DETERMINATION REPORT
GLOBAL CARBON BV

DETERMINATION OF THE "FINGER SHAFT FURNACE CONSTRUCTION AT OJSC SEVERSTAL, CHEREPOVETS, VOLOGDA REGION, RUSSIAN FEDERATION"

REPORT NO. RUSSIA-DET/0097/2010
REVISION NO. 03

BUREAU VERITAS CERTIFICATION

"Finger Shaft Furnace construction at OJSC Severstal, Cherepovets, Vologda region, Russian Federation"

Date of first issue:	Organizational unit:
01/02/2011	Bureau Veritas Certification Holding SAS
Client:	Client ref.:
Global Carbon BV	Mr. Lennard de Klerk

Summary:

Bureau Veritas Certification has made the determination of the project "Finger Shaft Furnace construction at OJSC Severstal, Cherepovets, Vologda region, Russian Federation" project of company Global Carbon BV located in Netherlands, Utrecht, Niasstraat 1 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 applies the appropriate baseline and monitoring methodology and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

In the Determination Report rev.02, Bureau Veritas Certification recommended the project for approval by the Host Party. The approval was issued by the Ministry for Economic Development of the Russian Federation by Order No 112 dated 12 March 2012. The Project Participant issued on 16 March 2012 the PDD version 2.8 which refers in Section A.5 to the received project approval. Due to the above, CAR 01 in the Determination Report rev.01 which addressed the absence of the project approval is closed and hence all implications in the Determination Report and Appendix A related to CAR 01 have become irrelevant to the approved project.

Report No.:	Subject Group:
RUSSIA-det/0097/2010	JI

Project title:

"Finger Shaft Furnace construction at OJSC Severstal, Cherepovets, Vologda region, Russian Federation"

Work carried out by:

Vera Skitina – Team Leader, Lead verifier

Andrey Rodionov - Verifier

Work reviewed by:

Leonid Yaskin – Internal Technical Reviewer

Work approved by:

Flavio Gomes – Operational Manager

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"Finger Shaft Furnace construction at OJSC Severstal, Cherepovets, Vologda region, Russian Federation"

Abbreviations

AIE	Accredited Independent Entity
BVC	Bureau Veritas Certification
BFP	Blast-furnace plant
CAR	Corrective Action Request
CL	Clarification Request
CO2	Carbon Dioxide
DDR	Draft Determination Report
DR	Document Review
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
ERU	Emission Reduction Unit
EAF	Electric Arc Furnace
EAFP	Electric Arc Furnace Plant
GHG	Greenhouse House Gas(es)
GC	Global Carbon BV
IE	Independent Entity
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
FSF	Finger Shaft Furnace
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
NG	Natural gas
NGO	Non Governmental Organization
OHP	Open Heart Plant
PDD	Project Design Document
PP	Project Participant
RF	Russian Federation
tCO2e	Tonnes CO2 equivalent
UNFCCC	United Nations Framework Convention for Climate Change

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"Finger Shaft Furnace construction at OJSC Severstal, Cherepovets, Vologda region, Russian Federation"

1 INTRODUCTION

Global Carbon BV (hereafter called "GC") has commissioned Bureau Veritas Certification to determine JI project "Finger Shaft Furnace construction at OJSC Severstal, Cherepovets, Vologda region, Russian Federation" (hereafter called "the project") located in the city Magnitogorsk, Chelyabinsk region, Russian Federation.

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

1.1 Objective

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

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

1.2 Scope

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

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

1.3 Determination team

The determination team consists of the following personnel:

"Finger Shaft Furnace construction at OJSC Severstal, Cherepovets, Vologda region, Russian Federation"

Vera Skitina

Bureau Veritas Certification Team Leader, Climate Change Verifier

Andrey Rodionov

Bureau Veritas Certification Verifier

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 GC 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 Guidance on criteria for baseline setting and monitoring, Kyoto Protocol, Clarifications on Determination Requirements to be checked by an Accredited Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, GC revised the original PDD v.2.0 dated 14/10/2010 and resubmitted it as v.2.1 dated 17/11/2010 followed by versions 2.2-2.7.

The first deliverable of the document review was the Determination Protocol Version 01 dated 01/11/2010 which contained 15 CARs and 4 CLs. The determination of the revised PDD v.2.3 led to issuance the Determination Protocol Version 02 with overall 32 CARs because AIE

found many points of concern related to baseline setting and the proof of additionality. The project owner has made a decision to revise the baseline concept and investment analysis and has provided to AIE the revised PDD Version 2.4 dated 20/12/2010. The last Determination Protocol Version 03 is based on the Determination Protocol Version 02 complemented by AIE findings related to the changes made in the revised PDD. The old CARs are either closed if appropriate or left open if relevant to the revised PDD. The Determination Protocol Version 03 summarizing Bureau Veritas Certification's findings of the desk document review was submitted to GC on 30/12/2010 which contained 46 CARs and 9 CLs.

The determination findings presented in this Determination Report Version 02 and Appendix A relate to the project as described in the PDD versions 2.0 (published), 2.3 dated 06/11/10 and version 2.7 (final) dated 27/01/11[1].

2.2 Follow-up Interviews

On 18/01/2011 Bureau Veritas Certification verifier A.Rodionov performed a visit to the project site. On-site interviews with the project participant OJSC Severstal and the PDD developer GC were conducted to confirm the selected information and to clarify some issues identified in the document review. Representatives of OJSC Severstal and the PDD Developer GC were interviewed (see References). The main topics of the interviews are summarized in Table 1.

"Finger Shaft Furnace construction at OJSC Severstal, Cherepovets, Vologda region, Russian Federation"

Table 1 Interview topics

Interviewed organization	Interview topics
OGSC Severstal	➢ OGSC Severstal Investment Programme ➢ Reasoning for project implementation ➢ Project management organization ➢ Project history and Implementation schedule ➢ Baseline scenario ➢ Barriers and uncommon practice ➢ Project scenario ➢ Recourse consumption saving effects ➢ Emission calculation ➢ Investment issues ➢ Commissioning and proven trials ➢ Capacity replacement issues ➢ QC & QA Procedures ➢ Training of personnel ➢ Environmental permissions ➢ Environmental Impact Assessment ➢ Public hearings
CONSULTANT Global Carbon BV	➢ Ditto
Stakeholders	➢ N/A

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the determination is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the project design.

Corrective Action Request (CAR) is issued, where:
(a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
(b) The JI requirements have not been met;
(c) There is a risk that emission reductions cannot be monitored or calculated.

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

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

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

3 PROJECT DESCRIPTION

The proposed JI project aims at replacement of open-hearth plant with a new FSF#2.

Steel industry causes significant CO2 emission. It is associated with significant coke and fuel consumption. Proposed project allows reducing CO2 emission at Severstal by the modernization of steel production.

The main benefit of electric arc steelmaking process is that it allows using up to 100 % of metal scrap during steel production in comparison with open hearth steel. Also a production of open hearth steel consumes the big amount of fossil fuels. The open hearth plant at Severstal consumes about 700 kg of pig iron per 1 tonne of steel. FSF#2 consumes about 400 kg of pig iron per 1 tonne of steel. Thus, FSF allows reducing of pig iron usage in steel production but it may not be excluded fully due to steel corrosion and increase steel consumption in the world. Pig iron production also leads to significant CO2 emission.

Fossil fuel consumption is reduced significantly due to project implementation (replacement of OHP by FSF#2). Production of open hearth steel requires larger amount of fossil fuels comparing to FSF technology. Also electricity consumption by the FSF in terms of GHG emission (with Russian emission factor for electricity generation) is less than GHG emission from fossil fuels combustion by the OHP. Also a Finger Shaft Furnace is more environmentally friendly than ordinary electric arc furnaces (EAF) which does not use scrap metal heating by off-gases. GHG emissions will be reduced due to project implementation. Information on baseline setting and additionality is presented in Section B.

Total estimated amount of emission reductions due to project implementation is 3,168,120 tonnes of CO2 equivalent as determined in Section E.

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 46 Corrective Action Requests and 9 Clarification Requests.

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

4.1 Project approvals by Parties involved (19-20)

The project has no approvals by the Host Party, therefore CAR 05 remains pending.

A written project approval by Party B should be provided to the AIE and made available to the secretariat by the AIE when submitting the first verification report for publication in accordance with paragraph 38 of the JI guidelines. It has not been provided to AIE at the determination stage.

4.2 Authorization of project participants by Parties involved (21)

The participation for each of the legal entities listed as project participants in the PDD is authorized by a Party involved, which is also listed in the PDD, through a written project approval by Party B should be provided to the AIE and made available to the secretariat by the AIE when submitting the first verification report for publication in accordance with paragraph 38 of the JI guidelines. It has not been provided to AIE.

The authorisation is deemed to be carried out through the issuance of the project approvals.

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.

JI specific approach

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

(a) By listing and describing the following plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one being Alternative1:
   a. Alternative 1: Continuation of a situation existing prior to the project (the existing open hearth plant continues its operation);
   b. Alternative 2: Construction of Finger Shaft Furnace #2 with old OHF dismantling (Project activity not implemented as JI);
   c. Alternative 3: Construction of a new Basic Oxygen Furnace with old OHF dismantling;

(b) Taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector. In this context, the following key factors that affect a baseline are taken into account:
   a. Sectoral reform policies and legislation in steel industry.
      The PDD refers to the main development goal of the metallurgical industry is satisfaction of domestic metal demand.
      Project activity is in line with the mentioned goals however they do not impose any obligations for the company owner of the metallurgical plant;
   b. Economic situation in Russian steel industry and predicted demand.
      The PDD shows that the project activity is equal with the baseline. In case of the project absence the baseline equipment (OHP) would operate and satisfy steel demand. The OHP emissions are determined in line with the methodological approach as described in Annex 2 of PDD;
   c. Availability of capital to OJSC Severstal (including investment barriers).
      Capital is available but high bank rate and high country investment risk make new equipment introduction in Russia unprofitable. This aspect was considered during additionality proof (Section B.2);
   d. Local availability of technology/techniques and equipment.
      The PDD reads that steel production process by OHF, EAF, and BOF are better-known and applied in Russia. Steel production by FSF is not widely practised in Russia. This aspect was considered during additionality proof (Section B.2);
   e. Price and availability of fuel.
      Electricity, natural gas and coke are widely used and available in Russia. All of them are produced inland. Fuel prices in

Russia are less than world market price. Detailed information is given in the PDD, Section B.2.

