DETERMINATION REPORT
GLOBAL CARBON BV

DETERMINATION OF THE "ENERGY EFFICIENCY IMPROVEMENT MEASURES THROUGH MODERNIZATION OF CAST-IRON PRODUCTION AT OJSC TULACHERMET, TULA, RUSSIA"

REPORT NO. RUSSIA-DET/0103/2010
REVISION NO. 02

BUREAU VERITAS CERTIFICATION

"Energy Efficiency Improvement Measures through modernization of cast-iron production at OJSC Tulachermet, Tula, Russia"

Date of first issue:	Organizational unit:
14/03/2011	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 "Energy Efficiency Improvement Measures through modernization of cast-iron production at OJSC Tulachermet, Tula, Russia" 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.

Report No.:	Subject Group:
RUSSIA-det/0103/2010	JI

Project title:

"Energy Efficiency Improvement Measures through modernization of cast-iron production at OJSC Tulachermet, Tula, Russia"

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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"Energy Efficiency Improvement Measures through modernization of cast-iron production at OJSC Tulachermet, Tula, Russia"

Abbreviations

AIE	Accredited Independent Entity
BVC	Bureau Veritas Certification
BF	Blast-furnace
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
GHG	Greenhouse House Gas(es)
GC	Global Carbon BV
IE	Independent Entity
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
NG	Natural gas
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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"Energy Efficiency Improvement Measures through modernization of cast-iron production at OJSC Tulachermet, Tula, Russia"

1 INTRODUCTION

Global Carbon BV (hereafter called "GC") has commissioned Bureau Veritas Certification to determine JI project "Energy Efficiency Improvement Measures through modernization of cast-iron production at OJSC Tulachermet, Tula, Russia" (hereafter called "the project") located in the city Tula, Central Federal district, 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:

"Energy Efficiency Improvement Measures through modernization of cast-iron production at OJSC Tulachermet, Tula, Russia"

Vera Skitina

Bureau Veritas Certification Team Leader, Climate Change Lead Verifier;

Andrey Rodionov

Bureau Veritas Certification Climate Change Verifier

This determination report was reviewed by:

Leonid Yaskin

Bureau Veritas Certification, Internal reviewer

2 METHODOLOGY

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

In order to ensure transparency, a determination protocol was customized for the project, according to the version 01 of the Joint Implementation Determination and Verification Manual, issued by the Joint Implementation Supervisory Committee at its 19 meeting on 04/12/2009. The protocol shows, in a transparent manner, criteria (requirements), means of determination and the results from determining the identified criteria. The determination protocol serves the following purposes:

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

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

2.1 Review of Documents

The Project Design Document (PDD) submitted by 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.1.1 dated 03/12/2010 and resubmitted it as v.1.3 dated 04/02/2011 followed by versions 1.4-2.0.

The PDD Version 1.8 dated 04/03/11 and Determination Report Version 01 dated 14/03/2011 were submitted for ITR. After two iterations of revision the PDD Version 1.8 the last PDD Version 2.0 and Determination Report Version 02 were issued for repeated ITR.

The determination findings presented in this Determination Report Version 02 and Appendix A relate to the project as described in the PDD versions 1.1 (published) and version 2.0 (final) dated 28/03/11[1].

2.2 Follow-up Interviews

On 25/01/2011 Bureau Veritas Certification verifier A.Rodionov performed a visit to the project site. On-site interviews with the project participant OJSC Tulachermet 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 Tulachermet and the PDD Developer GC were interviewed (see References). The main topics of the interviews are summarized in Table 1.

"Energy Efficiency Improvement Measures through modernization of cast-iron production at OJSC Tulachermet, Tula, Russia"

Table 1 Interview topics

Interviewed organization	Interview topics
OGSC Tulachermet	➢ OGSC Tulachermet 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

Tuyere apparatus was increased from 20 to 24, and blast furnace profile (shape) has been changed. This allowed gas usage level increase from 45% to 47.7%. This led to coke consumption decrease at the blast furnace 3.

Tuyere apparatus and furnace profile change are not connected with one another. These are two separate measures directed on to the hearth gas distribution improvement. Due to hearth gas distribution improvement, hearth gas desoxydation capability usage is increased, which characterized by the blast furnace gas usage level. The higher the blast furnace gas usage level, the lower coke specific consumption. Other measures are decreasing environmental impact of the pig iron production and are inalienable part of the furnace reconstruction program, as new pig iron production volumes will require new equipment to support its operation.

Specific factor of GHG emission per tonne of pig iron produced will be reduced after the blast furnace #3 reconstruction. Taking into account that other pig iron producers have higher specific GHG emission factor per tonne of pig iron produced, when that pig iron will be substituted by the pig iron produced at the modernized blast furnace, GHG emission reduction will occur, as reconstructed furnace is friendlier for the environment in terms of GHG emissions.

Total estimated amount of emission reductions due to project implementation is 685,872 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 23 Corrective Action Requests and 2 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 04 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 authorization 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 Alternative3:
   a. Alternative 1: Implementation of the proposed project measures without JI incentives;
   b. Alternative 2: Only secondary measures implementation without modernisation of the BF;
   c. Alternative 3: Blast furnace #3 shut down, incremental pig iron production by the third party producers;

(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 (BFP of incremental part) would operate and satisfy pig iron demand. The BFP emissions are determined in line with the methodological approach as described in Annex 2 of PDD;
c. Availability of capital to OJSC Tulachermet (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 pig iron production process by BF is available and applied in Russia. Technology of pig iron production by modernized BF#3 is not widely practiced 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. Detailed information is given in the PDD, Section B.2.

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

Alternative 3: Blast furnace #3 shut down, incremental pig iron production by the third party producers.

