

Bureau Veritas Certification
Holding SAS



DETERMINATION REPORT

**NATIONAL CARBON SEQUESTRATION
FOUNDATION**

**DETERMINATION OF THE
“Reconstruction of the steelmaking at
JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”**

BUREAU VERITAS CERTIFICATION

REPORT No. RUSSIA/0043-2/2009, v.2



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW), Asha, Russian Federation”

Date of first issue: 19/05/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: JSC National Carbon Sequestration Foundation	Client ref.: Mr. Y.Fedorov

Summary:

Bureau Veritas Certification was commissioned by JSC National Carbon Sequestration Foundation (NCSF) to make the determination of the project “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW), Asha, Russian Federation” 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 guidelines 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, monitoring plan and other relevant documents, and consists of the following three phases: i) desk review of the project design document and particularly 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, Table 5. Taking into account this output, the project proponent has 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.: RUSSIA/0043-2/2009 v.2	Subject Group: JI	
Project title: “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW), Asha, Russian Federation”		
Work carried out by: Vera Skitina – Team Leader, Lead verifier 		
Work reviewed and approved by: Leonid Yaskin – JI Operational Manager 		
Date of this revision: 22/02/2011	Rev. No.: 2	Number of pages: 90

Indexing terms:

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

No distribution without permission from the Client or responsible organizational unit

Limited distribution

Unrestricted distribution

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”



Abbreviations

AIE	Accredited Independent Entity
AMW	JSC Ashinskiy Metallurgical Works
BVC	Bureau Veritas Certification
CAR	Corrective Action Request
CCM	Continuous casting machine
CL	Clarification Request
CO ₂	Carbon Dioxide
DDR	Draft Determination Report
DR	Document Review
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
ERU	Emission Reduction Unit
EAF	Electric Arc Furnace
GHG	Greenhouse House Gas(es)
I	Interview
IE	Independent Entity
IETA/PCF	Validation and Verification Manual
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MoV	Means of Verification
NGO	Non Governmental Organization
NCSF	National Carbon Sequestration Foundation
LFA	Ladle-furnace aggregate
OHF	Open-hearth furnace
PDD	Project Design Document
PP	Project Participant
RF	Russian Federation
tCO ₂ e	Tonnes CO ₂ equivalent
UNFCCC	United Nations Framework Convention for Climate Change



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

Table of Contents		Page
1	INTRODUCTION	4
1.1	Objective	4
1.2	Scope	4
1.3	GHG Project Description	4
1.4	Determination team	6
2	METHODOLOGY.....	6
2.1	Review of Documents	8
2.2	Follow-up Interviews	9
2.3	Resolution of Clarification and Corrective Action Requests	10
3	DETERMINATION FINDINGS	11
3.1	Project Design	11
3.2	Baseline and Additionality	13
3.3	Monitoring Plan	14
3.4	Calculation of GHG Emissions	15
3.5	Environmental Impacts	15
3.6	Comments by Local Stakeholders	16
4	COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS.....	16
5	DETERMINATION OPINION	16
6	REFERENCES	18
7	DISCLAIMER.....	21
Appendix A: Determination Protocol		
Appendix B: Verifiers CV's		



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

1 Introduction

National Carbon Sequestration Foundation (hereafter referred ‘NCSF’) has commissioned Bureau Veritas Certification to determine its JI project “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW), Asha, Russian Federation” (hereafter referred ‘the project’) located in the city of Asha, Chelyabinsk region, Russian Federation. NCSF being the PDD developer coordinated the project and the determination process on behalf of the project participant JSC “Ashinskiy Metallurgical Works” (hereafter referred ‘AMW’).

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 purpose of the determination is to provide an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan, 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 meet 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 emission reduction 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 purpose of the determination is to provide an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan, 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 emission reduction units (ERUs).

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

1.3 GHG Project Description (quoted by PDD v.03)

The project of the reconstruction of the steelmaking at JSC “Ashinskiy Metallurgical Works” (AMW) is implemented with purpose of modern electrical steelmaking complex building, steel production increase, energy efficiency and GHG emission reductions. The reconstruction of the steelmaking at JSC “Ashinskiy Metallurgical Works” is performed by means of construction of the continuous-casting machine and the electric arc furnace. That provides to shut-down the open-hearth furnaces and steel casting into moulds.



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

Situation existing prior to the starting date of the project

JSC “Ashinskiy Metallurgical Works” specializes in the production and shipment of corrosion-proof and electric steel, derived plate steel, wire products, amorphous tapes and powders as well as a wide variety of consumer products. The company’s major market is in Russia. The main customers of the company are medium and small businesses from the construction, oil and gas, power and chemical industries.

JSC “Ashinskiy Metallurgical Works” operates three open-hearth furnaces of 200 t capacity each, one ladle furnace and four rolling mills (mill #2850, mill #1500, mill #1400, mill #720) located in three distinct workshops of the plant. The principal operational scheduled prior to the starting date of the project was: steel smelting in the open-hearth furnaces, steel processing in the ladle furnace, steel casting into moulds and rolled metal production from the ingots by the mill #2850.

Project scenario

The project scenario is included the following activities: construction of the EAF with loading conveyor CONSTEEL and CCM. As a result of the implementation of the specified activities, steel and rolled products will be produced according to the following scheme: begin 2008 – middle 2010 (after CCM commissioning – till EAF commissioning) melting of steel in the open-hearth furnaces, processing of steel in the ladle furnace, steel casting in the CCM and into the moulds, rolling of steel billets in the rolling plant #1; since 2010 (after EAF commissioning) melting of steel in the EAF, processing of steel in the ladle furnace, steel casting in the CCM, rolling of steel slabs in the rolling plant #1. The production of steel in the EAF shall amount to 1,000,000 tonnes per year. The output of rolled metal shall amount to 595,000 tonnes per year. The output of steel slabs as finished product for sale shall amount to 310,000 tonnes per year.

The project will allow to:

- shut-down the open-hearth furnaces;
- create a new steelmaking electric furnace;
- increase steel production;
- continuously cast steel into slabs instead of casting into moulds;
- improve working environment;
- reduce production costs;
- reduce pollution (environmental adverse effects);
- reduce greenhouse gas emissions.

Baseline scenario

The baseline scenario is the continuation of the current situation. The production of steel in the open-hearth furnaces, processing of steel in the ladle furnace, casting of steel into moulds, rolling of steel billets at the rolling plant #1. Without the implementation of the project, steel production at JOINT IMPLEMENTATION PROJECT DESIGN DOCUMENT FORM - Version 01 Joint Implementation Supervisory Committee page 4. This template shall not be altered. It shall be completed without modifying/adding headings or logo, format or font.



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

JSC “Ashinskiy Metallurgical Works” would be performed in open-hearth furnaces with a total output more than 650,000 tonnes per year. The open-hearth steel would be processed in the ladle furnace and cast into moulds. The output of ready rolled products from ingots according to the baseline scenario would be of 500,000 tonnes per year. Notwithstanding a smaller output of steel and rolled metal, the baseline scenario would offer steel and rolled metal of a quality similar to the project scenario through the use of the out-of-furnace technology in the ladle furnace. While the implementation of the project allows for an increase of steel and rolled metal production, the baseline scenario provides for an added-on output of steel about 420,000 tonnes per year at other iron-and-steel works in Russia.

Greenhouse gas emission reductions

The implementation of the project will reduce greenhouse gas emission by the following reasons:

- decrease in raw material consumption for steel production in steel plant;
- decrease in fuel consumption for steel and rolled metal production;
- decrease in metal losses when casting steel into moulds;
- decrease in steel consumption for production of rolled metal;
- decrease in raw materials and fuel consumption in auxiliary works (foundry shop, lime shop, etc.).

The expected reduction of GHG emissions over the crediting period (2008-2012) will be about 1,975,409 tonnes of CO₂ or in average 395,082 tonnes of CO₂ per year.

1.4 Determination team

The determination team consists of the following personnel:

Vera Skitina

Bureau Veritas Certification – Team Leader, Lead verifier

Leonid Yaskin

Bureau Veritas Certification – Internal Technical Reviewer

2. Methodology

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

The determination consisted of the following three phases:

- i) desk review of the project design document and the baseline and monitoring plan;
- ii) on-site assessment on 22/04/2010 and on-line interactions with PDD developer throughout the determination process;
- iii) resolution of outstanding issues (ref. to Appendix A Table 5 with CAR’s and CL’s) and the issuance of the final determination report and opinion.

In order to ensure transparency, a determination protocol was customized for the project, according to the Determination and Verification Manual (IETA/PCF).

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from validating 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 independent entity will document how a particular requirement has been validated and the result of the determination.

The original determination protocol consists of five tables. The different columns in these tables are described in Figure 1.

The completed determination protocol is enclosed in Appendix A to this report. It consists of four tables. Table 3 for “Baseline and Monitoring Methodologies” is omitted because the project participants established their own baseline and monitoring approach that is in accordance with appendix B of the JI Guidelines and because the questions regarding the used approach are presented in Table 2.

Determination Protocol Table 1: Mandatory Requirements			
Requirement	Reference	Conclusion	Cross reference
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (OK), a Corrective Action Request (CAR) or a Clarification Request (CL) of risk or non-compliance with stated requirements. The CAR's and CL's are numbered and presented to the client in the Determination Report.	Used to refer to the relevant protocol questions in Tables 2, 3 and 4 to show how the specific requirement is validated. This is to ensure a transparent determination process.

Determination Protocol Table 2: Requirements checklist				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in several sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question. (See below). Clarification Request (CL) is used when the determination team has identified a need for further clarification.

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

Determination Protocol Table 3: Baseline and Monitoring Methodologies				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements of baseline and monitoring methodologies should be met. The checklist is organized in several sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question. (See below). Clarification Request (CL) is used when the determination team has identified a need for further clarification.

Determination Protocol Table 4: Legal requirements				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The national legal requirements the project must meet.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question. (See below). Clarification Request (CL) is used when the determination team has identified a need for further clarification.

Determination Protocol Table 5: Resolution of Corrective Action and Clarification Requests			
Report corrective action and clarifications requests	Ref. to checklist question in tables 1/2/3/4	Summary of project owner response	Determination conclusion
If the conclusions from the Determination are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Tables 1-4 where the Corrective Action Request or Clarification Request is explained.	The responses given by the Client or other project participants during the communications with the determination team should be summarized in this section.	This section should summarize the determination team's responses and final conclusions. The conclusions should also be included in Tables 1-4 under "Final Conclusion".

Figure 1 Determination protocol tables

2.1 Review of Documents

Bureau Veritas Certification (BVC) signed the contract with NCSF on 11/09/2009 and received Project Design Document (PDD) Version 01 dated 01/09/2009 together with supporting documentation. The completeness check revealed some deviations from the JISC



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

PDD Form. On 25/02/2010, BVC received the finally remade PDD Version 01 dated as before 01/09/2009. The PDD was made publicly available for comments on BV Rus site as from 26 February 2010 till 27 March 2010.

The PDD and supporting documentation as well as additional background documents related to the project design, baseline, and monitoring plan, such as Kyoto Protocol, host Country laws, JI guidelines, JI Guidance on criteria for baseline setting and monitoring, and Tool for demonstration and assessment of additionality were reviewed.

The first deliverable of the document review was the Draft Determination Report (DDR) version 1 dated 05/03/2010 with 44 CAR's and 2 CL's.

The second deliverable of the document review was the Draft Determination Report (DDR) version 2 dated 27/04/2010 with seven new CAR's issued after the on-site assessment held on 22/04/2010.

On 07/05/2010, NCSF submitted the amended version of PDD together with summaries of responses to the verifiers' requests. Having reviewed this feedback, Bureau Veritas Certification issued DDR Version 02 dated 27/04/2010 with clarifications as to why some of NCSF responses can not be accepted.

During the further period up to 07/05/2010 when NCSF submitted the final PDD Version 03 dated 05/05/2010 which was accepted by BVC, a few versions of PDD were issued followed by their reviews reported in new DDR versions. Having received the Host Party approval of the project by the Order of Ministry of Economic Development #709 dated on 30.12.2010, NCSF provided the final PDD Version 4 dated 17/01/2011. The chronology of issuance of PDD and DDR is shown in Table 6.

The determination findings presented in this Determination Report Version 1 relate to the project as described in the published PDD Version 01 dated 01/09/2009, PDD Version 03 dated 05/05/2010, and final PDD Version 04 dated 17/02/2011.

Table 6. Chronology of issued PDD and DDR

PDD version	PDD date	Received on	DDR Version	DDR date
01	01/09/2009	17/02/2010	-	-
01 published 26/02	01/09/2009	24/02/2010	1	05/03/2010
02	16/04/2010	16/04/2010	2	20/04/2010
02 after site visit	16/04/2010	16/04/2010	3	27/04/2010
03	05/05/2010	07/05/2010	DR. v1	19/05/2010
04	17/01/2011	21/02/2011	FDR.v2	22/02/2011



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

2.2 Follow-up Interviews

Bureau Veritas Certification verifier Vera Skitina conducted a visit to the project site on 22/04/2010. On-site interviews with the project participant JSC “Ashinskiy Metallurgical Works” (AMW) and the PDD Developer NCSF were conducted to confirm the selected information and to clarify some issues identified in the document review. The interview topics are listed in Table 7. The interviewees are listed in Section 6 References.

Following the submission of the DDR Version 1, on-line interactions between NCSF and Bureau Veritas Certification took to resolve pending CAR’s and CL’s.

Table 7 Interview topics

Date / Interviewed organization	Interview topics
22/04/2010 AMW NCSF	<ul style="list-style-type: none"> ➤ AMW current Investment Programme ➤ Reasoning for construction new Electric Arc-Furnace ➤ 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

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 followed on by the project participants for Bureau Veritas Certification positive conclusion on the project design.

Corrective Actions Requests (CAR) are issued, where:

- i) there is a clear deviation concerning the implementation of the project as defined the PDD;



Determination Report on JI project
"Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation"

- ii) requirements set by the Methodological Procedure or qualifications in a verification opinion have not been met; or
- iii) there is a risk that the project would not be able to deliver high quality ERUs.

Clarification Requests (CL) are issued where

- iv) additional information is needed to fully clarify an issue.

The DDR summarising Bureau Veritas Certification's findings of the desk document review (Version 1) and on-site assessment (Version 3) were submitted to NCSF and AMW on 05/03/2010 and 27/04/2010 respectively. The findings identified have been 51 Corrective Action Requests and 2 Clarification Requests.

The amendments made by NCSF to the PDD and reported in PDD version 03 dated 05/05/2010 satisfactorily addressed the verifier's responses. As a result, the Determination Report Version 1 was issued on 19/05/2010. On 19/05/2010, it was sent, together with the PDD Version 03, to BVC Internal Technical Reviewer (ITR) for review.

No comments on the PDD were received during the public review period.

To guarantee the transparency of the determination process, the CAR's and CL's raised are summarized in Appendix A, Table 5.

