VERIFICATION REPORT
GLOBAL CARBON B.V.

VERIFICATION OF THE ENERGY EFFICIENCY INVESTMENT PROGRAM AT OJSC ARCELORMITTAL STEEL KRYVIY RIH

(Initial and for the period 01/01/2008 – 31/12/2009)

REPORT NO. UKRAINE/0129/2010

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BUREAU VERITAS CERTIFICATION

Date of first issue: 09/08/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: Global Carbon B.V.	Client ref.: Lennard de Klerk

Summary:

Bureau Veritas Certification has made the verification of the "Energy efficiency investment program at OJSC ArcelorMittal Steel Kryviy Rih" project of Global Carbon B.V. located in Kryviy Rih, Ukraine, on the basis of host country criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The verification scope is defined as a periodic independent review and post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions during defined verification period, and consisted of the following three phases: i) desk review of the Monitoring Report, Project Design Document and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the verification process is a list of Clarification Requests, Corrective Actions Requests, Forward Actions Requests (CL, CAR and FAR), presented in Appendix A.

The verification is based on the Monitoring Report (covers the period from the 1st of January 2008 to 31st of December 2009), the Monitoring Plan, the determined PDD, version 04 and supporting documents made available to Bureau Veritas Certification by the project participant.

In summary, Bureau Veritas Certification confirms that the project is implemented as per determined changes. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reduction is calculated without material misstatements.

Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents.

Based on information seen and evaluated we confirm that the implementation of the project has resulted in GHG emission reductions that totalize 95546 tons of CO2eq for the period from 01/01/2008 to 31/12/2009.

Report No.: No.UKRAINE/0129/2010	Subject Group: JI	Indexing terms
Project title: Energy efficiency investment program at OJSC ArcelorMittal Steel Kryviy Rih		*Climate Change, Kyoto Protocol, JI, Emission Reductions, Verification*
Work carried out by: Ivan Sokolov – Team leader, Climate Change Lead Verifier Vera Skitina – Team member, Climate Change Lead Verifier		☒ No distribution without permission from the Client or responsible organizational unit
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Abbreviations

AIE	Accredited Independent Entity
BVCH	Bureau Veritas Certification Holding SAS
BFG	Blast Furnace Gas
CAR	Corrective Action Request
CL	Clarification Request
CO_2	Carbon Dioxide
COG	Coke Owen Gas
ERU	Emission Reduction Unit
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GHG	Green House Gas(es)
IETA	International Emissions Trading Association
JI	Joint Implementation
JISC	JI Supervisory Committee
MoV	Means of Verification
MP	Monitoring Plan
MR	Monitoring Report
NG	Natural Gas
OJSC	Open Joint Stock Company
PCF	Prototype Carbon Fund
PDD	Project Design Document
SP	Sub-project
UNFCCC	United Nations Framework Convention on Climate Change

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1 INTRODUCTION

Global Carbon B.V. has commissioned Bureau Veritas Certification to verify the emissions reductions of JI project “Energy efficiency investment program at OJSC ArcelorMittal Steel Kryviy Rih” (hereafter called “the project”) located in the Kryviy Rih, Ukraine. This report summarizes the findings of the verification of the project, performed on the basis of criteria given to provide for consistent project operations, monitoring and reporting, and contains a statement for the verified emission reductions. The order includes the initial verification and verification for the period 01.01.08 – 31.12.09 of the project.

This report summarizes the findings of the initial and periodic verification. It is based on the Initial Verification Report Template Version 3.0, December 2003 and on the Periodic Verification Report Template Version 3.0, December 2003, both parts of the Validation and Verification Manual (VVM) published by International Emission Trading Association (IETA).

Initial and periodic verification has been performed as one integrated activity. It consists of a desk review of the project documents including PDD, monitoring plan, determination report, monitoring report and further documentation.

The results of the determination were documented by TÜV SÜD Industrie Service GmbH in the report: “Determination of the Energy efficiency investment program at OJSC ArcelorMittal Steel Kryviy Rih” No. 1155637 dated 16th of September, 2009. Project is approved by the sponsor party Luxembourg and registered under Track 1 procedure.

1.1 Objective

Verification is the periodic independent review and ex post determination by the AIE of the monitored reductions in GHG emissions during defined verification period.

The objective of verification can be divided in Initial Verification and Periodic Verification.