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

(a) Uncovered pig iron demand, due to blast furnace shut down, would be satisfied by the existing pig iron producers (the incremental part of pig iron production);

(b) BF#3 will be shut down due to excessive wear of equipment that makes is not possible to continue blast furnace operation in order to not to compromise operation safety;
(c) Implementation of modernized BF#3 is not financially attractive for OJSC Tulachermet and requires significant additional investment. Investment analysis has been presented to prove the additionality in section B.2;
(d) Implementation of other project measures excluding BF reconstruction could lead to significant losses in fuel, energy consumption, poor product manufacturing; significant lost times could occur, including emergency shutdowns.

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.

Outstanding issues related to Baseline setting (23), PP's response and the AIE conclusion are summarized in Appendix A (refer to CARs 05-11).

4.4 Additionality (27-31)

JI specific approach

The most recent version 05.2 of the "Tool for the demonstration and assessment of additionality" approved by the CDM Executive Board is used to demonstrate additionality. All explanations, descriptions and analyses are made in accordance with the selected tool.

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: Implementation of the proposed project measures without JI incentives;
Alternative 2: Only secondary measures implementation without modernization of the BF;
Alternative 3: Blast furnace #3 shut down, incremental pig iron production by the third party producers.

Justification of additionality has been done in several steps, based on consideration of economic attractiveness of alternative technological options of pig iron 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 benchmark and sensitivity analyses. The benchmark analysis has shown that the project's IRR is below the justified benchmark. The sensitivity analysis of variations of key parameters (investment cost, pig iron price, electricity and gas tariffs) confirms the conclusion of the basic investment analysis.

The spreadsheet with the benchmark and sensitivity analyses 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.

Outstanding issues related to Additioality (29), PP's response and the AIE conclusion are summarized in Appendix A (refer to CARs 12 and 13, CARs 22 and 23).

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 (sinter, coke, pellets) during the iron making 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.

Outstanding issue related to Project boundary (32), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 14).

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 began, and the starting date is 16/10/2001, which is after the beginning of 2000.

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

The PDD states the length of the crediting period in years and months, which is 5 years or 60 months, and its starting date as 01/01/2008, 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.

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 (Project 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 BP_y^{iron} (Pig iron production by BF#3 in year y (tonnes)). Indicators, constants and variables are listed in the PDD, Sections B.1, D. 1 and Annex 2.

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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:
- CO_2 emission factors for fuel, coke, lime and pellets, NCV for coke;

(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:
- CO_2 emission factors for electricity consumption;

(iii) Data and parameters that are monitored throughout the crediting period, such as:
- Production of pig iron by BF#3, consumption of raw materials by BF#3, consumption of oxygen, electricity, 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 pig iron by BF#3 which is measured per monitoring period; 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 of baseline emissions and project emissions such as formulae to calculate the emissions from pig iron production by BF#3 in year (Section D.1, Formula 1).

The monitoring plan presents the quality assurance and control procedures for the monitoring process, namely:
- Pig iron production is measured by scales in the blast furnace shop. Daily reports are generated based on the scales data and transferred to the electronic database. Scales are checked and calibrated according to the existing schedule by the accredited organisation. Reports are forwarded to the department of technical development.

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 Technical and production department head is responsible for approval measuring of the monitoring report.

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 than five years after the last transfer of ERUs for the project.

Outstanding issues related to Monitoring plan (36), PP's response and the AIE conclusion are summarized in Appendix A (refer to CARs 15-20 and CL 02).

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, electricity) 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 8,164,403 tons of CO2eq;
(b) Leakage (N/A);
(c) Emissions for the baseline scenario (within the project boundary), which are 8,850,275 tons of CO2eq;
(d) Emission reductions adjusted by leakage (based on (a)-(c) above), which are 685,872 tons of CO2eq.

Reporting period: From 01/01/2008 to 31/12/2012.

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

Outstanding issue related to Estimation (46), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 21).

4.10 Environmental impacts (48)

The PDD lists and attaches documentation on the analysis of the environmental impacts of the project in accordance with procedures as determined by the host Party, such as the Federal Law "On the Environmental Expertise".

The PDD shows that the project is realized far from national boundary and project emissions affect only few kilometers of the territory surrounding the plant therefore transboundary impacts were not taken into consideration.

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

4.11 Stakeholder consultation (49)

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 Tulachermet 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 "Energy Efficiency Improvement Measures through modernization of cast-iron production at OJSC Tulachermet, Tula, Russia" 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.

Project participants used "Tool for the demonstration and assessment of additionality" (Version 05.2). 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 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.

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 2.0 dated 28/03/2011 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party 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 "Energy Efficiency Improvement Measures through modernization of cast-iron production at OJSC Tulachermet, Tula, Russia", Version 2.0, March 28, 2011.

Supporting documentation:

a. 20110204_ER_Tulachermet_ver_02_revOK;
b. 20110304_CF_Tulachermet_ver 6.

/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).

"Energy Efficiency Improvement Measures through modernization of cast-iron production at OJSC Tulachermet, Tula, Russia"

/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 reports for 2008-2010

/2/ Internal memorandum (JI history) N09-10P/4-119, 2010

/3/ Schedule of overhaul of BF#3, 2003

/4/ Data of LLC "Korporatsiya proizvoditeley chernih metalov", 2008-2009

/5/ Technical instruction TI-127-D-40-2007, 2007

/6/ Calculation of technical and economic efficiency of invention for BF#3 modernization, 2001

/7/ Internal memorandum (cost of raw materials, fuel and products) N09-10P/4-33 for 2011

/8/ Internal memorandum (Project participant risk) N09-10P/4-36, 2011

/9/ Explanatory note of contractor design for BF#3 modernization, 2003

/10/ Proceedings of board of experts about workers skill in blast furnace production, NN 138,153,159 for 2004