3 Determination Findings

In the following sections, the findings of the determination are presented for each determination subject as follows:

- i) the findings from the desk review of the original project design document and the findings from interviews during the site visit are summarized. A more detailed record of these findings can be found in the Appendix A Determination Protocol.
- ii) where Bureau Veritas Certification had identified issues that needed clarification or that represented a risk to the fulfillment of the determination protocol criteria or the project objectives, a Clarification or Corrective Action Request, respectively, has been issued. The Clarification and Corrective Action Requests are stated in the in Appendix A Determination Protocol.
- iii) where Clarification and Corrective Action Requests have been issued, the response by the project participants to resolve these requests is summarized in Appendix A Table 5.
- iv) the conclusions of the determination are presented consecutively.

3.1 Project Design

The project design engineering represents current good practices of using high efficiency modern technology of steelmaking and casting, which provides reduction of resource consumption on all metallurgical conversion stages and besides reduces waste generation in comparison with the baseline technology.



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

The project consists in the construction of a continuous-casting machine (CCM) with technical output of 1,000 th. tonnes of slab per year and an electric arc furnace (EAF) with loading conveyor CONSTEEL with a capacity of 120 tonnes, with an output of 1,000 th. tonnes per year, each commissioning in two stages: first CCM in 2007, second EAF in 2010.

The proposed Joint Implementation project envisages a complex resource-saving effect from the transition to production of profiled steel in the electric arc furnaces and its teeming in the continuous casting machines (CCM) in 2007 instead of the existed three open-hearth furnaces production of the same steel and steel casting into the moulds resulting in steel billets – ingots in the open-hearth plant and rolling of steel billets at the rolling plant #1.

The implementation of the project (according to the project scenario) will reduce the consumption of fuel and carbonaceous feed for steel and rolled metal manufacturing as compared with the baseline scenario (refer to PDD, Section A.4.3, Table A.4.3-1). However, according to the project scenario, power consumption will increase once the electric arc furnace has been constructed.

The main supplier of equipment and technologies are CCM – STB (Italy); EAF – DANIELI (Italy) – the world leaders in the manufacture of equipment for the entire metallurgical cycle – from steel making and rolling to hot and cold finishing.

The implementation of electric arc steelmaking process results in increase of the average specific electricity consumption: from 0.007 MWh/t steel for the baseline scenario to 0.375 MWh/t steel after the EAF commissioning (project scenario). Refer to PDD, Section A.4.3, Table A.4.3-1. “Comparative data of the project and the baseline for fuel, carbonaceous feed and energy consumption for steel and rolled metal production”.

The project will result in significant increase of consumption of scrap steel and electricity. To cover the demand on steel scrap, the daughter enterprises of the JSC “AMW” were established specialized in scrap steel collection in the following regions: Chelyabinsk region, Tatarstan, Bashkortostan, Khanty-Mansi Autonomous Area. The rate of steel scrap supplied to the JSC “AMW” from the own enterprises amounts to 47% of the scrap steel consumed in 2009. The electricity for new EAF will be supplied from the grid: the transmission lines and substation are constructed for this (see also PDD, Sections A.4.2, and B.1). The implemented actions allow to cover the increased consumption of feed resources.

As a project result, CO₂ emission reductions occur due to the resource-saving and enhancement of efficiency of the use of secondary energy resources.

The proposed JI project implements modern and more efficient technology of steelmaking and casting reduces consumption of pig iron and carbon-containing fuels on preceding metallurgical conversion stages and reduces waste generation in comparison with the baseline scenario.



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

The estimated GHG emission reduction is 1,975,409 tonnes of CO₂ equivalents over the crediting period 2008 - 2012.

The identified areas of concern as to Project Design, PP’s response and BV Certification’s conclusion are described in Appendix A Table 5 (refer to CAR 01 - CAR 09, and CL 01).

The project “Reconstruction of the steelmaking at JSC “Ashinskiy Metallurgical Works”, Asha, Russian Federation” has been approved as JI project by the Order of Ministry of Economic Development #709 dated on 30.12.2010. This enabled AIE to close CAR 01 in the Determination Report Version 1.

3.2 Baseline and Additionality

A JI specific approach regarding baseline setting and additionality demonstration and assessment has been developed in accordance with JISC Guidance on criteria for baseline setting and monitoring (Version 02).

Six different scenarios were considered. All the alternatives do not face any prohibited barriers with regard to the Russian Federation legislation. Two scenarios are shown to be prevented by the organizational and technological barriers.

After screening of four alternatives available for the project participants, two alternative scenarios were selected as viable, namely:

- Scenario 1: the project activity without JI registration.
- Scenario 2: the continuation of the current situation. The production of steel in the open-hearth furnaces, processing of steel in the ladle furnace, casting of steel into moulds, rolling of steel billets at the rolling plant #1;

Continuation of the production of profiled steel in the open-hearth furnaces, processing of steel in the ladle furnace, casting of steel into moulds, rolling of steel billets at the rolling plant #1 (Scenario 2) was identified as most likely scenario thus representing the baseline scenario due to the following reasons: (a) it allows to produce the quantity of rolled metal required by the project (the output of ready rolled products from ingots according to the baseline scenario would be of 500,000 tonnes per year and an added-on output of steel about 420,000 tonnes per year at other iron-and-steel works in Russia) and meet the most stringent quality standards (after installation of LFA) without significant capital reconstruction; (b) it does not require increase of external purchases of scrap metal; (c) the investment barrier does not influence the implementation of the future Scenario 2 because it does not require any additional investments.

Scenario 1 was proven to be not financially and economically feasible. This follows from the investment analysis carried out in the frame of the additionality proof. Hence, the second alternative is reasonably taken as the baseline scenario as the most realistic and credible. Both scenarios are not prohibited by the Russian legislation.

The proposed approach to additionality demonstration and assessment provides traceable



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

and transparent information showing that the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to reductions of anthropogenic emissions by sources of GHG.

Justification of additionality has been done in several steps including identification of plausible alternatives to the project activity, barriers analysis, and common practice analysis. The key additionality proofs were the results of the financial barrier analysis and sensitivity analyses. The spreadsheet with the analyses was made available for the verifier and Bureau Veritas Certification will provide it upon request.

The identified areas of concern as to Baseline and Additionality, PP’s responses and BV Certification’s conclusions are described in Appendix A Table 5 (refer to CAR 10 - CAR 36).

The identified area of concern as to Project Duration / Crediting Period, PP’s response and BV Certification’s conclusion are described in Appendix A Table 5 (refer to CAR 37 – CAR 38).

3.3 Monitoring Plan

A JI specific approach regarding monitoring has been developed in accordance with the JISC “Guidance on criteria for baseline setting and monitoring” (Version 02).

All categories of data to be collected in order to monitor GHG emissions from the project (Option 1) and determine the baseline of GHG emissions are described in required details. Comprehensive historical data for parameters of OHF processes for the year 2008 at AMW (taken as average for 2006-2007) and a forecast for 2009-2012, used for the calculation of the baseline, are provided in PDD Section B.1 and Annex 2.

Step-by-step application of the used approach to the project activity is described in PDD Section D and Annex 3 including monitoring procedures, formulae, parameters, data sources etc.

The parameters monitored throughout the crediting period have been described and determined in PDD Section D.1.1.1 (for project scenario) and Section D.1.1.3 (for baseline scenario).

Data and parameters that are not monitored throughout the crediting period, but determined only once and that are available already at the stage of determination regarding the PDD, have been described and determined in PDD Section D.1, Table D.1-1, Table D.1-2 and Annex 2 as per [2].

Operational structure that AMW implemented to monitor emission reduction is clearly described in the PDD. Monitoring related quality control and quality assurance procedures



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

are backed up by the existing AMW reporting system under the certified Quality Management System according to the GOST R ISO 9001-2001.

To ensure the proper monitoring and reporting process for the JI project, AMW additionally established a special internal procedure, as a part of its certified quality management system. This is AMW Standard #058-51-2009 “Monitoring of GHG Emission Reductions”, approved by Technical director on 18.11.2009. Initial data necessary for calculating GHG emission reduction and calculation results will be stored in electronic and paper formats during all of the crediting period and two years following the crediting period.

Collection of data required for estimation of GHG emission reductions is planned to be performed to high industry standard.

The identified area of concern as to Monitoring Plan, PP’s response and BV Certification’s conclusion are described in Appendix A Table 5 (refer to CAR 37 – CAR 48, and CL 02).

3.4 Calculation of GHG Emissions

Formulae used for calculation of GHG emissions are presented in PDD Sections D and E. Input data for calculations and the calculations per se are presented on the spreadsheet made available to the verifiers by NCSF. The results are summarised in Section E. The verifier checked the calculations and found them accurate.

The estimated GHG emission reduction is 1,975,409 tonnes of CO2 equivalent over the crediting period 2008 - 2012.

The identified areas of concern as to Calculation of GHG Emissions, PP’s response and BV Certification’s conclusion are described in Appendix A Table 5 (refer to CAR 49, CAR 50).

3.5 Environmental Impacts

The project received the positive opinion of Glavgosexpertiza of Russia on the Working Design materials; the latter include the Environmental Impact Assessment. The project Feasibility Study received a positive opinion of the Rostekhnadzor State Environmental Expertise. The project has all permissions, limits and license required by the Russian environmental legislation for the stage of technical design, construction and maintenance. The evidences are presented in PDD Section F and supported by the list of documents obtained by the verifier at the site visit (refer to Section 6 References).

The identified area of concern as to Environmental impacts, PP’s response and BV Certification’s conclusion are described in Appendix A Table 5 (refer to CAR 51).

3.6 Comments by Local Stakeholders

No comments from local stakeholders were received.



Determination Report on JI project
"Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation"

No areas of concern as to Comments by Local Stakeholders are identified.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

In accordance with the Section E "Verification procedure under the Article 6 Supervisory Committee" of the JI guidelines, Bureau Veritas Certification published the PDD Version 01 on BV Rus site on 26/02/2010 and invited comments within 27/03/2010 by Parties, stakeholders and UNFCCC accredited observers. No comments have been received.

5 DETERMINATION OPINION

Bureau Veritas Certification has been engaged by National Carbon Sequestration Foundation (NCSF) to perform a determination of the JI project "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW), Asha, Russian Federation". The determination was performed on the basis of UNFCCC criteria for JI projects, in particular the verification procedures under the JI Supervisory Committee, as well as host country criteria and the criteria given to provide for consistent project operations, monitoring and reporting.

The determination is based on the information made available to us and on the engagement conditions detailed in this report. The determination has been performed using a risk-based approach as described above. The only purpose of the report is its use for the formal approval of the project under JI mechanism. Hence, Bureau Veritas Certification cannot be held liable by any party for decisions made or not made based on the determination opinion, which will go beyond that purpose.

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 on-line interviews with the project participant and PDD developer; iii) the issuance of the determination report and opinion.

The review of the project design documentation, the subsequent follow-up interviews, and the resolution of the Corrective Action Requests have provided Bureau Veritas Certification with the sufficient evidences to determine the fulfilment of the above stated criteria and to demonstrate that the project is additional.

The barriers analysis and common practice analysis demonstrate that the proposed project activity is not a likely 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 it is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The determination revealed two pending issues related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party (Russian Federation). If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”



in the Project Design Document, Version 03 dated 05/05/2010 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria. Bureau Veritas Certification thus recommends this project for the formal approval by the Ministry for Economic Development of the RF as the JI project in accordance with the RF Government Decree # 843 dated 28/10/2009.

Bureau Veritas Certification Holding SAS
19 May 2010

Vera Skitina – Team leader, Lead verifier

AIE Note:

The project “Reconstruction of the steelmaking at JSC “Ashinskiy Metallurgical Works”, Asha, Russian Federation” is approved as JI project by the Order of Ministry of Economic Development #709 dated on 30.12.2010. Therefore the last paragraph of the Determination Opinion above become irrelevant as regards the pending approval, the pending authorisation and the recommendation for the approval.

Bureau Veritas Certification Holding SAS
22 February 2011

Leonid Yaskin – JI Operational Manager

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW), Asha, Russian Federation”

6 REFERENCES

Reviewed document or type of information referred to in Appendix A and available before the site visit

1	“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW), Asha, Russian Federation”, PDD Version 01 dated 01/09/2009. Received on 25/02/2010. Published on BVC RUS website 26/02/2010. PDD Version 03 dated 05/05/2010. Received on 07/05/2010.
2	Project approval issued by the Order of Ministry of Economic Development #709 dated on 30.12.2010.
3	JISC Guidance on criteria for baseline setting and monitoring. Version 02.
4	Glossary of Joint Implementation terms. Version 04, JISC.
5	2006 IPC Guidelines on National Greenhouse Gas Inventories. Volume 3 Chapter 4.
6	“Regulation of realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change”. Approved by the RF Government Decree # 843 of 28/10/2009 “About measures on realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change”.
7	Excel spreadsheet with calculation of emission reduction. Provided by PDD Developer.

Reviewed document or type of information obtained at the site visit

8	A Report of proceedings at meeting of Board of Directors №3 dated 02.09.05.
9	A Report of proceedings at meeting of Board of Directors №6 dated 22.11.08.
10	Act of construction work (CCM) dated on 25.01.2006. Start of the project.
11	Project Design “Reconstruction of OHFP. CCM installation”, Volume 1: “Executive Summary”, JSC “Ashinskiy Metallurgical Works (AMW)”, 2006
12	Project Design “Reconstruction of OHFP. CCM installation”, Volume 2: “Investment Effectiveness”, JSC “Ashinskiy Metallurgical Works (AMW)”, 2007
13	Project Design “Reconstruction of OHFP. CCM installation”, Volume 3: “Environment Protection”, JSC “Ashinskiy Metallurgical Works (AMW)”, 2007
14	Positive Conclusion of construction on the Project Design “Reconstruction of OHFP. CCM installation “by local state authorities of Asha city, Chelyabinsk region”, dated, 01 April 2008, № ru74503101-77.
15	A certificate of acceptance and delivery of CCM according to the contract # AIT-643/380-1171/2005 dated 19.01.05
16	Contract # DP036301 Rev 1”New EAF with CCONSTEEL 120T for 970.000 TPY”, dated 07.08.07
17	Project Design “Reconstruction of steelmaking. Stage III”, Volume 1: “Executive Summary”, JSC “Ashinskiy Metallurgical Works (AMW)”, 2008
18	Project Design “Reconstruction of steelmaking. Stage III”, Volume 7: “Environment