Initial Verification: The objective of an initial verification is to verify that the project is implemented as planned, to confirm that the monitoring system is in place and fully functional, and to assure that the project will generate verifiable emission reductions. A separate initial verification prior to the project entering into regular operations is not a mandatory requirement.

Periodic Verification: The objective of the periodic verification is to verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan; furthermore the periodic verification evaluates the GHG emission reduction data and express a conclusion with a high, but not absolute, level of assurance about whether the reported GHG emission reduction data is free of material misstatements; and verifies that the reported GHG emission data is sufficiently supported by evidence, i.e. monitoring records. If no prior initial verification has been carried out, the objective

of the first periodic verification also includes the objectives of the initial verification.
The verification follows the host country criteria referring to the Kyoto Protocol criteria, the JI rules and modalities.

1.2 Scope

Verification scope is defined as an independent and objective review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions. The verification is based on the submitted monitoring report and the determined project design document including the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements and host county criteria. Bureau Veritas Certification has, based on the recommendations in the Validation and Verification Manual employed a risk-based approach in the verification, focusing on the identification of significant risks of the project implementation and the generation of ERUs.
The verification is not meant to provide any consulting towards the Client. However, stated requests for forward actions and/or corrective actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.
The audit team has been provided with a Monitoring Report version 1.0 dated 15/04/2010 and underlying data records, covering the period from the 01 of January 2008 to the 31 of December 2009 inclusive.

1.3 GHG Project Description

The Project is provided for the purpose of the implementation of an Energy Efficiency Investment Programme at integrated steel complex of ArcelorMittal Kryviy Rih in Ukraine.
For ArcelorMittal energy efficiency and optimization is an effective lever for minimizing impacts on the environment and improving its operational processes. In Kryviy Rih, Ukraine, the energy efficiency assessment has identified 8 key measures that will be implemented before 2012 to reduce electricity and natural gas consumption and increase the efficiency of power usage hence reducing carbon emissions.
The proposed JI project envisages the implementation of eight sub-projects to increase the energy effectiveness of complex's operations:
1. Modernization of air separating unit
2. Modernization of compressors station
3. Switch fuel from NG to COG+BFG+NG mixtures
4. Refurbishment of energy distribution system
5. New gas burner installation
6. Turbo generators installation
7. Blast furnace top recovery turbine installation

8. Heat recovery in refractory and lime rotary kilns

The overall objective of the JI Project is to generate Emission Reduction Units (ERUs) by reducing about 1.6 million tonnes of CO_2 emissions before the end of 2012 by saving around 580 GWh of electricity and 35 Mln m^3 of NG per year. The investment program is largely environmentally oriented; it will improve the efficiency in the use of resources and will apply modern technologies.
Moreover, the implementation of this Project will offer a number of socio-economic impacts to the region as shortly described here below:
- Implementation of the project will lead to improvement of ecological climate to the region, prevent reduction of working places and improve working conditions;
- The investment will increase economic activity by use of local civil engineering and related contractors for the implementation of the project;
- The project will increase the overall resource efficiency and therefore will strengthen the market position of the company. This will increase the job security of the people directly or indirectly dependent on the plant.
ERUs generation can stimulate improvements in reducing energy consumptions and improving environmental performance.

1.4 Verification 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

Leonid Yaskin
Bureau Veritas Certification, Internal Technical Reviewer

2 METHODOLOGY

The verification is as a desk review and field visit including discussions and interviews with selected experts and stakeholders.

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

- It organises, details and clarifies the requirements the project is expected to meet; and
- It ensures a transparent verification process where the verifier will document how a particular requirement has been verified and the result of the verification.

The verification protocol consists of one table under Initial Verification checklist and four tables under Periodic verification checklist. The different columns in these tables are described in Figure 1.

The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification procedures. The completed verification protocol is enclosed in Appendix A to this report.

Initial Verification Protocol Table 1			
Objective	**Reference**	**Comments**	**Conclusion (CARs/FARs)**
The requirements the project must meet	Gives reference to where the requirement is found.	Description of circumstances and further comments on the conclusion	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) of risk or non-compliance of the stated requirements. Forward Action Request (FAR) indicates essential risks for further periodic verifications.