After screening the second and the third alternative scenarios the first alternative is left as the most plausible, namely:

Alternative 1: Continuation of a situation existing prior to the project (the existing open hearth plant continues its operation).

The first alternative was identified as the most plausible scenario for the following reasons:

(a) There are not legal or other requirements that enforce Severstal to stop or reduce steelmaking by OHP. Continuation of production steel by open-hart furnaces meets the main development goal of the Russian metallurgical industry "to satisfy domestic metal demand". OJSC Severstal does not need investment to operate OHP;

(b) Implementation of new FSF#2 is not financially attractive for OJSC Severstal and requires significant additional investment. Investment analysis has been presented to prove the additionality in section B.2;

(c) The third alternative "Construction of a new Basic Oxygen Furnace with old OHF dismantling" has technological barriers for OJSC Severstal so requires construction of additional iron making and oxygen producing capacities in absence of free place to implement the appropriate equipments.

All explanations, descriptions and analyses pertaining to the baseline in the PDD are made in accordance with the referenced JI specific approach and the baseline is identified appropriately.

4.4 Additionality (27-31)

JI specific approach

Traceable and transparent information showing that 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 reductions of anthropogenic emissions by sources of GHGs was provided In PDD Section B.2.

The PDD developer provides a justification of the applicability of the approach with a clear and transparent description, as per item 4.3 above. PDD developer described and scrutinized plausible alternative scenarios which have been provided in Section B.1:

Alternative 1: Continuation of a situation existing prior to the project (the existing open hearth plant continues its operation);

Alternative 2: Construction of Finger Shaft Furnace #2 with old OHF dismantling (Project activity not implemented as JI);

Alternative 3: Construction of a new Basic Oxygen Furnace with old OHF dismantling.

Justification of additionality has been done in several steps, based on consideration of economic attractiveness of alternative technological options of commercial steel production, namely:

(a) identification of alternatives to the project activity,
(b) investment analysis,
(c) common practice analysis.

The key additionality proofs were the results of the investment comparison and sensitivity analyses. The investment comparison analysis shows that the production cost of the OHP steel (baseline) is less than the production cost of FSF steel (project) and so the project cannot be considered as a financially attractive. The sensitivity analysis of variations of key parameters (investment cost and consumption of metal stock, fuel and electricity) confirms the conclusion of the basic investment analysis.

The spreadsheet with the investment comparison analysis was made available for the verifier, and Bureau Veritas Certification will submit it to JISC at the final determination as the supporting documentation.

The common practice analysis has shown that the proposed JI project does not represent a widely observed practice in the geographical area concerned.

The verifier determined that additionality is demonstrated appropriately as a result of the analysis using the approach chosen.

4.5 Project boundary (32-33)

JI specific approach

The project boundary defined in the PDD, Section B.3, Table B.3.1 for project and baseline scenario accordingly, encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs) that are:

(i) Under the control of the project participants such as:
- Emission from the raw materials consumption (iron, coke, electrodes) during the steelmaking process;

(ii) Reasonably attributable to the project such as:
- GHG emissions from the electricity consumption from the Russian electricity grid;

(iii) Significant such as:
- Emission from the fuel combustion.

The delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD, Section B.3.

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 25/02/2005, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 15 years or 180 months.

The PDD states the length of the crediting period in years and months, which is 4.16 years or 50 months, and its starting date as 02/11/2008, which is on the date the first emission reductions are generated by the project.

The PDD states that the extension of its crediting period beyond 2012 is subject to the host Party approval, and the estimates of emission reductions or enhancements of net removals are presented separately for those until 2012 and those after 2012 in all relevant sections of the PDD, Sections C.1., C.2., C.3, page 25.

4.7 Monitoring plan (35-39)

JI specific approach

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 PE_{y}^{FSF2} (FSF#2 emissions in year y (tCO2)). Remainder factors and key characteristics are listed in the PDD, Sections B.1, D. 1 and Annex 2.

The monitoring plan specifies the indicators, constants and variables that are reliable (i.e. provide consistent and accurate values), valid (i.e. be clearly connected with the effect to be measured), and that provide a transparent picture of the emission reductions or enhancements of net

removals to be monitored such as $PO_{O2,y}^{FSF2}$ (oxygen consumption by FSF#2 in year y (1000 Nm3)). Indicators, constants and variables are listed in the PDD, Sections B.1, D. 1 and Annex 2.

The monitoring plan is developed subject to the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring" developed by the JISC.

All categories of data to be collected in order to monitor GHG emissions from the project and determine the baseline of GHG emissions (Option 1) are described in required details.

The monitoring plan explicitly and clearly distinguishes:

(i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination, such as:
- CO2 emission factors for fuel, coke, lime and electrode, NCV for fuel;

(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 such as:
- CO2 emission factors for electricity consumption (energy System "Center", Annex 2);

(iii) Data and parameters that are monitored throughout the crediting period, such as:
- Production of liquid steel by FSF#1 and FSF#2, consumption of raw materials by FSF#2 + LD+ Deairing equipment, consumption of oxygen, electricity and steam, combustion of fuel;

Step-by-step application of the used approach for monitoring is described in PDD Section D and Annex 2 including monitoring procedures, formulae, parameters, data sources etc.

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording, namely the production of steel by FSF#1 and FSF#2 which are measured annually; the data are archived in technical report. Refer to PDD, Section D.1.
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, such as formulae to calculate the

emissions from steel production by FSF#2 in year (Section B.1, Formula 2).

The monitoring plan presents the quality assurance and control procedures for the monitoring process, namely:

- Steel production by FSF#2 is calculated as sum of daily measuring of steel weight. The information is collected by Environmental protection department where monitoring report is prepared.

The procedures include, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available on request.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities, namely chief of Power Engineering Department is responsible for measuring of electricity consumption of project activity equipments.

Collection of data required for estimation of GHG emission reductions is planned to be performed to high industry standard in both electronic and paper way.

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

The monitoring plan provides, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources (IPCC) but not including data that are calculated with equations

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

4.8 Leakage (40-41)

JI specific approach

The PDD appropriately describes an assessment of the potential leakage of the project and appropriately explains that the estimation of leakage is neglected from conservative reasons because baseline fuel consumptions (natural gas, coke) are bigger than in project scenario.

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

JI specific approach

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

The PDD provides the ex ante estimates of:

(a) Emissions for the project scenario (within the project boundary), which are 1,431,635 tons of CO2eq;
(b) Leakage (N/A);
(c) Emissions for the baseline scenario (within the project boundary), which are 6,126,067 tons of CO2eq;
(d) Emission reductions adjusted by leakage (based on (a)-(c) above), which are 3,168,120 tons of CO2eq.

Reporting period: From 02/11/2008 to 31/12/2012.

The formulae used for calculating the estimates are referred in the PDD, Sections E.1-E.6, Section D.1.4.

For calculating the estimates referred to above, key factors defined in the monitoring plain influencing the project and baseline emissions were taken into account, as appropriate.

The estimation referred to above is based on conservative assumptions and the most plausible scenario 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 number of months of the crediting period, and multiplying by twelve.

The PDD Section E includes an illustrative ex ante emissions calculation.

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, such as the Federal Law "On the Environmental Expertise".

The PDD provides conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party, if the

analysis referred to above indicates that the environmental impacts are considered significant by the project participants or the host Party.

4.11 Stakeholder consultation (49)

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

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

4.12 Determination regarding small scale projects (50-57)

Not applicable

4.13 Determination regarding land use, land-use change and forestry (LULUCF) projects (58-64)

Not applicable

4.14 Determination regarding programmes of activities (65-73)

Not applicable

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 project "Finger Shaft Furnace construction at OJSC Severstal, Cherepovets, Vologda region, Russian Federation" Project in Russia. 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.

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

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

The determination revealed two pending issues related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party. If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Version 2.7 dated 27/01/2011 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

The review of the project design documentation and the 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 Type the name of the company that relate directly to the GHG components of the project.

/1/ PDD "Finger Shaft Furnace construction at OJSC Severstal, Cherepovets, Vologda region, Russian Federation", Version 2.0, October 14, 2010.

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PDD "Finger Shaft Furnace construction at OJSC Severstal, Cherepovets, Vologda region, Russian Federation", Version 2.7, January 27, 2011.

Supporting documentation:

a. 20110127_CF_Severstal.xls;
b. 20110125_ER_Severstal.xls.

"Finger Shaft Furnace construction at OJSC Severstal, Cherepovets, Vologda region, Russian Federation"

/2/ Guidelines for Users of the Joint Implementation Project Design Document Form/Version 04, JISC.

/3/ Guidance on criteria for baseline setting and monitoring (Version 02).

/4/ "Strategy of metal industry development in Russia till 2020" http://www.minprom.gov.ru/activity/metal/strateg/2.