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

	Protection”, JSC “Ashinskiy Metallurgical Works (AMW)”, 2009
19	Positive Conclusion of construction on the Project Design “Reconstruction of steel-making. Stage II “by local state authorities of Asha city, Chelyabinsk region”, dated, 21 May 2009, № ru74503101-70.
20	Order # 143 dated 19.02.07 “Appointment of Working Group for AEF construction and installation”
21	Strategic Business targets 2009-2015. Annex to the Order #6 of Board of Directors dated 22.11.08
22	Training records for Stage 1 and Stage II of the project. Contracts of training.
23	A timetables for the obligatory testing of the measuring instrument calibration) under service conditions of OHFP. 2008, 2009,2010
24	Measuring appliances records of OHFP as per the timetables for the obligatory testing of the measuring instrument calibration) under service conditions of OHFP. 2008.
25	Technical Passport of OHF#3.
26	Technical conclusion on a potential technical capacity of CCM to produce output as 1.005.033 profiled steel billets (slabs) per year.
27	Monthly Technical Reports of OHF, the rolling plant #1 (mill #2850) of “AMW”, 2008.
28	A Technical Process Card of the steel making operations in the rolling plant #1 (mill #2850), dated 10.02.09
29	Technical Passport of CCM, dated 25.09.07
30	A timetable for capital maintenance overhaul of the metallurgical aggregates of “AMW” in the rolling plant #1 (mill #2850) in 2010. Technical act of permission to use the metallurgical aggregates of “AMW”, in the rolling plant #1 (mill #2850)
31	A Technical Passport of the continuous billet-heating furnace #3 of the rolling plant #1 (mill #2850)
32	Guidance to Planning, Formation and Accounts for Production and Realization of the final products. Rolling.
33	Technical Reports of “AMW” (electricity consumption, compressed air). 2008
34	Permission # Ч-2066 for air pollutant emissions for a period 15.09.2009 – 15.09.2010, given by Federal Service for Ecological, Technical and Atomic Supervision on 06.10.2009. All valid on the date of the site visit.
35	State statistic environmental form 2-tp (air) of “AMW” in 2008, 2009.
36	Permission # Ч-376 for wastewater for a period 22.12.2009 – 22.12.2014, given by Federal Service for Ecological, Technical and Atomic Supervision on 21.01.2009.
37	Permission # Ч-8324 for waste generation and they placement for a period 17.07.2009 – 10.06.2014, given by Federal Service for Ecological, Technical

Determination Report on JI project

 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

	and Atomic Supervision on 17.07.2009.
38	State Certificate of GOSTR accreditation of Testing Analytic Laboratory of "AMW". POCC RU 0001.515957, dated 09.11.09, valid till 09.11.2014
39	Sanitary-hygienic zone of "AMW". Records of an state official approval
40	Technical presentation for a Scenario of a side loading for EAF. "AMW"
41	Positive State Opinion on the the Working Design Project JSC"AMW" "OHP Complex. Reconstruction".
42	Positive State Opinion on the Working Design Project JSC"AMW" "EAF Complex."
43	Rolled metal production - Rolling mill 2850. Technical note of Technical capacity of Rolling mill 2850.
44	Steel slabs production – CCM. Technical note of Technical capacity of CCM working simultaneously with EAF-120.
45	A technological flow diagram of EAFP, OHP,
46	Standard of "AMW" CTP-058-51-2009. GHG Emission Reduction Monitoring, dated 17.11.09
47	Measuring appliances records of BFP, OHFP, EAFP
48	A timetables for the obligatory testing of the measuring instrument calibration) under service conditions of BFP, OHFP, EAFP
49	Training personnel records dated 17/12/09 (EAFP)
50	BFP indexes trend for 2002-2009
51	Records of the coke furnace batteries out for the 17 th of 2009
52	Environmental licenses of "AMW" valid on the date of the site visit.

Persons interviewed during site visit on 22/04/10 at AMW

1	V.Myzgin – AMV acting General Director
2	Y.Lolyagin – AMV Board of Directors Secretary
3	S.Fedorov – AMV Technical Department Manager
4	V.Krylovskiy – AMV Financial Director
5	A.Latypov – AMV Planning and Financial Department Manager
6	E.Klimov – MMK Deputy Director
7	M.Lalyagin – AMV Chief Metrologiest
8	Y.Lalyagin – AMV Technical Director
9	M.Kazakov – Main Specialist of National Carbon Sequestration Foundation (NCSF), PDD developer
10	D.Vasilyev – Deputy Workshop Manager of OHFP



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

11	A.Kozlitin – Deputy heat-power engineering Workshop Manager of OHFP
12	A.Kustov – electrician of OHFP
13	Z.Sharipov - Workshop Manager of OHFP
14	L.Fedyukova – Economist of OHFP
15	S.Kozorez – Deputy of sheet mill (rolling mill) #1
16	N.Kalmykova – acting as Economist of sheet mill (rolling mill) #1
17	T.Ermakova – Engineer of Main Electric Department. Energy Recourses Account bureau.
18	S.Ryabov - Engineer of Main Electric Department. Energy Recourses Account bureau.

7 DISCLAIMER

This report contains the results of the determination of whether the project under consideration meets the relevant requirements of Article 6 of the Kyoto Protocol and the JI guidelines. The used determination procedure does not fall under the verification procedure under the JISC, as defined in the JI guidelines, paragraphs 30–45. Instead, paragraph 23 of the JI guidelines applies to the determination based on which Bureau Veritas Certification Holding SAS issues, under the contractual arrangements with NCSF, an expert opinion on the project as per the RF Government Decree # 843 of 28/10/2009 “About measures on realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change”.



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

APPENDIX A: COMPANY JI PROJECT DETERMINATION PROTOCOL

Table 1 Mandatory Requirements for Joint Implementation (JI) Project Activities

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
1. The project shall have the approval of the Parties involved.	Kyoto Protocol Article 6.1 (a)	<p>CAR 01. The project has no approval of the Host Party.</p> <p>Verifiers' Note: JISC Glossary of JI terms/Version 01 defines the following:</p> <p>a) At least the written project approval(s) by the host Party(ies) should be provided to the AIE and made available to the secretariat by the AIE when submitting the determination report regarding the PDD for publication in accordance with paragraph 34 of the JI guidelines;</p> <p>(b) At least one written project approval by a Party involved in the JI project, other than the host Par-</p>	Table 2, Section A.5.



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		<p>ty(ies), 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, at the latest.</p> <p>The project “Reconstruction of the steelmaking at JSC “Ashinskiy Metallurgical Works”, Asha, Russian Federation” is approved as JI project by the Order of Ministry of Economic Development #709 dated on 30.12.2010. Hence CAR 01 is closed.</p>	
2. Emission reductions, or an enhancement of removal by sinks, shall be additional to any that would otherwise occur.	Kyoto Protocol Article 6.1 (b)	OK	Table 2, Section B.2
3. The sponsor Party shall not acquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7.	Kyoto Protocol Article 6.1 (c)	OK	N/A
4. The acquisition of emission reduction units shall be supplemental to domestic actions for the purpose of meeting commitments under Article 3.	Kyoto Protocol Article 6.1 (d)	OK	N/A



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
<p>5. Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects.</p>	<p>Marrakech Accords, JI Modalities, §20</p>	<p>OK</p>	<p>The Russian national focal point is the Ministry of Economic Development.</p> <p>The Russian national guidelines and procedures are established by the “Regulation of realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change”. Approved by the RF Government Decree # 843 of 28/10/2009 “About measures on realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change”.</p>
<p>6. The host Party shall be a Party to the Kyoto Protocol.</p>	<p>Marrakech Accords, JI Modalities, §21(a)/24</p>	<p>OK</p>	<p>Russia has ratified the Kyoto Protocol by Federal Law N 128-Φ3 dated 04/11/04.</p>



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts.	Marrakech Accords, JI Modalities, §21(b)/24	OK	The Russian Federation's assigned amount has been calculated and recorded in the 4th National Communication dated 12/10/06.
8. The host Party shall have in place a national registry in accordance with Article 7, paragraph 4.	Marrakech Accords, JI Modalities, §21(d)/24	OK	Russian Federation has established the GHG Registry by the RF Government Decree N 215-p dated 20/02/06.
9. Project participants shall submit to the independent entity a project design document that contains all information needed for the determination.	Marrakech Accords, JI Modalities, §31	OK	Closed Joint Stock Company “National Carbon Sequestration Foundation” (CJSC NCSF) has submitted a PDD to Bureau Veritas Certification, which contains all information needed for determination.
10. The project design document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments.	Marrakech Accords, JI Modalities, §32	OK	The PDD was made publicly available for comments on BV Rus site from 26.02.10 till 27.03.10.



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, in accordance with procedures as determined by the host Party shall be submitted, and, if those impacts are considered significant by the project participants or the host Party, an environmental impact assessment in accordance with procedures as required by the host Party shall be carried out.	Marrakech Accords, JI Modalities, §33(d)	OK	Table 2, Section F
12. The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B.2
13. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B.2
14. The baseline methodology shall exclude to earn ERUs for decreases in activity levels outside the project activity or due to force majeure.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B.2
15. The project shall have an appropriate monitoring plan.	Marrakech Accords, JI Modalities, §33(c)	OK	Table 2, Section D
16. A project participant may be: (a) A Party involved in the JI project; or (b) A legal entity authorized by a Party involved to participate in the JI project.	“Glossary of Joint Implementation Terms”, Version 02	The Russian project participant will be authorized by the Host Party through the issuance of the approval for the project.	Table 2, Section A



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		<p>Conclusion is pending a follow-up on CAR 01. Refer to Verifiers' Note in 1 above.</p> <p>The project "Reconstruction of the steelmaking at JSC "Ashinskiy Metallurgical Works", Asha, Russian Federation" is approved as JI project by the Order of Ministry of Economic Development #709 dated on 30.12.2010. Hence the authorisation of the project participant is deemed received..</p>	



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A. General Description of the project					
A.1 Title of the project					
A.1.1. Is the title of the project presented?	1,2	DR	The title of the project is: “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW), Asha, Russian Federation”. The indicated Sectoral Scope is (9) Metal production.		OK
A.1.2. Is the current version number of the document presented?	1,2	DR	The current version number of PDD is 01. CARs and CLs are issued based on a review of PDD Version 01 dated 01.09.09, Version 03 dated 05.05.10, and findings of the project site visit held on 22.04.10. The PDD Version 01 was published on BVC Rus website and is reviewed as a part of determination.		OK
A.1.3. Is the date when the document was completed presented?	1,2	DR	Version 01 dated 01.09.09 Version 03 dated 05.05.10		OK



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

A.2. Description of the project					
A.2.1. Is the purpose of the project included?	1,2	DR I	<p>The project is implemented on the site of JSC Ashinskiy Metallurgical Works (AMW).</p> <p><u>Project scenario</u></p> <p>The project envisaged, under the modernization program, the construction of a new continuous-casting machine (CCM) and electric arc-furnace (EAF) in 2005 instead of the existed three open-hearth furnaces and, thus, the transition to production of profiled steel in the EAF and its casting in the CCM instead of production of the same steel and profiled billet (slabs) in the open-hearth plant with casting into moulds and steel billets rolling production.</p> <p>The project intends to undergo a shut-down the three existing open-hearth furnaces followed by steel output increasing up to 1,000,000 tonnes and of rolled metal up to 595,000 tonnes per year due to the production of profiled steel, needed for "AMW" steelmaking operations, by a more efficient technique with CCM and an EAF.</p> <p>The key saving solutions implemented during "AMW" modernization program are indicated in PDD Section A.2 page 3.</p> <p><u>Baseline scenario</u></p> <p>The baseline scenario assumes the further use of the existing capacities for profiled steel billet production in open-hearth furnaces with</p>		OK



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

		<p>a total output more than 650,000 tonnes per year. The open-hearth steel would be processed in the ladle furnace (LF) and cast into moulds with total profiled steel output of 500,000 tonnes per year and with the same quality as in the project due to the use of the out-of-furnace technology in the ladle furnace. The incremental part of the baseline scenario of steel about 420,000 tonnes per year will be produced at other iron-and-steel works in Russia.</p> <p>The baseline technology represents business-as-usual "AMW" operations under the RF legislation.</p>		
--	--	--	--	--



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

A.2.2. Is it explained how the proposed project reduces greenhouse gas emissions?	1,2	DR	<p>GHG emissions are reduced due to the implementation of the following key technological and operational resource saving measures:</p> <ul style="list-style-type: none"> - decrease in raw material consumption for steel production in steel plant; - decrease in fuel consumption for steel and rolled metal production; - decrease in metal losses when casting steel into moulds; - decrease in steel consumption for production of rolled metal; - decrease in raw materials and fuel consumption in auxiliary works (foundry shop, lime shop, etc.). <p>The expected reduction of GHG emissions over the crediting period (2008-2012) will be about 2,000 th. tonnes of CO₂ or in average 400 th. tonnes of CO₂ per year.</p> <p>CAR 02. Please include in PDD Section A.2 as per [2] the description of the purpose of the project with a concise explanation of the technical description. Please summarize the history of the project including its JI component.</p>	CAR 02	OK
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?	1,2	DR	The project participants are listed in PDD Section A.3 and Annex 1.	CAR 03	OK

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

			Party A is the Russian Federation. CAR 03. Please ensure the Table Format In Section A.3 for project participants and Party (ies) involved in the project are in line with requirements of [2]. Party B is to be listed.		
A.3.2. The data of the project participants are presented in tabular format?	1,2	DR	Conclusion is pending a response to CAR 03		OK
A.3.3. Is contact information provided in Annex 1 of the PDD?	1,2	DR	The contact information is provided in PDD Annex 1.		OK
A.3.4. Is it indicated, if it is the case, if the Party involved is a host Party?	1,2	DR	It is indicated that the Russian Federation is the host Party.		OK
A.4. Technical description of the project					
A.4.1. Location of the project activity					
A.4.1.1. Host Party(ies)	1,2	DR	The Russian Federation is indicated as the host Party in PDD Section A.3.		OK
A.4.1.2. Region/State/Province etc.	1,2	DR	Chelyabinsk Region, Russian Federation.		OK
A.4.1.3. City/Town/Community etc.	1,2	DR	City of Asha.		OK
A.4.1.4. Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	1,2	DR	The unique identification is given by the following information: Asha is situated 400 km west of Chelyabinsk on the river Sim. Geographical coordinates of the Project: 55°00' NL, 57°15' EL.		OK
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					
A.4.2.1. Does the project design engineering reflect current good practices?	1,2	DR, I	The project design engineering represents current good practices of using high effi-	CAR 04	OK



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

		<p>ciency modern and more efficient technology of steelmaking and casting from the resource consumption standpoint on preceding metallurgical conversion stages and besides reduces waste generation in comparison with the baseline technology.</p> <p>CAR 04. Information about the transmission lines (35 kV) over a distance of 70 km and a scaling substation for powering the EAF (refer to PDD Section A.4.2 p. 7) should be included in the schedule.</p> <p>CAR 05. The project envisages the step wise approach in commissioning of CCM and EAF (refer to Section B.4.3, Diagram A.4-1). The existed three open-hearth furnaces are intended to be operated till EAF commissioning date (2010), but the approach is not placed in the project and baseline boundaries schemes (refer to Section D.1, Fig.D.1-1 and Fig.D.1-2, on p,30-31). The explicitly description of the project scenario as per se in respect to the applied approach is not presented in PDD Section A.4.2, B.1, B.2, D.1 [2].</p> <p>CAR 06. As it was found out at the site visit and discussed with the project owners that the CCM has a production capacity of 800,000 th. tonnes of slab per year (as per technical Passport for CCM). The output of CCM, identified in PDD, is 1,000 th. tonnes of slab per year (refer to PDD Section A.4.2). Please provide a technical justification that</p>	<p>CAR 05 CAR 06</p>	<p>OK OK</p>
--	--	--	---	-----------------------------------