Periodic Verification Checklist Protocol Table 2: Data Management System/Controls		
Identification of potential reporting risk	**Identification, assessment and testing of management controls**	**Areas of residual risks**
The project operator's data management system/controls are assessed to identify reporting risks and to assess the data management system's/control's ability to mitigate reporting risks. The GHG data management system/controls are assessed against the expectations detailed in the table.	A score is assigned as follows: • Full - all best-practice expectations are implemented. • Partial - a proportion of the best practice expectations is implemented • Limited - this should be given if little or none of the system component is in place.	Description of circumstances and further commendation to the conclusion. This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) of risk or non compliance with stated requirements. The corrective action requests are numbered and presented to the client in the verification report.

Periodic Verification Protocol Table 3: GHG calculation procedures and management control testing		
Identification of potential reporting risk	**Identification, assessment and testing of management controls**	**Areas of residual risks**
Identify and list potential reporting risks based on an assessment of	Identify the key controls for each area with potential reporting risks. Assess	Identify areas of residual risks, i.e. areas of

the emission estimation procedures, i.e. ➢ the calculation methods, ➢ raw data collection and sources of supporting documentation, ➢ reports/databases/information systems from which data is obtained. Identify key source data. Examples of source data include metering records, process monitors, operational logs, laboratory/analytical data, accounting records, utility data and vendor data. Check appropriate calibration and maintenance of equipment, and assess the likely accuracy of data supplied. Focus on those risks that impact the accuracy, completeness and consistency of the reported data. Risks are weakness in the GHG calculation systems and may include: ➢ manual transfer of data/manual calculations, ➢ unclear origins of data, ➢ accuracy due to technological limitations, ➢ lack of appropriate data protection measures? For example, protected calculation cells in spreadsheets and/or password restrictions.	the adequacy of the key controls and eventually test that the key controls are actually in operation. Internal controls include (not exhaustive): ➢ Understanding of responsibilities and roles ➢ Reporting, reviewing and formal management approval of data; ➢ Procedures for ensuring data completeness, conformance with reporting guidelines, maintenance of data trails etc. ➢ Controls to ensure the arithmetical accuracy of the GHG data generated and accounting records e.g. internal audits, and checking/ review procedures; ➢ Controls over the computer information systems; ➢ Review processes for identification and understanding of key process parameters and implementation of calibration maintenance regimes ➢ Comparing and analysing the GHG data with previous periods, targets and benchmarks. When testing the specific internal controls, the following questions are considered: 1. Is the control designed properly to ensure that it would either prevent or detect and correct any significant misstatements? 2. To what extent have the internal controls been implemented according to their design; 3. To what extent have the internal controls (if existing) functioned properly (policies and procedures have been followed) throughout the period? 4. How does management assess the internal control as reliable?	potential reporting risks where there are no adequate management controls to mitigate potential reporting risks Areas where data accuracy, completeness and consistency could be improved are highlighted.

Periodic Verification Protocol Table 4: Detailed audit testing of residual risk areas and random testing		
Areas of residual risks	**Additional verification testing performed**	**Conclusions and Areas Requiring Improvement**

		(including Forward Action Requests)
List the residual areas of risks (Table 2 where detailed audit testing is necessary. In addition, other material areas may be selected for detailed audit testing.	The additional verification testing performed is described. Testing may include: 1. Sample cross checking of manual transfers of data 2. Recalculation 3. Spreadsheet 'walk throughs' to check links and equations 4. Inspection of calibration and maintenance records for key equipment ➢ Check sampling analysis results ➢ Discussions with process engineers who have detailed knowledge of process uncertainty/error bands.	Having investigated the residual risks, the conclusions should be noted here. Errors and uncertainties should be highlighted. Errors and uncertainty can be due to a number of reasons: ➢ Calculation errors. These may be due to inaccurate manual transposition, use of inappropriate emission factors or assumptions etc. ➢ Lack of clarity in the monitoring plan. This could lead to inconsistent approaches to calculations or scope of reported data. ➢ Technological limitations. There may be inherent uncertainties (error bands) associated with the methods used to measure emissions e.g. use of particular equipment such as meters. ➢ Lack of source data. Data for some sources may not be cost effective or practical to collect. This may result in the use of default data which has been derived based on certain assumptions/conditions and which will therefore have varying applicability in different situations. The second two categories are explored with the site personnel, based on their knowledge and experience of the processes. High risk process parameters or source data (i.e. those with a significant influence on the reported data, such as meters) are reviewed for these uncertainties.

