DETERMINATION REPORT

GLOBAL CARBON BV

DETERMINATION OF THE IMPLEMENTATION OF ARC FURNACE STEELMAKING PLANT "ELECTROSTAL" AT KURAKHOVO, DONETSK REGION

REPORT NO. UKRAINE/0111/2010

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

DETERMINATION REPORT

Date of first issue: 04/06/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: Global Carbon BV	Client ref.: Lennard De Klerk

Summary:
Bureau Veritas Certification has made the determination of the "Implementation of Arc furnace Steelmaking Plant "Electrostal" at Kurakhovo, Donetsk region" project of Global Carbon BV located in premises of the Electrostal Plant, Kurakhovo town, Donetsk region, Ukraine on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Executive Board, as well as the host country criteria.

The determination scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final determination report and opinion. The overall determination, from Contract Review to Determination Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

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

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

Report No.: UKRAINE/0111/2010	Subject Group: JI	
Project title: "Implementation of Arc furnace Steelmaking Plant "Electrostal" at Kurakhovo, Donetsk region"		
Work carried out by: Ivan Sokolov – Team leader, Climate Change Lead Verifier Vera Skitina – Team member, Climate Change Lead Verifier Kateryna Zinevych – Team member, Climate Change Verifier		
Work verified by: Leonid Yaskin – Internal Technical Reviewer		
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Indexing terms

Climate Change, Project Design Document, Determination, Emission Reductions, Kyoto Protocol

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Abbreviations change

CAR	Corrective Action Request
JI	Joint Implementation
ERU	Emission Reduction Unit
CL	Clarification Request
CO_2	Carbon Dioxide
IE	Independent Entity
GHG	Green House Gas(es)
I	Interview
IETA	International Emissions Trading Association
MoV	Means of Verification
NGO	Non Government Organization
PCF	Prototype Carbon Fund
PDD	Project Design Document
UNFCCC	United Nations Framework Convention for Climate Change

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1 INTRODUCTION

Global Carbon BV has commissioned Bureau Veritas Certification to determinate its JI project “Implementation of Arc furnace Steelmaking Plant “Electrostal” at Kurakhovo, Donetsk region” (hereafter called “the project”) at premises of the Electrostal Plant, Kurakhovo town, Donetsk region, Ukraine.

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

1.1 Objective

The determination serves as project design verification and is a requirement of all projects. The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project’s compliance with relevant UNFCCC and host country criteria are 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).

UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Executive Board, as well as the host country criteria.

1.2 Scope

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

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

1.3 GHG Project Description

The purpose of this project is to reduce emissions of greenhouse gases by using modern technologies to improve steel production in the region. The project envisages the construction of a green field steel manufacturing plant, based on a modern electric arc furnace (EAF). The EAF installed allows production of steel from 100% scrap metal feedstock.

The new production facility will use less a carbon intensive method to produce steel than a typically used by the majority of existing Ukrainian enterprises. This will allow reducing of GHG emissions.

This project was initiated by Donetsk Metal Rolling Plant (DMRP), the owner of Electrostal. DMRP wishes to create a plant that would produce square billets required for DMRP. Previously all square billets were purchased from external suppliers. Therefore, the construction of an wholly owned plant will allow DMRP to improve their supply chain.

The project activities are limited physically to the premises of “Electrostal” Ltd. At the same time, the source of GHG emission is indirect, because the substitution of technologies will take place at the more carbon intensive Ukrainian metallurgical plants.
The project includes the construction of a steel manufacturing plant based on a modern electric arc furnace. The steel produced will substitute similar production volumes from the Ukrainian market that have been produced due to more carbon intensive technologies. Detailed technical information is provided in section B.1.
A modern electric arc furnace is a highly efficient recycler of steel scrap.

The use of EAFs allows steel to be made from 100% scrap metal feedstock. Therefore, the primary benefit is the substitution of virgin iron which requires much energy to be produced, with scrap that has no emission as it is waste. It is also significant that there is a large reduction in specific energy (energy per unit weight) required to produce steel. In addition, modern EAFs are more flexible, being able to vary production to meet demand, as opposed to traditional Ukrainian production that is less flexible to change in demand requirements.
EAFs are significantly less carbon intensive than other widespread methods in Ukraine, such as Open Hearth Furnaces (OHF), and Basic Oxygen Furnaces (BOF).
Scrap metal is delivered to a scrap bay located next to the melt shop. The scrap is loaded into large buckets called baskets, with 'clamshell' doors for a base.
The scrap basket is then taken to the melt shop, the roof is swung off the furnace, and the furnace is charged with scrap from the basket. After charging, the roof is swung back over the furnace and meltdown commences. The electrodes are lowered onto the scrap, the arc is struck and the electrodes are then set to bore into the layer of shred at the top of the furnace. Lower voltages are selected for this first part of the operation to protect the roof and walls from excessive heat and damage from the arcs. Once the electrodes have reached the heavy melt at the

base of the furnace and the arcs are shielded by the scrap, the voltage is increasing and the electrodes are raised slightly, lengthening the arcs and increasing power to the melt. This enables a molten pool to form more rapidly, reducing tap-to-tap times.
Once flat bath conditions are reached, i.e. the scrap has been completely melted down, the melted metal is heating and hot metal is tapping.
Another bucket of scrap can be charged into the furnace and melted down, thus closing the cycle.
All oxygen consumed by Electrostal is produced by mini-plant Linde, which is situated on the Electrostal territory.
Main project equipment also includes the Ladle Furnace (LF) and Continuous Casting Machine (CCM).
The purpose of the Ladle Furnace is to act as a holding furnace between the EAF and the continuous casting machine. During this secondary steelmaking argon bubbling is applied to homogenize the steel composition and temperature. In the LF all necessary dopes can be added to the steel.
After secondary steelmaking, the molten steel is usually continuously cast via a tundish into a water-cooled copper mold causing a thin shell to solidify. This 'strand' is then withdrawn through a set of guiding rolls and further cooled by spraying with a fine water mist. The solidified shell continues to thicken until the strand is fully solidified. Finally, the strand is cut into desired lengths and these are either discharged to a storage area or to the hot rolling mill.
All technical staff working with new equipment has necessary permissions and had successfully completed relevant training. "Electrostal" Ltd has the license* which allows providing education on working specialties concerning iron and steel works.
All work on the proposed JI project does not require extensive maintenance effort for monitoring.

1.4 Determination team

The determination team consists of the following personnel:

Ivan Sokolov
Bureau Veritas Certification Team Leader, Climate Change Lead Verifier

Vera Skitina
Bureau Veritas Certification Climate Change Lead Verifier

Kateryna Zinevych
Bureau Veritas Certification Climate Change Lead Verifier

Leonid Yaskin

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Bureau Veritas Certification, Internal Technical Reviewer

2 METHODOLOGY

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

In order to ensure transparency, a determination protocol was customized for the project, according to the Determination and Verification Manual (IETA/PCF). The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from determining the identified criteria. The determination protocol serves the following purposes:

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

The 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.

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 determined. 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 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 clarifications and corrective action requests	**Ref. to checklist question in tables 2/3**	**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 2, 3 and 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 2, 3 and 4, under "Final Conclusion".

Figure 1 Determination protocol tables

2.1 Review of Documents

The Project Design Document (PDD) submitted by Global Carbon BV and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for Completing the Project Design Document (JI-PDD), Approved methodology, Kyoto Protocol, Clarifications on Determination Requirements to be Checked by a Designated Operational Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests Global Carbon BV revised the PDD and resubmitted it on 27th of May 2010.

The determination findings presented in this report relate to the project as described in the PDD version 1.1.

2.2 Follow-up Interviews

On 22/04/2010 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of "Electrostal" Ltd and Global Carbon BV were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
"Electrostal" Ltd	➢ Project history ➢ Project approach ➢ Project boundary ➢ Implementation schedule ➢ Organizational structure ➢ Responsibilities and authorities ➢ Training of personnel ➢ Quality management procedures and technology ➢ Rehabilitation/Implementation of equipment (records) ➢ Metering equipment control ➢ Metering record keeping system, database ➢ Technical documentation ➢ Monitoring plan and procedures ➢ Permits and licenses ➢ Environmental Impact Assessment ➢ Local stakeholder's response.
LOCAL Stakeholder	➢ Influence of the project implementation on the local community
Global Carbon BV	➢ Baseline methodology. ➢ Monitoring plan. ➢ Investment analysis. ➢ Calculation of emission reduction

2.3 Resolution of Clarification and Corrective Action Requests

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

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

3 DETERMINATION FINDINGS

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

1) The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are summarized. A more detailed record of these findings can be found in the Determination Protocol in Appendix A.
2) Where Bureau Veritas Certification had identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 27 Corrective Action Requests and 7 Clarification Requests.
3) The conclusions for determination subject are presented.

3.1 Project Design

The project is expected to be in line with host-country specific JI requirements because it aims at reducing emissions of greenhouse gases by using modern technologies to improve steel production in the region.

The Project Scenario is considered additional in comparison to the baseline scenario, and therefore eligible to receive Emissions Reductions Units (ERUs) under the JI, based on an analysis, presented by the PDD, of investment, technological and other barriers, and prevailing practice.

The project design is sound and the geographical (Kurakhovo, Donetsk Region, Ukraine) and temporal (25 years) boundaries of the project are clearly defined.

Corrective Action Request (CAR) 01

The project has no approval of the host Party.

Response

Letters of Approval will be issued after the submission of the determination report to the NFPs.

Conclusion of the determination team

Conclusion is pending. The approval should be obtained following the determination of the project.

Corrective Action Request (CAR) 02

Please indicate the purpose of the project.