Category 2 Documents:

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

/1/ Technical performance of electric steel plant for 2008-2010

/2/ Technical reports for 2004-2010

/3/ Internal memorandum (JI history) for 2005

/4/ Analysis of OHP steel prime cost for 2003-2005

/5/ Analysis of FSF steel prime cost for 2003-2005

/6/ Spreadsheet on project "Reconstruction of the line for the slabs production" for 2006

/7/ Estimate calculation of project "Reconstruction of the line for the slabs production" for 2005

/8/ The project timeline for 2004-2006

/9/ Conclusion of Rostehnadzor N 094747 on project "Reconstruction of the line for the slabs production" for 2005

/10/ Order N662 about closure of steel production by OHP for 2008

/11/ Conclusion of the government departmental examination on project "Reconstruction of the line for the slabs production" for 2006

/12/ Estimation of returned scrap from OHP dismantling for 2008

/13/ List of professional development of FSF staff for 2010

Persons interviewed:

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

/1/ I. Shatunin – OJSC Severstal, Main ecologist of Safety management Department

/2/ A. Morozova - OJSC Severstal, Manager of Safety management Department

/3/ V. Litvinov - OJSC Severstal, Manager of Safety management Department

/4/ E. Denicov - OJSC Severstal, Manager of Department of Industrial economy

/5/ A. Ladin - OJSC Severstal, Manager of preproduction Department

/6/ L. Tarakanova - OJSC Severstal, Manager of Department of Investment

/7/ N. Solodovnikov - OJSC Severstal, Deputy chief of FSF shop

/8/ A. Petrov - OJSC Severstal, Specialist of Technical Department

/9/ N. Lugovskih - OJSC Severstal, Power engineering specialist of FSF shop

/10/ M. Butiakin – Global Carbon, PDD developer, Lead Specialist

DETERMINATION PROTOCOL

Table 1
Check list for determination, according JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 02)

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
Guidelines for JI PDD Form Users Section A General description of the project				
A.1. Title of the project				
A.1	Is the title of the project presented? Is the sectoral scope to which project pertains presented? Is the current version number of the document presented? Is the date when the document was completed presented?	The title of the project is: "Finger Shaft Furnace construction at OJSC Severstal, Cherepovets, Vologda region, Russian Federation". The sectoral scope is (9) Metal production. The PDD Version 2.0 was originally presented to Bureau Veritas and reviewed as a part of determination. PDD v.2.0 is dated 14/10/2010. **AIE Note: Following the determination of the original PDD and issuance by AIE of the Determination Protocol Versions 01 and 02 with overall 32 CARs, the project owner has made a decision to revise the baseline concept and investment analysis and has provided to AIE the revised PDD Version 2.4 dated 20/12/2010. The current Determination Protocol Version 03 is based on the Determination Protocol Version 02 complemented by AIE findings related to the changes made in the revised PDD. The old CARs are either closed if appropriate or left open if relevant to the revised PDD.**	OK	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		The new AIE findings from the study of the revised PDD will be entitled hereafter as follows: **Findings in the revised PDD**		
A.2 Description of the project				
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; 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?	The Project's purpose is the application of a more energy efficient technology in steelmaking process. The situation existed prior the project start along with brief description of project and baseline scenario is represented in section A.2. **CAR 01.** PDD doesn't provide enough summarising explanation (expected outcome, including a technical description) about: - Implemented Finger Shaft Furnace #1, Ladle furnace, Continuous Casting Machine and other equipment installed before the project; - Equipment in project scenario; - "Other steel producers" in the baseline scenario as regards their ability to produce steel products with the same characteristics as in the project (dimensions, steel grade, special quality requirements and etc.). **CAR 02.** The history of the JI project is not summarised. **Findings in the revised PDD** **CL 09.** PDD, p.3 reads: "Severstal did not have available pig iron and oxygen capacity." Please clarify what means "available"?	CAR 01 CAR 02 CL 09	OK OK OK
A.3 Project participants				
A.3	Are project participants and Party(ies) involved	Host Party is the Russian Federation (Party A). Party B is The		OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	in the project listed? Is contact information provided in Annex 1 of the PDD?	Netherlands. Project participant for Party A is OJSC Severstal and for Party B is Global Carbon BV. The contact information is provided in PDD Annex 1.		
A.4 Technical description of the project				
A.4.1	Location of the project	Refer to A.4.1.1-A.4.1.4.		OK
A.4.1.1	Host Party(ies)	The Russian Federation.		OK
A.4.1.2	Region/State/Province etc.	Vologda Region		OK
A.4.1.3	City/Town/Community etc.	Cherepovets		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)	Sec. A 4.1.4. provides consistent information and geographical coordinate allowing unique identification of project location. The Severstal production site is located at the north outskirts of Cherepovets. The project site coordinates are: longitude 37.58' E, latitude 59.15' N.		OK
A.4.2. Technologies to be employed, or measures, operations or actions to be implemented by the project				
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?	Section A.4.2 PDD provides description of technology and measures to be implemented to gain proposed emission reductions. **CL 01.** It's known that the operation of a Finger Shaft Furnace demands a special preparation of scrap. Please clarify whether there is production area with the specially implemented equipment for scrap preparation to operate at the Finger Shaft Furnace #2. **CL 02.** It is common practice to use of liquid and pig iron up to 40% in charge of Finger Shaft Furnace and also to blow of coke breeze into liquid metal to froth slag. Please clarify if this common practice is	CAR 03 CL 01 CL 02 CL 03 CL 04 CL 05	OK OK OK OK OK OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		used during operation of the Finger Shaft Furnace #2. **CL 03.** PDD, Section A.4.2, Table A.4.2.1 reads: capacity of FCF is 150 t and LF is 120 t. Please clarify why the capacity of FCF is bigger than capacity of LF. **CAR 03.** Please clearly distinguish the difference in technologies to be employed, or measures, operations or actions to be implemented by the project on the FSF#1 and FSF#2 as both of them could be considered as "using modern energy-efficient technologies" (refer to PDD, Section A.4.2, p.7). **CL 04.** Please specify the project construction boundary. Section A.2, p.2 reads: "The project consists of construction of a new Finger Shaft Furnace #2 with a ladle furnace," but p.7 states that:" The project consists of construction of Finger Shaft Furnace #2". Does the de-airing equipment is a part of the project (refer to Section A.4.2, p.8, Table A.4.2.1) **CL 05.** Please clarify the schedule for "Project documents development". It was stated in Section A.2, p.4 that "Preparation of project site had begun **at the end of 2004.** A plan of technical and economic development was approved in February 2005". Table A.4.2.2 indicates "Project documents development" starting from Q1 2004. The point would be a site visit assurance with documented evidence.		
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances				
A.4.3	Is it explained briefly how anthropogenic GHG	**CAR 04.** PDD Section A.4.3 is not transparent as to how GHG	CAR 04	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	emission reductions are to be achieved? (This section should not exceed one page.)	emissions are to be reduced by the proposed JI project. Conclusion is also pending a response to CAR 03.		
A.4.3.1. Estimated amount of emission reductions over the crediting period				
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 CO2 equivalent provided?	The length of the crediting period is indicated to be 60 months. Total as well as annual and average annual emission reductions in tonnes of CO2 equivalent are provided.		OK
A.5. Project approval by the Parties involved				
A.5	Are written project approvals by the Parties involved attached?	**CAR 05.** The project has no approvals by the Parties involved. The project approval by the Host Party was provided.	CAR 05	OK
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	No, pending a response to CAR 05.	Pending	OK
19	Does the PDD identify at least the host Party as a "Party involved"?	It is indicated that the Russian Federation is the host Party.		OK
19	Has the DFP of the host Party issued a written project approval?	No, pending a response to CAR 05.	Pending	OK
20	Are all the written project approvals by Parties involved unconditional?	No approvals from parties involved. Pending a response to CAR 05.	Pending	OK
Authorization of project participants by Parties involved				
21	Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through: − A written project approval by a Party involved, explicitly indicating the name of the legal entity?	Legal entity for Party A is OJSC Severstal and for Party B is Global Carbon BV. These project participants will be authorized with the issue of related project approvals. Pending a response to CAR 05.	Pending	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	or − Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity?			
Baseline setting				
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? − JI specific approach − Approved CDM methodology approach	PDD explicitly indicate that JI specific approach is used.		OK
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	Pending a response to CAR 06-CAR 10 and CAR 33-CAR 35.	Pending	OK
23	Does the PDD provide justification that the baseline is established: (a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one? (b) Taking into account relevant national and/or sectoral policies and circumstance? − Are key factors that affect a baseline taken into account? (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors? (d) Taking into account of uncertainties and	(a) Five alternative scenarios are listed in PDD Section B.1. 1. Other steel producers will produce the remaining steel demand; 2. Construction of Finger Shaft Furnace #2 (Project activity not implemented as JI); 3. Construction of a new Basic Oxygen Furnace; 4. Construction of a new EAF; 5. Construction of Open-Hearth Plant. **CAR 06.** PDD makes conclusion that the scenarios 2, 3, 4, 5 cannot be considered as plausible. If so, why these scenarios were listed? According to Paragraph 25 of Guidance, listed should be plausible scenarios. (b) PDD lacks transparency as to how the main development goal of	CAR 06 CAR 07 CAR 08 CAR 09 CAR 10 CAR 33 CAR 34 CAR 35	OK OK OK OK OK OK OK OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	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?	the Russian metallurgical industry "to reduce domestic metal demand" was taken into account in baseline establishing. **CAR 07.** PDD lacks transparency as to how the main development goal of the Russian metallurgical industry "to reduce domestic metal demand" was taken into account in baseline establishing. PDD takes into account some key factors that affect a baseline in accordance with "Guidance on criteria for baseline setting and monitoring". **CAR 08.** PDD v.2.3 has significantly changed the baseline scenario as response to CARs issued in DDR ver.01. Key factors affected the baseline that were taken into account do not properly address now the new baseline scenario "Continuation of a situation existing prior to the project (the existing open hearth plant continues its operation). In particular: (i) the reference to third party producers (incremental part) is not adequate. (ii) The statement "Steel production process by OHF, **EAF**, BOF are better-known and applied in Russia" cannon now be accepted as one of the technological barriers to the project implementation related relevant additionality proof (refer to Step 3 in Section B.2). (c) The baseline is established generally in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors. (d) Uncertainties for key baseline parameters were identified. (e) Emission reductions are not earned due to decrease of activity outside the project. (f) The baseline is established by drawing on the list of standard		