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

			<p>the installed CCM could ensure the total steel production under the project of 1,000,000 tonnes per year and of rolled metal of 595,000 tonnes per year.</p>		
<p>A.4.2.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?</p>	<p>1,2</p>	<p>DR I</p>	<p>The project technology is the-state-of-art.</p> <p>The project technology envisages the reconstruction of OHF's and transition to EAF technique in a profiled steel production and represents the advanced resource saving metallurgical technology of profiled steel production at the conversion steel production stage within the project boundary (steelmaking plant).</p> <p>Project realization allows reducing CO2 emissions primarily due to:</p> <ul style="list-style-type: none"> - decrease in raw material consumption for steel production in steel plant (scrap, iron); - decrease in fuel consumption for steel and rolled metal production; - decrease in metal losses when casting steel into moulds; - decrease in steel consumption for production of rolled metal; - decrease in raw materials and fuel consumption in auxiliary works (foundry shop, lime shop, etc.). <p>Besides the main equipment (LF & EAF), it is foreseen to build transmission lines (35 kV) over a distance of 70 km and a scaling sub-</p>		<p>OK</p>

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

			station for powering the EAF. The EAF process results in increase of the electricity consumption against the baseline scenario.		
A.4.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1,2	DR I	The project technology is unlikely to be substituted by other or more efficient technologies within the project period.		OK
A.4.2.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	1,2	DR, I	CL 01. Please clarify if provisions for meeting training needs with regards monitoring are made if appropriate.	CL 01	OK
A.4.2.5. Does the project make provisions for meeting training and maintenance needs?	1,2	DR	Conclusion is pending a response to CL 01.	Pending	OK
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.4.3.1. Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	1,2	DR	The explanation is given in Section A.4.3. Under the baseline greenhouse gas emissions occur at “AMW” due to the use of carbonaceous feeds in the open-hearth steel production process (iron, limestone, coke, etc.), fuel burning (fuel oil, natural gas) and also due to electricity consumption in the Russian national energy system when supplying power from the grid, as a result of using fossil fuel for power production. The same processes are applied to cover the incremental part of the profiled steel	CAR 07 CAR 08	OK OK



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

			<p>amount at the other iron-and-steel works in Russia.</p> <p>The project will result in the reduction of consumption of fuel and carbonaceous feed for steel and rolled metal manufacturing if compared with the baseline. However, according to the Project, power consumption will increase once the electric arc furnace has been constructed.</p> <p>CAR 07. Please provide a concise comparative data of the project and the baseline for fuel and carbonaceous feed consumption for steel and rolled metal production to show the reduction of raw materials and energy consumption in respect to step wise approach in commissioning of CCM and EAF (refer to Section B.4.3, Diagram A.4-1).</p> <p>CAR 08. Please provide in PDD Section A.4.3 an assessment of carbonaceous feed resource availability for the project.</p>		
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?	1,2	DR	<p>The estimated GHG emission reduction is 1,973,665 tonnes of CO₂ equivalent over the crediting period 2008 - 2012. Refer to PDD Section A.4.3.1.</p> <p>Conclusion is pending responses to CAR's 11-12, 13, 18, 19, 35, 43, 45-47, and CAR 50, which may result in recalculation of the CO₂ emissions.</p>	Pending	OK
A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO ₂ e?	1,2	DR	<p>The estimated annual emission reduction is 157,299 (for the year 2008); 8,476 (for the year</p>	Pending	OK



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

			2009); 386,979 (for the year 2010); 668,956 (for the year 2011); 671,956 (for the year 2012); tones of CO2 equivalent. Refer to PDD Section A.4.3.1. Conclusion is pending responses to CAR’s 11-12, 13, 18, 19, 35, 43, 45-47, and CAR 50, which may result in recalculation of the CO2 emissions.		
A.4.3.4. Are the data from questions A.4.3.2 and A.4.3.3 above presented in tabular format?	1,2	DR	The data is presented in the tabular format. Refer to PDD Section A.4.3.1.		OK
A.5. Project approval by the Parties involved					
A.5.1. Are written project approvals by the Parties involved attached?	1,2	DR	CAR 09. Please provide the correct references to the Host Party (Russian Federation) Regulatory documents. Conclusion is pending a response to CAR 01 and CAR 02.	CAR 09	OK

B. Baseline					
B.1. Description and justification of the baseline chosen					
B.1.1. Is the chosen baseline described?	1,2	DR	The baseline is defined in Section B.1 as “continuation of the existing situation, namely operation of open-hearth furnaces for steel production”. CAR 10. A detailed theoretical description of	CAR 10 CAR 11 CAR 12 CAR 13	OK OK OK OK



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

		<p>the baseline in a complete and transparent manner as well as a justification in accordance with paragraph 23 through 29 of the "Guidance on criteria for baseline setting and monitoring" [4] is not provided in PDD Section B.1 as per [2]. In particular, the baseline is not identified by listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one, as per Paragraph 24 therein.</p> <p>CAR 11. The baseline being identified in Section B.1 on p.11 means "continuation of the existing situation, namely operation of open-hearth furnaces for steel production" without making major additional capital investments contradicts with the described one in PDD Section A.2, p.2, that assumes the further use of the existing capacities for profiled steel billet production in open-hearth furnaces with a total output more than 650,000 tonnes per year with additional treatment in the ladle furnace (LF) and casting into moulds with total profiled steel output of 500,000 tonnes per year. The incremental part of the baseline scenario of steel about 420,000 tonnes per year will be produced at other iron-and-steel works in Russia.</p> <p>CAR 12. As it was found out at the site visit and discussed with the project owners a specific project scenario identical to the realized one but with vertical batch was assessed by the project owners at the investment decision</p>	<p>CAR 14</p>	<p>OK</p>
--	--	--	---------------	-----------



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

			<p>stage. The scenario is not identified in Section B.1 by listing and describing as a plausible future scenario on the basis of conservative assumptions; and selecting the most plausible one is made without the scenario in question (refer to Guidance on criteria for baseline setting and monitoring" [4], Paragraph 24 therein). Please provide the evidence that at the investment stage the respective incoming information was assessed by the project owners.</p> <p>CAR 13. As it was found out at the site visit and discussed with the project owners the project scenario (identified as Future scenario 1 in PDD Section B.1, p.14) aims "... melting of steel in the open-hearth furnaces, processing of steel in the ladle furnace, steel casting in the CCM and into the moulds, rolling of steel billets in the rolling plant #1..." Please note also that under the scenario about 30% of steel slabs are selling as production. The sufficient correction should be made in the PDD.</p> <p>CAR 14. The key information and data used to establish the baseline (variables, parameters, data sources etc.) are not provided in the prescribed tabular form in PDD Section B.1 and Annex 1 as per [2].</p> <p>Conclusion is pending a response to CAR 19.</p>		
<p>B.1.2. Is it justified the choice of the applicable baseline for the project category?</p>	<p>1,2,3</p>	<p>DR</p>	<p>The own baseline approach is used with references to JI Guidelines and the JISC Guidance on criteria for baseline setting and monitoring.</p>	<p>CAR 15 CAR 16</p>	<p>OK OK</p>



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

			<p>CAR 15. Please describe and justify in PDD Section B.1 the baseline chosen in accordance with appendix B of JI Guidelines and the JISC Guidance on criteria for baseline setting and monitoring [3] as required in [2].</p> <p>CAR 16. Please ensure that all key factors that affect the baseline listed in para 25 (a-g) of the Guidance on criteria for baseline setting and monitoring are taken into account as required in [2].</p> <p>Conclusion is pending a response to CAR 10, CAR 11, CAR 12, CAR 13, and CAR 14.</p>		
B.1.3. Is it described how the methodology is applied in the context of the project?	1,2	DR	Not applicable since this is the own project-specific approach.		OK
B.1.4. Are the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)?	1,2	DR	<p>CAR 17. Please provide in Section B.1 in a transparent manner all assumptions, methodologies, parameters, data sources and key factors as required in para 26 of [2].</p> <p>CAR 18. As it was found out at the site visit and discussed with the project owners <i>Specific emissions of CO₂ by steel production, tCO₂/t</i> for the baseline calculation fixed ex-ante as 1.181 is not correct as it characterizes the project scenario technology and could not be applied therefore. Please provide appropriate justifications for the conservativeness approach in respect to the coefficient application in the baseline scenario and made a needed calculations (Refer to Section A.4.3, Table A.4.3-2</p>	CAR17 CAR 18 CAR 19	OK OK OK



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

			<p>and correspondence excel spread sheets).</p> <p>CAR 19. Steel production in steelmaking furnaces under baseline, $P_{STEEL,SP,BL,y}$, steel rolled metal production in rolling plant under baseline $P_{STEEL,RP,BL,y}$ for 2008 are fixed ex-ante as actual 2008 production steel output data. As per para 26 of Guidance on criteria for baseline setting and monitoring [3]: "baseline shall be established ... (b) taking into account of uncertainties and using conservative assumptions". The above mentioned requirements are not met with regard to conservative assumptions as the maximum steel output data are used to calculate baseline GHG emissions.</p> <p>Conclusion is pending a response to CAR 10, CAR 11, CAR 12, CAR 13, and CAR 14, CAR 15, CAR 16 and CAR 11.</p>		
<p>B.1.5. Is all literature and sources clearly referenced?</p>	<p>1,2</p>	<p>DR</p>	<p>CAR 20. Please provide a correct reference for the Guidance on criteria for baseline setting and monitoring in PDD Section B.1 on p.11, on p. 16, on p. 20 and on p. 23 [2].</p> <p>The same request pertains actual for:</p> <ul style="list-style-type: none"> - the sources for technological data in Table A.2-1 on p. 2 and Table A.4-1 on p. 8; - "Development strategy of the metallurgy of the Russian Federation until 2015", Source: http://www.minprom.gov.ru in Section B.2 on p. 16. The right title of the document is "Development strategy of the metallurgy of the Russian Federation until 	<p>CAR 20</p>	<p>OK</p>



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

			2020”; - a footnote 7 in Section B.3 on p. 18 to IPCC is not full; - to IPCC, 2006 as a reference for determining CO2 emissions both in project and baseline scenario for steel-melting furnaces, ladle furnace, foundry plant, lime calcining furnaces.		
B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project					
B.2.1. Is the proposed project activity additional?	1,2, 4,5	DR	To prove the project additionality, an approach is used with references to Annex 1 of [2] based on analysis that «... <i>the project scenario is not part of the identified baseline scenario and that the project will lead to reductions of anthropogenic emissions by sources ...</i> » It is stated in Section B.2 that the additionality is demonstrated through a “review of Project alternatives and key factors that affect the implementation of Project alternatives showed that the Project activity is not a Baseline Scenario due to the presence of significant barriers for its implementation”. In fact, to prove the project additionality the barriers analysis was applied similar to the described in Methodological Tool “Combined tool	CAR 21 CAR 22 CAR 23 CAR 24 CAR 25 CAR 26 CAR 27 CAR 28 CAR 29 CAR 31 CAR 32 CAR 33	OK OK OK OK OK OK OK OK OK OK OK



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

		<p>to identify the baseline scenario and demonstrate additionality" version 02.2 [5].</p> <p>Two Alternative scenarios (A) were listed namely:</p> <p><u>A 1. Implementation of the Project without it being registered as a JI Project.</u></p> <p><u>A 2. Continuation of the current situation.</u></p> <p>All the alternatives do not face any prohibited barriers with regard to the Russian Federation legislation.</p> <p>Three main key factors that are directly or indirectly affect the implementation of the identified two Alternative scenarios listed in Section B.2 were identified and assessed: (1) investment barrier; (2) technological barriers:</p> <p>(a) lack of infrastructure for implementation of the alternative scenarios;</p> <p>(b) absence of prevailing practice («first of its kind»);</p> <p>(c) absence of skilled and/or properly trained labour; and (3) financial barrier (cost efficiency).</p> <p>To show that A1 could not be considered as viable one the financial barrier (cost efficiency) in form of investment analysis has been conducted with the use of the benchmark analysis method as per [5].</p> <p>The Russian Federation Central Bank refinancing rate was applied as 11 % at the time of de-</p>	<p>CAR 34</p>	<p>OK</p>
--	--	--	---------------	-----------



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

		<p>cision made and consider as a conservative benchmark. The risk factor was not applied.</p> <p>So IRR benchmark used in investment analysis assumed as 11 %.</p> <p>The calculations show that IRR of the project = 5.81% that is well below the established threshold. Hence, the project is not financially and economically attractive (without revenue from ERU sale). The verifier has checked the provided spreadsheet and found the calculations correct.</p> <p>All the above identified barriers are influencing the implementation of the A 1 (project scenario). The assessment results are presented in Section B.2 Table B.2-1.</p> <p>Investment analysis of A 2 has shown that the recourse cost saving effect due to a higher EAF efficiency cannot compensate for high investment costs (8,717,018 KRUB) without the revenue from the sale of ERU's and, as a result, the project has negative NPV. The project payback within the planning horizon can be ensured only by means of including the additional funds, drawn from the sales of ERU's, with IRR = 11.16% and NPV = 45,048,11 KRUB.</p> <p>Therefore, the A 2 is taken as the baseline scenario.</p> <p>So, the project provides emission reduction that is additional to any that would otherwise</p>		
--	--	--	--	--



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

		<p>occur.</p> <p>CAR 21. The old version 01 instead of the actual 02 of Guidance on criteria for baseline setting and monitoring is used for the baseline justification. Refer to Section B.2 on p. 12 [2].</p> <p>CAR 22. It is not explicitly indicated which of approaches, defined in para 2 of the annex 1 to the Guidance on criteria for baseline setting and monitoring to demonstrate addtionality is chosen. In PDD, the approach similar to that in PDD CDM Methodological Tool "Combined tool to identify the baseline scenario and demonstrate addtionality is used [5]. Please provide a justification of its applicability with clear and transparent description, as well as references [2].</p> <p>CAR 23. There is no consistency with regard to the baseline identification. Please refer to Section A.2, p. 2, Section B.1. p. 11 and Section B., p.14, and Section B.2, p.12 [2].</p> <p>CAR 24. The baseline scenario being identified as Alternative 2 means continuation a business-as-usual situation, i.e. profiled steel production at the existed four rolling mills (##1-4, refer to Section A.2, p.2). But it is stated in PDD Section B.2 on p.12 that only a rolling mill # 1 is engaged in the profiled steel production both in the project and baseline scenario.</p> <p>CAR 25. Alternative scenario as "continuation</p>		
--	--	--	--	--



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

		<p>of the current situation as the production of steel in the open-hearth furnaces, processing of steel in the ladle furnace, casting of steel into moulds, rolling of steel billets at the rolling mills ##2-4 without implementing any significant changes in the technological process" is not identified and assessed [2].</p> <p>CAR 26. Please ensure the statement in Section B.2, p.15:"... before launching the operation of the EAF, the steel will be produced in open-hearth furnaces and casted on the CCM. This practice was introduced for the first time by Ashinskiy Metallurgical Works and did not exist in any iron-and-steel works in Russia" is correct with reference to the technological lead in Russian metallurgical Companies.</p> <p>CAR 27. There is no consistency in the steel output with regard to the baseline definition. Section A.2, p.3 states: "the baseline scenario provides for an added-on output of steel about 420,000 tonnes per year at other iron-and-steel works in Russia", but it is stated in Section B.2, p.12: "... it is assumed that the added steel output of 500,000 tonnes per year would be produced by the alternative scenario 2 at other iron-and-steel works in Russia"[2].</p> <p>CAR 28. The statement in PDD "another significant factor that defines the additionality of the Project is the Russian National Policy regarding ferrous metallurgy" is incorrect. Rele-</p>		
--	--	--	--	--