Response
"In general, the purpose of this project is reduction of greenhouse gas emissions by using modern technologies to improve - steel production at the site"
The similar explanation was added to PDD.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 03
There is no a concise, summarizing explanation of how the proposed project reduces greenhouse gas emissions.
Response
The explanation was added to the second paragraph of the Section A.2 PDD.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 04
Please provide the summary of the history of the projects JI component.

Response
"Before the decision making concerning EAF steelmaking plant construction the management of the DMRP were consulted by State Authority for Environmental Questions in Donetsk region concerning the possibility to use additional financing, including Kyoto Protocol mechanisms"
The similar explanation was added to PDD.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 05
Please correct the format of the Table A.3.1. according to the one indicated in the template/Guidelines ver.04

Response
The table A.3.1 was corrected according to the one indicated in the template/Guidelines ver.04

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Clarification Request (CL) 01
Please clarify in a more detailed way the technology to be implemented (as well as information considering ladle furnace and oxygen unit).

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In the implementation schedule diagram A.4.2 in the PDD version 1.0 the stage of decision making is dated 21.12.2005 while the enterprise protocol when the construction decision was made is dated 27.02.2006.

Response
The implementation schedule diagram A.4.2 was corrected.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 09
In the implementation schedule diagram A.4.2 in the PDD version 1.0 the stage the end of commissioning works is dated 06.09.2008 while the decision of the city hall head on work acceptance is dated 25.12.2008.

Response
The implementation schedule diagram A.4.2 was corrected.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 10
Please correct the tables A.4.1. and A.4.2. according to the required by the Guidelines ver.04 format.

Response
The tables A.4.1 and A.4.2 were corrected according to the one indicated in the template/Guidelines ver.04

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 17
Please correct the amount of months.

Response
The amount of months was corrected. The correct figure is 300 months.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 18
Please provide the proof that operational lifetime could be 25 years because the passport from the producer provides warrant for the operation for 12 years.

Response

To clarify this point Henk Reimink (General Manager, Technology and Environment from the World Steel Association) was involved as an external expert. The following clarification was achieved from him:
"... in my opinion your estimate of 25 years of useful life for heavy industrial equipment is correct and this is normally used for calculating cost analysis or value analysis for complex sites"

Conclusion of the determination team
Evidence presented was found sufficient. Issue is closed.

3.2 Baseline and Additionality

The "Implementation of Arc furnace Steelmaking Plant "Electrostal" at Kurakhovo, Donetsk region" project uses the JI specific approach.

In accordance with the paragraph 24 of the "Guidance on criteria for baseline setting and monitoring", Version 02, the project developer proposes the identification of a baseline scenario by listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one.
For the emission reduction calculation and monitoring, the project developer proposes using a JI specific approach in accordance with the JI Guidance on Criteria for Baseline Setting and Monitoring, Version 02. No approved CDM methodologies are used and if elements of CDM methodologies are used, it is clearly indicated. All information concerning the methodological approach for the emissions reduction calculation chosen is given below in section B.1. of the PDD version 2.0. All information concerning methodological approach for monitoring of emission reductions is given in section D of the PDD version 2.0.

The baseline scenario has been identified as the most plausible scenario among all realistic and credible alternatives. Taking into account that proposed project activity is a green-field project and does not substitute any separate technology, there are only several alternatives that can be considered as plausible.

The possible alternative baseline scenarios are the following:

(a) Proposed project activity without JI;
(b) Production of the similar to project activity products by other metallurgical plants in Ukraine (continuation of existing practice);
(c) Construction of a separate plant similar to project activity, using another technology (OHF or BOF)
(d) Construction of a new plant by another party using EAF technology
(e) The combination of alternative 1 and 4

The baseline options considered do not include those options that:

- do not comply with legal and regulatory requirements; or
- depend on key resources such as fuels, materials or technology that are not available at the project site.

The most economically attractive alternative among the alternatives mentioned above (b) has been selected as the baseline scenario, since such alternative is not expected to face any prohibitive barriers that could have prevented it from being taken up as the project activity. With the help of the most recent version of "Tool for demonstration and assessment of additionality" project developer my means of implementation barrier and common practice analysis shows that project activity is additional itself and would not occur without JI incentive.

Corrective Action Request (CAR) 11
Please move the project line parameters into section D because the key baseline parameters are just steel production level and emission factor for steel production. Others are projectline key parameters.

Response
The project line parameters were moved to Annex 3, because all of them are the key parameters for monitoring. Necessary corrections were made in PDD
Key baseline parameters (steel production level and emission factor for steel production) are indicated in the section B.1.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Clarification Request (CL) 03
Please provide information on how the real expectations of the PO are estimated and show the example.

Response
"The technical department of the Electrostal plant estimates which production level could be achieved during further years. This expectation is based on results achieved and plans concerning possible improvements in the regimes and technology"
The similar footnote was added to PDD into the place of first mentioning of real expectations of the PO.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 12
PDD version 1.0 states that there is no market iron consumption intended and some iron is consumed only as a part of scrap while it was verified

onsite that some iron is requested to be added by the technology. Please clarify and correct.

Response
"It is required to use iron as a source of carbon, in the amount of 5 kg per 1 tonne of steel. All pig iron used under the project is a scrap and therefore can be considered as a climate neutral"
The similar footnote was added to PDD.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 13
Please clarify why the limestone consumption is listed among the key parameters while it is not used by the plant. Correct if appropriate.

Response
The parameter "limestone consumption" was removed from PDD because no limestone is consumed.
Necessary changes were made in different places of PDD and Excel spreadsheet.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 14
Please mention if there are any technological barriers to the implementation of the proposed project activity.

Response
Since there are no technological barriers to the proposed project activity project developer uses investment and prevailing practice as well as common practice analysis in order to prove the additionality.

Conclusion of the determination team
Explanation was found satisfactory. Issue is closed.

Corrective Action Request (CAR) 15
Please clarify the source of the 3.8% of the EAF technology share at the Ukrainian steel production market.

Response
The figure 3.8% for EAF technology share at the Ukrainian steel production market is wrong. The correct figure is 3.7%. The source of correct value is already mentioned in the PDD.
Necessary changes were made in different places of PDD and Excel spreadsheet.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 16
National policies that affect a baseline are not taken into account.

Response
"No national policies and circumstances can significantly influence the baseline"
The similar line was added to the PDD.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

3.3 Monitoring Plan

The Project uses the JI specific approach. Refer discussions on the validity of the methodology at section 3.2 above.

In accordance with the approach chosen and taking into account that proposed project concerns new construction, baseline emissions should be calculated based on project level of steel production and relevant emission factor.
The best practice for monitoring for JI project should not influence (or minimally influence) on common monitoring practice, used in the plant. Therefore, existing statistical documents (Technical Reports, etc.) will be used as a source of data. All metering devices used for metering the data, necessary for ER calculations should be regularly checked and calibrated, if necessary, to provide insignificant level of uncertainties. Therefore, all data in the calculation of the baseline and project emissions have insignificant level of uncertainties due to regular calibration of meters.
All data needed for ER calculation will be collected in the official statistic documents used by plant and after that recalculated into the value of emission reductions by the method described below.

If the main metering device fails, and there are no reserve metering devices available, the monitoring report will use indirect data and evidence, but only if their applicability (data and evidence) is justifiably proved. Likely, a conservative approach will be used. The possible way to solve some problems in this case is to use the reports developed under ISO 9001, which has been implemented on the plant.
The data monitored and required for calculation of the ERUs will be archived and kept for 2 years after the last transfer of ERUs.

Corrective Action Request (CAR) 19

There is no proof onsite that the data monitored and required for calculation of the ERUs will be archived and kept for 2 years after the last transfer of ERUs.

Response
After the site visit the management of the Electrostal plant issued the Order #41 from 21th May 2010.
It is stated that all technical documentation (including evidences for raw materials, energy etc. consumption) has to be stored for 7 years. Taking into account that the plant starts its work in 2008, this order can be considered as a proof that the data monitored and required for calculation of the ERUs will be archived and kept for 2 years after the last transfer of ERUs.
Conclusion of the determination team
Evidence was presented to the determinators' team. Issue is closed.

Corrective Action Request (CAR) 20
Please clarify if there are any and provide reference to the projects, studies, and literature sources etc that use or mention the same approach.

Response
As it was mentioned in the Annex 2 of the PDD: "For the emission reduction calculation and monitoring, the project developer proposes to use a JI specific approach in accordance with the JI Guidance on Criteria for Baseline Setting and Monitoring, Version 02. No approved CDM methodologies are used"
Therefore, no separate studies, literature sources etc was used.
Some parameters refer to the external sources, such as IPCC Guidelines for National Greenhouse Gas Inventories or other researches, which is clearly mentioned and referenced.

Conclusion of the determination team
Explanation was found satisfactory. Issue is closed.

Corrective Action Request (CAR) 21
There is no calculation approach for the emission factor for oxygen production neither in the section D or Annex 3 of the PDD version 1.0.

Response
Calculation approach for the emission factor for oxygen production was added to the PDD.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 22

It is not clear in what way all data in the calculation of the baseline emissions includes corrections regarding measurement uncertainties.

Response
As it was mentioned in the PDD, section D.1:
"All metering devices used for metering the data, necessary for ER calculations should be regularly checked and calibrated, if necessary, to provide insignificant level of uncertainties"
This statement clearly shows that measurement uncertainties were taken into account.
Nevertheless, additional explanation was added:
"Therefore, all data in the calculation of the baseline and project emissions have sufficient level of uncertainties due to regular calibration of meters"

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Clarification Request (CL) 04
Please clarify what is considered under indirect data and evidence, which may be used if the main metering device fails, and there are no reserve metering devices available.