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

Figure 1 Verification protocol tables

2.1 Review of Documents

The Monitoring Report (MR) version 1.0 dated 15/04/2010 submitted by Global Carbon B.V. and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), applied methodology, Kyoto Protocol, Clarifications on Verification Requirements to be checked were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, Global Carbon B.V. revised the MR and resubmitted it as final version 2.0 on the 6 of September 2010.
The verification findings presented in this report relate to the project as described in the Monitoring Report version 1.0, 1.2, 1.3 and 2.0.

2.2 Follow-up Interviews

On 07/07/2010 Bureau Veritas Certification performed interviews during site visit with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Global Carbon B.V. and OJSC ArcelorMittal Kryviy Rih were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics during site visit

Interviewed organization	Interview topics
OJSC ArcelorMittal Kryviy Rih	Organizational structure. Responsibilities and authorities. Training of personnel. Quality management procedures and technology. Implementation of equipment (records). Metering equipment control. Metering record keeping system, database.
Consultant: Global Carbon B.V.	Baseline methodology Monitoring plan Monitoring report Deviations from PDD Revised Monitoring plan

2.3 Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the verification 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 GHG emission reduction calculation.

Findings established during the initial verification can either be seen as a non-fulfilment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

Corrective Action Requests (CAR) are issued, where:
i) there is a clear deviation concerning the implementation of the project as defined by the PDD;
ii) requirements set by the MP or qualifications in a verification opinion have not been met; or
iii) there is a risk that the project would not be able to deliver (high quality) ERUs.

Forward Action Requests (FAR) are issued, where:
iv) the actual status requires a special focus on this item for the next consecutive verification, or
v) an adjustment of the MP is recommended.

The verification team may also use the term Clarification Request (CL), which would be where:
vi) additional information is needed to fully clarify an issue.

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

3 VERIFICATION FINDINGS

In the following sections, the findings of the verification are stated. The verification findings for each verification subject are presented as follows:
1) The findings from the desk review of the original project activity 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 Verification Protocol in Appendix A.
2) The conclusions for verification subject are presented.

In the final verification report, the discussions and the conclusions that followed the preliminary verification report and possible corrective action requests are encapsulated in this section.

3.1 Remaining issues CAR's, FAR's from previous determination/verification

One task of the verification is to check the remaining issues from the previous determination and verification or issues which are clearly defined for assessment in the PDD. The determination report prepared by TÜV SÜD Industrie Service GmbH do not note any open issues.

3.2 Project Implementation

The energy efficiency assessment conducted at ArcelorMittal Kryviy Rih envisages the implementation of eight sub-projects to increase the energy effectiveness of complex's operations.
The following sub-projects have been started within the monitoring period (2008-2009) and have been generating emissions reduction:

Sub-project	SP name	Starting date of ERUs generation	Comments
2	Modernisation of compressor station	07.10.2008	Completed at compressor TK#21
3	Fuel switch from NG to NG+COG+BFG mixture at rolling mill #3 (RM#3)	21.05.2008	Completed at rolling mill #3 (RM#3). Fuel switch at lime and refractory kilns not started.
	Fuel switch from NG to NG+COG+BFG mixture at wire rod rolling mill #3 (WRRM#3)	27.05.2008	Added in accordance to procedures for changes during project implementation. See Annex 4
	Fuel switch from NG to NG+COG+BFG mixture at light section rolling mill #5 (LSRM#5)	16.11.2009	Added in accordance to procedures for changes during project implementation. See Annex 4

Other subprojects, are either in implementation stage like SP1, SP4 or the implementation of them is postponed and will start at later stage. Subproject 5 has been partially implemented but usage of COG and BFG did not reach expected level and the ERUs generated by it will be claimed at later stage, upon reaching its design consumption of COG and BFG.
Inclusion of only subprojects 2 and 3 does not lead to fundamental changes in monitoring plan, but only in decrease of amount of generated ERUs versus the amount expected in PDD.
Fuel switch from NG to NG+COG+BFG mixture at wire rod rolling mill #3 (WRRM#3) and light section rolling mill #5 (LSRM#5) was added in accordance to procedures for changes during project implementation. (presented in the Annex 4 of the MR).
Eight compressors are currently installed at the oxygen plant. In spite of the fact that current units are in good conditions and still workable, total of 8 air compressors are planned to be refurbished in order to increase the energy efficiency of compressed air production. The refurbishment results in reduction of specific electricity consumption per cubic meter of compressed air produced from the current 0.09 kWh/m3 to some expected value of 0.082 kWh/m3.
The sub-project #3 consist in the partial replacement of natural gas with gas mixture of blast furnace gas/coke oven gas/natural gas (BFG+COG+NG) by installing and connecting new pipelines of mixing and boosting stations, and replacing of burners of two mills of Rolling shop.

