation of the project has started. The beginning of project activity coincides with the Minutes of meeting regarding condition of basic	Necessary corrections are made in the PDD. The issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to check-list question in the table	Summary of project owner response	Determination team conclusion
		production assets of DIISW and development of strategy for its reconstruction and revamping, dated December 26, 2003 when the first real actions were undertaken, which allowed to generate emission reductions starting from the 1st April 2004 by implementation of such measures as technological improvements using a better quality of raw materials. The appropriate modifications were done in the PDD.	
Clarification Request (CL) 01 Please, in the PDD section A.5 specify the name of the DFPs (of Parties involved) which will issue written approvals.	A.5	The name of DFPs was specified in the PDD version 6 of 10/05/2011 as follows: LoA of a foreign government will be provided either by the Government of Japan (The Liaison Committee for the Utilization of the Kyoto Mechanisms), by the Government of Spain (Ministerio de Medio Ambiente, Medio Rural y Marino Oficina Española de Cambio Climático), by the Government of Netherlands (Ministry of Economic Affairs), or by the United Kingdom of Great Britain and Northern Ireland (Department of Energy and Climate Change).	Necessary information is added to the PDD. The issue is closed.
Clarification Request (CL) 02 Please, indicate (in the PDD) the number of LoE (Letter of Endorsement) issued by the Government of Ukraine for this project.	19	The number of LoE (Letter of Endorsement) issued by the Government of Ukraine for this project was indicated in section A.5 of the modified PDD (version 6 of 10/05/2011).	Based on the amendments made, CL 02 is closed.
Clarification Request (CL) 03 Please, explain in detail why the approach used	22	The approach used in the registered JI project UA1000022 covers basically the same assets as	The provided explanation was found satisfactory. The issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to check-list question in the table	Summary of project owner response	Determination team conclusion
for the project UA1000022 also can be applicable in the case of the project "Revamping of sintering and blast-furnace production at OJSC "Dniprovsky Integrated Iron and Steel Works named after Dzerhynsky".		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. However, in the project UA1000022 the specific energy consumption by all assets that are also covered by the proposed project is the same in order to avoid double counting of the ERs. The information was added to the PDD version 6 of 10/05/2011.	
Clarification Request (CL) 04 Please, clarify (in the PDD section B.1) which data was selected as the baseline data (data through the year 2003 or averaged data through the period 1999-2003).	23	As the baseline data was selected the averaged data through the period 1999-2003. The year 2003 was selected as the year when the investment decision was made. The information was accordingly modified in the PDD version 6 of 10/05/2011, section B.1.	CL 04 is closed based on the explanation provided and amendments made in the PDD.
Clarification Request (CL) 05 Please, revise the name of the fourth column of the table 4 (the PDD section B.3). It is better to replace the name "Included?" by more appropriate "Inclusion/Exclusion".	32 (d)	The name of the fourth column of the table 4 (the PDD section B.3) was modified by more appropriate "Inclusion/Exclusion" in the PDD version 6 of 10/05/2011.	Due to the corrections made in the PDD, the issue is closed.
Clarification Request (CL) 06 Please, indicate the justification of parameter choice for all the parameters used.	36 (a)	Justification of parameter choice is now included in the PDD (Please see modified PDD version 6 dated 10/05/2011).	Based on the information added to the PDD, CL 06 is closed.
Clarification Request (CL) 07	36 (b) (iii)	According to Ukrainian legislation and regulations	Forward Action Request (FAR) 01

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Please, note (in the PDD) that data to be monitored and required for determination are to be kept for two years after the last transfer of ERUs for the project.		all monitored data are to be kept for at least 5 years (the proving documents are submitted to the verifier). Based on the request of the verifier the project owner will issue the appropriate decree regarding data monitored and required for determination storage. This will be shown to the verifier during verification. Also, the following sentence was added to the PDD (version 6 dated 10/05/2011): "Data monitored and required for determination will be stored at DIISW during the whole crediting period and also during two years after the last transfer of ERU's".	The order concerning the procedure for keeping monitoring data should be issued by DIISW". This issue will be checked during the first verification.
Forward Action Request (FAR) 01 The order concerning the procedure for keeping monitoring data should be issued by DIISW.	36 (b) (iii)	The issue will be closed till the start of the verification process.	This issue will be checked during the first verification.
Clarification Request (CL) 08 Please, describe balance of process needs (step 2 in the PDD section D.1.1.4) specifically for the case of this project; and exactly indicate (in the PDD section D) the parameters used for monitoring of CO_2 emissions related to the balance of process needs.	36 (f)	Step 2 "Balance of process needs" of chosen JI specific approach in the PDD implies CO_2e emissions from such facilities as: CHP (that produces blast-furnace blowing, chemically treated water and heat), as well as facilities that produce compressed air, oxygen, nitrogen, argon, water, air-free water and treated. These facilities consume fuel-and energy resources to ensure supply of all secondary energy resources to the	The issue is closed due to the information added to the PDD.

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		technological process. Double counting is avoided. This information is now included in the text of PDD (version 6 dated 10/05/2011).	
Clarification Request (CL) 09 Please, provide a copy of the certificate on compliance of management system with requirements of the standard ISO 9001:2008.	36 (i)	A copy of the certificate on compliance of management system with requirements of the standard ISO 9001:2008 is now provided to the verifier. The web-link of a copy is now included in the PDD.	Based on the information provided, CL 09 is closed.
Clarification Request (CL) 10 Please, revise the table 12 (the PDD section F.1. It is better to combine the second and the third columns into one.	48 (a)	Necessary amendments were made in the modified PDD (version 6 dated 10/05/2011).	The issue is closed due to the amendments made in the PDD.
Clarification Request (CL) 11 Please, entitle Excel files with calculations of baseline and project emissions, and emission reductions calculations; also, please, correct the name of the Excel sheets in the files.	A.4.3.1	Excel files with calculations of baseline and project emissions, and emission reductions are now entitled.	Based on the amendments made, the issue is closed.