/11/ Passport of scale car N 0418, 2009

/12/ Schedule of measuring means, 2010-2011

/13/ Acceptance certificate of BF#3, 2003

/14/ Protocol N44 of pollutants emissions measuring, 2005

/15/ Registration evidence of the dangerous manufacturing entities, 2007

/16/ Conclusion of Gosexpertiza N1/118, 2004

/17/ Sanitary-hygienic conclusion, 2004

/18/ Industrial safety conclusion of BF#3 shell, 2002

/19/ Permission for pollutants emissions, 2004-2011

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/ S. Cherepahin – OJSC Tulachermet, Deputy chief engineer

/2/ S. Murat – OJSC Tulachermet, Chief of production and technical department

/3/ A. Drabik – OJSC Tulachermet, Key specialist of advanced development department

/4/ B. Pozdniakov – OJSC Tulachermet, Deputy chief of design department

/5/ V. Titov – OJSC Tulachermet, Deputy chief engineer on industrial safety

/6/ V. Ribakov – OJSC Tulachermet, Plant engineer

/7/ M. Butenko – OJSC Tulachermet, Main power engineering specialist

/8/ I. Glaziev – OJSC Tulachermet, Head of IT department

/9/ D. Fedorenko – OJSC Tulachermet, Deputy chief of BFP on technology

/10/ A. Bocharov – OJSC Tulachermet, Chief of staff training department

/11/ V. Chadaev – OJSC Tulachermet, Deputy chief of works and building department

/12/ S. Papkov – Global Carbon, PDD developer, Lead Specialist

DETERMINATION PROTOCOL

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

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
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: "Energy Efficiency Improvement Measures through modernization of cast-iron production at OJSC Tulachermet, Tula, Russia". The sectoral scope is (9) Metal production. The PDD Version 1.1 was presented to Bureau Veritas and reviewed as a part of determination. PDD is dated 03/12/2010.	N/A	N/A	OK
A.2 Description of the project					
A.2	Is the purpose of the project	The Project's purpose is to	Response 1 to CAR 01	Conclusion on	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	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?	reduce impact of the iron making process on the climate through existing production process modernization by the more energy efficient technology implementation. 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 sufficient summarising explanation about: a) Situation existing prior to the starting date of the project; b) Baseline scenario; c) Project scenario (expected outcome, including a technical description). **CAR 02.** PDD Section A.2 reads that the BF#3 expected capacity is about 4200 tonnes of pig iron daily. This corresponds to annual capacity about 1.4 million of pig iron as	Project purpose and history There are three blast furnaces at the plant, BF#1, BF#2 and BF#3. Main product is pig iron. Blast furnace #3 is built in 1962. Last first grade repair for BF#3 is done more than 20 years ago. Baseline scenario In this scenario BF will be shot down due to excessive wear of equipment that makes it not possible to continue blast furnace operation in order to not to compromise operation safety . It is assumed in the scenario that pig iron production level is equal to the project scenario pig iron production level. Third party pig iron producer would have produced this amount. Response 1 to CAR 02 Figure A2.1 was removed.	Response 1 to CAR 01 CAR 01 is closed based on due amendments made to the revised PDD. Conclusion on Response 1 to CAR 02 CAR 02 is closed based on due amendments made to the revised PDD.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		per spreadsheet ER. This does not correspond to data on Figure A.2.1 where the annual outcome of project and baseline scenario is above 2.5 million tonnes of pig iron. Moreover it does not make sense to show on the figure that the project activity has incremental production (other plants).			
A.3 Project participants					
A.3	Are project participants and Party(ies) involved in the project listed? Is contact information provided in Annex 1 of the PDD?	Host Party is the Russian Federation (Party A). Party B is The Netherlands. Project participant for Party A is OJSC "Tulachermet" and for Party B is Global Carbon BV. The contact information is provided in PDD Annex 1.	N/A	N/A	OK
A.4 Technical description of the project					
A.4.1	Location of the project	Refer to A.4.1.1-A.4.1.4.	N/A	N/A	OK
A.4.1.1	Host Party(ies)	The Russian Federation.	N/A	N/A	OK
A.4.1.2	Region/State/Province etc.	Central Federal district of the Russian Federation.	N/A	N/A	OK
A.4.1.3	City/Town/Community etc.	Tula.	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
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)	Section A.4.1.4 provides consistent information and geographical coordinates allowing unique identification of project location. OJSC "Tulachermet" is located in the Central Federal district, Tula city, Russian Federation. The project site coordinates are: E37.37, N54.12.	N/A	N/A	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 on BF#3. The main results of the implementation are as follows: • the volume of BF#3 increased to 2,200 cubic meters; • the number of tuyere apparatus increased from 20 to 24; • shaft cooling is switched to the closed loop cycle with chemically filtered water; • central bunkers set up for the metal containing raw	Response 1 to CL 01 Measures mentioned are part of first grade repair program. These measures are not obligatory.	Conclusion on Response 1 to CL 01 CL 01 is closed based on appropriate explanation.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		materials; • new circled area of the tuyere zone was constructed; • new air cooling system of the blast furnace bottom was constructed. **CL 01.** PDD Section A.4.2 reads: "After the blast furnace #3 is refurbished according to the first grade repair …" It means that these implemented measures were planned for the first grade repair. Please clarify if these measures were obligatory or not for BF#3 operational maintenance.			
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 emission reductions are to be achieved? (This section should not exceed one page.)	**CAR 03.** PDD Section A.4.3 is not transparent as to how GHG emissions are to be reduced by the proposed JI project.	Response 1 to CAR 03 Tuyere apparatus was increased from 20 to 24, and blast furnace profile (shape) has been changed. This allowed gas usage level increase from 45% to 47.7%. This allowed coke	Conclusion on Response 1 to CAR 03 CAR 03 is not closed. PDD does not explain the following: • how increasing of tuyere apparatus	