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring". Basic assumptions of the baseline methodology presented in Section D.1.1.4. and Annex 2 are as follows: - Baseline emissions are calculated on the basis of production emissions by other metallurgical plants (the further is referred as the incremental part). The output of baseline incremental part equals the project production. - Emission factor due to incremental production of steel is calculated with the use of the approach resembling the "Tool to calculate the emission factor for an electricity system" (version 02). The approach envisages the calculation of Operating Margin (emission factor for the all plants) and Build Margin (emission factor for the new ones). These two factors are used to calculate Combined Margin factor. In PDD Build Margin is reasonably taken as zero. **CAR 09.** The statement "Most information is taken from the international publicly available sources" and "This means that, depending on the actual production in the project scenario, there is an option in the baseline scenario where this amount of products (steel, iron, coke) is produced by other producers in Russia" are not applicable for the presented in PDD ver 2.3 baseline scenario (refer to Section B, p.13). **CAR 10.** Conclusions for considering Scenarios #3, 4 as plausible future baseline scenario lack of the conservative assumptions justifications and parameters, date sources, thus it is questionable to select the most plausible one. The Scenario #2 is not listed as plausible one as required by Guidance para 24, but in Section B.2 it		

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		is listed for additionality proof. **Findings in the revised PDD** Baseline emissions are calculated on the basis of production emissions by Open-Hearth Plant of OJSC Severstal. The output of baseline scenario equals the project production. Emission factor due to incremental production of steel is not applicable for the revised PDD. (a) Five alternative scenarios are listed in PDD Section B.1. 1. The existing open hearth plant; 2. Construction of a Finger Shaft Furnace #2 with old OHP dismantling; 3. Construction of a new Basic Oxygen Furnace with old OHP dismantling; 4. Construction of a new EAF with old OHP dismantling; 5. Construction of a new Open-Hearth Plant with old OHP dismantling. Scenario 1 is selected as the most plausible thus representing the baseline. **CAR 33.** PDD, Scenario 4 does not take into account that a construction of FSF with the shaft furnace and the equipment for scrap preparation (additional equipment) demands more investment and costs for maintenance than EAF which does not have this additional equipment.. **CAR 34.** PDD, Scenario 5 can not be plausible because Construction		

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		of a new Open-Hearth Plant contradicts with the synchronous Open-Hearth Plant dismantling. Moreover it does not make sense to implement the obsolescent equipment and technology such as Open-Hearth Plant. Please make corrections in Sections B.1 and B.2. **CAR 35.** PDD, page 16 reads: "Scenario 1 is the only remaining plausible scenario and therefore is identified as the baseline." Please select the most plausible scenario as required by the Guidance Paragraph 24.		
24	If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above?	N/A		OK
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	N/A		OK
Approved CDM methodology approach only_Paragraphs 26(a) – 26(d)_Not applicable				
Additionality				
JI specific approach only				
28	Does the PDD indicate which of the following approaches for demonstrating additionality is used? (a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to	PDD explicitly indicates that the CDM "Tool for the demonstration and assessment of additionality" (Version 05.2) was used. **CAR 11**. The CDM additionality tool is applied not in its totality, namely its paragraph (3) is not addressed. In accordance with this paragraph project proponents should "provide evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity. This evidence shall be based on (preferably official, legal and/or other corporate) documentation that	CAR 11 CAR 12 CAR 13 CAR 14 CAR 36	OK OK OK OK OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	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".	was available at, or prior to, the start of the project activity". Please provide the above mentioned evidence for the JI project activity. **CAR 12.** Step 3 in part of Invest barriers do not applied to Scenario #3. It is stated in Section B.1 that "It needs significant investment" but no comparison analysis done to proof the conclusion that it could not be considered as one of the future plausible baseline scenario. **CAR 13.** Scenario #4 lack of technological barrier justification in part of primary cost of EAF steel with regard to FSF steel. Please provide evidence for the statement. **CAR 14.** No appropriate analysis is made to make a conclusion that "FSFs are not spread in Russia and therefore there is a technological risk". **Findings in the revised PDD** **CAR 36.** Scenario #4 lacks justification of the statement that primary cost of EAF steel is higher than that of FSF steel.		
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	The use of this approach is conditioned by its transparency and popularity in JI. A clear and transparent description of the Tool steps is provided.		OK
29 (b)	Are additionality proofs provided?	Additionality is proven by investment analysis and common practice analysis. At Step 1a, 5 alternative scenarios were listed all of them were mentioned in section B.1 and also the proposed project activity undertaken without JI registration. At Step 1b it is concluded that all scenarios are consistent with mandatory laws and regulations of the Russian Federation. For Alternative 2 (project without JI registration) benchmark analysis	CAR 15 CAR 16 CAR 17 CAR 18 CAR 19 CAR 20 CAR 37	OK OK OK OK OK OK OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		was applied, followed by sensitivity analysis. Input data for the analyses is provided. It is shown that the project activity is not economically and financially attractive. The spreadsheet with the analyses is made available to the verifier. **CAR 15.** It's known that OJSC Severstal treats EAF billet to produce finished steel. PDD, Section B.2, Alternative 1 reads: "Other steel producers will produce the remaining steel demand". Please justify that the other steel producers will provide output (billet) comparable with the proposed project activity (quality, properties and application areas) in accordance with "Tool for the demonstration and assessment of additionality". **CAR 16.** PDD developer made conclusion that the alternatives 3, 4, 5 cannot be considered as plausible or reasonable. Please identify realistic and credible alternatives only in accordance with "Tool for the demonstration and assessment of additionality". Confer CAR 03 concerning baseline scenario. **CAR 17.** The value of project risk premium in accordance with an approved methodology is 8-10% (PDD refers to the methodology). PDD developer applied the upper value of project risk to derive the benchmark what is not conservative. Please justify the choice of the risk value. **CAR 18.** PDD developer calculated financial indicators of the project (IRR) using slab and bloom prices. This is not a conservative approach because OGSC Severstal main product is a rolled metal having higher prices than slabs and blooms. The rolled metal is produced from own slabs and blooms which are sold by OGSC Severstal in a small account. Please include in the analysis relevant	CAR 38 CAR 39	OK OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		costs and revenues in order to make calculations of financial indicators conservative. **CAR 19.** Common practice analysis does refer to Finger Shaft Furnace #1 and ladle furnace that were implemented at OJSC Severstal in 1999 (refer to PDD Section A.2). This equipment is similar to the equipment of project activity. The existence of a similar activity at the project participant calls into question the conclusion of the investment analysis that the proposed project activity is financially unattractive. **CAR 20.** The investment barrier applied in PDD ver.2.3 in the barrier analysis has been studied as investment comparison analysis for the existed OHP and proposed FSF operations (Step 2 of Investment analysis). Please ensure that the requirements of the Additionality Tool are met in part of Sub-step 3a "Investment barriers, other than the economic/financial barriers in Step 2 (Investment analysis)". **Findings in the revised PDD** **CAR 37**. Following Step 1b on which five realistic and credible alternatives to the project activity are identified the PDD developer compares steel production costs for Alternative 1 and Alternative 2. Why are Alternatives 3 - 5 neglected is not explained. **CAR 38**. Benchmark analysis used for demonstration of additionality is not applicable to the situation IRR < 0 which does not require any benchmark to conclude that the project is not financially attractive (without revenue from ERU sale). **CAR 39.** Investment analysis is based in particular on calculating the difference of primary costs (without metal stock) of steel produced by FSF and OHF. It is results are valid if the cost of primary stock is the		