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

		<p>vant national and/or sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector should be taken into account at the baseline establishment stage and could not be considered as a relevant additionality proofs (refer to [3, para 13b,iii).</p> <p>CAR 29. The incorrect interpretation how the possible financial strategy of the projects in metallurgical Russian industry under the “Strategy for Development of Metallurgy in the Russian Federation until 2020” would be realized is presented in PDD. Refer to http://www.minprom.gov.ru/activity/metal.</p> <p>CAR 30. Investment analysis lacks transparency as to the provision of input data and assumptions so that a reader could reproduce the analysis and obtain the same results. Otherwise the spreadsheet with the analysis should be attached to PDD. Please also justify all the input data taken for investment analysis [2].</p> <p>CAR 31. It is not explained how JI mechanism helps to alleviate the Investment barrier.</p> <p>CAR 32. Provide evidence that input values used in the investment analysis (e.g. total project investments, electricity and raw material costs, inflation, internal threshold) were valid and applicable at the time of the investment decision taken by the project participant [2].</p>		
--	--	--	--	--



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

			<p>CAR 33. Please include a sensitivity analysis to show whether the conclusion regarding the financial/economic attractiveness is robust.</p> <p>CAR 34. Common practice analysis is missing what does not allow determining if the project is additional. Provide an analysis to which extent similar activities to the proposed project activity have been implemented previously or are currently underway. If similar activities are observed, then essential distinctions between the proposed project activity and similar activities shall reasonably be explained.</p>		
B.2.2. Is the baseline scenario described?	1,2	DR	Please refer to PDD Section B.2.		OK
B.2.3. Is the project scenario described?	1,2	DR	<p>The project scenario, being Alternative 1, is described in PDD Sections A.4.2. A.4.3, B.2.</p> <p>Conclusion is pending a response to CAR 02, CAR 05, CAR 06, CAR 07, CAR 12, CAR 13, CAR 17, CAR 28, CAR 29 and CAR 30-34.</p>	Pending	OK
B.2.4. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario included?	1,2	DR	Conclusion is pending a response to CAR 07, CAR 16, CAR 17, and CAR 18.	Pending	OK
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?	1,2	DR	<p>According to PDD Section B.2, the project activity itself is not a likely baseline scenario due to significant barriers.</p> <p>Conclusion is pending a response to CAR 21, CAR 22, CAR 23, CAR 24, CAR 26, CAR 27, CAR 28, CAR 29 and CAR 30-33.</p>	Pending	OK
B.2.6. Are national policies and circumstances relevant to the	1,2	DR	Currently “AMW” has no commitments to fed-		OK

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

baseline of the proposed project activity summarized?			eral, regional or municipal authorities regarding the open-hearth furnace operations shutdown (refer to PDD Section A.4.2 and B.2). “Strategy for Development of Metallurgy in the Russian Federation until 2020” is the considered as Russian policy and circumstances relevant to the baseline of the proposed project activity.		
B.3. Description of how the definition of the project boundary is applied to the project activity					
B.3.1. Are the project’s spatial (geographical) boundaries clearly defined?	1,2,3	DR I	Project and baseline boundaries are illustrated in Fig D.1-1 (baseline boundary) and Fig D.-2 (project boundary) in Section D.1 rather than in Section B.3. CAR 35. The assessment with regard to the provisions of paragraph 14 and 16 of the JISC Guidance for baseline setting and monitoring [3] towards to the project’s spatial boundaries definition is not presented in PDD Section B.3 with regard to the CH4 and N2O exclusion. It could not be treated as a conservative approach in terms of the project GHG emissions [2]. Section E does not include the leakage assessment as stated in Section B.3 Table B.3-2.	CAR 35	OK
B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline					
B.4.1. Is the date of the baseline setting presented (in DD/MM/YYYY)?	1,2	DR	The date of the baseline setting is 01/09/2009.		OK
B.4.2. Is the contact information provided?	1,2	DR	The baseline was developed by CJSC “Na-		OK

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

			<p>tional Carbon Sequestration Foundation” (Moscow) Contact person: Roman Kasakov, principal specialist. e-mail: KazakovRA@ncsf.ru Tel.: +7 499 788 78 35 ext. 113 Fax: +7 499 788 78 35 ext. 107</p>		
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	<p>It is indicated that CJSC “National Carbon Sequestration Foundation” is not a project participant listed in Annex 1 of the PDD [2]. CAR 36. CJSC “National Carbon Sequestration Foundation” is not listed in Annex 1 of the PDD [2].</p>	CAR 36	OK
C. Duration of the project and crediting period					
C.1. Starting date of the project					
C.1.1. Is the project’s starting date clearly defined?	1,2	DR	<p>June 2006 is justified as the project’s starting date as start of construction (refer to PDD p.31 Section C1). CAR 37. The starting date of a JI project is the date on which the implementation or construction or real action of the project begins [2]. Though the project includes two stages, one starting date of the project should be indicated. Please refer to Section A.4.2 Diagram A.4-1 on p.8 [2].</p>	CAR 37	OK
C.2. Expected operational lifetime of the project					
C.2.1. Is the project’s operational lifetime clearly defined in years and months?	1,2	DR	<p>CAR 38. The project’s operational lifetime in months is not defined [2]. Please ensure the</p>	CAR 38	OK

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

			unique project's operational lifetime in months. Please refer to Section A.4.2 Diagram A.4-1 on p.8 [2].		
C.3. Length of the crediting period					
C.3.1. Is the length of the crediting period specified in years and months?	1,2	DR	CAR 39. The length of the crediting period in months is not defined [2].	CAR 39	OK
D. Monitoring Plan					
D.1. Description of monitoring plan chosen					
D.1.1. Is the monitoring plan defined?	1,2,3	DR	<p>The monitoring plan is defined on the basis of an own approach without using any approved methodologies.</p> <p>Option 1 – Monitoring of the emissions in the project scenario and baseline scenario – is chosen.</p> <p>The carbon balance method is used for calculation of direct CO₂ emissions with reference to carbon balance method in line with Section 4.2.2 of Chapter 4 of “2006 IPCC Guidelines for National Greenhouse Gas Inventories” and amendments in the part of monitoring of CO₂ emissions during generation of electricity at MMK own plants, consumption of electricity in EAFP, generation and consumption of air blast in BFP. Refer to PDD Section D.1.1.</p> <p>Emissions during production of pig iron in blast furnace plant include blast furnace dust and scrubber sludge with carbon context of 12,6 % (company's data) and this fraction is conservatively considered as leakage emission outside</p>	CAR 40 CAR 42 CAR 43 CAR 44 CAR 45	OK OK OK OK OK



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

		<p>MMK (refer to PDD Section D.1.3). Data to be collected is defined in PDD Sections D.1.1.1 and D.1.1.3.</p> <p>CAR 40. Please explicitly indicate which of the approaches regarding monitoring, defined in the JISC Guidance on criteria for baseline setting and monitoring is chosen [2].</p> <p>CAR 41. Table with default data (calculated/fixed ex-ante) applied for both baseline and project CO₂ emission calculations are not identified and numbered in PDD Section D.1 (refer to p.25-29) [2].</p> <p>CAR 42. The term "methodology" should be replaced by an approach or method in terms of CO₂ emission factor for steel production (incremental part). Methodology as per se has not been prescribed as a tool for JI mechanism [2]. Refer to PDD Section D.1, p.27 and Annex 4.</p> <p>CAR 43. There is no description in PDD of the assumption to calculate specific technological parameters and process emission factor for profiled steel production according to the baseline. Please state how uncertainties are taken into account and conservativeness is safeguarded with regard to the applied assumption to calculate the factor based on historical production data as average for 2006-2007. Please include in PDD the historical production data for 2006-2007 to ensure transparency [2].</p>		
--	--	---	--	--



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

			<p>CAR 44. Please include in Section D.1 the data and sources of parameters which are determined once and are taken as constants during monitoring but are not available at the stage of determination: (1) specific consumption of fuel and raw materials for steel production in the open-hearth plant is taken as a constant following the launch of the EAF; (2) specific pig iron consumption for the steel production according to the baseline is taken as a constant following the launch of the EAF. Please state how uncertainties are taken into account and conservativeness is safeguarded with regard to the applied assumption [2].</p>		
D.1.2. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.	1,2	DR	This option is selected.		OK
D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.	1,2	DR I	<p>Data to be collected in order to monitor emissions from the project is defined in PDD Section D.1.1.1.</p> <p>Parameters which are continuously monitored during the crediting period:</p> <ul style="list-style-type: none"> - consumption of fuel, carbonaceous raw materials, electric power and other energy sources as per project scenario for all emission sources is determined on the basis of actual monitoring data; <p>These data and relevant monitoring points are defined in PDD Section D.1.1.2 as follows:</p> <ul style="list-style-type: none"> - $PE_{SP,y}$ - project emissions from steelmaking furnaces, tCO₂; 	CAR 45 CL 02	OK OK



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

		<ul style="list-style-type: none"> - PE_{LF,y} - project emissions from ladle furnace, tCO₂; - PE_{SC,y} - project emissions from continuous casting machine (CCM), tCO₂; - PERP_{,y} - project emissions from rolling plant, tCO₂; - PE_{LP,y} - project emissions from lime production, tCO₂; - PE_{MP,y} - project emissions from foundry plant, tCO₂; - PE_{IP,y} - project emissions from pig iron production outside JSC AMW, tCO₂; <p>There are 40 parameters to be monitored within the project boundary to get the above project emission (refer to Section D.1.1.1).</p> <p>Parameters that are not monitored throughout the crediting period, but are determined only once, and that are available already at the stage of the PDD development, have been described and determined in PDD Section D.1 Table on p.25-29.</p> <p>There are no parameters that are not monitored throughout the crediting period, but are determined only once, and that are not available already at the stage of determination regarding the PDD.</p> <p>It is defined that the data will be archived elec-</p>		
--	--	---	--	--

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

			<p>tronically and on paper.</p> <p>CAR 45. Please state how uncertainties are taken into account and conservativeness is safeguarded in respect to the applied fixed ex-ante carbon content of steel data as 0.0025t C / t. PDD lacks the out put data of steel quality (refer to PDD Section D.1 Table on p. 26) [2].</p> <p>CL 02. Please clarify the approach of selecting the key information and data used for selection of the baseline and used for the project emissions monitoring [2]. Note that the data (refer to PDD Section D.1 Table on p. 26), used both for baseline and project emissions calculation, do not include in Section B.2 as the key information and data.</p>		
D.1.4. Description of the Formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2,5	DR	Description of the formulae used to estimate CO2 emissions of GHG from metallurgical conversions during production of profiled steel billet are described in PDD Section D.1.1.2. These are Formulae (1) – (8.5) on p. 41-52 presented in PDD Section D.1.1.2. They allow calculating CO2 project emissions on the basis of data defined in D.1.3 above. The formulae are numbered. The formulae were checked and found correct.		
D.1.5. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived.	1,2	DR I	Relevant data necessary for determining the baseline emissions are presented in section D.1.1.3 (refer to PDD Section B.1 pp.14-21). Parameters which are continuously monitored during the crediting period:	CAR 46	OK



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

		<ul style="list-style-type: none"> - specific consumption of fuel, carbonaceous raw materials, electric power and other energy sources in the baseline for open-hearth furnaces, ladle furnace, lime production, rolled metal production, are calculated on the basis of actual data for fuel, raw materials, electric power and other energy sources consumption as well as product manufacturing data. <p>Baseline direct CO2 emissions are calculated based on parameters which are determined once and are taken as constants for the whole monitoring period. They are available at the stage of determination:</p> <ul style="list-style-type: none"> - specific steel consumption (steel billets) for rolled metal according to the baseline is calculated on the basis of historical data on the steel billets consumption f and rolled metal production in 2006-2007; - specific raw materials and fuel consumption for molds production is calculated on the basis of historical data on the fuel and raw materials consumption in the foundry plant and molds production in 2006-2007; - carbon content of pig iron, steel, heavy fuel oil, natural gas, carbonaceous raw materials is fixed ex-ante with reference to IPCC, 2006; National Inventory Report, 2009; - CO2 emission factors from production of electric power supplied from outside, are fixed ex-ante with reference to Operational Guide- 		
--	--	--	--	--



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

		<p>lines for Project Design Documents of Joint Implementation Project. Volume 1: General guidelines, Ministry of Economic Affairs of the Netherlands, 2004;</p> <p>CO2 emission factors from pig iron and steel production at other metallurgical plants as per project activity are calculated on the basis of data provided by the National Inventory Report, 2009.</p> <p>They are also explained within the Section D.1.1.4 (refer PDD Section D.1.1.4, pp. 60-85).</p> <p>There are no parameters that are not monitored throughout the crediting period, but are determined only once, and that are not available already at the stage of determination regarding the PDD.</p> <p>CAR 46. It is stated in Section D.1.1.4 that “following the launch of the EAF, specific carbonaceous raw material (<i>i</i>) consumption in steelmaking furnaces according to the baseline ($SRMC_{i,SP,BL,y}$) will be constant. Specific consumption will be calculated by the formula (1.1.1.2) as an average value $SRMC_{i,SP,BL,y}$ for the operation period of the steel plant since the commissioning of the ladle furnace till the commissioning of the EAF”. The data of commissioning date of the ladle furnace and carbonaceous raw material (<i>i</i>) consumption in steelmaking furnaces according to the baseline ($SRMC_{i,SP,BL,y}$) calculated, as shown in spread-</p>		
--	--	--	--	--



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

			sheet (based on historical production date 2006-2008), are not presented in PDD to ensure transparency [2]. Conclusion is pending a follow-up on CL 02.		
D.1.6. Description of the Formulae used to estimate baseline emissions (for each gas, source etc, emissions in units of CO2 equivalent).	1,2	DR	These are Formulae (1) – (9.5) presented in PDD Section D.1.1.4, which allow to uniformly calculating CO2 baseline emissions. Detailed and transparent description of the formulae is given. The formulae were checked and found correct.		OK
D.1.7. Option 2 – Direct monitoring of emissions reductions from the project (values should be consistent with those in section E)	1,2	DR	Not applicable.		OK
D.1.8. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived.	1,2	DR	Not applicable.		OK
D.1.9. Description of the Formulae used to calculate emission reductions from the project (for each gas, source etc; emissions/emission reductions in units of CO2 equivalent).	1,2	DR	Not applicable.		OK
D.1.10. If applicable, please describe the data and information that will be collected in order to monitor leakage effects of the project.	1,2	DR	“Not applicable” is stated in PDD Section D.1.3. CAR 47. There is no evidence that assessment of potential leakage of the project is undertaken and an explanation is given as to which source of leakage is to be calculated and which can be neglected. Refer to [2] para 18, p.6.	CAR 47	OK