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
			consumption decrease at the blast furnace 3, Specific factor of GHG emission per tonne of pig iron produced will be reduced after the blast furnace #3 reconstruction. Taking into account that other pig iron producers have higher specific GHG emission factor per tonne of pig iron produced, when that pig iron will be substituted by the pig iron produced at the modernized blast furnace, GHG emission reduction will occur, as reconstructed furnace generates less GHG emissions per 1 ton of produced pig iron. <u>Response 2 on CAR 03</u> Tuyere apparatus and furnace profile change are not connected with one another. These are two separate measures directed on to the hearth gas distribution improvement.	number is connected with blast furnace profile; • how blast furnace profile is connected with gas usage level; • what kind of gas is referred is not explained; • how increasing of gas usage is connected with specific coke consumption; • how other measures of project activity affect specific coke consumption. <u>Conclusion on Response 2 to CAR 03</u> CAR 03 is not closed. Please include in PDD the explanation which is given in Response 2.	

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
			Due to hearth gas distribution improvement, hearth gas desoxydation capability usage is increased, which characterized by the blast furnace gas usage level. The higher the blast furnace gas usage level, the lower coke specific consumption. Other measures are decreasing environmental impact of the pig iron production. <u>Response 3 on CAR 03</u> The explanation is added to the PDD on Page 12 Section A.4.3.	<u>Conclusion on Response 3 to CAR 03</u> CAR 03 is closed based on due amendments made to the revised PDD.	OK
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 as 5 years. Total as well as annual and average annual emission reductions in tonnes of CO2 equivalent are provided. Emission reductions for 2009 are negative and total emissions reductions for	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		crediting period are positive. The project may be regarded as compliant with Article 6 of the Kyoto Protocol because the emissions increase has been compensated by subsequent emission reductions by the project activity (refer to Executive Board of the CDM 21-st meeting report, point 18).			
A.5. Project approval by the Parties involved					
A.5	Are written project approvals by the Parties involved attached?	**CAR 04.** 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.	Response 1 to CAR 04 The project approval by the Host Party will be provided after the determination of the PDD.	N/A	Pending
DVM					
Project approvals by Parties					
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	No, pending a response to CAR 04.	Pending	N/A	Pending
19	Does the PDD identify at least the host Party as a	It is indicated that the Russian Federation is the host Party.	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	"Party involved"?				
19	Has the DFP of the host Party issued a written project approval?	No, pending a response to CAR 04.	Pending	N/A	Pending
20	Are all the written project approvals by Parties involved unconditional?	Yes, the written project approvals by Parties involved are unconditional.	N/A	N/A	OK
Authorization of project participants by Parties involved					
21	Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through: − A written project approval by a Party involved, explicitly indicating the name of the legal entity? or − Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity?	Legal entity for Party A is OJSC "Tulachermet" 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 04.	Pending	N/A	Pending
Baseline setting					
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? − JI specific approach − Approved CDM	PDD explicitly indicate that JI specific approach is used.	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	methodology approach				
JI specific approach only					
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	Please refer to CAR 05 – CAR 10.	N/A	N/A	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	(a) Three alternative scenarios are listed in PDD Section B.1. 1. Implementation of the proposed project measures without JI incentives; 2. Partial implementation of the project measures without modernisation of the BF; 3. Continuation of existing situation. Scenario 3 was selected as the most plausible scenario thus representing the baseline. **CAR 05.** Selection of Scenario 3 as the baseline is not justified since no proof is provided in Section B.1 that Scenario 1 cannot be the must plausible.	<u>Response 1 to CAR 05</u> In this scenario all measures will be implemented, but the project will not be registered as JI project and will not gain JI revenue to cover expenses on the project partially. As it is shown in the section B.2. the project is not feasible without JI revenue. This is not the most plausible scenario. The text was added to PDD Section B.1. <u>Response 1 to CAR 06</u> Title has been changed to: BF will be shot down due to excessive wear of equipment that makes it not possible to continue blast furnace operation in order to not to compromise operation safety.	<u>Conclusion on Response 1 to CAR 05</u> CAR 05 is closed based on due amendments made to the revised PDD. <u>Conclusion on Response 1 to CAR 06</u> CAR 06 is closed based on due amendments made to the revised PDD. <u>Conclusion on</u>	OK OK OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	uncertainties and using conservative assumptions? (e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure? (f) By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring", as appropriate?	**CAR 06.** The title of Scenario 3 (baseline) and its description in Sections B.1 and B.2 do not correspond to the description of the baseline in Section A.2 and Annex 2. **CAR 07.** PDD Section B.1 Scenario 2 reads: "BF #3 was working inefficiently and could not operate in such mode any longer." Please justify the statement by documented evidence. **CAR 08.** PDD Section B.1 Scenario 2 doesn't give any information about partial measures to be implemented. Please provide it. (b) PDD takes into account Strategy of the Russian metallurgical industry development until 2020 in baseline establishing. PDD takes into account key factors that affect a baseline in accordance with "Guidance on	Modernization program will not be implemented. Response 1 to CAR 07 Documented evidence was presented to the verifier during the site visit. Response 1 to CAR 08 This scenario accounts for the partial implementation, specifically a combination or a single measure implementation amongst the following options: blast furnace profile will be changed and volume increased to 2,200 cubic meters; tuyere apparatus increase from 20 to 24; new lining covering with carbon and graphite blocks application and with fire-refractory concrete; coolers made of high-durable pig iron with sphere-alike graphite installation, cast house	Response 1 to CAR 07 CAR 07 is closed based on due amendments made to the revised PDD. Conclusion on Response 1 to CAR 08 CAR 08 is not closed. AIE can not positively determine exclusion of this scenario because its exclusion is based on the following statement "Therefore implementation of other project measures excluding BF reconstruction cannot be considered reasonable". "Therefore" is not reasoned: it is not evident at all that these other project measures, single or in combination,	