Response
There are a lot of indirect sources which can be used for calculation of emission reduction in case the main metering device fails, and there are no reserve metering devices available. Concrete method and source will be chosen during the monitoring period if it is necessary (if the main metering device fails, and there are no reserve metering devices available) depending on the kind and location of the problem.
In general, the possible way to solve some problems in this case is to use the reports developed under ISO 9001, which has been implemented on the plant.
Necessary explanation was made in PDD.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 23
Please provide reference to the relevant host Party regulations. If not applicable, please state so.

Response
The information concerning host Party regulations was added to the Section F.1. In section D.1 it was already provided the reference to the Section F.1.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 24
Please double check equipment mentioned in the section D.2 of the pDD version 1.0 according to the one placed on-site.

Response
Section D.2 was checked and necessary corrections were made.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Clarification Request (CL) 05
Please clarify the detailed structure of the team members.

Response
The detailed structure of the management team was provided in PDD. Nevertheless, it was wrong. The main difference is that technical department is responsible for monitoring, collection, registration, visualization, archiving, reporting of the monitored data.
Necessary corrections were made in PDD.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

3.4 Calculation of GHG Emissions

As per JI specific approach, the baseline emission sources considered is amount of steel produced under the baseline.

As required under JI specific approach, the baseline emissions are calculated by

$BE_y = Steel_{BL} \times GlEF_{Bl,steel}$, where

$Steel_{BL}$ - Amount of steel produced under the baseline, t
$GlEF_{Bl,steel}$ - Global emission factor for steel production, t CO_2 /t steel

$GlEF_{Bl,steel} = EF_{BOF} \times \omega_{BOF} + EF_{EAF} \times \omega_{EAF} + EF_{OHF} \times \omega_{OHF}$, where

EF_{BOF} - emission factor for steel making process based on basic oxygen furnaces, t CO_2 /t steel
EF_{EAF} - emission factor for steel making process based on electric arc furnaces, t CO_2 /t steel
EF_{OHF} - emission factor for steel making process based on open hearth furnaces, t CO_2 /t steel

ω_{BOF} , ω_{EAF}, ω_{OHF} – Share of relevant technology in the market, %

Since the proposed baseline scenario is production of the similar to project activity products by other metallurgical plants in Ukraine – continuation of existing practice given approach to calculate baseline emissions with the help of global emission factor for steel production was thoroughly checked. The references provided to the percentage of steelmaking technologies were followed and determinated. Given approach for calculation of the global emission factor for steel production was found the only one possible in the national circumstances and under current national policy.

In accordance with approach chosen, steel production levels for baseline and for the project scenario are the same, therefore:

$$Steel_{BL} = Steel_{PL}$$

The detailed algorithms are described later under sections D.1.1.4 of the PDD version 2.0.

As described in JI specific approach, the project emissions result due to:

- Electrodes consumption by EAF
- Oxygen consumption
- Electricity consumption by EAF and LF
- Natural gas consumption
- Anthracite consumption
- Lime consumption
- Electrodes consumption by LF.

As required under JI specific approach, the baseline emissions are calculated by

$PE_y = PE_1 + PE_2 + \cdots + PE_{10}$, where

$PE_1 - PE_{10}$ - Emissions relevant to the sources listed above, t $CO_{2\ eq}$.

The value of each emission under the project scenario can be found by multiplying amount/volume of «pollutant» on relevant emission factor:

$$PE_{electrodes,y} = (G_{electrodes\_EAF,y} + G_{electrodes\_EAF,y}) \times EF_{electrodes,y}$$

$$PE_{oxygen,y} = G_{oxygen,y} \times EF_{oxygen,y}$$

$$PE_{electricity,y} = G_{electricity_{EAF+LF},y} \times EF_{electricity,y}$$

$$PE_{NG,y} = G_{NG,y} \times EF_{NG,y}$$

$$PE_{antracite,y} = G_{antracite,y} \times EF_{antracite,y}$$

$PE_{lime,y} = G_{lime,y} \times EF_{lime,y}$

Where,

$PE_{i,y}$- project emissions for relevant source *i* for year *y*, t $CO_{2\ eq}$.
$G_{i,y}$ - amount/volume of each source *i* for year *y*. These data are the monitoring parameters (units are different; please see Table D.1.1.1 of the PDD version 2.0. for details).
EF_{y} - factor of emission for each source *i* for year *y*, t CO_2/amount (units are different; please see Table D.1.1.2 of the PDD version 2.0. for details).

With reference to this approach, project does not lead to any leakage.

The estimated annual average of approximately 391334 tCO2e over the crediting period and 486160 tCO2e after the crediting period of emission reduction represents a reasonable estimation using the assumptions given by the project.

Clarification Request (CL) 06
Please, explain whether conservative assumptions have been used to calculate project GHG emissions.

Response
To prevent overestimation in emission reductions generated PP used conservative emissions factors, which are listed as key parameters in the Annex 3 of the PDD.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Clarification Request (CL) 07
Please clarify whether conservative assumptions have been used to calculate baseline emissions.

Response
All the conservative assumptions in calculation of baseline emissions were properly described in the section B.1. of the PDD version 2.0.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 25
Please correct Table E.6. according to the Guidelines ver.04 format.

Response
The Table E.6. was corrected according to the Guidelines ver.04 format.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

Corrective Action Request (CAR) 26
Please double check excel spreadsheets and correct all the Ukrainian words.

Response
There are no Ukrainian words in the excel spreadsheets. The difference may be caused by the different settings of the Excel program.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

3.5 Environmental Impacts

The Host Party for this project is Ukraine. Environmental Impact Assessment (EIA) is the part of the Ukrainian project planning and permitting procedures. Implementation regulations for EIA are included in the Ukrainian State Construction Standard DBN A.2.2.-1-2003 (Title:"Structure and Contents of the Environmental Impact Assessment Report (EIR) for Designing and Construction of Production Facilities, Buildings and Structures").

The EIA has been completed for the proposed project and approved by local authority. Analysis of this document shows that construction of the Plant will not lead to negative impacts, due to the following:

- Equipment installed under the project activity is modern and efficient;
- There are different efficient cleaning systems that were installed as a part of project equipment;
- Recycling water system is used. Therefore, no unsanctioned discharge of sewage waters is possible;
- All project emissions will not exceed MPEs (maximum permit emissions)

According to calculations made in EIA, emissions of air pollutants will be considered as insignificant.

Corrective Action Request (CAR) 27
Please submit the list of the documentation.

Response
The list of the documentation was added to the PDD.

Conclusion of the determination team
PDD version 2.0 was checked. Issue is closed.

3.6 Comments by Local Stakeholders

In accordance with Ukrainian legislation, DMRP has consulted the regional authority to obtain the necessary approvals for construction of the Electrostal plant. Decree No104 from 22.03.2006 was issued by Kurakhovo city council as an official approval of this project. No stakeholder consultation is required by Host Party. Nevertheless, it was a newspaper article* published to inform stakeholders about a new steelmaking plant which is going to be constructed. For the JI project, stakeholder comments will be gathered during the month following publication of this PDD on the UNFCCC website in accordance with the determination process.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to the modalities for the Determination of JI projects, the DOE shall make publicly available the project design document and receive, within 30 days, comments from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available.

Bureau Veritas Certification published the project documents on the UNFCCC JI website (http://JI.unfccc.int) on 02/04/2010 and invited comments within 01/05/2010 by Parties, stakeholders and non-governmental organizations.

No comments were received.

5 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the "Implementation of Arc furnace Steelmaking Plant "Electrostal" at Kurakhovo, Donetsk region" Project in Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The determination consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final determination report and opinion.

* "Vecherniy Donetsk", No54 from 08.04.2006

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

By construction of a green-field plant using new EAF technology, the project is likely to result in reductions of GHG emissions. An analysis of the investment barrier and barriers due to prevailing practice demonstrates 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 the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation (version 2.0) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

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

6 REFERENCES

Category 1 Documents:
Documents provided by Type the name of the company that relate directly to the GHG components of the project.

/1/ PDD ‘Implementation of Arc furnace Steelmaking Plant “Electrostal” at Kurakhovo, Donetsk region’ version 1.0 date 30th of March 2010

/2/ PDD ‘Implementation of Arc furnace Steelmaking Plant “Electrostal” at Kurakhovo, Donetsk region’ version 1.1 date 1st of April 2010

/3/ PDD ‘Implementation of Arc furnace Steelmaking Plant “Electrostal” at Kurakhovo, Donetsk region’ version 2.0 date 27th of May 2010

/4/ Excel spreadsheet ‘Implementation of Arc furnace Steelmaking Plant “Electrostal” at Kurakhovo, Donetsk region’ version 1.0 dated 30th of March 2010

/5/ Excel spreadsheet ‘Implementation of Arc furnace Steelmaking Plant “Electrostal” at Kurakhovo, Donetsk region’ version 2.0 dated 25th of May 2010

/6/ Letter of Endorsement for the JI project "Electrostal” at Kurakhovo, Donetsk region " #213/23/7 dated 12.03.2010.

/7/ Guidelines for Users of the Joint Implementation Project Design Document Form/Version 04, JISC.

/8/ JISC Guidance on criteria for baseline setting and monitoring.

Version 02.

/9/ Tool for the demonstration and assessment of additionality, Version 05.2.

/10/ Glossary of Joint Implementation Terms, Version 02.

/11/ UKRAINE'S INITIAL REPORT UNDER ARTICLE 7, PARAGRAPH 4, OF THE KYOTO PROTOCOL

/12/ Letter of Approval ref No 2010JI11 issued on 22 April 2010 by the Netherlands NFP

Category 2 Documents:

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

/1/ Letter #121/12-4 of JI consideration before start of the project from deputy head of the Donetsk rada commission on environment and natural resources dated 20.05.2010

/2/ Order form "Electrostal" Ltd on the archivation of documentation dated 21.05.2010

/3/ Table. Average work indicators of complex for 2009.