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

D.1.11. Description of the Formulae used to estimate leakage (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2	DR	Conclusion is pending a response to CAR 35.	Pending	OK
D.1.12. Description of the Formulae used to estimate emission reductions for the project (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2	DR	This is the straightforward Formula (D.1.4.-1) $ER_y = BE_y - PE_y$. Refer to PDD Section D.1.4.		OK
D.1.13. Is information on the collection and archiving of information on the environmental impacts of the project provided?	1,2	DR I	The environmental monitoring at “AMW” is carried out in accordance with environmental legislative requirements of the Russian Federation. The company periodically monitors its emission parameters, according to the schedules of environmental impact monitoring. Supporting documentation will be checked during the site visit.		OK
D.1.14. Is reference to the relevant host Party regulation(s) provided?	1,2	DR	CAR 48. References to the Russian Federation regulations with regard to the environmental impacts of the project are not provided in PDD as required in [2], Section D.1.5.	CAR 48	OK
D.1.15. If not applicable, is it stated so?	1,2	DR	Refer to D.1.14.	Pending	OK
D.2. Qualitative control (QC) and quality assurance (QA) procedures undertaken for data monitored					
D.2.1. Are there quality control and quality assurance procedures to be used in the monitoring of the measured data established?	1,2	DR I	The measurement devices are envisaged to be calibrated periodically by the specialized organization. This is confirmed at the site visit.		OK

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

D.3. Please describe of the operational and management structure that the project operator will apply in implementing the monitoring plan					
D.3.1. Is it described briefly the operational and management structure that the project participants(s) will implement in order to monitor emission reduction and any leakage effects generated by the project	1,2	DR I	Refer to PDD Section D.3.		OK
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
D.4.1. Is the contact information provided?	1,2	DR	Contact person: Roman Kasakov, principal specialist. e-mail: KazakovRA@ncsf.ru Tel.: +7 499 788 78 35 ext. 113 Fax: +7 499 788 78 35 ext. 107		OK
D.4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	It is indicated that CJSC “National Carbon Sequestration Foundation” is not a project participant should be listed in Annex 1 of the PDD [2]. Conclusion is pending a request to CAR 36.	Pending	OK
E. Estimation of greenhouse gases emission reductions					
E.1. Estimated project emissions					
E.1.1. Are described the Formulae used to estimate anthropogenic emissions by source of GHGs due to the project?	1,2	DR	These are Formulae numbered in Section D.1.1.2. The common results are presented in PDD Section E.1. These were checked and found correct. CAR 49. Estimates of anthropogenic emis-	CAR 49	OK

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

			sions of GHG by Combined heat and power station (CHP) and power equipment plant, identified as sources where greenhouse gas emissions occur as a result of the project implementation, are not presented in Section E.1 as per [2]. The same request pertain actual to the Section E.4 in respect to account facilities, located outside the Ashinskiy Metallurgical Works (electric power system - grid). Refer to PDD Section B.3, p.17.		
E.1.2. Is there a description of calculation of GHG project emissions in accordance with the Formula specified in for the applicable project category?	1,2	DR	<p>GHG project emissions PE are calculated by Formulae numbered in Section D.1.1.2 with result presented to the verifier on the excel spreadsheet.</p> <p>Calculations results of GHG emissions PE are shown in PDD Section E.1 and in Table 3 on p.93 PDD and found correct.</p> <p>Conclusion is pending also a response to CAR’s 11-12, 13, 18, 35, 43, 45-47, and CAR 50, which may result in recalculation of the CO2 emissions.</p>	Pending	OK
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	1,2	DR	As the project provides to the more efficiency use of row materials and fuel by steel production and processing in comparison to the base-line scenario (refer to PDD, Section A.4.3.1, table A.4.3-1) the project implementation brings to the reduction of row materials and fuel consumption and accordingly to reduction of the leakage arising from row materials and fuel use (e.g. extraction, processing, transport).		OK

Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

			Thus, the leakage is negligible and has not been taken into account with relation to the conservative estimation of emission reductions.		
E.2. Estimated leakage					
E.2.1. Are described the Formulae used to estimate leakage due to the project activity where required?	1,2	DR	Conclusion is pending a response to CAR 35. To be fulfilled after receiving the updated PDD	Pending	OK
E.2.2. Is there a description of calculation of leakage in accordance with the Formula specified in for the applicable project category?	1,2	DR	Conclusion is pending a response to CAR 35.	Pending	OK
E.2.3. Have conservative assumptions been used to calculate leakage?	1,2	DR	Conclusion is pending a response to CAR 35.	Pending	OK
E.3. The sum of E.1 and E.2.					
E.3.1. Does the sum of E.1. and E.2. represent the project activity emissions?	1,2	DR	The sum is presented in Section E.3.1 in a tabular format. Conclusion is pending a response to CAR 06, CAR 18, CAR 19, and CAR 50.	Pending	OK
E.4. Estimated baseline emissions					
E.4.1. Are described the Formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline using the baseline methodology for the applicable project category?	1,2	DR	These are Formulae numbered in Section D.1.1.4. The common results are presented in PDD Section E.1. These were checked and found correct. Conclusion is pending a response to CAR 06, CAR 18, CAR 19, and CAR 50.	Pending	OK
E.4.2. Is there a description of calculation of GHG baseline emissions in accordance with the Formula specified for the applicable project category?	1,2	DR	GHG baseline emissions BE are calculated by Formulae numbered in Section D.1.1.4 with result presented to the verifier on the excel	CAR 50	OK

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

			<p>spreadsheet.</p> <p>Calculations results of GHG emissions PE are shown in PDD Section E.4 and in Table 3 on p.94 PDD.</p> <p>CAR 50. As it was found out at the site visit and then discussed with the project owners the incorrect data for the steel production in EAF for 2007 was applied for the baseline emission calculation: 652,153.4 tonnes (technical report 2007 for EAF) instead of 649,695.7 tonnes (PDD, excel spreadsheets). Please ensure the needed corrections are done</p>		
E.4.3. Have conservative assumptions been used to calculate baseline GHG emissions?	1,2	DR	<p>Specific steel consumption for rolled metal production outside JSC AMW ($S_{SCR,P,OUT,y}$), used in the actual rolled metal production outside JSC AMW according to the baseline calculation was assumed as 1 (or 100%) based on a conservative approach.</p> <p>Conclusion is pending a response to CAR 19.</p>	Pending	OK
E.5. Difference between E.4. and E.3. representing the emission reductions of the project					
E.5.1. Does the difference between E.4. and E.3. represent the emission reductions due to the project during a given period?	1,2	DR	<p>The difference between E.4 and E.3 equal 1.973.664.9 tCO₂-eq and represents the total emission reductions in 2008-2012 due to the project implementation. Refer to PDD Section E. 5.</p> <p>Conclusion is pending a response to CAR 06, CAR 18, CAR 19, and CAR 50, which may re-</p>	Pending	OK

Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

			sult in recalculation of the CO2 emissions.		
E.6. Table providing values obtained when applying Formulae above					
E.6.1. Is there a table providing values of total CO ₂ abated?	1,2	DR	PDD Section E.6 in a tabular format provides the total values of project emissions, baseline emissions, and emission reductions in accordance with the JI reporting format. Conclusion is pending a response to CAR 06, CAR 18, CAR 19, and CAR 50.	Pending	OK
F. Environmental Impacts					
F.1. Documentation on the analysis of the environmental impacts of the project, including trans-boundary impacts, in accordance with procedures as determined by the host Party					
F.1.1. Has an analysis of the environmental impacts of the project been sufficiently described?	1,2	DR I	Yes. Refer to PDD Section F.1.		OK
F.1.2. Are there any host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	1,2,5	DR I	Under the RF Urban Development Code N 190-Φ3 [5], the capital construction cannot start without an authority's permission. The latter is granted if there is a positive conclusion of the state expertise on the project documentation, which shall contain the results of EIA. Permissions of the environmental authority Rostekhnadzor shall also be issued for both the construction of the object and for its exploitation. Once the new equipments have been constructed and commissioned, it should have all the permissions granted. .	CAR 51	OK



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

			Environmental permissions will be checked during verifier’s site-visit and found out in compliance with RF environmental legal requirements. CAR 51. Please include in PDD Section F.1 references to the existed official authority’s permissions as per Russian Federation requirements to the activity in question as per [2].		
F.1.3. Are the requirements of the National Focal Point being met?	1,2,6,7	DR I	The requirements of the National Focal Point to present the EIA should be met before the submission of the project to the Coordination Centre of National Focal Point [7, 8]. Refer to F.1.		OK
F.1.4. Will the project create any adverse environmental effects?	1,2	DR I	Permits for Air Emissions would be checked during verifier’s site-visit and found out in compliance with RF environmental legal requirements.		OK
F.1.5. Are transboundary environmental impacts considered in the analysis?	1,2	DR I	The project activity has no transboundary environmental impacts.		OK
F.1.6. Have identified environmental impacts been addressed in the project design?	1,2	DR I	To be checked during site visit.	Pending	OK
G. Stakeholders’ comments					
G.1.Information on stakeholders’ comments on the project, as appropriate					
G.1.1. Is there a list of stakeholders from whom comments on the project have been received?	1,2	DR I	There is no information about any comments from stakeholders.		OK



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

G.1.2. The nature of comments is provided?	1,2	DR I	Refer to G.1.		OK
G.1.3. Has due account been taken of any stakeholder comments received?	1,2	DR I	Refer to G.1.		OK



Determination Report on JI project
 "Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation"

Table 4 Legal requirements

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Legal requirements					
1.1. Is the project activity environmentally licensed by the competent authority?	1,2	DR	Refer to F.1.		OK
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?	1,2	DR	The conditions of the environmental permissions have been checked during verifier's site-visit.		OK
1.3. Is the project in line with relevant legislation and plans in the host country?	1,2	DR	Yes, the project is in line with relevant legislation and plans in the host country.		OK



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

Table 5 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
<p>CAR 01. The project has no approval of the Host Party.</p>	<p>1 Table 1</p>	<p>According to the Russian Federation Government Decree № 843 “On Measures of Realization of Article 6 of Kyoto Protocol to United Nations Framework Convention on Climate Change” dated on 28.10.2009 and Regulations “On Realization of Article 6 of Kyoto Protocol to United Nations Framework Convention on Climate Change” approved by the Government Decree № 843 dated on 28.10.2009 the Project shall be approved following the positive determination of the Project by an expert organization. The corresponding information is provided in the section A.5. of the PDD.</p>	<p>CAR 01 is closed.</p> <p>The project “Reconstruction of the steelmaking at JSC “Ashinskiy Metallurgical Works”, Asha, Russian Federation” is approved as JI project by the Order of Ministry of Economic Development #709 dated on 30.12.2010. Therefore the last paragraph of the Determination Opinion above become irrelevant as regards the pending approval, the pending authorisation and the recommendation for the approval.</p>



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
CAR 02. Please include in PDD Section A.2 as per [2] the description of the purpose of the project with a concise explanation of the technical description. Please summarize the history of the project including its JI component.	A. 2.2	The section A.2. of the PDD is corrected: the purpose of the project implementation and the history of the project are provided.	This CAR is closed based on a concise addition made in PDD Section A.3.
CAR 03. Please ensure the Table Format In Section A.3 for project participants and Party (ies) involved in the project are in line with requirements of [2]. Party B is to be listed.	A.3.1	The Table in the Section A.3. is corrected. The Party B is not determined on the moment of PDD elaboration.	This CAR is closed based on a concise correction made in PDD Section A.2.
CAR 04. Information about the transmission lines (35 kV) over a distance of 70 km and a scaling substation for powering the EAF (refer to PDD Section A.4.2 p. 7) should be included in the schedule.	A.4.2.1	The information about the transmission lines and the scaling substation is included in the schedule in the section A.4.2. (Diagram A.4-1.)	This CAR is closed based on a concise amendments made in PDD Section A.4.2, p.8 (Diagram A.4-1.).
CAR 05. The project envisages the step wise approach in commissioning of CCM and EAF (refer to Section B.4.3, Diagram A.4-1). The existed three open-hearth furnaces are intended to be operated till EAF commissioning date (2010), but the approach is not placed in the project and baseline boundaries schemes (refer to Section D.1, Fig.D.1-1 and Fig.D.1-2, on p,30-31). The explicitly description of the project scenario as per se in respect to the	A.4.2.1	The Figures indicated the step wise approach in commissioning of CCM and EAF are provided in the section D of PDD. The explicitly description of the project scenario is provided in the relevant section of the PDD.	This CAR is closed based on a concise amendments made in PDD.



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),

Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
applied approach is not presented in PDD Section A.4.2, B.1, B.2, D.1 [2].			
<p>CAR 06. As it was found out at the site visit and discussed with the project owners that the CCM has a production capacity of 800,000 th. tonnes of slab per year (as per technical Passport for CCM). The output of CCM, identified in PDD, is 1,000 th. tonnes of slab per year (refer to PDD Section A.4.2). Please provide a technical justification that the installed CCM could ensure the total steel production under the project of 1,000,000 tonnes per year and of rolled metal of 595,000 tonnes per year.</p>	A.4.2.1	<p>The technical justification of steel slabs production in the installed CCM at the rate of about 1,000,000 tonnes and rolled metal production in the Rolling plant #1 at the rate of about 595,000 tonnes is attached to the PDD.</p>	<p>The response is accepted.</p> <p>This CAR is closed based on a concise technical justification addition made in PDD.</p>
<p>CAR 07. Please provide a concise comparative data of the project and the baseline for fuel and carbonaceous feed consumption for steel and rolled metal production to show the reduction of raw materials and energy consumption in respect to step wise approach in commissioning of CCM and EAF (refer to Section A.4.3, Diagram A.4-1).</p>	A.4.3.1	<p>Comparative data of the project and the baseline for fuel, carbonaceous feed and energy consumption for steel and rolled metal production are provided in the section A.4.3.</p>	<p>This CAR is closed based on a concise addition made in PDD Section A.4.3. Now comparative data of the project and the baseline for fuel, carbonaceous feed and energy consumption for steel and rolled metal are presented in Section A.4.3.</p>
<p>CAR 08. Please provide in PDD Section</p>	A.4.3.1	<p>The assessment of the feed resource availability for the</p>	<p>This CAR is closed based</p>



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
A.4.3 an assessment of carbonaceous feed resource availability for the project.		project is provided in the section A.4.3. of the PDD.	on a concise addition made in PDD.
CAR 09. Please provide the correct references to the Host Party (Russian Federation) Regulatory documents.	A.5.1	The correct references to the Host Party regulatory are provided in the Section A.5.	This CAR is closed based on a concise correction made in PDD Section A.5. Correct references for the Host Party (Russian Federation) Regulatory documents are given.
CAR 10. A detailed theoretical description of the baseline in a complete and transparent manner as well as a justification in accordance with paragraph 23 through 29 of the “Guidance on criteria for baseline setting and monitoring” [4] is not provided in PDD Section B.1 as per [2]. In particular, the baseline is not identified by listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one, as per Paragraph 24 therein.	B.1.1	The detailed theoretical description of the baseline is provided in the section B.1. of the PDD in accordance with Appendix B of the JI guidelines and on criteria for baseline setting and monitoring (Version 02).	This CAR is closed based on a sufficient addition made in PDD Section B.1.
CAR 11. The baseline being identified in Section B.1 on p.11 means “continuation of the existing situation, namely operation of open-hearth furnaces for steel production” without making major additional capital investments	B.1.1	<u>Response 1 of 26.04.10.</u> The incremental part of the steel production outside the JSC “AMW” is calculated using the formulae 1.9.5.1. and 1.9.5.2 provided in the section D.1.1.4. using the following data:	<u>Conclusion on Response 1</u> Conclusion is pending. Refer to the new CAR 18 discussed after the site