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		criteria for baseline setting and monitoring". (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. **CAR 09.** The data dimension of emission factor for natural gas and blast furnace gas consumptions does not correspond to the given values (Section B.1 and Annex 2). **CAR 10.** Please justify applicability of the value 0.525 for emission factor for limestone consumption since it is taken from the source for clinker calcination. (d) Uncertainties for key baseline parameters were identified. Basic assumptions of the baseline methodology presented in Section D.1.1.4	reconstruction and aspiration implementation; central bunkers set up for the metal containing raw materials at the bunker platform; new air cooling system of the blast furnace bottom construction. <u>Response 2 on CAR 08</u> The scenario has been changed to: Scenario 2. Only secondary measures implementation without modernisation of the BF. This scenario accounts for secondary measures implementation only, not connected with the blast furnace itself; specifically, a combination or a single measure implementation amongst the following options: coolers made of high-durable pig iron with sphere-alike graphite installation, cast house	could not improve operation of BF#3. <u>Conclusion on Response 2 to CAR 08</u> CAR 08 is closed based on due amendments made to the revised PDD.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		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 11**. Baseline (iron incremental production) is	reconstruction and aspiration implementation; central bunkers set up for the metal containing raw materials at the bunker platform; new air cooling system of the blast furnace bottom construction. Prior to its shutdown, BF #3 was working inefficiently and could not operate in such mode any longer. Inefficient operation could lead to significant losses in fuel, energy consumption, poor product manufacturing; significant lost times could occur, including emergency shutdowns. Blast furnace capacity could drop up to 10-15%. Therefore implementation of other project measures excluding BF reconstruction cannot be considered reasonable as the blast furnace is the main and the only item that can produce pig iron. In case of the blast furnace emergency		

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		defined in PDD by data from the annual statistical report "Russian Chermetinformation" for the year 2007. This is not in accordance with the guidance in Annex 2 that baseline emission factor is estimated ex-ante and monitored and calculated ex-post. Please provide in PDD Section B.1 and Annex 2 the actual baseline information for the years 2008 and 2009. (e) The baseline is established in such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure. (f) The baseline is established by drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring" such as baseline emissions, project missions, emission factor for coke, limestone, natural gas,	shutdown, or complete stop all secondary equipment installed would also be non-operational, and could not produce pig iron, eventually all manufacturing process had to be stopped if the blast furnace remains not reconstructed. Secondary measures implementation only cannot be considered reasonable. Therefore, this scenario cannot be considered as the baseline. Response 1 to CAR 09 Units were fixed to tCO_2/GJ Response 1 to CAR 10 0.43971 tCO2/t emission factor is used. Metal industry (Guidelines for National Greenhouse Gas Inventories, Volume 3: Industrial Process and Product Use, Chapter 2: Mineral Industry Emissions, Table 2.1, page 7, IPCC, 2006)	Conclusion on Response 1 to CAR 09 CAR 09 is closed based on due amendments made to the revised PDD. Conclusion on Response 1 to CAR 10 CAR 10 is closed based on due amendments made to the revised PDD.	OK OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		anthracitic coal consumption, etc.	Response 1 to CAR 11 The actual baseline information is provided in section B.1 and Annex 2 for the years 2008 and 2009.	Conclusion on Response 1 to CAR 11 CAR 11 is closed based on due amendments made to the revised PDD.	OK
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			
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	N/A			
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	It is explicitly indicated that the latest version of the CDM "Tool for the demonstration and	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	additionality is used? (a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals; (b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality; (c) Application of the most recent version of the "Tool for the demonstration and assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the	assessment of additionality" (Version 05.2) was used. In accordance with paragraph (3) of the tool 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". Such evidence is referred to in PDD on page 3 as follows: "On 14 March 2001 a meeting took place where preparations for blast furnace #3 modernisation were discussed and JI component for the project was taken in to account and potential income was considered".			

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	CDM Executive Board".				
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.	N/A	N/A	OK
29 (b)	Are additionality proofs provided?	Additionality is proven by investment analysis and common practice analysis. At Step 1a, 2 alternative scenarios were listed: Scenario 1 The proposed project activity undertaken without JI registration and Scenario 3 Continuation of existing situation. **CAR 12.** Scenario 3 is described in Section B.1 as follows: "BF will be shot down due to excessive wear of equipment that makes is not possible to continue blast furnace operation in order to not to compromise operation safety". This contradicts the description of Scenario 3 in Section B.2: "Modernization	<u>Response 1 to CAR 12</u> The alternative to the project activity has been changed to : Alternative 2. In this scenario BF will be shut down due to excessive wear of equipment that makes is not possible to continue blast furnace operation in order to not to compromise operation safety . Modernization program will not be implemented. Only regular maintenance is performed to keep BF#3 operational. The scenario is business-as-usual situation compliant with the Russian legislation. There are no additional investments required for the BF reconstruction.	<u>Conclusion on Response 1 to CAR 12</u> CAR 12 is not closed. PDD Section B.1 indentifies three plausible scenarios whereas Section B.2 considers only two. Scenario 2 from Section B.1 is lost.	