/4/ Contract #57/09 dated 30.12.2009.

/5/ Calculation to the contract on after-sales cervice #57/09 dated 30.12.2009.

/6/ Certificate of attestation #ВЛ-655/08. Valid to 16.01.2011. Protocol of chemical testing of oil #190 dated 18.06.2009.

/7/ Contract #E/08-221.

/8/ Report of technical services #2212-09T dated 22.12.2009.

/9/ Complition certificate dated 22.12.2009 according to the annex 1 to the contract #85C dated 01.10.2009.

/10/ Passport of TEST-RECORD of transformer ser. #06HN019/1 dated 18.04.2007.

/11/ Operation and maintenance manual #06HN019/130. Power transformer for electric arc furnace 35000 25031 kVA OFWF 53000/800 700 500 B ser. #06HN019/1 dated 14.02.2007.

/12/ Contract #E/08-222 dated 15.12.2008.

/13/ Certificate of attestation #ВЛ-655/08. Valid to 16.01.2011. Protocol of chemical testing of oil #189 dated 18.06.2009.

/14/ Operation and maintenance manual #06HN020/130. Power transformer for ladle furnace 8000 3829 kVA OFWF 35000/280 250 120 B ser. #06HN020/1 dated 16.02.2007.

/15/ Passport of the electrical wagon tensometric scale ВВЭТ-150-ТД2-ЭП 0-ДП-С ТУ У 29.2-19377931-001-2006 dated 2007. Verification data dated 01.07.2009.

/16/ Passport of the electrical wagon tensometric scale ВВЭТ-150-ТД2-ЭП 0-ДП-С ТУ У 29.2-19377931-001-2006 dated 2007. Verification data dated 16.12.2009.

/17/ Passport of electrical automobile tensometric scale ВТА-60 dated 2007. Verification data dated 01.07.2009.

/18/ Certificate of state metrological attestation #804 dated 15.04.2007 ВТА-60 #061002044.

/19/ Passport of melting ДСП #812281 ТИ-ДСП-001-09.

/20/ Passport of melting УКП #812281 ТИ-УКП-002-09.

/21/ Passport of melting МНЛЗ #812281 ТИ-МНЛЗ-003-09.

/22/ Statement of state commission on commissioning of completed construction facility #05/1150 dated 25.12.2008.

/23/ Orders of head of regional state administration dated 24.12.2008 #694 on approval of the statement of state commission on commissioning of completed construction facility "Electrical steel melting mini plant at Kurahove (1 line, AIC with boiler shop and pedestrian walkways, area of shear press)".

/24/ Statement of state commission on commissioning of completed construction facility dated 16.12.2008.

/25/ Second complex expert opinion dated 04.12.2008 #1127/2.

/26/ License AB#446836. Valid to 17.04.2012.

/27/ License AB#305780. Validity period from 17.04.2007 to 17.04.2012

/28/ License AB#363304 dated 10.09.2007. Validity period from 26.06.2007 to 26.06.2012.

/29/ Permit on start of the facility operation #794.08.30-27.10.0 dated 02.04.2008. It is valid from 02.04.2008 to 02.04.2011.

/30/ Permit on start of the facility operation #793.08.30-27.10.0 dated 02.04.2008. It is valid from 02.04.2008 to 02.04.2011.

/31/ Permit on start of the facility operation #1124.08.30-27.10.0 dated 25.04.2008. It is valid from 25.04.2008 to 25.04.2011.

/32/ Permit on start of the facility operation #2291.09.30-27.10.0 dated 04.08.2009. It is valid from 04.08.2009 to 04.08.2012.

/33/ Permit on facility operation with high risk level #1369.08.14-37.10.0 dated 04.12.2008. It is valid from 04.12.2008 to 04.12.2011.

/34/ Permit on start of work realization with high risk level #0960.08.14-27.10.0 dated 20.08.2008. It is valid from 20.08.2008 to 20.08.2011.

/35/ Permit on start of work realization with high risk level #0238.07.14-37.10.0 dated 06.03.2007. It is valid from 06.03.2007 to 06.03.2010.

/36/ Permit on start of the facility operation #1256.09.30-27.10.0 dated 06.05.2009. it is valid from 06.05.2009 to 06.05.2012.

/37/ Permit on start of work realization with high risk level #0489.09.14-27.10.0 dated 05.05.2009. It is valid from 05.05.2009 to 05.05.2012.

/38/ Permit on start of work realization with high risk level #1132.07.14-27.52.0 dated 25.09.2007. It is valid from 25.09.2007 to 25.09.2010.

/39/ Protocol of meeting of LLC "Elektrostal" memberships dated 27.02.2006.

/40/ Newspaper "Vechernij Donetsk" #94 dated 08.04.2006. Statement of intent.

/41/ Decision #104 of executive committee of Kurahovo city council on permit to LLC "Elektrostal" for construction of electrical steel melting plant at the city Kurahovo dated 22.03.2006.

/42/ Working draft of electro-technical section. Approved part. High power electrical supply and electro-technical section. Explanatory note and figures. Volume #4 02218-Э dated 2007.

/43/ Working draft. Explanatory note. Figures. ТЭ-ЭЛ 07/01-СС. Volume 1.1.

/44/ Working draft. Specificatin of equipment, products and materials. ТЭ-ЭЛ 07/01-СС.С. Volume 1.2.

/45/ Working draft. ТЭ-ЭЛ 06/01-ЭС-ПЗ. Explanatory note. Volume 1 dated 2007.

/46/ Decision #V/22-24 dated 30.05.2007 on consideration of LLC "Elektrostal" application on permit of materials collection of agreement of holdback location ВЛ 110 kV.

/47/ Environmental impact assessment by design facility ТЭ-СТ 05/01/06-ЭС2-ПЗ.

/48/ Approved part of the working draft. Volume 1. Explanatory note 92307-ПЗ dated 2007.

/49/ Approved part of the working draft. Volume 10. Estimate documentation 92307-СМ dated 2007.

/50/ Approved part of the working draft. Volume 11. Investment efficiency. Conclusions and suggestions 92307-ТЭО dated 2008.

/51/ Order #85 dated 28.09.2009 on amendment to the order #68 dated 10.08.2010 on appointment the owner of the process of enterprise integral menegament system.

/52/ Statement on metrological service dated 2009.

/53/ Expert opinion about ability of statement coordination of LLC "Elektrostal" dated 14.01.2010.

/54/ Statement #863 on appointment of responsible persons dated 09.12.2009.

/55/ Statement #474а on appointment of responsible persons dated 17.07.2009.

/56/ List of measurement devices that are in operation and should be verified in 2010 dated 21.10.2009.

/57/ Certificate of measurement device verification #24-1/0765, ser. #G070000006100055 DN 25 dated 26.12.2008. Valid to December 2010.

/58/ Certificate of measurement device verification #24-1/0767, ser. #G070000006200029 DN 40 dated 29.12.2008. Valid to December 2010.

/59/ Certificate of measurement device verification #39-1/1465, ser. #456 dated 25.12.2008. Valid to December 2010.

/60/ Protocol #340 of verification of numerator Лидер ВГ-1 (ser. #456). Protocol #456.

/61/ Certificate of state metrological attestation #39.1082.07 dated 26.10.2007.

/62/ Certificate of state metrological attestation #145 dated 21.12.2009.

/63/ Statement #007893 of technical verification of device accounting (in the electrical facikities that have power more than 1000 V) dated 22.05.2009.

/64/ Statement #007894 of technical verification of device accounting (in the electrical facikities that have power more than 1000 V) dated 22.05.2009.

/65/ Letter #02 of deputy of general director of metrology DE "Donetskstandartmetrologia" to Kapeliushnyi S.A. dated 01.12.2009.

/66/ Order #820 dated 19.11.2009.

/67/ Certificate of commissioning of sensors #1 (5461178), #2 (5160465), #3 (5159960), #4 (5161397), #5 (5160156), #6 (5160853), #7 (5160921), #8 (5160071) dated 15.05.2007. Certificate of verification dated 01.07.2009. Certificate of verification dated 16.12.2009.

/68/ Certificate of commissioning of sensors #1 (5401311), #2 (5401319), #3 (5401291), #4 (5401297), #5 (5401355), #6 (5401263), #7 (5401307), #8 (5401260) dated 11.07.2007. Certificate of verification dated 01.07.2009.

/69/ Passport F3161, ser. #EAF 11042008.

/70/ Passport F3177, ser. #LF-11042008.

/71/ Passport CC-5300, ser. #CCM-11042008.

/72/ Invoice 201 "raw materials and materials". Flow invoice 201 (Д-К) for first quarter in 2010.

/73/ Expenditure invoice #PH-0000045 dated 01.02.2010.

/74/ Invoice #43 dated 03.02.2010.

/75/ Payment warrant-assignment #7763 in the invoice subscription #273912 dated 16.02.2010.

/76/ Invoice #1308 dated 13.08.2009.

/77/ Invoice #PH-0000002 dated 13.08.2009.

/78/ Invoice #0408 dated 04.08.2009.

/79/ Invoice #90143370 dated 24.03.2010.

/80/ Statement of acceptance-transfering #90111479 according to the contract #246 dated 11.03.2008.

/81/ Report of the work of steel melting complex of OJSC "Elektrostal" in December 2009 according to the results of 2009 dated 14.01.2010.

/82/ Report for December 2009. Table 3. average indicator of comparative complex work.

/83/ Report of the work of steel melting complex of OJSC "Elektrostal" in November 2009 dated December 2009.

/84/ Environmental impact assessment (EIA) 92307-3A. Explanatory note. Volume 9 dated 2008.

/85/ Statement of intent.

/86/ Project statement on EIA materials.