Determination Report on JI project

"Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),

Asha, Russian Federation"

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
<p>contradicts with the described one in PDD Section A.2, p.2, that assumes the further use of the existing capacities for profiled steel billet production in open-hearth furnaces with a total output more than 650,000 tonnes per year with additional treatment in the ladle furnace (LF) and casting into moulds with total profiled steel output of 500,000 tonnes per year. The incremental part of the baseline scenario of steel about 420,000 tonnes per year will be produced at other iron-and-steel works in Russia.</p>		<p>Steel production in steelmaking furnaces under Project ($P_{STEEL,SP,PJ,y}$) = 1,000,000 t</p> <p>Rolled metal production in rolling plant under Baseline ($P_{STEEL,RP,BL,y}$) = 500,000 t</p> <p>Steel billets consumption for rolled metal production in rolling plant under Project ($C_{STEEL,BILLET,PJ,y}$) = 691,534 t</p> <p>Rolled metal production in rolling plant under Project ($P_{STEEL,RP,PJ,y}$) = 595,140 t</p> <p>The calculation is made in the excel file with GHG emission calculation attached to the PDD.</p> <p>The calculated value of incremental part of the steel production is exactly 419,000 t or about 420 th. T.</p>	<p>visit.</p> <p><u>Conclusion on Response 2 as to CAR 18.</u></p> <p>The response on the CAR 18 was accepted by the verifier. The specific emissions of steel production in the baseline are corrected with regard to conservative assumption for baseline setting. The table A.4.3-2. was corrected. The excel spread sheets are available to the verifier and found correct.</p> <p>The CAR 11 is closed.</p>
<p>CAR 12. As it was found out at the site visit and discussed with the project owners a specific project scenario identical to the realized one but with vertical batch was assessed by the project owners at the investment decision stage. The scenario is not identified in Section B.1 by listing and describing as a plausible future scenario on the basis of conserva-</p>	B.1.1	<p>The future scenario for EAF with vertical bath is considered by analysis of the future scenarios in the section B.1. The evidence that this future scenario was considered at the investment stage is provided in the PDD.</p>	<p>The CAR is closed now based on the amendments made in PDD.</p> <p>The future scenario for EAF with vertical bath was considered by analysis of the future scenarios in the section B.1.</p>



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
<p>tive assumptions; and selecting the most plausible one is made without the scenario in question (refer to Guidance on criteria for baseline setting and monitoring” [4], Paragraph 24 therein). Please provide the evidence that at the investment stage the respective incoming information was assessed by the project owners.</p>			
<p>CAR 13. As it was found out at the site visit and discussed with the project owners the project scenario (identified as Future scenario 1 in PDD Section B.1, p.14) aims “... melting of steel in the open-hearth furnaces, processing of steel in the ladle furnace, steel casting in the CCM and into the moulds, rolling of steel billets in the rolling plant #1...” Please note also that under the scenario about 30% of steel slabs are selling as production. The sufficient correction should be made in the PDD.</p>	B.1.1	The description of the future scenario 1 is corrected through the PDD.	<p>The amendments made in PDD by the project owners are accepted.</p> <p>The CAR is now closed.</p>
<p>CAR 14. The key information and data used to establish the baseline (variables, parameters, data sources etc.) are not provided in the prescribed tabular form in PDD Section B.1 and Annex 2 as per [2].</p>	B.1.1	The key information and data used to establish the baseline are provided in the prescribed tabular form in the Section B.1 and Annex 2 of the PDD.	This CAR is closed based on a concise addition made in PDD Section B.1 and Annex 2.



Determination Report on JI project

"Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),

Asha, Russian Federation"

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
<p>CAR 15. Please describe and justify in PDD Section B.1 the baseline chosen in accordance with appendix B of JI Guidelines and the JISC Guidance on criteria for baseline setting and monitoring [3] as required in [2].</p>	B.1.2	<p>The baseline is chosen by listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one taking into account the key factors that affect a baseline. The detailed information is provided in the section B.1. of the PDD.</p>	<p>This CAR is closed based on concise amendments given in PDD.</p> <p>A JI specific approach regarding baseline setting is used in accordance with Appendix B of the JI guidelines and paragraph 23 through 29 of the Guidance on criteria for baseline setting and monitoring (Version 02).</p>
<p>CAR 16. Please ensure that all key factors that affect the baseline listed in para 25 (a-g) of the Guidance on criteria for baseline setting and monitoring are taken into account as required in [2].</p>	B.1.2	<p>The all factors provided in the paragraph 25 (a-g) of the Guidance on criteria for baseline setting and monitoring (Version 02) are considered by baseline setting. In the section B.1. of the PDD is clearly described what factors are taken into account and whatever factors are excluded from consideration.</p>	<p>The corrections are accepted, the CAR is closed.</p>
<p>CAR 17. Please provide in Section B.1 in a transparent manner all assumptions, methodologies, parameters, data sources and key factors as required in para 26 of [2].</p>	B.1.4	<p>All assumptions, methodologies, parameters, data sources and key factors for baseline setting are provided in transparent manner in the section B.1. of the PDD.</p>	<p>This CAR is closed based on concise amendments given in PDD.</p>
<p>CAR 18 As it was found out at the site visit</p>	B.1.4	<p>The specific emissions of steel production in the base-</p>	<p>The corrections are ac-</p>



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
<p>and discussed with the project owners <i>Specific emissions of CO₂ by steel production, tCO₂/t</i> for the baseline calculation fixed ex-ante as 1.181 is not correct as it characterizes the project scenario technology and could not be applied therefore. Please provide appropriate justifications for the conservativeness approach in respect to the coefficient application in the baseline scenario and made a needed calculations (Refer to Section A.4.3, Table A.4.3-2 and correspondence excel spread sheets).</p>		<p>line are corrected with regard to conservative assumption for baseline setting. The table A.4.3-2. is corrected. The excel spread sheets are attached.</p>	<p>cepted, the CAR is closed. The verifier has checked the calculations and found them correct.</p>
<p>CAR 19. Steel production in steelmaking furnaces under baseline, $P_{STEEL,SP,BL,y}$, steel rolled metal production in rolling plant under baseline $P_{STEEL,RP,BL,y}$ for 2008 are fixed ex-ante as actual 2008 production steel output data. As per para 26 of Guidance on criteria for baseline setting and monitoring [3]:“baseline shall be established ... (b) taking into account of uncertainties and using conservative assumptions”. The above mentioned requirements are not met with regard to conservative assumptions as the maximum steel output data are used to calculate baseline GHG emissions.</p>	B.1.4	<p>The data of steel and rolled metal production under baseline are corrected. The conservative approach based on historical data instead of actual data is used for baseline setting.</p>	<p>The corrections are accepted, the CAR is closed. The verifier has checked the calculations and found them correct.</p>



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
<p>CAR 20. Please provide a correct reference for the Guidance on criteria for baseline setting and monitoring in PDD Section B.1 on p.11, on p. 16, on p. 20 and on p. 23 [2].</p> <ul style="list-style-type: none"> - The same request pertains actual for: - the sources for technological data in Table A.2-1 on p. 2 and Table A.4-1 on p. 8; - “Development strategy of the metallurgy of the Russian Federation until 2015”, Source: http://www.minprom.gov.ru in Section B.2 on p. 16. The right title of the document is “Development strategy of the metallurgy of the Russian Federation until 2020”; - a footnote 7 in Section B.3 on p. 18 to IPCC is not full; - to IPCC, 2006 as a reference for determining CO2 emissions both in project and baseline scenario for steel-melting furnaces, ladle furnace, foundry plant, lime calcining furnaces. 	B.1.5	The correct references are provided in the PDD.	<p>Correct references for the Guidance on criteria for baseline setting and monitoring and requested sources of data throughout PDD are given.</p> <p>This CAR is closed.</p>
<p>CAR 21. The old version 01 instead of the actual 02 of Guidance on criteria for baseline</p>	B.2.1	Corrected. The actual version of the Guidance on criteria for baseline setting and monitoring is used.	The corrections are accepted, the CAR is



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
setting and monitoring is used for the baseline justification. Refer to Section B.2 on p. 12 [2].			closed.
<p>CAR 22. It is not explicitly indicated which of approaches, defined in para 2 of the annex 1 to the Guidance on criteria for baseline setting and monitoring to demonstrate additionality is chosen. In PDD, the approach similar to that in PDD CDM Methodological Tool “Combined tool to identify the baseline scenario and demonstrate additionality is used [5]. Please provide a justification of its applicability with clear and transparent description, as well as references [2].</p>	B.2.1	<p>JI specific approach is used for demonstration of additionality of the project in accordance with the paragraph 2(a) of the Annex I to the “Guidance on criteria for baseline setting and monitoring”, (Version 02). The approved CDM methodologies and tools are not used for demonstration of additionality.</p> <p>The description of the approach chosen is given in the section B.2. of the PDD.</p>	<p>This CAR is closed based on concise amendments given in PDD. JI specific approach is used for demonstration of additionality of the project in accordance with the paragraph 2(a) of the Annex I to the “Guidance on criteria for baseline setting and monitoring”, (Version 02).</p>
<p>CAR 23. There is no consistency with regard to the baseline identification. Please refer to Section A.2, p. 2, Section B.1. p. 14 and Section B.2, p. 12 [2].</p>	B.2.1	<p>The consistency information with regard to the baseline identification is provided in the relevant section of the PDD.</p>	<p>The explanations are accepted due to amendments made in PDD, the CAR is closed.</p>



Determination Report on JI project

"Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),

Asha, Russian Federation"

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
<p>CAR 24. The baseline scenario being identified as Alternative 2 means continuation a business-as-usual situation, i.e. profiled steel production at the existed four rolling mills (##1-4, refer to Section A.2, p.2). But it is stated in PDD Section B.2 on p.12 that only a rolling mill # 1 is engaged in the profiled steel production both in the project and baseline scenario.</p>	B.2.1	<p>The existed four rolling mills (# 2850, #1500, #1400, #720) is described in the section A.2. of the PDD for demonstration of the technology structure of the JSC "AMW". But the rolling mill #1500, mill #1400, mill #720 are excluded from the further consideration as the project has not influence on they operation. The increased rolled metal production in rolling plant #1 (mill #2850) provides to increase of rolled metal selling but not to the increase or change of other rolling mills operation. The relevant information is provided in the section A.2., A.4.3., B.3. and D.1.</p>	<p>The explanations are accepted due to amendments made in PDD, the CAR is closed.</p>
<p>CAR 25. Alternative scenario as "continuation of the current situation as the production of steel in the open-hearth furnaces, processing of steel in the ladle furnace, casting of steel into moulds, rolling of steel billets at the rolling mills ##2-4 without implementing any significant changes in the technological process" is not identified and assessed [2].</p>	B.2.1	<p>All future scenarios are identified and assessed in the section B.1. and B.2. of the PDD in accordance with "Guidance on criteria for baseline setting and monitoring", (Version 02). The future scenario of the continuation of the current situation is determined as the future scenario 2: The continuation of the current situation. The production of steel in the open-hearth furnaces, processing of steel in the ladle furnace, casting of steel into moulds, rolling of steel billets at the rolling mill #1.</p>	<p>The response is accepted provided the amendments made in PDD, Section B.1 and B.2. The CAR is closed.</p>
<p>CAR 26. Please ensure the statement in Section B.2, p.15:"... before launching the operation of the EAF, the steel will be produced in open-hearth furnaces and casted on the CCM. This practice was introduced for the first time by Ashinskiy Metallurgical Works</p>	B.2.1	<p>The correct references are provided in the section B.1.</p>	<p>The response is accepted provided the amendments made in PDD, Section B.1. The CAR is closed.</p>



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
and did not exist in any iron-and-steel works in Russia” is correct with reference to the technological lead in Russian metallurgical Companies.			
<p>CAR 27. There is no consistency in the steel output with regard to the baseline definition. Section A.2, p.3 states: “the baseline scenario provides for an added-on output of steel about 420,000 tonnes per year at other iron-and-steel works in Russia”, but it is stated in Section B.2, p.12: “... it is assumed that the added steel output of 500,000 tonnes per year would be produced by the alternative scenario 2 at other iron-and-steel works in Russia”[2].</p>	B.2.1	<p><u>Response 1 of 04/09/2009</u> Corrected. The added steel production outside the JSC “AMW” is estimated at 420 000 t per year after EAF commissioning (See also the summary to CAR 09).</p>	<p><u>Conclusion on response 1</u> Conclusion is pending. Refer to the new CAR 18 issued after the site visit. <u>Conclusion on response 2</u> The response is accepted provided the amendments made in PDD due to the response on CAR 18. The CAR is closed.</p>
<p>CAR 28. The statement in PDD “another significant factor that defines the additionality of the Project is the Russian National Policy regarding ferrous metallurgy” is incorrect. Relevant national and/or sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector should be taken into account at the baseline establishment stage</p>	B.2.1	<p>Corrected. The provisions of Strategy of the development of metallurgy in the Russian Federation up to 2020 are considered by the baseline establishment stage.</p>	<p>The corrections are accepted due to amendments made in PDD, the CAR is closed.</p>



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
and could not be considered as a relevant additionality proofs (refer to [3, para 13b,iii).			
CAR 29. The incorrect interpretation how the possible financial strategy of the projects in metallurgical Russian industry under the “Strategy for Development of Metallurgy in the Russian Federation until 2020” would be realized is presented in PDD. Refer to http://www.minprom.gov.ru/activity/metal .	B.2.1	The correct interpretation of the Strategy for Development of Metallurgy in the Russian Federation until 2020 with corresponding references is provided in the PDD.	The corrections are accepted, the CAR is closed.
CAR 30. Investment analysis lacks transparency as to the provision of input data and assumptions so that a reader could reproduce the analysis and obtain the same results. Otherwise the spreadsheet with the analysis should be attached to PDD. Please also justify all the input data taken for investment analysis [2].	B.2.1	<u>Response 1 of 26.04.10.</u> Spreadsheet with references to the data sources has been attached to PDD.	<u>Conclusion on response 1</u> Conclusion is pending. Refer to the new CAR 12 issued after the site visit. <u>Conclusion on response 2</u> The response is accepted provided the amendments made in PDD due to the response on CAR 12. The CAR is closed.
CAR 31. It is not explained how JI mechanism helps to alleviate the Investment barrier.	B.2.1	Ashinskiy Metallurgical Works does not have sufficient funds for completing the Project (investment barrier). The additional income from selling of ERU allows attracting the necessary funding for completing of the Project: with the carbon financing the project is more	The explanations are accepted due to amendments made in PDD, the CAR is closed.