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		program will not be implemented. Only regular maintenance is performed to keep BF#3 operational". Please identify realistic and credible alternative scenario to the project activity. At Step 1b it is concluded that all scenarios are consistent with mandatory laws and regulations of the Russian Federation. At Step 2, an investment and analysis was carried out including the sensitivity analysis. Option III benchmark analysis was applied. Kei input data for the analyses is provided in PDD Section B.2. It is shown that the project activity is not economically and financially attractive. The spreadsheet with the analyses is not made available to AIE. **CAR 13.** The value of project risk premium in accordance	Response 2 on CAR 12 The scenario is made consistent with section B.2. Response 1 to CAR 13 There are new technologies introduced in the project that are new to the Russian Federation. Among those technologies are: furnace shaft cooling by usage of chemically cleaned water in closed loop; cooling plates made of high durable pig iron with sphere-alike graphite; thin walled furnace shaft lining by fire-resistant concrete; double level cast house with aspiration system; automated hearth firing and bottom monitoring system. Due to new technologies presence highest project risk value applied. Response 2 on CAR 13	Conclusion on Response 2 to CAR 12 CAR 12 is closed based on due amendments made to the revised PDD. Conclusion on Response 1 to CAR 13 CAR 13 is not closed. The project activity does not change the main technology and equipment, namely production of pig iron in blast furnace. The implementation of new equipment relates to improvement of existing technology. The applied high risk of 8% shall be justified. Conclusion on	OK OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		with the mentioned methodology is 3-5% (investments in the development of commercial production). PDD developer applied the value of project risk 8%. Please justify the choice of the risk value. **CAR 22.** PDD, Section A.4.2 reads:"Tuyere apparatus were increased from 20 to 24, and blast furnace profile (shape) has been changed. This allowed gas usage level increase from 45% to 47.7%. This led to coke consumption decrease at the blast furnace 3". In this respect please justify the inclusion of costs of other project measures in investment analysis, such as new lining covering with carbon and graphite blocks, coolers made of high-durable pig iron with sphere-alike graphite, reconstruction of cast house, implementation of aspiration, all of which do not influence on	The project risk premium has been changed to 4%. Response 3 on CAR 13 Description for the project risk premium has been changed to: This type of projects has the medium risk factor of 3-5%. Thus the moderate range is applied. Response 1 on CAR 22 Despite the fact that not all the measures mentioned lead directly to the GHG emissions reductions, such as coke consumption decrease, these measures are inalienable part of the reconstruction program, because furnace cannot operate without lining, with the operational parameters chosen, when furnace volume is increased, coolers made of high-durable	Response 2 to CAR 13 CAR 13 will be closed when description of project risk premium in table B.2.1 is corrected. Conclusion on Response 3 to CAR 13 CAR 13 is closed based on due amendments made to the revised PDD. Conclusion on Response 1 to CAR 22 Please provide documented evidence that the investments as well as other input values used in investment analysis have been valid and applicable at the time of the investment decision taken by the project participant (refer to Annex of Tool for the	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		GHG emissions reductions. At Step 4, the common practice analysis was conducted with conclusion that the proposed JI project (reconstruction of BF with modern improvement process using and new capacity creation) does not reflect widely observed and commonly carried out activities.	pig iron with sphere-alike graphite will handle cooling of the increased in volume furnace; reconstruction of cast house and implementation of aspiration are essential when production volumes are increased. These measures are one program which proves that the measures are inalienable as entire furnace operation depends on these measures. Response 2 to CAR 22 The documented evidence is forwarded to the verifier 2011025_Project and investments_GlobalCarbon_24_02_11.pdf.	demonstration and assessment of additionality Version 05.2). Conclusion on Response 2 to CAR 22 Please provide sources of input data in investment analysis: "Pig iron price; Средняя цена чугуна; Average natural gas tariff; Average electricity tariff from the grid; Own generated electricity cost; Diesel oil price; Сштеук price; Quartzite price; Iron ore price; Pellets price; Briquettes price; Oxygen price; Wet	

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
				metallurgical coke; Steel scrap price; Maintenance cost" (quoted by 20101019_CF_Tulachermet_ver 2_revOK (1)_Insert Costs&Tariffs).	
			Response 3 to CAR 22 Supporting document 20110301_SD_Prices.pdf is forwarded to the verifier.	Conclusion on Response 3 to CAR 22 The response by Tulachermet is signed by Deputy Head of Production & Technical Department. Please provide evidence that this is the right person to provide information about economic and financial issues. Optionally, please provide the response from the Financial & Economical Function.	
			Response 4 to CAR 22 Supporting document 20110302_SD_Prices_ver2_	Conclusion on Response 4 to CAR 22 CAR 22 is closed based	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
			GlobalCarbon_2_3_11 is forwarded to the verifier. Deputy head of planning and economics department signature is provided.	on received document with the response from economic planning administration.	
29 (c)	Is the additionality demonstrated appropriately as a result?	**CAR 23.** The benchmark is defined without taking account of a basic bank interest rate cleared from inflation. Please correct accordingly. The company risk shall be justified by a formal statement. With pending CAR 24 the additionality is not proven.	Response 1 to CAR 23 Discount rate without allowance for project risk is taken into account as: *Discount rate without risk* = $= \frac{Refinance\ rate - inflation}{100 + inflation} \cdot 100\%$ Supporting document 20110304_SD_Project_participants_risk_assessment.pdf is forwarded to the verifier.	Conclusion on Response 1 to CAR 23 CAR 23 is closed based on due amendments made to the revised PDD.	OK
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	Refer to 29 (c)	Pending	N/A	Pending
Approved CDM methodology approach only_ Paragraphs 31(a) – 31(e)_Not applicable					
Project boundary (applicable except for JI LULUCF projects					
JI specific approach only					

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
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 (limestone, coke, sinter, pellet) during the iron making process; - Fuel (gas) combustion; GHG emissions from the Russian electricity grid. **CAR 14.** Emissions related to oxygen consumption are not taken into account in Table B.3.1. Figure B.3.1 does not depict oxygen consumption.	Response 1 to CAR 14 Table B.3.1. is updated to reflect oxygen consumption. Oxygen consumption is included in the Figure B.3.1.	Conclusion on Response 1 to CAR 14 CAR 14 is closed based on due amendments made to the revised PDD.	OK
32 (b)	Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above?	Project boundary is defined on the basis of case-by-case analysis (not always quantitative) of emission sources. Pending a response to CAR 14.	Pending	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
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. Pending a response to CAR 14.	Pending	N/A	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 CAR 14.	Pending	N/A	OK
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 October 16, 2001 being the date of the investment decision.	N/A	N/A	OK
34 (a)	Is the starting date after the beginning of 2000?	Yes, it is.	N/A	N/A	OK
34 (b)	Does the PDD state the	Operational lifetime is defined	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	expected operational lifetime of the project in years and months?	as 20 years or 240 months.			
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.	N/A	N/A	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.	N/A	N/A	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.	N/A	N/A	OK
34 (d)	If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the estimates of emission reductions or enhancements of net removals presented	N/A			