/87/ Conclusion of the state ecological expertise C#08.10.298 of the statement that project documents are in compliance with legislation on environmental protection dated 16.10.2008 out. #07-7636.

/88/ Permit #1 413 845 600-3 on the pollutant emissions into the air by stationary sources dated 08.12.2008. It is valid from 08.12.2008 to 08.12.2013.

/89/ Report of monitoring of folowing the permitted amount of pollutant emissions into the air at LLC "Elektrostal" (stage 1) dated 2009.

/90/ Schedule of under torch monitoring of the air quality for 2009 dated 18.02.2009.

/91/ Schedule of soil investigation at the buffer area of LLC "Elektrostal" dated 04.01.2010.

/92/ Schedule of organisation and technical measures of environmrntal protection of LLC "Elektrostal" for 2010.

/93/ Registration card of facilities of waste generation, waste treatment and utilisation, reg. #237 dated 01.12.2008.

/94/ Technical passport of wastes of luminescent lamps and wastes that contain mercury, in bad repair or exhausted lamps.

/95/ Information on the composition and properties of wastes with indication of its hazardous class and operation recommendations at LLC "Elejtrostal".

/96/ Instruction (technical rules) on wastes operation at LLC "Elektrostal' #01-08 dated 30.05.2008.

/97/ Instruction on wastes collection, storage, registration and treatment at LLC "Elektrostal" dated 2009.

/98/ Report of the air protection 2-ТП (the air) annual, for 2009.

/99/ Schedule of training dated 28.02.2010.

/100/ Protocol #30 dated 14.10.2009 of state qualification commission meeting at LLC "Elektrostal".

/101/ Protocol dated 30.12.2009.

/102/ Order on increase discharges dated 23.11.2009.

/103/ Conclusion dated 18.11.2009.

/104/ Schedule of workers training at LLC "Elektrostal" for 2009.

/105/ Invoice dated 20.04.2010.

/106/ Photo - Meter 1040181, #01 144 644.

/107/ Photo - Meter #01 146 934.

/108/ Photo - Oxygen unit #21.

/109/ Photo - Meter #01 146 933.

/110/ Photo - Oxygen unit #22.

/111/ Figures of daily consumption of gas, oxygen, argon dated 01.02.2009.

/112/ Log book of dispatcher for April 2010.

/113/ Meters 35/6/04 kV of accounting of electrical energy consumption.

Persons interviewed:

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

/1/ Sazhko S.N. – Deputy Head of the Kurahov city hall

/2/ Ivanov V.G. – Deputy of the Kurahov city hall

/3/ Hobta A.S. – Head engineer

/4/ Serov A.I. – Head of the Technical Department

/5/ Malyarchik N.I. – Head Energetic

/6/ Dun T.N. – Head of the BOT

/7/ Sidorenko V.I. – Deputy Head of the Technological Complex

/8/ Faykuhen L.S. – Deputy Head of the Electrical Equipment Complex

/9/ Kartoshev O.V. – Energetic of the Complex

/10/ Tsareva E.N. – Head of the CZL

/11/ Naches A. – Head of the Technical Bureau

/12/ Sherbina V.N. – Head of the DTCS

/13/ Isotova T.N. – Certification Engineer

/14/ Litus L.V. – Certification Engineer

/15/ Ivashchenko E.I. – Engineer-ecologist

/16/ Putelenko I. – Head Master of ASUTP

/17/ Frolov M.A. - Metrologist

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APPENDIX A: 'IMPLEMENTATION OF ARC FURNACE STEELMAKING PLANT "ELECTROSTAL" AT KURAKHOVO, DONETSK REGION' JI PROJECT DETERMINATION PROTOCOL

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

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)	**CAR 01**. The project has no approval of the host Party. Verifiers' Note: JISC Glossary of JI terms/Version 02 defines the following: 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; (b) At least one written project approval by a Party involved in the JI project, other than the host Party(ies), should be provided to the AIE and made available to the secretariat by	Table 2 Section A.5.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		the AIE when submitting the first verification report for publication in accordance with paragraph 38 of the JI guidelines, at the latest. After finishing of project determination report, the PDD and Determination Report will be presented to National Environmental Agency of Ukraine for receiving the Letter of Approval.	
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
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.	Marrakech Accords, JI Modalities, §20	OK	Both countries have designated their Focal Points. National guidelines and procedures for approving JI projects have been published.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
			Contact data in Ukraine: **National Environmental Investment Agency of Ukraine** 35 Urytsky Str., Kyiv, P.O. 03035 Phone: +380 44 594 91 11 Fax: +380 44 5949115 Email: info.neia@gmail.com National guidelines and procedures for the approval of JI projects are available (www.neia.gov.ua) Contact data in the Netherlands: **Ministry of Economic Affairs** Catharijnesingel 59

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
			P.O. Box 8242 3503 RE Utrecht Netherlands Phone: +31 30 239 3413 Email: d.de.haan@sentern ovem.nl National guidelines and procedures for the approving JI projects are available (http://ji.unfccc.int/UserManagement/FileStorage/XQ0CYFTBQDSELQJSZUKHKRMANMD6QD
6. The host Party shall be a Party to the Kyoto Protocol.	Marrakech Accords, JI Modalities, §21(a)/24	OK	The Ukraine is a Party (Annex I Party) to the Kyoto Protocol and has ratified the Kyoto Protocol at April 12th, 2004.
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities	Marrakech Accords,	OK	In the Initial Report submitted by

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
for the accounting of assigned amounts.	JI Modalities, §21(b)/24		Ukraine on 29. Dec. 2006 the AAUs are quantified with: 925 362 174.39 (x 5) = 4 626 810 872 tCO2-e
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	Ukraine national GHG registry has been outlined in the Initial Report. (http://unfccc.int/national_reports_under_the_kyoto_protocol/items/3765.php)
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	Global Carbon BV has submitted the 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	PDD Version 1.0. dated 01/04/2010 was made publicly available for comments on UNFCCC JI website from 02 April 2010

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
			till 01 May 2010.
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 A.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 is a legal entity authorized by a Party involved to participate in the JI project.	JISC "Modalities of communication	Conclusion is pending a follow-up on CAR 01. Refer to	Table 2, Section A

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
	of Project Participants with the JISC" Version 01, Clause A.3	Verifiers' Note in 1 above.	

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	Implementation of Arc furnace Steelmaking Plant "Electrostal" at Kurakhovo, Donetsk region	OK	OK
A.1.2. Is the current version number of the document presented?	1,2	DR	The current version of the PDD is 1.0.	OK	OK
A.1.3. Is the date when the document was completed presented?	1,2	DR	The PDD Version 1.0. is dated 1st of April 2010. The Sectoral Scope is 9.	OK	OK
A.2. Description of the project					
A.2.1. Is the purpose of the project included?	1,2	DR	**CAR 02**. Please indicate the purpose of the project.	CAR 02	OK

A.2.2. Is it explained how the proposed project reduces greenhouse gas emissions?	1,2	DR	Section A.2 provides an explanation of the: Situation existing prior to the starting date of the project; Baseline scenario; Project scenario. **CAR 03.** There is no a concise, summarizing explanation of how the proposed project reduces greenhouse gas emissions. **CAR 04**. Please provide the summary of the history of the projects JI component.	CAR 03, 04	OK
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?	1,2	DR	Party A is Ukraine. Legal entity is "Electrostal" Ltd. Party B is the Netherlands. Legal entity is Global Carbon BV	OK	OK
A.3.2. The data of the project participants is presented in tabular format?	1,2	DR	The data of the project participants is presented in the tabular format. **CAR 05.** Please correct the format of the Table A.3.1. according to the one indicated in the template/Guidelines ver.04	CAR 05	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	OK
A.3.4. Is it indicated, if it is the case, if the Party involved is a host Party?	1,2	DR	Ukraine is indicated as a host Party.	OK	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	Ukraine is indicated as the Host Party in the PDD Section A.4.1.1.	OK	OK
A.4.1.2. Region/State/Province etc.	1,2	DR	Donetsk region	OK	OK
A.4.1.3. City/Town/Community etc.	1,2	DR	Kurakhovo town	OK	OK
A.4.1.4. Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page).	1,2	DR	PDD Section A.4.1.4 defines in detail the physical location, including information allowing the unique identification of the project. Information on the physical location is provided according to the template and does not exceed one page.	OK	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	The project design engineering represents current good practices of construction of a steel manufacturing plant based on a modern electric arc furnace. **CL 01.** Please clarify in a more detailed way the technology to be implemented (as well as information considering ladle furnace and oxygen unit).	CL 01	OK
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?	1, 2	DR	The project activity includes the construction of a steel manufacturing plant, based on a modern electric arc furnace. The steel produced will substitute similar production volumes from the Ukrainian market that has been produced using more carbon intensive technologies. Detailed technical information	OK	OK

			is provided in section B.1 of this PDD. A modern electric arc furnace is a highly efficient recycler of steel scrap. The use of EAFs allows steel to be made from a 100% scrap metal feedstock. Therefore, the primary benefit is the substitution of virgin iron, requiring much energy to produce, with scrap that has no emission as it is waste. It is also significant that there is a large reduction in specific energy (energy per unit weight) required to produce the steel. The common practice in Ukraine is using Open Hearth Furnaces (OHF), and Basic Oxygen Furnaces (BOF).		
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	The project technology is unlikely to be substituted by other or more efficient technologies within the project period.	OK	OK
A.4.2.4.	Does the project extensive initial training and maintenance efforts in order to work as presumed during the project period?	1,2	DR I	All technical staff working with the EAF has necessary permission and has successfully completed relevant training. **CAR 06.** Please, include in the report information considering training of the staff. **CL 02.** Please clarify, whether the project requires extensive maintenance efforts in order to work as presumed during the project period.	CAR 06 CL 02	OK