The heat content associated to the use of waste gases would be lost into the atmosphere without the implementation of this project. Replacement of NG by COG+BFG+NG mixture for the heating of reheating furnaces of Rolling Mill# 3 has been implemented in May 2008 and the gas mixture of COG, BFG and NG is being used instead of NG only.
As a result of SP3 implementation, RM#3 has significantly (approximately two times) reduced consumption of NG. This amount of NG has been replaced by large amount of COG and BFG which, therefore is used instead of being flared.
According to the procedures regarding changes during project implementation, into SP3 two similar actictivities are included: fuel switch from NG to gas mix at wire rod rolling mill #3 (WRRM#3 and light-section rolling mill #5 (LSRM#5). The nature of these two actions is fully similar to the RM#3.
The identified areas of concern as to Project Implementation, project participants' response and BV Certification's conclusion are described in the Appendix A.

3.3 Internal and External Data

The monitoring approach in the monitoring plan of the PDD requires monitoring and measurement of variables and parameters necessary to quantify the baseline emissions and project emissions in a conservative and transparent way.
Internal and external data are obtained according to the PDD and the revised monitoring plan included in the MR. Most of the data monitored is of internal origin. The list of fixed default and baseline values is presented in the Tables 15-16, 20 of the MR.
Kryviy Rih transmission department of Ukrtransgas provides gas certificates containing data on NG NCV to AMKR. Its laboratory has all necessary permits and accreditation for conducting trials.
List of internal parameters necessary for ERUs calculation (including actual values of the parameters) is provided in the Tables 17-20 of the MR.
The identified areas of concern as to internal and external data, project participants' response and BV Certification's conclusion are described in the Appendix A.

3.4 Environmental and Social Indicators

The overall objective of the JI Project is to generate ERUs by reducing of CO2 emissions by saving electricity and natural gas. At the same time the investment program is largely environmentally oriented; it will improve the efficiency in the use of resources and it will apply modern technologies.

Moreover, the implementation of this project will offer a number of socio-economic impacts to the region.
Implementation of the project will lead to improvement of environmental climate in the region, prevent reduction of working places and improve working conditions.
The investment will increase economic activity by use of local civil engineering and related contractors for the implementation of the project. The project will increase the overall resource efficiency and therefore will strengthen the market position of the company. This will increase the job security of the people directly or indirectly dependent on the plant.
ArcelorMittal investment in the Company is a landmark transaction for Ukraine and its transition to a market economy. It has the potential to demonstrate to other foreign investors the benefits arising from a transparent privatisation, successful restructuring and introduction of international business management practices. ERUs generation can stimulate improvements in reducing energy consumptions and improving
The identified areas of concern as to management and operational system, project participants response and BV Certification's conclusion are described in the Appendix A.

4 VERIFICATION FINDINGS FOR THE PERIOD 2008 - 2009

4.1 Completeness of Monitoring

4.1.1 Determination of the revised Monitoring Plan

In the course of first monitoring period (01.01.2008 – 31.12.2009) the original monitoring plan described in the registered PDD version 04 was changed by the project participants.
The subproject #3: "Fuel switch from natural gas to coke oven, blast furnace and natural gas mixture" foresees the following two actions according the final version of the PDD:
a) Replacement of NG by COG+BFG+NG mixture for the heating of reheating furnaces of Rolling Shop 3;
b) Switch from NG to NG+BFG mixture in refractory and lime rotary kilns.
Action a) at rolling shop #3 has been successfully implemented as described in PDD on 21/05/2008 and has been operating since then.
Implementation of action b) experienced changes. The decision was made to implement the fuel switch from NG to GOG, BFG and NG mixture not at the refractory kilns and lime rotary kilns, but to extend the project to two other rolling mills: light-section rolling mill #5 (LSRM#5) and wire rod roiling mill #3 (WRRM#3). Both extensions have been already successfully implemented. The confirmative documents were submitted to the AIE on-site. The detailed technical project description, emission sources and baseline are described in the Annex 4 of the MR ver. 1.3.