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		same for FSF and OHS). Please prove this.		
29 (c)	Is the additionality demonstrated appropriately as a result?	Pending a response to CAR 15 – CAR 19. **Findings in the revised PDD** Pending a response to CARs 37-CAR 39.	Pending	OK
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	Pending a response to CAR 15 -CAR 19. **Findings in the revised PDD** Pending a response to CAR 37-CAR 39.	Pending	OK
Approved CDM methodology approach only_ Paragraphs 31(a) – 31(e)_Not applicable				
Project boundary (applicable except for JI LULUCF projects				
JI specific approach only				
32 (a)	Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	The project 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. These are: - Emission from the raw materials (iron, coke, electrodes) during the steelmaking process; - Fuel (gas) combustion; - GHG emissions from the Russian electricity grid. **Findings for the revised PDD** **CAR 40.** Project boundary does not include additional equipment for scrap preparation in the drop-hammer plant for project activity.. **CAR 41.** Project boundary includes only de-airing equipment although in compliance with Section A.4.2 the de-airing equipment is	CAR 40 CAR 41	OK OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		a part of out furnace treatment.		
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?	Project boundary is defined on the basis of case-by-case analysis (not always quantitative) of emission sources. Pending a response to CL 01.	Pending	OK
32 (c)	Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart as appropriate?	The delineation of the project boundary and the gases and sources are included appropriately described and justified in the PDD by using a Figure B.3.1. Please correct the identification "EAF" to "FSF "on Figure B.3.1. Pending a response to CL 01. **CL 06.** Please clarify the "Subproject boundary" name for the title of Figure B.3.1 as no subprojects are identified within the proposed project.	CL 06	OK
32 (d)	Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?	All gases and sources are included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified in Section B1, Table B.3.1. Pending a response to CL 01. **CAR 21.** Please ensure the statements in PDD ver. 2.3 are adequate to the modified baseline scenario: "All steel producers have comparable emissions from these sources, thus including these sources is conservative" and "All steel producers have comparable emissions from raw material consumption". Please correct inadequate phrasing "In the project scenario and in the baseline amount of electrodes will be different" since no electrodes are used in the baseline scenario. **CAR 22.** The LF#1 and #2 are included in Monitoring plan. Please ensure they are both identified as GHG sources on Figure B.3.1 and Table B.3.1 (refer to Section D.1.1.2. p.33).	CAR 21 CAR 22 CAR 23	OK OK OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		CAR 23. Raw material as scrap and pig iron are not identified as GHG sources of emissions during steel production (refer to Figure B.3.1 and Table B.3.1). Scrap is also not included in the project emissions calculations in Section D.1.1.2 (refer to p.29 as reference that "Coke, iron and steel production are included in the project boundary").		
Approved CDM methodology approach only_ Paragraph 33_Not applicable				
Crediting period				
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?	The starting date is defined as February 25, 2005 when investment into project was approved by OJSC Severstal.		OK
34 (a)	Is the starting date after the beginning of 2000?	Yes, it is.		OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	Operational lifetime is defined as 15 years or 180 months.		OK
34 (c)	Does the PDD state the length of the crediting period in years and months?	The length of crediting period is defined as 5 years or 60 months.		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?	Starting day is 01/01/2008 which is the date of the first emission reductions generated by the project.		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?	The crediting period is defined as from 01/01/2008 till 31/12/2012.		OK
34 (d)	If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the estimates of emission reductions or	N/A		OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	enhancements of net removals presented separately for those until 2012 and those after 2012?			
Monitoring plan				
35	Does the PDD explicitly indicate which of the following approaches is used? − JI specific approach; − Approved CDM methodology approach.	It is explicitly indicated that a JI specific approach is chosen.		OK
JI specific approach only				
36 (a)	Does the monitoring plan describe: − All relevant factors and key characteristics that will be monitored? − The period in which they will be monitored? − All decisive factors for the control and reporting of project performance?	The monitoring plan describes: - data to be monitored such as electricity consumption by FSF#2 (refer to Section D.1.1.1 of PDD for project activity) or steel production by FSF#2 (refer to Section D.1.1.3 of PDD for baseline); - the period in which they will be monitored: continuously or monthly or annually; - all decisive factors for the control and reporting of project performance: 2tp statistics forms; quality control (QC) and quality assurance (QA) procedures; the operational and management structure that will be applied in implementing the monitoring plan. **CAR 24.** The monitoring plan does not include $PE_{\text{iron,y}}^{FSF2}$ (refer to Formula 2 in Section D.1.1.2). **CAR 25.** Please explain and justify the applicability of the baseline emission factor of the "replacement production" as the baseline requires no "replacement production" (refer to Section B.1 and B.2. Section D.1. p.25. Also a response to Section D.1.1.4 "Production the open heart plant (replacement production"), Tabular Form for the key data used to establish the baseline. Annex 2. p.61). **CAR 26.** Please provide justifications that pig iron production	CAR 24 CAR 25 CAR 26 CL 07 CAR 42	OK OK OK OK OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		emission factor is applied based on reasonable conservative approach (refer to PDD Section D.1, p.24). **CL 07.** PDD, Section D1.1.2 reads: "Coke, pig iron, lime and limestone consumption by FSF#1 and FSF#2 cannot be monitored individually." Please explain why this is so, because it is common practice that the consumption of materials is fixed for each melting. Additionally pending a response to CL 1. **Findings in the revised PDD** **CAR 42.** Please provide justifications of values: 0,149 and 0,909 of energy consumption for air and oxygen production in Annex 2, page 55.		
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 the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions to be monitored. For data to be monitored, please refer to 36(a) above. For constants please refer to the next paragraph. **Findings for the revised PDD** **CAR 43.** Please include in the description of monitoring plan how conservativeness of all assumptions is taken into account in Section D.1.	CAR 43	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	Default value is used on the basis of 2006 IPCC and fixed ex-ante based on historical production data.. The source is recognized and supported with statistical data. The default values are following: - Emission factors from lime and coke production (IPCC data); - Emission factors from fuel combustion (IPCC data); - Emission factors of electrodes (IPCC data);	CL 08	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	levels? − Are the default values presented in a transparent manner?	- Baseline emission factor for steel production (fixed ex-ante as average for 2003-2005); - CO2 emission factor of electricity grid of Russia (fixed ex-ante for 2008-2012, refer to Annex 2); - Emission factor for oxygen production (fixed ex-ante as average for 2006-2008); - Emission factor for steam production (fixed ex-ante as average for 2006-2008); - Net Calorific Value of fuel. **CL 08.** Please clarify whether the term "specific Emission factor for steam production" is correct in terms of "specific".		
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?	PDD clearly indicates how the values are to be selected and justified. But still a response to CL 11 is applicable.		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?	The monitoring plan specifies the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions to be monitored. For constants, please refer to the next paragraph.		OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	All parameters included in the monitoring plan are to be either monitored under regular operational practice or taken as constants. **SV 01.** Monitoring system reliability should be checked on site.	SV 01	OK
36 (b) (iv)	Are International System Unit (SI units) used?	International System Units (SI units) are used.		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?	PDD in Sections B.1, D.1.1.3 and Annex 2 notes PP_y^{FSF2} Steel production by FSF#2 in year y (tonnes of steel) that is used to calculate baseline emissions.		OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		Pending a response to CL 01.		
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	There is consistency between parameters, coefficients, variables, etc. used in baseline and monitoring plan.		OK
36 (c)	Does the monitoring plan draw on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"?	The monitoring plan draws on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring". **Findings in the revised PDD** The monitoring plan draws on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring" such as project emissions, baseline emissions, emission factor for steel, pig iron, coke, limestone, natural gas consumption.		OK
36 (d)	Does the monitoring plan explicitly and clearly distinguish: (i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination? (ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination? (iii) Data and parameters that are monitored throughout the crediting period?	Description of the monitoring plan in Section D.2 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) such as: - emission factors from lime and coke production; - emission factors from fuel combustion; - emission factors of electrodes; NCV of fuel, - and that are available already at the stage of determination regarding the PDD such as: - emission factor for power grid; - iron production emission in year. (ii) N/A. (iii) Data and parameters that are to be monitored throughout the crediting period such as: - coke consumption by FSF#2;		OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
		- steel production by FSF#2 in year; - lime consumption by FSF#2. **Findings in the revised PDD** Description of the monitoring plan in Section D.1 explicitly and clearly distinguishes: (i)) Refer to emission factors for coke, limestone, electrodes and NCV of fuel. ii) Refer to emission factor for electricity consumption. (iii) Refer to steel production, pig iron, coke, limestone, consumptions by FSF#2 and OHP.		
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	Yes, the methods used and data collection frequency and recording are clearly defined in the monitoring plan. **Findings in the revised PDD** Yes, the methods used and data collection frequency and recording are clearly defined in the monitoring plan as "annually"		OK
36 (f)	Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/ removals or direct monitoring of emission reductions from the project, leakage, as appropriate?	These are Formulae in Section D.1.1.4 for baseline emissions (Formula 19) and Section D.1.1.2 for project emissions (Formula 1). Leakage are reasonably neglected (refer to Section D.1.3.2). Also pending a response to CAR 23.	Pending	OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	The underlying rationale for the formulae are explained as appropriate.		OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Consistent variables, equation formats, subscripts are used. Also pending a response to CAR 23 and CL 04.	Pending	OK
36 (f) (iii)	Are all equations numbered?	Yes.		OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
36 (f) (iv)	Are all variables, with units indicated defined?	Yes, except one of them. **CAR 27.** The parameter $PE_{\text{iron,y}}^{FSF2}$ is not identified in Formula 2. **Findings in the revised PDD** **CAR 44**. Formula 2 in Annex 2 does not have comments with values: 7000, 4,1868, $CF_{fuel,BFG,y}^{steam}$, $\text{CO}_{\text{y}}^{\text{k}}$. **CAR 45.** Please provide formulae to estimate the emissions for dolomite and burnt dolomite which are given in Annex 2, Table Anx 2.3.	CAR 27 CAR 44 CAR 45	OK OK OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	Pending a response to CAR 10, CAR 26 and CL 01. **Findings in the revised PDD** Pending a response to CAR 41-44.	Pending	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	**SV 02**. Check the uncertainty level for estimation of key parameters against the meters certificates.	SV 02	OK
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured?	There is consistency between the elaboration on the baseline scenario and calculating the baseline emission in the spreadsheet. Pending a response to CAR 25.	Pending	OK
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	There are no parts of the algorithms or formulae that are not self-evident in PDD. Pending a response to CAR 23.	Pending	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	Yes, the monitoring is in line with current operational routines.		OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
36 (f) (vii)	Are references provided as necessary?	**SV 03.** Check the original data sources for all parameters used for monitoring.	SV 03	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	Pending a response to CL 04.	Pending	
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?	N/A		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?	The uncertainty is not described in Table D.2 **SV 04.** Uncertainty of metering equipment shall be checked against manufacturer's certificates. Additionally pending a response to CL 04.	SV 04	OK
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project? Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?	PDD Section D.1.5 provides explicit identification of main relevant Russian Federation environmental regulations.		OK
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	N/A		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	QC/QA procedures are specified in PDD Section D.2. **CAR 28.** Please provide the reference to national monitoring standards used for monitoring routines. Pending a response to CAR 16 in 36 (m) below. **SV 05.** Calibration procedures will be checked on site.	CAR 28 SV 05	OK OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	kept and made available upon request?			
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	The operational and management structure for GHG monitoring is described in PDD Section D.3, Fig. D.3.1. **SV 06.** The authority/ responsibility distribution for data collection, achieving and storing will be checked on site. **Findings in the revised PDD** **CAR 46.** Please indicate who is responsible for: - data storage and archiving; - data processing; - data reporting; - monitoring report approval.	CAR 46	OK
36 (k)	Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type? If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?	Monitoring techniques are in line with current operation routines at OJSC " Severstal".		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?	These data are provided in the PDD, Section D.2. Response to CAR 15.		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?	No, it is not indicated. **CAR 29.** Please ensure that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project.	CAR 29	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
37	If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above?	N/A		OK
Approved CDM methodology approach only_Paragraphs 38(a) – 38(d)_Not applicable				
Applicable to both JI specific approach and approved CDM methodology approach_Paragraph 39_Not applicable				
Leakage				
JI specific approach only				
40 (a)	Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?	Leakages are reasonably assumed to be neglected.		OK
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	N/A		OK
Approved CDM methodology approach only_Paragraph 41_Not applicable				
Estimation of emission reductions or enhancements of net removals				
42	Does the PDD indicate which of the following approaches it chooses? (a) Assessment of emissions or net removals in the baseline scenario and in the project scenario (b) Direct assessment of emission reductions	Assessment of emissions in the baseline scenario and in the project scenario is chosen. Option 1 is chosen.		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)?	PDD provides ex ante estimates of: (a) Emissions for the project scenario (Section E.1); (b) Leakage (Section E.2);	CAR 30 CAR 31	OK OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	(b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the pr oject boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	(c) Emissions for the baseline scenario (Section E.4); (d) Emission reductions adjusted by leakage (Section E.6). **CAR 30.** Please provide estimates of anthropogenic emissions of greenhouse gases by sources (coke, electrodes, natural gas, oxygen and steam) separately. **CAR 31.** Please ensure the appropriateness of the wording and data for "Other steel producers" in Table E.4.1 and E.4.2" is correct with regard to the revised baseline in PDD ver.2.3 (refer to Section E, p.47)		
44	If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emission reductions or enhancements of net removals (within the project boundary)? (b) Leakage, as applicable? (c) Emission reductions or enhancements of net removals adjusted by leakage?	N/A		OK
45	For both approaches in 42 (a) Are the estimates in 43 or 44 given: (i) On a periodic basis? (ii) At least from the beginning until the end of the crediting period? (iii) On a source-by-source/sink-by-sink basis? (iv) For each GHG? (v) In tones of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol?	Estimates in 43 are given on the periodic basis, from the beginning until the end of the crediting period, in tones of CO2 equivalent. Response to CAR 17. The formulae used in PDD are consistent. Key factors influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project are taken into account. Default value off natural gas emission factors is taken from 2006 IPCC. Estimation in 43 is based on conservative assumptions and the most plausible scenario in a transparent manner?	CAR 32	OK