A.4.2.5. Does the project make provisions for meeting training and maintenance needs?	1,2	DR I	Please refer to **CL2** of Verifiers' Note	-	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 I	This project intends to reduce greenhouse gas emissions by using modern technology to improve the steel production at the site. The new production facility will use a STB* Electric Arc Furnace, which uses a less carbon intensive method than typically used in by the majority of Ukrainian enterprises. Taking into account that no national and/or sectoral policies oblige for such activity, in the absence of the proposed project it is assumed that no similar plant will be constructed at least during the Kyoto period. The section does not exceed one page and complies with all requirements. **CAR 07.** In the implementation schedule diagram A.4.2 in the PDD version 1.0 the stage of project designing was performing	CAR 07, 08, 09	OK

* http://www.stbtecnosiderurgica.it

			during 2004-2005 while the project documentation is dated 2007. Please clarify and correct. **CAR 08.** In the implementation schedule diagram A.4.2 in the PDD version 1.0 the stageof decision making is dated 21.12.2005 while the enterprise protocol when the construction decision was made is dated 27.02.2006. **CAR 09.** In the implementation schedule diagram A.4.2 in the PDD version 1.0 the stage the end of commissioning works is dated 06.09.2008 while the decision of the city hall head on work acceptance is dated 25.12.2008.		
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?	1,2	DR	The estimation of emission reductions over the crediting period is provided in Table A.4.1. Section A.4.3.1. of the PDD. The estimated total emission reductions equal 1,794,880 tCO_2e over the crediting period starting on 01/01/2008.	OK	OK
A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	1,2	DR	The estimated annual emission reduction over the crediting period equals 51,203 tCO_2e.	OK	OK
A.4.3.4. Is 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 required tabular format. Refer to the Tables A.4.1. and A.4.2. in PDD Section A.4.3.1. **CAR 10.** Please correct the tables A.4.1. and A.4.2. according to the required by	CAR 10	OK

			the Guidelines ver.04 format.		
A.5. Project approval by the Parties involved					
A.5.1.1. Are written project approvals by the Parties involved attached?	1,2	DR	The project approval by the Host Party will be provided after the determination of the PDD. Refer to Verifiers' Note in Table 1 item 1. Conclusion is pending a response to CAR 01.	Pending	-
B. Baseline					
B.1. Description and justification of the baseline chosen					
B.1.1. Is the chosen baseline described?	1,2	DR	In accordance with the paragraph 24 of the "Guidance on criteria for baseline setting and monitoring", Version 02*, the project developer proposes the identification of a baseline scenario by listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one. "Continuation of the existing situation" is accepted as the baseline scenario.	OK	OK
B.1.2. Is it justified the choice of the applicable baseline for the project category?	1,2, 4,	DR	No approved CDM methodologies are used. In accordance with JI Guidance on Criteria for Baseline Setting and Monitoring, Version 02, the project developer proposes a JI	OK	OK

* http://ji.unfccc.int/Ref/Documents/Baseline_setting_and_monitoring.pdf

			specific approach for the emission reduction calculation and monitoring. The choice of the applicable baseline scenario is justified with the help of describing existing alternatives. The baseline scenario has been identified as the most plausible scenario from all realistic and credible alternatives.		
B.1.3. Is it described how the methodology is applied in the context of the project?	1,2,4	DR	This is a JI specific approach. Its application is described in a complete and transparent manner.	OK	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	The basic assumptions of the JI specific approach are based on official forecasts of the project owner as well as on the real historical data for the previous period.	OK	OK
B.1.5. Is all literature and sources clearly referenced?	1,2	DR	Relevant literature and sources are referenced through the text of PDD with some exception. **CAR 11.** Please move the project line parameters into section D because the key baseline parameters are just steel production level and emission factor for steel production. Others are projectline key parameters. **CL 03.** Please provide information on how the real expectations of the PO are estimated and show the example. **CAR 12.** PDD version 1.0 states that there is no market iron consumption intended and some iron is consumed only as a part of	CL 03 CAR 11, 12, 13	OK

			scrap while it was verified onsite that some iron is requested to be added by the technology. Please clarify and correct. **CAR 13.** Please clarify why the limestone consumption is listed among the key parameters while it is not used by the plant. Correct if appropriate.		
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,	DR	Additionality is demonstrated trough steps 1-4 of the current Tool for the demonstration and assessment of additionality, Version 05.2. **CAR 14.** Please mention if there are any technological barriers to the implementation of the proposed project activity. **CAR 15.** Please clarify the source of the 3.8% of the EAF technology share at the Ukrainian steel production market.	CAR 14, 15	OK
B.2.2. Is the baseline scenario described?	1,2	DR	The baseline scenario is described in sufficient detail in PDD Sections B.1and B.2.	OK	OK

B.2.3. Is the project scenario described?	1,2	DR	The project scenario is described in sufficient detail in PDD Sections A.4.2, A.4.3 and B.1. The project includes the greenfield construction of a steel manufacturing plant, based on a modern electric arc furnace (EAF).		
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	The analysis of the fact of emissions in the baseline scenario would likely exceed the emissions in the project scenario is included	OK	OK
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?	1,2,4	DR	It is vividly demonstrated that the project activity itself is not a likely baseline scenario	OK	OK
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?	1,2, 6	DR	**CAR 16.** National policies that affect a baseline are not taken into account.	CAR 16	OK
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, 4	DR	The project's spatial (geographical) boundaries are defined. Refer to PDD Section B.3 Table B.3.1. and Figure B.3.1. The baseline boundary is generally in line with the provisions of paragraph 11 of Guidance on criteria for baseline setting and monitoring [4].	OK	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 presented as 01/04/2010.	OK	OK
B.4.2. Is the contact information provided?	1,2	DR	The contact information is provided in Annex I of the PDD.	OK	OK
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	It is indicated that Clobal Carbon BV is the project participant listed in Annex 1 of PDD.	OK	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	Starting date of the project is 27 February 2006.	OK	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	The operational lifetime of the project is defined in years and months. **CAR 17.** Please correct the amount of months. **CAR 18.** Please provide the proof that operational lifetime could be 25 years because the passport from the producer provides warrant for the operation for 12 years.	CAR 17, 18	OK
C.3. Length of the crediting period					
C.3.1. Is the length of the crediting period specified in	1,2	DR	4 years 10 months or 58 months. The starting date of the crediting period is	OK	OK

years and months?			01/03/2008.		
D. Monitoring Plan					
D.1. Description of monitoring plan chosen					
D.1.1. Is the monitoring plan defined?	1,2, 4	DR	The monitoring plan is presented in Section D of the PDD. **CAR 19.** There is no proof onsite that the data monitored and required for calculation of the ERUs will be archived and kept for 2 years after the last transfer of ERUs. **CAR 20.** Please clarify if there are any and provide reference to the projects, studies, ;iterature sources etc that use or mention the same approach. **CAR 21.** There is no calculation approach for the emission factor for oxygen production neither in the section D or Annex 3 of the PDD version 1.0. **CAR 22.** It is not clear in what way all data in the calculation of the baseline emissions includes corrections regarding measurement uncertainties. **CL 04.** Please clarify what is considered under indirect data and evidence, which may be used if the main metering device fails, and there are no reserve metering devices available.	CAR 19, 20, 21, 22 CL 04	OK

D.1.2. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.	1,2, 4	DR	See Section D.1.1 of the PDD version 1.0.	OK	OK
D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.	1,	DR	See Section D.1.1.1 of the PDD version 1.0. Monitoring plan will include the following positions to monitor emission reductions from the project: • Amount of steel produced under the project activity • Iron consumption • Pellets consumption • Electrodes consumption by EAF • Oxygen consumption • Electricity consumption by EAF • Natural gas consumption • Anthracite consumption (includes all anthracite sources) • Lime consumption (includes lime, magnesite and dolomite sources) • Electricity consumption by LF • Electrodes consumption by LF	OK	OK

			This data will be archived both in electronic and paper way.		
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	DR	See Section D.1.1.2 of the PDD version 1.0.	OK	OK
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	See Section D.1.1.3 of the PDD version 1.0.	OK	OK
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	See Section D.1.1.4 of the PDD version 1.0.	OK	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	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	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	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	Data and information that will be collected in order to monitor leakage effects of the project is presented in Table D.1.3.1. of the PDD	OK	OK
D.1.11. Description of the formulae used to	1,2	DR	See Section D.1.3.2. of the PDD	OK	OK

estimate leakage (for each gas, source etc.; emissions in units of CO2 equivalent).					
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	See Section D.1.4. of the PDD	OK	OK
D.1.13. Is information on the collection and archiving of information on the environmental impacts of the project provided?	1,2	DR	Collection and archiving of the information on the environmental impacts of the project was done based on the approved EIA in accordance with the host Party legislation (see Section F.1).	OK	OK
D.1.14. Is reference to the relevant host Party regulation(s) provided?	1,2	DR	**CAR 23.** Please provide reference to the relevant host Party regulations. If not applicable, please state so.	CAR 23	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	Quality control and quality assurance procedures are exhaustive. **CAR 24.** Please double check equipment mentioned in the section D.2 of the pDD version 1.0 according to the one placed on-site.	CAR 24	OK

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	The operational and management structure that the project participants(s) will implement in order to monitor emission reduction generated by the project is briefly described in PDD Section D.3. For monitoring, collection, registration, visualization, archiving, reporting of the monitored data planning and economic department is responsible. The principle structure is presented the flow-chart in Section D.3. **CL 05.** Please clarify the detailed structure of the team members.	CL 05	OK

D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
D.4.1. Is the contact information provided?	1,2	DR	The contact information is provided in the Annex 1 of the PDD	OK	OK
D.4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	The entity is the project participant listed in Annex 1 of the PDD	OK	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	The formulae used to estimate project emissions is described in Section D.1.1.2. of the PDD.	OK	OK