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	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.	N/A	N/A	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: pig iron production, coke, limestone, natural gas, electricity consumption by BF#3 (D.1.1.1), pig iron production by BF#3 (D.1.1.3); - the period in which they will be monitored: continuously or monthly or annually; - all decisive factors for the control and reporting of project performance: quality control (QC) and quality assurance (QA) procedures; the operational and management structure that will be applied in	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		implementing the monitoring plan.			
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. **SV 01.** Monitoring plan reliability and validity should be checked on site.	N/A	N/A	OK
36 (b)	If default values are used: − Are accuracy and reasonableness carefully	Default values are used on the basis of 2006 IPCC. The source is recognized and supported	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	balanced in their selection? − Do the default values originate from recognized sources? − Are the default values supported by statistical analyses providing reasonable confidence levels? − Are the default values presented in a transparent manner?	with statistical data. The default values are as follows: • Emission factors from limestone decarbonisation; • Emission factors from pellet production; • Emission factors from natural gas consumption; • Emission factors from coke production; • Emission factors from coke burning; • NCV of coke.			
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.	N/A	N/A	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 provides explicit description of the data sources for all parameters concerned (2006 IPCC, technical report of OJSC Tulachermet). **CL 02.** Please clarify if OJSC	Response 1 to CAR 15 IPCC coefficient was used to preserve consistency between emissions in the baseline and in the project therefore conservativeness is secured by estimating	Conclusion on Response 1 to CAR 15 CAR 15 is closed based on due explanations.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		Tulachermet monitors the NCV of the coke consumed or not. **CAR 15.** OJSC Tulachermet produces sinter for pig iron production and has relevant technical data to calculate emission factor of the sinter production. In this regard, please justify conservativeness of using the IPCC default value for this emission factor.	baseline and the project using universal assessment method preventing that way emissions change due to differences in the coefficient. Emissions reductions are not gained due to changes in the coefficient between the project and the baseline. This approach is conservative. Response 1 to CL 02 Tulachermet does not monitor NCV of the coke consumed.	Conclusion on Response 1 to CL 02 CL 02 is closed based on due explanations and after checking on site visite.	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. Means of monitoring are indicated: raw materials (pellets and limestone) consumption for iron production are weighed by strain-gauge, pig iron production is measured by scales. These data are transferred to the database.	N/A	N/A	OK
36 (b) (iv)	Are International System Unit (SI units) used?	International System Units (SI units) are used.	N/A	N/A	OK
36 (b) (v)	Does the monitoring plan	PDD, Sections B.1, D.1.1.3 and	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals but are obtained through monitoring?	Annex 2 have identified: - BP_y^{iron} Displaced iron production in the baseline scenario in year y (tonnes) and - BEF_y Baseline emission factor for displacing foundry pig iron production in year *y* (tCO_2/t of foundry pig iron) as the monitoring parameters that are used to calculate baseline emissions but obtained through monitoring.			
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.	N/A	N/A	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" such as project emissions, baseline emissions, emission factor for coke, limestone, natural gas, anthracitic coal consumption.	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
36 (d)	Does the monitoring plan explicitly and clearly distinguish: (i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination? (ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination? (iii) Data and parameters that are monitored throughout the crediting period?	Description of the monitoring plan in Section D.1 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). Refer to emission factors for natural gas, coke, limestone, and blast furnace. 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. Refer to emission factor for electricity consumption. (iii) Data and parameters that are to be monitored throughout the crediting period. Refer to pig iron production, coke, limestone, pellet, sinter consumptions by BF#3,	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		emission factor for incremental iron plants.			
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 as "annually" or "monthly" or "continuously".	N/A	N/A	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.1.1.2 for project emissions, in Section D.1.1.2 for baseline emissions and in Section D.1.3.2 for leakage.	N/A	N/A	OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	The underlying rationale for the formulae is explained as appropriate.	N/A	N/A	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Consistent variables, equation formats, subscripts etc. are used.	N/A	N/A	OK
36 (f) (iii)	Are all equations numbered?	Yes.	N/A	N/A	OK
36 (f) (iv)	Are all variables, with units indicated defined?	Yes, except one of them. **CAR 16.** The parameter	Response 1 to CAR 16 Parameter was added to	Conclusion on Response 1 to CAR 16	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
		$PE_{\sin ter,y}$ is not identified in Section D.1.1.1 and D1.1.2.	D.1.1.1. and D.1.1.2.	CAR 16 is closed based on due amendments made to the revised PDD.	
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	Pending a response to CAR 16 and CL 02.	N/A	N/A	OK
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	N/A	N/A	N/A	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. **SV 02.** Check the original data sources for all parameters used for monitoring.	N/A	N/A	OK
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	Any parts of the algorithms or formulae that are not self-evident are explained. **CAR 17.** The dimension of the terms in Formulae 8 and 2 is incorrect. The definition "4.19 - Conversion coefficient kcal to kJ" in Formula 8 is incorrect.	Response 1 to CAR 17 Formula 2 has been modified to: Limestone specific consumption in year y (tonnes limestone /tonne pig iron); Incorrect definition is removed.	Conclusion on Response 1 to CAR 17 CAR 17 is closed based on due amendments made to the revised PDD.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
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.	N/A	N/A	OK
36 (f) (vii)	Are references provided as necessary?	References to 2006 IPCC V.2 and V.3 are provided.	N/A	N/A	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	Yes.	N/A	N/A	OK
36 (f) (vii)	Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed?	N/A			
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?	Provision of uncertainty range and confidence interval is irrelevant for such measurements.	N/A	N/A	OK
36 (g)	Does the monitoring plan identify a national or international monitoring	**CAR 18.** Please provide the references to national monitoring standards used for	Response 1 to CAR 18 Monitoring is done based on technological instructions TI-	Conclusion on Response 1 to CAR 18 CAR 18 is not closed.	