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
	(b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate? (d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent? (e) Are emission factors (including default emission factors) if used for calculating the estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice? (f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner? (g) Are the estimates in 43 or 44 consistent throughout the PDD? (h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?	Estimates in 43 are consistent throughout the PDD. The annual average of estimated emission reductions calculated by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period and multiplying by twelve. **CAR 32.** Data sources in E.1.1 are not identified. Also pending a response to CAR 31.		

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
46	If the calculation of the baseline emissions or net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation?	Illustrative ex-ante estimation of baseline emissions is made on the spreadsheet. Refer to section E.4 and Annex 2. Also pending a response to CAR 31.		OK
Approved CDM methodology approach only_Paragraphs 47(a) – 47(b)_Not applicable				
Environmental impacts				
48 (a)	Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	PDD Section E.1 lists and attaches documentation on the analysis of the environmental impacts of the project (N/A for transboundary impacts), in accordance with procedures as determined by the host Party.		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 accordance with the procedures as required by the host Party?	The project has approved on 25th July 2005 by the regional office of Glavgosexpertiza, in Vologda region (#09/4747). The project does not have any significant negative impacts on the environment. Furthermore, the project leads to a decrease of energy consumption and to a reduction of GHG emissions. The project does not have any transboundary environmental impacts.		OK
Stakeholder consultation				
49	If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide: (a) A list of stakeholders from whom comments on the projects have been received, if any? (b) The nature of the comments? (c) A description on whether and how the comments have been addressed?	Stakeholder consultation is not required by the Russian legislation. According to the local procedure OJSC Severstal published information about the project in mass media. List of publications is presented in PDD.		OK
Determination regarding small-scale projects (additional elements for assessment)_Paragraphs 50 - 57_Not applicable				

Section A Paragraph or DVM Paragraph	Check Item	Initial finding	Draft Concl.	Final Concl.
Determination regarding land use, land-use change and forestry projects _Paragraphs 58 – 64(d)_Not applicable				
Determination regarding programmes of activities_Paragraphs 66 – 73_Not applicable				

DETERMINATION PROTOCOL

Table 2 Resolution of Corrective Action and Clarification Requests

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
CAR 01 PDD doesn't provide enough summarising explanation (expected outcome, including a technical description) about: - Implemented Finger Shaft Furnace #1, Ladle furnace, Continuous Casting Machine and other equipment installed before the project; - Equipment in project scenario; - "Other steel producers" in the baseline scenario as regards their ability to produce steel products with the same characteristics as in the project (dimensions, steel grade, special quality requirements and etc.).	A.2	Response 1 to CAR 01 Section A.2 of PDD was changed.	Conclusion on Response 1 to CAR 01 CAR 01 is not closed due to the following: Please provide enough summarising explanation for verifier to situation existing prior to the starting date of the project in part of: • CCM availability; • FSF #2 place construction. As is stated in PDD Section A.2, p.3, "the FSC #2 and the ladle furnace were constructed on the site of dismantled EAFs (#1, 2) in 2005". Information on p.2 contradicts with that: "Two EAFs (#3, 4) were dismantled. On their site a new Finger Shaft Furnace #1 and ladle furnace were constructed"; • New equipment purchasing and installing (electric furnace shop, FSF#2); • Clarification for main technical data of the OHP (refer to Table A.2.1 in Section A.2) in part of capacity output. Does it a maximum technical capacity according to technical documentation for OHP furnaces or average data for some period? Please justify the

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
			source of the data. • Steel production capacity by BOF. Conclusion on Response 2 to CAR 01 CAR 01 is not closed due the following: Please add the BOF steel making capacity description as it is one of the most up-to-day effective processes in OJSC Severstal and could be considered as a baseline scenario (See the Chief Executive for Steel Division A.Kruchinin statement:" In 2010 the BOA steel making process rates 85% of total company's steel production. We would increase the rate of steel produced by this more efficient process" (refer to http://www.gastrotehnika.ru/rus/art/696.html) CAR 01 is closed based on due amendments made to the revised PDD.
CAR 02 The history of the JI project is not summarised.	A.2	Response 1 to CAR 02 Information about history of the JI project was added in the project background and description (Section A.2).	Conclusion on Response 1 to CAR 02 CAR 02 is closed based on due amendments made to PDD.
CAR 03. Please clearly distinguish the difference in technologies to be employed, or measures, operations or actions to be implemented by the project on the FSF#1 and FSF#2 as both of them could be considered as "using modern energy-efficient technologies" (refer	A.4.2	Response 1 to CAR 03 Differences between FSF#1 and FSF#2 were specified in section A.2 (before project and project scenario).	Conclusion on Response 1 to CAR 03 CAR 03 is not closed due the following: Section A.2 does not contain the information which is given in Response 1 to CAR 03. Please

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
to PDD, Section A.4.2, p.7).		The new auxiliary equipment was installed together with the FSF#2. Existing auxiliary equipment (after the EAFs dismantling) is used for FSF#1 operating. Also FSF#2 has more recent gas burners and oxygen injectors system than FSF#1 (injector can be used as burner). Response 2 to CAR 03 The text was added in Section A.4.2. The FSF#2 has more recent gas burners and oxygen injectors system (injector can be used as gas burner).	include it in Section A.4.2. Conclusion on Response 2 to CAR 03 CAR 03 is closed based on due amendments made to PDD.
CAR 04 PDD Section A.4.3 is not transparent as to how GHG emissions are to be reduced by the proposed JI project. Conclusion is also pending a response to CAR 03.	A.4.3	Response 1 to CAR 04 The text was added. Fossil fuel consumption is reduced significantly due to project implementation (replacement of OHP by FSF#2). Response 2 to CAR 04 See Response 2 to CAR 03.	Conclusion on Response 1 to CAR 04: The explanation is accepted but as a revised PDD was issued, please response to CAR 03 to close the CAR 04. Conclusion on Response 2 to CAR 04 CAR 04 is closed based on due amendments made to PDD.

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
CAR 05 The project has no approvals by the Parties involved. The project approval by the Host Party will be provided after the determination statement is issued by the AIE.	A.5	Response 1 to CAR 05 The project approval by the Host Party will be provided after the determination of the PDD.	CAR 05 is closed as the host country letter of approval was obtained on 12/03/12.
CAR 06 PDD makes conclusion that the scenarios 2, 3, 4, 5 cannot be considered as plausible. If so, why these scenarios were listed? According to Paragraph 25 of Guidance, listed should be plausible scenarios.	23	Response 1 to CAR 06 Scenarios 2-5 were changed in PDD.	CAR 06 is closed based on due amendments made to the revised PDD.
CAR 07 PDD lacks transparency as to how the main development goal of the Russian metallurgical industry "to reduce domestic metal demand" was taken into account in baseline establishing.	23	Response 1 to CAR 07 Scenario 1 was changed in PDD.	CAR 07 is closed based on due amendments made to the revised PDD.

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
CAR 08 PDD v.2.3 has significantly changed the baseline scenario as response to CARs issued in DDR ver.01. Key factors affected the baseline that were taken into account do not properly address now the new baseline scenario "Continuation of a situation existing prior to the project (the existing open hearth plant continues its operation). In particular: (i) the reference to third party producers (incremental part) is not adequate. (ii) The statement "Steel production process by OHF, EAF, BOF are better-known and applied in Russia" cannon now be accepted as one of the technological barriers to the project implementation related relevant additionality proof (refer to Step 3 in Section B.2).	23	N/A.	CAR 08 is closed as irrelevant to the revised PDD.
CAR 09 The statement "Most information is taken from the international publicly available sources" and "This means that, depending on the actual production in the project scenario, there is an option in the baseline scenario where this amount of products (steel, iron, coke) is produced by other producers in Russia" are not applicable for the presented in PDD ver 2.3 baseline scenario (refer to Section B, p.13).	23	Response 1 to CAR 09 PDD was corrected.	CAR 08 is closed as irrelevant to the revised PDD.
CAR 10 Conclusions for considering Scenarios #3, 4 as plausible future baseline scenario lack of the conservative assumptions justifications and parameters,	23	Response 1 to CAR 10 Conclusions for considering Scenarios #3, 4 were detailed.	CAR 10 is closed based on due amendments made in the revised PDD.