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	The estimated values of the project emissions are presented in PDD Section E.1 Table 1. An excel spreadsheet was made available to the verifiers. The calculations were checked and observed to be correct at the assumptions taken and input data used.		
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	1,2	DR	**CL 06.** Please, explain whether conservative assumptions have been used to calculate project GHG emissions.	CL 06	OK
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	The formula used to estimate leakage due to the project is described in Section D.1.3.2. of the PDD	OK	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	A description of calculation of leakage in accordance with the formula specified for the applicable project category is presented in Tables 3 and 4 Section E.2.of the PDD	OK	OK
E.2.3. Have conservative assumptions been used to calculate leakage?	1,2	DR	N/a	OK	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	Table 5 contains the calculated values of the sum of E.1 and E.2 represent the project emissions.	OK	OK
E.4. Estimated baseline emissions					
E.4.1. Are described the formulae used to estimate the anthropogenic emissions by source of GHGs in	1,2	DR, I	The formula used to estimate baseline emissions is presented in Section D.1.1.4. of	OK	OK

the baseline using the baseline methodology for the applicable project category?			the PDD.		
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, I	The estimated values of the baseline emissions are presented in PDD Section E.4 Table 7. The calculations on excel spreadsheet were checked and observed to be correct at the assumptions taken and input data used.	OK	OK
E.4.3. Have conservative assumptions been used to calculate **baseline** GHG emissions?	1, 2	DR	**CL 07.** Please clarify whether conservative assumptions have been used to calculate baseline emissions.	CL 07	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	The estimated values of GHG emission reductions (the difference between E4 and E3) are presented in PDD Section E.5, Table 9.	OK	OK
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	The presented Table E.6 provides the yearly and total values of project emissions, leakages, baseline emissions and emission reductions for the crediting period. **CAR 25.** Please correct Table E.6. according to the Guidelines ver.04 format. **CAR 26.** Please double check excel spreadsheets and correct all the Ukrainian words.	CAR 25, 26	OK

F. Environmental Impacts					
F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary 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	Analysis of the environmental impacts of the project is described in PDD Section F1. **CAR 27.** Please submit the list of the documentation.	CAR 27	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, 7	DR I	According to Ukrainian legislation, an Environmental Impact Assessment (EIA), as a part of the project design documents, has been completed for the proposed project and approved by local authority (seen on site).	OK	OK
F.1.3. Are the requirements of the National Focal Point being met?	1,2, 8	DR I	To meet the requirements of Regulation [8], the application for the project approval shall include, inter alia, the substantiation of environmental effectiveness of the project. The application will be submitted following the determination of the project.	OK	OK
F.1.4. Will the project create any adverse environmental effects?	1,2	DR I	Analysis of the EIA shows that introduction of the EAF will have a lot of positive environmental effects and will lead to the improvement of the environmental situation in the region	OK	OK
F.1.5. Are transboundary environmental impacts considered in the analysis?	1,2	DR I	The project will have positive transboundary effect	OK	OK

F.1.6. Have identified environmental impacts been addressed in the project design?	1,2	DR	Refer to item F.1.1. of the present Verifiers' Note.	OK	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	Environmental impacts are not considered significant by the project participants or the host Party	OK	OK
G.1.2. The nature of comments is provided?	1,2	DR	Refer to item G.1.1. of the present Verifiers' Note.	OK	OK
G.1.3. Has due account been taken of any stakeholder comments received?	1,2	DR	Refer to item G.1.1. of the present Verifiers' Note.	OK	OK

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	DR, I	The project is licensed by the competent authority. This was checked on-site. Project activity is permitted by: Environment Impact Assessment (AIE) 92307-3A. Explanation note. Book 9 dated 2008. Note on intentions. Task on the AIE development. State environmental expertise conclusion CN№08.10.298 on the accordance of the project documentation to the environmental legislation dated 16.10.2008 p. №07-7636. Permit №1 413 845 600-3 on the emissions to the atmosphere by the stationary sources dated 08.12.2008. Valid from 08.12.2008 till 08.12.2013. Report on the control of the permitted amount of the emissions to the atmospheric air at the LLC “Electrostal” stage 1 dated 2009 Action plan of the undrflare control of the condition and quality of the atmospheric air	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			at 2009 dated 18.02.2009 Action plan of the sanitary zone solid research at LLC “Electrostal” dated 04.01.2010 Register of the objects of waste formation, treatment and utilization №237 dated 01.12.2008 Technical passport of the luminescent lamp waste and mercury containing waste, damaged or out of use. Information on the content and characteristics of the waste with indication of the danger class and treatment recommendations LLC “Electrostal”. Waste treatment instructions LLC “Electrostal” №01-08 dated 30.05.2008. Waste collection, audit, storage and treatment instruction at LLC “Electrostal” for 2009 Report on the atmospheric air protection 2-ТП annual for 2009		
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?	1	DR, I	Environmental permits are presented, please refer to section 1.1. table 4. of the present Verifiers’ Note..	OK	OK
1.3. Is the project in line with relevant legislation and plans in the host country?	1	DR, I	The project is in line with relevant legislation and plans in the host country.	OK	OK

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
CAR 01. The project has no approval of the host Party.	1 Table 1	N/A	Conclusion is pending. The approval should be obtained following the determination of the project.
CAR 02. Please indicate the purpose of the project.	A.2.1.	*"In general, the purpose of this project is reduction of greenhouse gas emissions by using modern technologies to improve - steel production at the site"* The similar explanation was added to PDD. Please see corrected PDD, Section A.2, page 2	PDD version 2.0. was checked. Issue is closed.
CAR 03. There is no concise, summarizing explanation of how the proposed project reduces greenhouse gas emissions.	A.2.2	The explanation was added to the second paragraph of the Section A.2 PDD. Please see corrected PDD, Section A.2, page 2	PDD version 2.0. was checked. Issue is closed.
CAR 04. Please provide the summary of the history of the project's JI component.	A.2.2	*"Before the decision making concerning EAF steelmaking plant construction the management of the DMRP were consulted by State Authority for Environmental Questions in Donetsk region concerning the possibility to use additional*	PDD version 2.0. as well as attached file were checked. Issue is closed.

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
		financing, including Kyoto Protocol mechanisms" The similar explanation was added to PDD. Please see corrected PDD, Section A.2, page 2 (please see attached file Letter_JI_consideration.pdf)	
CAR 05. Please correct the format of the Table A.3.1. according to the one indicated in the template/Guidelines ver.04	A.3.2.	The table A.3.1 was corrected according to the one indicated in the template/Guidelines ver.04 Please see corrected PDD, Section A.3, page 3	PDD version 2.0. was checked. Issue is closed.
CAR 06. Please, include in the report information considering training of the staff.	A.4.2.4	*"All technical staff working with new equipment has necessary permissions and had successfully completed relevant training. "Electrostal" Ltd has the license which allows to provide education on working specialties concerning iron and steel works"* The similar explanation was added to PDD.	PDD version 2.0. was checked. Issue is closed.

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
		Please see corrected PDD, Section A.4.2, page 6	
CAR 07. In the implementation schedule diagram A.4.2 in the PDD version 1.0 the stage of project designing was performing during 2004-2005 while the project documentation is dated 2007. Please clarify and correct.	A.4.3.1.	The implementation schedule diagram A.4.2 was corrected. Please revise corrected PDD, Section A.4.3, page 6	PDD version 2.0. was checked. Issue is closed.
CAR 08. In the implementation schedule diagram A.4.2 in the PDD version 1.0 the stage of decision making is dated 21.12.2005 while the enterprise protocol when the construction decision was made is dated 27.02.2006.	A.4.3.1.	The implementation schedule diagram A.4.2 was corrected. Please revise corrected PDD, Section A.4.3, page 6	PDD version 2.0. was checked. Issue is closed.
CAR 09. In the implementation schedule diagram A.4.2 in the PDD version 1.0 the stage the end of commissioning works is dated 06.09.2008 while the decision of the city hall head on work acceptance is dated 25.12.2008.	A.4.3.1.	The implementation schedule diagram A.4.2 was corrected. Please revise corrected PDD, Section A.4.3, page 6	PDD version 2.0. was checked. Issue is closed.
CAR 10. Please correct the tables A.4.1. and A.4.2. according to the required by the Guidelines ver.04 format.	A.4.3.4.	The tables A.4.1 and A.4.2 were corrected according to the one indicated in the template/Guidelines ver.04	PDD version 2.0. was checked. Issue is closed.

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
		Please see corrected PDD, Section A.4.3.1, page 7	
CAR 11. Please move the project line parameters into section D because the key baseline parameters are just steel production level and emission factor for steel production. Others are projectline key parameters.	B.1.5.	The project line parameters were moved to Annex 3, because all of them are the key parameters for monitoring. Necessary corrections were made in PDD Key baseline parameters (steel production level and emission factor for steel production) are indicated in the section B.1. Please see corrected PDD, Section B.1. and Annex 3	PDD version 2.0. was checked. Issue is closed.
CAR 12. PDD version 1.0 states that there is no market iron consumption intended and some iron is consumed only as a part of scrap while it was verified onsite that some iron is requested to be added by the technology. Please clarify and correct.	B.1.5.	*"It is required to use iron as a source of carbon, in the amount of 5 kg per 1 tonne of steel. All pig iron used under the project is a scrap and therefore can be considered as a climate neutral"* The similar footnote was added to PDD Please see corrected PDD, Section A.2, page 2	PDD version 2.0. was checked. Issue is closed.
CAR 13. Please clarify why the limestone consumption is listed among the key	B.1.5.	The parameter "limestone consumption" was removed from PDD because no limestone is	PDD version 2.0. was checked. Issue is closed.