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	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?	monitoring routines.	127-D-40-2007 specially developed for such purposes. Response 2 on CAR 18 Instruction TI-127-D-40-2007 is provided as supporting document with cover page and contents, should more information from the instruction be provided, please specify the chapter, as huge scanning amount will not allow sending the instruction via e-mail; See attached file: TI-127-D-40-2007.doc Instruction is mentioned in the PDD at the page 43.	Please refer in PDD to this instruction and make it available to AIE. Conclusion on Response 2 to CAR 18 CAR 18 is closed based on due amendments made to the revised PDD.	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			
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process,	QC/QA procedures are specified in PDD Section D.2 in sufficient detail. **SV 03.** Calibration procedures	N/A	N/A.	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request?	will be checked on site			
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	The operational and management structure for ER monitoring is described in general terms in PDD Section D.3. **CAR 19.** Please indicate who is responsible for: - Data storage and archiving; - Data processing; - Data reporting; - Monitoring report approval. **SV 04.** Allocation of the authority/ responsibility will be checked on site.	Response 1 to CAR 19 Clause added on page 40: Monitoring responsibilities: -Data storage and archiving – Technical and production department staff; -Data processing - Technical and production department staff; -Data reporting - Technical and production department staff; -Monitoring report - approval Technical and production department head.	Conclusion on Response 1 to CAR 19 CAR 19 is closed based on due amendments made to the revised PDD.	OK
36 (k)	Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type?	Monitoring techniques are in line with current operation routines at OJSC Tulachermet.	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?				
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?	Tables D.1.1.1 and D.1.1.3 provide compilation of the data needed to monitor project and baseline emissions.	N/A	N/A	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?	**CAR 20.** It is not indicated that the data monitored and required for verification will be kept for two years after the last transfer of ERUs for the project.	Response 1 to CAR 20 Sentence added: Data monitored and required for verification will be kept for two years after the last transfer of ERUs for the project.	Conclusion on Response 1 to CAR 20 CAR 20 is closed based on due amendments made to the revised PDD.	OK
37	If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or	N/A			

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	combination, together with elements supplementary developed by the project participants in line with 36 above?				
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 zero.	N/A	N/A	OK
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	N/A			
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	Assessment of emissions in the baseline scenario and in the project scenario is chosen.	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	(b) Direct assessment of emission reductions				
43	If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the pr oject boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	PDD provides ex ante estimates of: (a) Emissions for the project scenario (Section E.1); (b) Leakage (Section E.2); (c) Emissions for the baseline scenario (Section E.4); (d) Emission reductions adjusted by leakage (Section E.6).	N/A	N/A	OK
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	N/A			

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	removals adjusted by leakage?				
45	For both approaches in 42 (a) Are the estimates in 43 or 44 given: (i) On a periodic basis? (ii) At least from the beginning until the end of the crediting period? (iii) On a source-by-source/sink-by-sink basis? (iv) For each GHG? (v) In tones of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? (b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and	Estimates in 43 are given on the periodic basis, from the beginning until the end of the crediting period, in tones of CO2 equivalent. The formulae used in PDD are consistent. Key factors influencing the baseline emissions and the activity level of the project and the emissions are taken into account, as appropriate but additionally refer to CAR 11. Data sources used for calculating the estimates are clearly identified, reliable and transparent. Default values are taken from 2006 IPCC V.2 and V.3. Estimation in 43 is generally based on conservative assumptions and the most plausible scenario in a transparent manner but additionally refer to CL 02 and	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	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	CAR 17. Estimates in 43 are consistence through the PDD but additionally refer to CAR 11. 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.			

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?				
46	If the calculation of the baseline emissions or net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation?	PDD demonstrates ex-ante estimation of baseline emissions which are based on iron plant data for 2007 as noted in CAR 11 **CAR 21.** Please present baseline calculations in Section E.4 based on information from reports "Russian Chermetinformation" for 2008 and 2009.	Response 1 to CAR 21 Baseline calculations are presented in Section E.4 based on information from reports "Russian Chermetinformation" for 2008 and 2009.	Conclusion on Response 1 to CAR 21 CAR 21 is closed based on due amendments made to the revised PDD.	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	PDD Section E.1 lists and attaches documentation on the analysis of the environmental	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	impacts of the project, in accordance with procedures as determined by the host Party. The project does not have any transboundary environmental impacts.			
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 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 permit for air emission No 991P issued 01 March 2006 by Rostekhnadzor is listed in PDD. **SV 05**. The current acting permit will be checked at the site.	N/A	N/A	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	Stakeholder consultation is not required by the Russian legislation. According to the local procedure OJSC Tulachermet published information about the project in local magazine	N/A	N/A	OK

Guidelines for JI PDD Form Users or DVM Paragraph	Check Item	Initial finding	Response from project participants	Review of project Participants' action	Conclusion
	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?	"Metallurg".			
Determination regarding small-scale projects (additional elements for assessment)_Paragraphs 50 - 57_Not applicable					
Determination regarding land use, land-use change and forestry projects _Paragraphs 58 – 64(d)_Not applicable					
Determination regarding programmes of activities_Paragraphs 66 – 73_Not applicable					