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
date sources, thus it is questionable to select the most plausible one. The Scenario #2 is not listed as plausible one as required by Guidance para 24, but in Section B.2 it is listed for additionality proof.			
CAR 11 The CDM additionality tool is applied not in its totality, namely its paragraph (3) is not addressed. In accordance with this paragraph project proponents should "provide evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity. This evidence shall be based on (preferably official, legal and/or other corporate) documentation that was available at, or prior to, the start of the project activity". Please provide the above mentioned evidence for the JI project activity.	24	Response 1 to CAR 11 Document was directed AIE.	Conclusion on Response 1 to CAR 11 CAR 11 will be closed when AIE receives a formal documented evidence of the JI prior consideration. CAR 11 is closed because AIE received a formal documented evidence of the JI prior consideration.
CAR 12 Step 3 in part of Invest barriers do not applied to Scenario #3. It is stated in Section B.1 that "It needs significant investment" but no comparison analysis done to proof the conclusion that it could not be considered as one of the future plausible baseline scenario.	24	N/A	CAR 12 is closed as irrelevant to the revised PDD.
CAR 13 Scenario #4 lack of technological barrier justification in part of primary cost of EAF steel with regard to FSF steel. Please provide evidence for the statement.	24	N/A	CAR 13 is closed as irrelevant to the revised PDD.
CAR 14 No appropriate analysis is made to make a conclusion	24	N/A	CAR 14 is closed as irrelevant to the revised PDD.

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
that "FSFs are not spread in Russia and therefore there is a technological risk".			
CAR 15 It's known that OJSC Severstal treats EAF billet to produce finished steel. PDD, Section B.2, Alternative 1 reads: "Other steel producers will produce the remaining steel demand". Please justify that the other steel producers will provide output (billet) comparable with the proposed project activity (quality, properties and application areas) in accordance with "Tool for the demonstration and assessment of additionality".	29(b)	Response 1 to CAR 15 Alternative's was changed.	CAR 15 is closed as irrelevant to the revised PDD.
CAR 16 PDD developer made conclusion that the alternatives 3, 4, 5 cannot be considered as plausible or reasonable. Please identify realistic and credible alternatives only in accordance with "Tool for the demonstration and assessment of additionality". Confer CAR 03 concerning baseline scenario.	29(b)	Response 1 to CAR 16 Alternatives 3, 4, 5 were changed in PDD.	CAR 16 is closed as irrelevant to the revised PDD.
CAR 17 The value of project risk premium in accordance with an approved methodology is 8-10% (PDD refers to the methodology). PDD developer applied the upper value of project risk to derive the benchmark what is not conservative. Please justify the choice of the risk value.	29(b)	Response 1 to CAR 17 The investment analysis was changed to barriers analysis in PDD. Response 2 to CAR 17 8% was applied as the value of	CAR 17 is closed as irrelevant to the revised PDD.

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
		project risk premium	
CAR 18 PDD developer calculated financial indicators of the project (IRR) using slab and bloom prices. This is not a conservative approach because OGSC Severstal main product is a rolled metal having higher prices than slabs and blooms. The rolled metal is produced from own slabs and blooms which are sold by OGSC Severstal in a small account. Please include in the analysis relevant costs and revenues in order to make calculations of financial indicators conservative.	29(b)	Response 1 to CAR 18 The project boundary was changed (limited by liquid steel production only). The baseline (scenario #1 and alternative #1) was changed to continue operation of OHP. The barriers analysis was used in PDD. Comparison of primary cost (OHP and FSF) was used for argumentation of Investment barriers. Response 2 to CAR 18 The project benefit was applied as the difference in primary cost of open hearth steel and electric steel.	CAR 18 is closed as irrelevant to the revised PDD.
CAR 19 Common practice analysis does refer to Finger Shaft Furnace #1 and ladle furnace that were implemented at OJSC Severstal in 1999 (refer to PDD Section A.2). This equipment is similar to the equipment of project activity. The existence of a similar activity at the project participant calls into question the conclusion of the investment analysis that the proposed project activity is financially unattractive.	29(b)	Response 1 to CAR 19 The common practice analysis was changed in the PDD. Response 2 to CAR 19 The common practice analysis was changed in the PDD. The project FSF#1 installation can not be considered as a similar project	Conclusion on Response 1 to CAR 19 CAR is not closed. Please analyze operations of OJSC Severstal steel making process with FSFS#1 (since 1999) with the presentation documented evidence and quantitative information to prove that proposed JI project is not the similar technology, scale, etc. (refer to Sub-step 4a of the Additionality Tool).

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
		activity.	Conclusion on Response 2 to CAR 19 CAR 19 is closed based on due amendments made to the revised PDD.
CAR 20 The investment barrier applied in PDD ver.2.3 in the barrier analysis has been studied as investment comparison analysis for the existed OHP and proposed FSF operations (Step 2 of Investment analysis). Please ensure that the requirements of the Additionality Tool are met in part of Sub-step 3a "Investment barriers, other than the economic/financial barriers in Step 2 (Investment analysis)".	29(b)	N/A.	CAR 18 is closed as irrelevant to the revised PDD.
CAR 21. Please ensure the statements in PDD ver. 2.3 are adequate to the modified baseline scenario: "All steel producers have comparable emissions from these sources, thus including these sources is conservative" and "All steel producers have comparable emissions from raw material consumption". Please correct inadequate phrasing "In the project scenario and in the baseline amount of electrodes will be different" since no electrodes are used in the baseline scenario.	32(d)	Response 1 to CAR 21 It was deleted.	CAR 21 is closed based on irrelevance for the revised PDD.
CAR 22 The LF#1 and #2 are included in Monitoring plan. Please ensure they are both identified as GHG sources on Figure B.3.1 and Table B.3.1 (refer to Section D.1.1.2. p.33).	32(d)	Response 1 to CAR 22 Figure B.3.1 and Table B.3.1 were corrected.	CAR 22 is closed based on due amendments made to the revised PDD.

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
CAR 23 Raw material as scrap and pig iron are not identified as GHG sources of emissions during steel production (refer to Figure B.3.1 and Table B.3.1). Scrap is also not included in the project emissions calculations in Section D.1.1.2 (refer to p.29 as reference that "Coke, iron and steel production are included in the project boundary").	32(d)	Response 1 to CAR 23 The mistake was corrected in page 29. Pig iron was added in Table 3.1 as raw material. Emissions from pig iron, coke are calculated by their EFs. Response 2 to CAR 23 This source was added in Table B.3.1. And it was excluded because it contributes to less than 1% of the total emissions (calculation was added in the excel file).	Conclusion on Response 1 to CAR 23 CAR is not closed. Scrap is not included in the project and baseline emissions calculations. Conclusion on Response 2 to CAR 23 CAR 23 is closed because verifier has been received the evidence that the carbon content in scrap is 0.2%.
CAR 24 The monitoring plan does not include $PE_{\text{iron,y}}^{FSF2}$ (refer to Formula 2 in Section D.1.1.2).	36(a)	Response 1 to CAR 24 $PE_{\text{iron,y}}^{FSF2}$ was added in the monitoring plan.	CAR 24 is closed based on due amendments made to the revised PDD.
CAR 25 Please explain and justify the applicability of the baseline emission factor of the "replacement production" as the baseline requires no "replacement production" (refer to Section B.1 and B.2. Section D.1. p.25. Also a response to Section D.1.1.4 "Production the open heart plant (replacement production"), Tabular Form for the key data used to establish the baseline. Annex 2. p.61).	36(a)	Response 1 to CAR 25 It was corrected in PDD.	CAR 25 is closed based on due amendments made to the revised PDD.
CAR 26	36(a)	Response 1 to CAR 26	CAR 26 is closed based on due amendments

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
Please provide justifications that pig iron production emission factor is applied based on reasonable conservative approach (refer to PDD Section D.1, p.24).		The mistake was corrected in page 24.	made to the revised PDD.
CAR 27 The parameter $PE_{\text{iron,y}}^{FSF2}$ is not identified in Formula 2.	36 (f) (iv)	Response 1 to CAR 27 $PE_{\text{iron,y}}^{FSF2}$ was added in the monitoring plan.	CAR 27 is closed based on due amendments made to the revised PDD.
CAR 28 Please provide the reference to national monitoring standards used for monitoring routines.	36(i)	Response 1 to CAR 28 OJSC Severstal has implemented standard for monitoring and measuring system (STO 00186217-SMK-7.6-01-2008/2010). This standard corresponds to the federal law #102-FZ and other requirements in Russia. Results of monitoring and measuring are stored in the Severstal's archive (not less than 10 years). This text was added in Section D.2 of PDD.	CAR 28 is closed based on due amendments made to the revised PDD.
CAR 29 Please ensure that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project.	36(m)	Refer to CAR 28.	CAR 29 is closed based on due amendments made to the revised PDD.

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
CAR 30 Please provide estimates of anthropogenic emissions of greenhouse gases by sources (coke, electrodes, natural gas, oxygen and steam) separately.	43	Response 1 to CAR 30 The anthropogenic emissions of greenhouse gases by sources (coke, electrodes, natural gas, oxygen and steam) were separated.	CAR 30 is closed based on due amendments made to the revised PDD.
CAR 31 Please ensure the appropriateness of the wording and data for "Other steel producers" in Table E.4.1 and E.4.2" is correct with regard to the revised baseline in PDD ver.2.3 (refer to Section E, p.47)	43	Response 1 to CAR 31 It was corrected.	CAR 31 is closed based on due amendments made to the revised PDD.
CAR 32 Data sources in E.1.1 are not identified.	45	Response 1 to CAR 32 Refer to CAR 30.	CAR 32 is closed based on due amendments made to the revised PDD.
CAR 33 PDD, Scenario 4 does not take into account that a construction of FSF with the shaft furnace and the equipment for scrap preparation (additional equipment) demands more investment and costs for maintenance than EAF which does not have this additional equipment.	23	Response 1 to CAR 33 Scenario 4 was deleted because it did not reflect Severstal's development strategy.	CAR 33 is closed based on due amendments made to the revised PDD.
CAR 34 PDD, Scenario 5 can not be plausible because Construction of a new Open-Hearth Plant contradicts with the synchronous Open-Hearth Plant dismantling. Moreover it does not make sense to implement the		Response 1 to CAR 34 Scenario 5 was deleted.	CAR 34 is closed based on due amendments made to the revised PDD.