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
parameters while it is not used by the plant. Correct if appropriate.		consumed. Necessary changes were made in different places of PDD and Excel spreadsheet.	
CAR 14. Please mention if there are any technological barriers to the implementation of the proposed project activity.	B.2.1.	Since there are no technological barriers to the proposed project activity project developer uses investment and prevailing practice as well as common practice analysis in order to prove the additionality.	PDD version 2.0. was checked. Issue is closed.
CAR 15. Please clarify the source of the 3.8% of the EAF technology share at the Ukrainian steel production market.	B.2.1.	The figure 3.8% for EAF technology share at the Ukrainian steel production market is wrong. The correct figure is 3.7%. The source of correct value is already mentioned in the PDD. Necessary changes were made in different places of PDD and Excel spreadsheet.	PDD version 2.0. was checked. Issue is closed.
CAR 16. National policies that affect a baseline are not taken into account.	B.2.6.	*"No national policies and circumstances can significantly influence the baseline"* The similar line was added to the PDD. Please see corrected PDD, Section B.2, page 13	PDD version 2.0. was checked. Issue is closed.
CAR 17. Please correct the amount of	C.2.1.	The amount of months was corrected. The	PDD version 2.0. was checked. Issue is closed.

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
months.		correct figure is 300 months. Please see corrected PDD, Section C.2, page 20	
CAR 18. Please provide the proof that operational lifetime could be 25 years because the passport from the producer provides warrant for the operation for 12 years.	C.2.1.	To clarify this point Henk Reimink (General Manager, Technology and Environment from the World Steel Association) was involved as an external expert. The following clarification was achieved from him: *"… in my opinion your estimate of 25 years of useful life for heavy industrial equipment is correct and this is normally used for calculating cost analysis or value analysis for complex sites*"	The e-mailing between Global Carbon BV senior consultant and Henk Reimink was checked. Explanation found sufficient. Issue is closed.
CAR 19. There is no proof onsite that the data monitored and required for calculation of the ERUs will be archived and kept for 2 years after the last transfer of ERUs.	D.1.1.	After the site visit the management of the Electrostal plant issued the Order #41 from 21th May 2010. It is stated that all technical documentation (including evidences for raw materials, energy etc. consumption) has to be stored for 7 years. Taking into account that the plant starts its work in 2008, this order can be considered as a proof that the data monitored and required for calculation of the ERUs will be archived and	Evidence was checked. Issue is closed.

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
		kept for 2 years after the last transfer of ERUs. No changes to the PDD are needed.	
CAR 20. Please clarify if there are any and provide reference to the projects, studies, literature sources etc that use or mention the same approach.	D.1.1.	As it was mentioned in the Annex 2 of the PDD: *"For the emission reduction calculation and monitoring, the project developer proposes to use a JI specific approach in accordance with the JI Guidance on Criteria for Baseline Setting and Monitoring, Version 02. No approved CDM methodologies are used"* Therefore, no separate studies, literature sources etc was used. Some parameters refer to the external sources, such as IPCC Guidelines for National Greenhouse Gas Inventories or other researches, which is clearly mentioned and referenced. No changes to the PDD are needed.	Explanation was found satisfactory. Issue is closed.
CAR 21. There is no calculation approach for the emission factor for oxygen production neither in the section D or Annex 3 of the PDD version 1.0.	D.1.1.	Calculation approach for the emission factor for oxygen production was added to the PDD. Please see corrected PDD, Annex 2, page 40	PDD version 2.0. was checked. Issue is closed.

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 22. It is not clear in what way all data in the calculation of the baseline emissions includes corrections regarding measurement uncertainties.	D.1.1.	As it was mentioned in the PDD, section D.1: *"All metering devices used for metering the data, necessary for ER calculations should be regularly checked and calibrated, if necessary, to provide insignificant level of uncertainties"* This statement clearly shows that measurement uncertainties were taken into account. Nevertheless, additional explanation was added: *"Therefore, all data in the calculation of the baseline and project emissions have sufficient level of uncertainties due to regular calibration of meters"* Please see corrected PDD, Section D.1, page 31	PDD version 2.0. was checked. Issue is closed.
CAR 23. Please provide reference to the relevant host Party regulations. If not applicable, please state so.	D.1.14	The information concerning host Party regulations was added to the Section F.1. In section D.1 it was already provided the reference to the Section F.1.	PDD version 2.0. was checked. Issue is closed.

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
		Please see corrected PDD, Section F.1, page 35	
CAR 24. Please double check equipment mentioned in the section D.2 of the PDD version 1.0 according to the one placed on-site.	D.2.1.	Section D.2 was checked and necessary corrections were made. Please see corrected PDD, Section D.	PDD version 2.0. was checked. Issue is closed.
CAR 25. Please correct Table E.6. according to the Guidelines ver.04 format.	E.6.1.	The Table E.6. was corrected according to the Guidelines ver.04 format. Please see corrected PDD, Section E.6, page 33	PDD version 2.0. was checked. Issue is closed.
CAR 26. Please double check excel spreadsheets and correct all the Ukrainian words.	E.6.1.	There are no Ukrainian words in the excel spreadsheets. The difference may be caused by the different settings of the Excel program.	Issue is closed.
CAR 27. Please submit the list of the documentation.	F.1.1.	The list of the documentation was added to the PDD. Please see corrected PDD, Section F.1, page 36	PDD version 2.0. was checked. Issue is closed.
CL 01. Please clarify in a more detailed way the technology to be implemented (as well as information considering ladle furnace and	A.4.2.1.	Information concerning usage of Ladle Furnace and Continuous Casting Machine was added to the Section A.4	PDD version 2.0. was checked. Issue is closed.

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
oxygen unit).		Please see corrected PDD, Section A.4.2, page 5	
CL 02. Please clarify, whether the project requires extensive maintenance efforts in order to work as presumed during the project period.	A.4.2.4.	*"All work on the proposed JI project does not require extensive maintenance effort for monitoring"* The similar explanation was added to PDD Please see corrected PDD, Section A.4.2, page 6	PDD version 2.0. was checked. Issue is closed.
CL 03. Please provide information on how the real expectations of the PO are estimated and show the example.	B.1.5.	*"The technical department of the Electrostal plant estimates which production level could be achieved during further years. This expectation is based on results achieved and plans concerning possible improvements in the regimes and technology"* The similar footnote was added to PDD into the place of first mentioning of real expectations of the PO. Please see corrected PDD, Section B.1, page	PDD version 2.0. was checked. Issue is closed.

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
		12	
CL 04. Please clarify what is considered under indirect data and evidence, which may be used if the main metering device fails, and there are no reserve metering devices available.	D.1.1.	There are a lot of indirect sources which can be used for calculation of emission reduction in case the main metering device fails, and there are no reserve metering devices available. Concrete method and source will be chosen during the monitoring period if it is necessary (if the main metering device fails, and there are no reserve metering devices available) depending on the kind and location of the problem. In general, the possible way to solve some problems in this case is to use the reports developed under ISO 9001, which has been implemented on the plant. Necessary explanation was made in PDD. Please see corrected PDD, Section D.1, page 31	PDD version 2.0. was checked. Issue is closed.
CL 05. Please clarify the detailed structure of the team members.	D.3.1.	The detailed structure of the management team was provided in PDD. Nevertheless, it was wrong. The main difference is that technical department is responsible for monitoring, collection, registration, visualization, archiving,	PDD version 2.0. was checked. Issue is closed.

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
		reporting of the monitored data. Necessary corrections were made in PDD Please see corrected PDD, Section D.3, page 31	
CL 06. Please, explain whether conservative assumptions have been used to calculate project GHG emissions.	E.1.3.	To prevent overestimation in emission reductions generated PP used conservative emissions factors, which are listed as key parameters in the Annex 3 of the PDD. No changes to the PDD are needed.	Explanation was found satisfactory. Issue is closed.
CL 07. Please clarify whether conservative assumptions have been used to calculate baseline emissions.	E.4.3.	All the conservative assumptions in calculation of baseline emissions were properly described in the section B.1. of the PDD version 2.0.	PDD version 2.0. was checked. Issue is closed.

Appendix B: Verifiers CV's

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)

Climate Change Lead Verifier, Bureau Veritas Certification Holding SAS Local Climate Change Product Manager for Ukraine

Bureau Veritas Black Sea District Health, Safety and Environment Department Manager

He has over 25 years of experience in Research Institute in the field of biochemistry, biotechnology, and microbiology. He is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered), Quality Management System (IRCA registered), Occupational Health and Safety Management System, and Food Safety Management System. He performed over 140 audits since 1999. Also he is Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and Lead Tutor of the IRCA registered ISO 9000 QMS Lead Auditor Training Course. He is Lead Tutor of the Clean Development Mechanism /Joint Implementation Lead Verifier Training Course and he was involved in the determination/verification over 50 JI/CDM projects.

Vera Skitina, PhD (metallurgy)
Climate Change Lead Verifier
Bureau Veritas Certification Rus 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 determination and verification of over 15 JI projects.

Kateryna Zinevych, M.Sci. (environmental science)

Climate Change Verifier

Bureau Veritas Ukraine Health, Safety and Environment Project Manager

Kateryna Zinevych has graduated from National University of Kyiv-Mohyla Academy with the Master Degree in Environmental Science. She has successfully completed IRCA registered Lead Auditor Training Course for Environment Management Systems and Quality Management Systems. She has undergone a training course on Clean Development Mechanism /Joint Implementation and she is involved in the determination/verification of 26 JI projects.

Internal Technical Review performed by:

Mr. Leonid Yaskin, PhD (thermal engineering)

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

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 Krzhizhanovsky Power Engineering Institute, All-Russian Teploelectroproject Institute, JSC Energoperspectiva. 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.