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		economically effective and the income from ERU sale can be guarantee timely repayment of credit and retirement of bonds.	
<p>CAR 32. Provide evidence that input values used in the investment analysis (e.g. total project investments, electricity and raw material costs, inflation, internal threshold) were valid and applicable at the time of the investment decision taken by the project participant [2].</p>	B.2.1	<p><u>Response 1 of 26.04.10.</u> Investment analysis was made on the base of data which was actual in 2006. It is confirmed by the references to the data sources in the spreadsheet.</p>	<p><u>Conclusion on response 1</u> Conclusion is pending. Refer to the new CAR 12 issued after the site visit. <u>Conclusion on response 2</u> The response is accepted provided the amendments made in PDD due to the response on CAR 12. The CAR is closed.</p>
<p>CAR 33. Please include a sensitivity analysis to show whether the conclusion regarding the financial/economic attractiveness is robust.</p>	B.2.1	<p><u>Response 1 of 26.04.10.</u> Sensitivity analysis has been included.</p>	<p><u>Conclusion on response 1</u> Conclusion is pending. Refer to the new CAR 12 issued after the site visit. <u>Conclusion on response 2</u> The response is accepted provided the amendments made in PDD due to the</p>



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
			response on CAR 12. The CAR is closed.
<p>CAR 34. Common practice analysis is missing what does not allow determining if the project is additional. Provide an analysis to which extent similar activities to the proposed project activity have been implemented previously or are currently underway. If similar activities are observed, then essential distinctions between the proposed project activity and similar activities shall reasonably be explained.</p>	B.2.1	<p>The common practice analysis is provided in the section B.2. of the PDD. There are the similar activities in the relevant geographical area but the essential distinctions between the proposed project activity and similar activities are reasonably explained. That demonstrates the project additionality.</p>	<p>The corrections are accepted due to amendments made in PDD, the CAR is closed.</p>
<p>CAR 35. The assessment with regard to the provisions of paragraph 14 and 16 of the JISC Guidance for baseline setting and monitoring [3] towards to the project’s spatial boundaries definition is not presented in PDD Section B.3 with regard to the CH4 and N2O exclusion. It could not be treated as a conservative approach in terms of the project GHG emissions [2]. Section E does not include the leakage assessment as stated in Section B.3 Table B.3-2.</p>	B.3.1	<p>The project boundaries definition regarding leakage and CH4 and N2O emissions is corrected in accordance with Guidance for baseline setting and monitoring (Version 02) and provided in the section B.3.</p>	<p>The corrections are accepted due to amendments made in PDD, the CAR is closed.</p>
<p>CAR 36. CJSC “National Carbon Sequestra-</p>	B.4.3	<p>The Annex 1 of the PDD is corrected. CJSC “National</p>	<p>The corrections are ac-</p>



Determination Report on JI project

"Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),

Asha, Russian Federation"

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
tion Foundation" is not listed in Annex 1 of the PDD [2].		Carbon Sequestration Foundation" is listed in the Annex 1. The contact information of CJSC "NCSF" is not presented as CJSC "NCSF" is not a project participant.	Accepted due to amendments made in PDD, the CAR is closed.
CAR 37. The starting date of a JI project is the date on which the implementation or construction or real action of the project begins [2]. Though the project includes two stages, one starting date of the project should be indicated. Please refer to Section A.4.2 Diagram A.4-1 on p.8 [2].	C.1.1	The starting date of a JI project is provided in the section C.3. of the PDD. The starting data is determined as date of CCM construction beginning.	The corrections are accepted due to amendments made in PDD, the CAR is closed.
CAR 38. The project's operational lifetime in months is not defined [2]. Please ensure the unique project's operational lifetime in months. Please refer to Section A.4.2 Diagram A.4-1 on p.8 [2].	C.2.1	The operational lifetime of the project is 15 years (180 months). The relevant information is provided in the section C.2.	The corrections are accepted due to amendments made in PDD, the CAR is closed. Please provide in PDD the reason for the operational lifetime of the project as 15 years (180 months).
CAR 39. The length of the crediting period in months is not defined [2].	C.3.1	The length of the crediting period is 156 months (from 01/01/2008 to 31/12/2020). The relevant information is provided in the section C.3. of the PDD.	The corrections are accepted due to amendments made in PDD, the CAR is closed.
CAR 40. Please explicitly indicate which of the approaches regarding monitoring, defined	D.1.1	The detailed description of the approach chosen regarding monitoring is provided in the section D.1. of the	The response is accepted.



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
in the JISC Guidance on criteria for baseline setting and monitoring is chosen [2].		PDD.	This CAR is closed based on the adequate corrections made to the PDD.
CAR 41. Table with default data (calculated/fixed ex-ante) applied for both baseline and project CO ₂ emission calculations are not identified and numbered in PDD Section D.1 (refer to p.25-29) [2].	D.1.1	<u>Response 1 of 26.04.10.</u> The table in the section D.1. is identified and numbered.	<u>Conclusion on response 1</u> Conclusion is pending. Refer to the new CAR 12 and CAR 18 issued after the site visit. <u>Conclusion on response 2</u> The response is accepted provided the amendments made in PDD due to the response on CAR 12. The CAR is closed.
CAR 42. The term “methodology” should be replaced by an approach or method in terms of CO ₂ emission factor for steel production (incremental part). Methodology as per se has not been prescribed as a tool for JI mechanism [2]. Refer to PDD Section D.1, p.27 and Annex 4.	D.1.1	The term “methodology” is replaced by the term “approach”.	The response is accepted. This CAR is closed based on the adequate corrections made to the PDD.
CAR 43. There is no description in PDD of	D.1.1	The assumption to calculate specific technological pa-	The corrections are ac-



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
<p>the assumption to calculate specific technological parameters and process emission factor for profiled steel production according to the baseline. Please state how uncertainties are taken into account and conservativeness is safeguarded with regard to the applied assumption to calculate the factor based on historical production data as average for 2006-2007. Please include in PDD the historical production data for 2006-2007 to ensure transparency [2].</p>		<p>Parameters and process emission factor is provided in the section D.1. of the PDD. The information about uncertainties and conservativeness of the calculated based on historical production data parameters are provided in the section B.1. The historical production data are provided in the Annex 2 of the PDD.</p>	<p>Accepted due to amendments made in PDD, the CAR is closed.</p>
<p>CAR 44. Please include in Section D.1 the data and sources of parameters which are determined once and are taken as constants during monitoring but are not available at the stage of determination: (1) specific consumption of fuel and raw materials for steel production in the open-hearth plant is taken as a constant following the launch of the EAF; (2) specific pig iron consumption for the steel production according to the baseline is taken as a constant following the launch of the EAF. Please state how uncertainties are taken into account and conservativeness is safeguarded with regard to the applied assumption [2].</p>	<p>D.1.1</p>	<p>The data and sources of parameters which are determined once and are taken as constants during monitoring period but are not available at the stage of determination are provided in the section D.1.</p> <p>The parameters will be calculated based on the historical data (from measuring equipment) as average for the long period (2006-2010). This ensures low uncertainties and conservativeness of the determined parameters.</p>	<p>The corrections are accepted due to amendments made in PDD, the CAR is closed.</p>



Determination Report on JI project

"Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),

Asha, Russian Federation"

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
<p>CAR 45. Please state how uncertainties are taken into account and conservativeness is safeguarded in respect to the applied fixed ex-ante carbon content of steel data as 0.0025t C / t. PDD lacks the out put data of steel quality (refer to PDD Section D.1 Table on p. 26) [2].</p>	D.1.3	<p>The analysis of the actual data of carbon content in steel produced at JSC "AMW" shows that average content is 16.9% (or 0.00169 tC / t steel). Though the use of carbon value content 0.25% (or 0.0025 tC / t steel) is conservative as it provided to the conservative emission reductions estimation: the emission reductions by steel production at JSC "AMW" is less by using the higher value of carbon content (0.25%).</p> <p>Besides as in the baseline scenario the added steel production outside the JSC "AMW" is considered the use of carbon content determined for steel production in Russia (National inventory report) ensures the comparable data use by estimation of emission reduction as results of steel production replacement in other Russian steel works.</p> <p>The uncertainties level by 0,25% carbon content value use is low. The deviation in emission reductions calculated using the actual average data (0.169%) is in range less than 0.1%.</p>	The CAR is closed providing that the explanations are placed in PDD.
<p>CAR 46. It is stated in Section D.1.1.4 that "following the launch of the EAF, specific carbonaceous raw material (<i>i</i>) consumption in steelmaking furnaces according to the baseline ($SRMC_{i,SP,BL,y}$) will be constant. Specific consumption will be calculated by the formula</p>	D.1.5	The historical data for steel production and carbonaceous raw material (<i>i</i>) consumption (as well fuel and energy resources consumption) by steelmaking are provided in the Annex 2 of the PDD.	The corrections are accepted due to amendments made in PDD, the CAR is closed.

Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
(1.1.1.2) as an average value $SRMC_{i,SP,BL,y}$ for the operation period of the steel plant since the commissioning of the ladle furnace till the commissioning of the EAF”. The data of commissioning date of the ladle furnace and carbonaceous raw material (<i>i</i>) consumption in steelmaking furnaces according to the baseline ($SRMC_{i,SP,BL,y}$) calculated, as shown in spreadsheet (based on historical production date 2006-2008), are not presented in PDD to ensure transparency [2].			
CAR 47. There is no evidence that assessment of potential leakage of the project is undertaken and an explanation is given as to which source of leakage is to be calculated and which can be neglected. Refer to [2] para 18, p.6.	D.1.10	The potential leakage is assessed in accordance with requirements of Guidance on criteria for baseline setting and monitoring (Version 02). The assessment shows that the leakage is neglected. The results of assessment are provided in the section B.3. of the PDD.	The corrections are accepted due to amendments made in PDD, the CAR is closed.
CAR 48. References to the Russian Federation regulations with regard to the environmental impacts of the project are not provided in PDD as required in [2], Section D.1.5.	D.1.14	The Russian Federation regulations with regard to the environmental impacts of the project are provided in the section D.1.5. of PDD.	The corrections are accepted due to amendments made in PDD, the CAR is closed.
CAR 49. Estimates of anthropogenic emissions of GHG by Combined heat and power station (CHP) and power equipment plant,	E.1.1	The estimated emissions are provided by sources in the section E. of the PDD.	The corrections are accepted due to amendments made in PDD, the



Determination Report on JI project
 “Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
 Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
identified as sources where greenhouse gas emissions occur as a result of the project implementation, are not presented in Section E.1 as per [2]. The same request pertain actual to the Section E.4 in respect to account facilities, located outside the Ashinskiy Metallurgical Works (electric power system – grid). Refer to PDD Section B.3, p.17.			CAR is closed.
CAR 50. As it was found out at the site visit and then discussed with the project owners the incorrect data for the steel production in EAF for 2007 was applied for the baseline emission calculation: 652,153.4 tonnes (technical report 2007 for EAF) instead of 649,695.7 tonnes (PDD, excel spreadsheets). Please ensure the needed corrections are done.	E.4.2	The data of steel production in 2007 are corrected. The technical report of steelmaking plant for 2007 is attached.	The corrections are accepted due to amendments made in PDD, the CAR is closed.
CAR 51. Please include in PDD Section F.1 references to the existed official authority’s permissions as per Russian Federation requirements to the activity in question as per [2].	F.1.2	The references to the existed official authority’s permissions are provided in the section F.1.	The corrections are accepted due to amendments made in PDD, the CAR is closed.
CL 01. Please clarify if provisions for meeting training needs with regards monitoring are made if appropriate.	A.4.2.4	The necessary consultation for monitoring implementation at JSC “AMW” was undertaken by CJSC “NCSF” in year 2009.	The clarifications are accepted with respect to including the information



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		<p>The Standard of JSC “AMW” is elaborated for monitoring procedures determination and quality of monitoring to guarantee: Industry standard #058-51-2009 “Monitoring of GHG Emission Reductions”, approved by Technical director on 18.11.2009.</p> <p>The additional training of Industry standard implementation will be undertaking in 2010.</p>	<p>into PDD. The evidence was provided at the site visit to the verifier.</p>
<p>CL 02. Please clarify the approach of selecting the key information and data used for selection of the baseline and used for the project emissions monitoring [2]. Note that the data (refer to PDD Section D.1 Table on p. 26), used both for baseline and project emissions calculation, do not include in Section B.2 as the key information and data.</p>	D.1.3	<p>The approach for selecting the key information and data used for selection of the baseline and used for the project emissions monitoring are added to the PDD.</p> <p>The key information and data used to establish the baseline (variables, parameters, data sources etc.) are provided in the section B.1. in prescribed tabular form.</p>	<p>The clarifications are accepted with respect to including the information into PDD. The evidence was provided at the site visit to the verifier.</p>



Determination Report on JI project

“Reconstruction of the steelmaking at JSC Ashinskiy Metallurgical Works (AMW),
Asha, Russian Federation”

Appendix B: Verifier's CV

Mrs. Vera Skitina, PhD (metallurgical)

Lead Verifier

Bureau Veritas Certification Russia Technical Director - Lead Auditor, Lead Tutor, Lead Verifier

She has over 15 years of experience in powder metallurgy, aluminium metallurgy, plastic metal working, physical-chemistry processes, gas production at power plant, environmental science. She worked in Irkutsk Aluminium Plant, SUAL powder metallurgy plant, Nadvoitzky aluminium plant, Central Scientific Institute of Metals. She is a Lead auditor of Bureau Veritas Certification for Quality Management Systems (IRCA registered), Environmental Management System (IRCA registered), Occupational Health and Safety Management System (IRCA registered). She performed over 200 audits since 2004. Also she is a Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and a Lead Tutor of the IRCA registered ISO 9001 Lead Auditor Training Course. She is an Assuror of Social Reports. She has undergone intensive training on Clean Development Mechanism /Joint Implementation and was/is involved in the determination of over 15 JI projects and verification of 5 JI projects.

Mr. Leonid Yaskin, PhD (thermal engineering)

Internal Technical Reviewer

Bureau Veritas Certification Rus General Director, Climate Change Local Manager, Lead Auditor, IRCA Lead Tutor, Lead Verifier, Internal Technical Reviewer

He has over 30 years of experience in heat and power R&D, engineering, and management, environmental science and investment analysis of projects. He worked in Krrzhizhanovsky Power Engineering Institute, All-Russian Teploelectroproject Institute, JSC Ergoperspectiva. He worked for 8 years on behalf of European Commission as a monitor of Technical Assistance Projects. He is a Lead auditor of Bureau Veritas Certification for Quality Management Systems (IRCA registered), Environmental Management System (IRCA registered), Occupational Health and Safety Management System (IRCA registered). He performed over 250 audits since 2002. Also he is a Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and a Lead Tutor of the IRCA registered OHSAS 18001 Lead Auditor Training Course. He is an Assuror of Social Reports. He has undergone intensive training on Clean Development Mechanism /Joint Implementation and was/is involved in the determination of over 50 JI projects.