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
obsolescent equipment and technology such as Open-Hearth Plant. Please make corrections in Sections B.1 and B.2.			
CAR 35 PDD, page 16 reads: "Scenario 1 is the only remaining plausible scenario and therefore is identified as the baseline." Please select the most plausible scenario as required by the Guidance Paragraph 24.	23	Response 1 to CAR 35 The text was corrected. Scenario 1 is most plausible scenario and therefore is identified as the baseline.	CAR 35 is closed based on due amendments made to the revised PDD.
CAR 36 Scenario #4 lacks justification of the statement that primary cost of EAF steel is higher than that of FSF steel.	24	Response 1 to CAR 36 See Response 1 to CAR 33.	CAR 36 is closed based on due amendments made to the revised PDD.
CAR 37 Following Step 1b on which five realistic and credible alternatives to the project activity are identified the PDD developer compares steel production costs for Alternative 1 and Alternative 2. Why Alternatives 3 - 5 neglected are is not explained.	29(b)	Response 1 to CAR 37 The text was added. Alternative 5 is neglected due to relevant reasons (absence of additional ironmaking, oxygen and liquid steel processing capacities at Severstal). Also there is not free place for new equipment installation in the basic oxygen department.	CAR 37 is closed based on due amendments made to the revised PDD.
CAR 38 Benchmark analysis used for demonstration of additionality is not applicable to the situation IRR < 0 which does not require any benchmark to conclude that the project is not financially attractive (without revenue	29(b)	Response 1 to CAR 38 Investment analysis was changed.	CAR 38 is closed based on due amendments made to the revised PDD.

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
from ERU sale).			
CAR 39 Investment analysis is based in particular on calculating the difference of primary costs (without metal stock) of steel produced by FSF and OHF. It is results are valid if the cost of primary stock is the same for FSF and OHS). Please prove this.	29(b)	Response 1 to CAR 39 Investment analysis was changed. Response 2 to CAR 39 Invest analysis was recalculated taking into account: • return scrap after OHF decommissioning; • investment cost, prices and tariffs were represent in transparent form; • source of annual average primary cost was presented in PDD. Response 3 to CAR 39 Invest analysis was recalculated.	Conclusion on Response 1 to CAR 39 CAR 39 is not closed due to the following findings in the revised PDD: • return scrap after OHF decommissioning is not taken into account; • please provide AIE the source of annual average primary cost and refer to it in PDD; • investment cost, prices and tariffs in calculations on spreadsheet "20110112_CF_Severstal.xls" are not transparent and cannot be determined by AIE. Conclusion on Response 2 to CAR 39 CAR 39 is not closed due to the following finding in the revised PDD: Primary cost of OHF steel is 5344.63 on spreadsheet "20110125_CF_Severstal.xls" although in accordance with the received document "Cost-benefit analysis OHF for 2004" primary cost of OHF steel is 5367.8. CAR 39 is closed based on due amendments made to the revised PDD.

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
CAR 40 Project boundary does not include additional equipment for scrap preparation in the drop-hammer plant for project activity.	32(a)	Response 1 to CAR 40 This source was added in Table B.3.1. And it was excluded because it contributes to less than 1% of the total emissions. (There are a briquette press and a scrap cutter in drop-hammer plant.)	CAR 40 is closed based on due amendments made to the revised PDD.
CAR 41 Project boundary includes only de-airing equipment although in compliance with Section A.4.2 the de-airing equipment is a part of out furnace treatment.	32(a)	Response 1 to CAR 41 They (de-airing equipment and ladle furnace) are in Table B.3.1 and Figure B.3.1.	CAR 41 is closed based on due amendments made to the revised PDD.
CAR 42 Please provide justifications of values: 0,149 and 0,909 of energy consumption for air and oxygen production in Annex 2, page 55.	36(a)	Response 1 to CAR 42 These mistakes were corrected.	CAR 42 is closed based on due amendments made to the revised PDD.
CAR 43 Please include in the description of monitoring plan how conservativeness of all assumptions is taken into account in Section D.1.	36(b)	Response 1 to CAR 43 The conservative reasons were added. Response 2 to CAR 43 Document was directed AIE. ER was recalculated taking into account actual data 2010. Mistake was corrected (using of solid steel instead of liquid steel).	Conclusion on Response 1 to CAR 43 CAR 43 will be closed when AIE receives the documented evidence of technical data which are given in Table E.1.3 and E.1.4. CAR 43 is closed based on due amendments made to the revised PDD.
CAR 44 Formula 2 in Annex 2 does not have comments with	36 (f) (ii)	Response 1 to CAR 44 The comments were added.	CAR 44 is closed based on due amendments made to the revised PDD.

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
values: 7000, 4,1868, $CF^{steam}_{fuel,BFG,y}$ CO^{k}_{y} .			
CAR 45 Please provide formulae to estimate the emissions for dolomite and burnt dolomite which are given in Annex 2, Table Anx 2.3.	36 (f) (ii)	Response 1 to CAR 45 EF's dolomite and burnt dolomite were added.	CAR 45 is closed based on due amendments made to the revised PDD.
CAR 46 Please indicate who is responsible for: - data storage and archiving; - data processing; - data reporting; - monitoring report approval	36(j)	Response 1 to CAR 46 It was added in Section D.3.	CAR 46 is closed based on due amendments made to the revised PDD.
CL 01 It's known that the operation of a Finger Shaft Furnace demands a special preparation of scrap. Please clarify whether there is production area with the specially implemented equipment for scrap preparation to operate at the Finger Shaft Furnace #2.	A.4.2	Response 1 to CL 01 Finger Shaft Furnace requires special scrap requirements. Size and mass of one piece have to be no more than 1.5 metre and 400 kilograms correspond. Additional equipment was installed in the drop-hammer plant for production increasing.	Conclusion on Response 1 to CL 01 CL 01 is closed based on appropriate explanation and the amendments made to PDD.
CL 02 It is common practice to use of liquid and pig iron up to 40% in charge of Finger Shaft Furnace and also to blow of coke breeze into liquid metal to froth slag. Please clarify if this common practice is used during operation of the Finger Shaft Furnace #2.	A.4.2	Response 1 to CL 02 Blowing of coke breeze into liquid metal to froth slag is common practice if pig iron is used for electric arc steel production. Pig iron using at EAF or FSF is	Conclusion on Response 1 to CL 02 CL 02 is closed based on appropriate explanation and the amendments made to PDD.

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
		common too, but It's maximum limited about 40%.	
CL 03 PDD, Section A.4.2, Table A.4.2.1 reads: capacity of FCF is 150 t and LF is 120 t. Please clarify why the capacity of FCF is bigger than capacity of LF.	A.4.2	Response 1 to CL 03 150 tonnes is maximum capacity of liquid steel in FSF. But its heat size is about 120-125 tonnes according to the construction documentation.	Conclusion on Response 1 to CL 02 CL 03 is closed based on appropriate explanation and amendments made to PDD.
CL 04 Please specify the project construction boundary. Section A.2, p.2 reads: "The project consists of construction of a new Finger Shaft Furnace #2 with a ladle furnace," but p.7 states that:" The project consists of construction of Finger Shaft Furnace **#2**". Does the de-airing equipment is a part of the project (refer to Section A.4.2, p.8, Table A.4.2.1).	A.4.2	Response 1 to CL 04 The project boundary and new equipment was specified in Section A2. (FSF #2 and LF are using existing deairing equipment and CCMs capacity). Description deairing process was added in Section A.4.2.	Conclusion on Response 1 to CL 04 CL 04 is closed based on appropriate explanation.
CL 05 Please clarify the schedule for "Project documents development". It was stated in Section A.2, p.4 that "Preparation of project site had begun **at the end of 2004.** A plan of technical and economic development was approved in February 2005". Table A.4.2.2 indicates "Project documents development" starting from Q1 2004. To be determined at a site visit based on documented evidence.	A.4.2	Response 1 to CL 05 It was added in Section A.2.	Conclusion on Response 1 to CL 05 CL 05 is closed based on appropriate explanation and the amendments made to PDD.

CAR/CL	Ref. to checklist question in Table 1	Summary of project owner response	Determination team conclusion
CL 06 Please clarify the "Subproject boundary" name for the title of Figure B.3.1 as no subprojects are identified within the proposed project.	32(c)	Response 1 to CL 06 It was corrected.	CL 06 is closed based on due amendment made to the revised PDD.
CL 07 PDD, Section D1.1.2 reads: "Coke, pig iron, lime and limestone consumption by FSF#1 and FSF#2 cannot be monitored individually." Please explain why this is so, because it is common practice that the consumption of materials is fixed for each melting.		Response 1 to CL 07 Business accounting is made for the all electric arc shop at Severstal. These data are checked every month and use for enterprise accounting. Heat report is not used for enterprise accounting therefore it is not checked.	CL 07 is closed based on due explanation made to the Response 1.
CL 08 Please clarify whether the term "specific Emission factor for steam production" is correct in terms of "specific".	36(b)	Response 1 to CL 08 It was corrected in PDD.	CL 08 is closed based on due amendments made to the revised PDD.
CL 09 PDD, p.3 reads: "Severstal did not have available pig iron and oxygen capacity." Please clarify what it means.	A.2	Response 1 to CL 12 The text was corrected. Severstal did not have any additional available capacity for pig iron and oxygen manufacture.	CL 08 is closed based on due amendments made to the revised PDD.