Similar to the action a) of SP3 in PDD, the COG and BFG, together with NG would be used to heat the furnaces of light-section RM#5 and wire rod RM#3 in the project scenario.
The monitoring of emissions reduction occurred due to this change will be similar to the monitoring of emissions reduction from fuel switch at rolling mill #3.
To monitor the emissions reduction, the actual amount of gas mix will be metered; the NCV of gas mix will be calculated as weighted average, based on metered consumption of individual gases at CGMS and measured NCV of each of the gases.
In the baseline scenario these two rolling mills would continue using NG only. The heat content of COG and BFG would continue to be flared. All the heat supplied to light-section RM#5 and wire rod RM#3 is covered by NG only, while in the project scenario all three gases contribute their calorific values. The total amount of heat consumed is equal in project and baseline scenarios.
Global Carbon B.V. revised the original Monitoring Plan and submitted it for the determination (the description is included in the Annex 4 of the MR). The implementation of sub-project #3 (fuel switch from NG to NG+COG+BFG mixture) was only extended to two new rolling mills (not stipulated by the PDD). Thus no new emission sources were covered by the revised Monitoring Plan.
During determination process Bureau Veritas Certification reviewed the revised Monitoring Plan (included in the MR ver.1.3). The project participants provided an appropriate justification for the proposed revision. The additional parameters and emission sources in the project and baseline scenarios applicable to the rolling mill #5 and the wire rod roiling mill #3 are presented in the Tables 8-9, 11-12 of the final version of the MR. List of measuring devices necessary for monitoring of emissions at the rolling mill #5 and the wire rod roiling mill #3 is included in the MR ver. 1.3 and found to be in compliance with the actual status of monitoring system existing at the plant. Relevant changes were included both in the formulas (MR ver.1.3) and in the algorithm of the ERUs calculation (supporting Excel file) to cover all the emission sources applicable to the project.
The monitoring approach in the Monitoring Plan of the PDD version 04 requires monitoring and measurement of variables and parameters necessary to quantify the baseline emissions and project emissions in a conservative and transparent way. The same approach is applied in the revised Monitoring Plan.
The reporting procedures reflect the revised monitoring plan completely. Changes that have been implemented do not affect conservativeness of the approach to the emission reductions calculations and procedures of the data collection and archiving. The Management and Operational Systems are eligible for reliable project monitoring according to the new plan. Bureau Veritas Certification confirms that the proposed revisions to

the monitoring plan do not affect conformity with the relevant rules and regulations for the establishment of monitoring plans.
The monitoring of the project is complete, effective and reliable and generally complies with the monitoring methodology described in the PDD and the revised Monitoring Plan included in the MR ver.1.3. All relevant emission sources are covered by the monitoring plan and the boundaries of the project are defined correctly and transparently. All pertinent parameters were monitored and determined as prescribed. The collected data were stored during the whole monitoring period. The monitoring methodologies and supporting records were sufficient to enable verification of emission reductions. During the verification process, no significant lacks of evidence were detected. The reporting procedures, which were described in the final MR and examined during the on-site visit, were found to reflect the ones defined by the PDD and the revised Monitoring Plan.
The identified areas of concern as to Completeness of Monitoring, project participants response and BV Certification's conclusion are described in the Appendix A.

4.2 Accuracy of Emission Reduction Calculations

It is evidenced that the whole monitoring system was fully operational during the entire monitoring period. The verification team confirms that emission reduction calculations have been performed according to the revised monitoring plan and to the calculation methodology reported in the final MR in accordance with the PDD. The verification team checked the transfer of monitored data, correctness of the formulae versus the PDD as well as calculations of emission reductions. No inaccuracies in calculations were detected by the verifiers. Finally, our own calculations have shown the same results as given in the final Monitoring Report.
At OJSC ArcelorMittal Kryviy Rih the best available techniques are used in order to minimize uncertainties. Uncertainties are generally low. All monitoring equipment that used for monitoring purposes is in compliance with national legislative requirements and standards; this ensures that uncertainties are accounted in data collected.
The parameters used in the calculation of the baseline and project emissions are measured directly with the use of special equipment are included in the tables 17-20 of the MR. The other ones are estimated with the use of appropriate coefficients. The verification team obtained access to all relevant documentation needed to verify the emission reduction calculation. All used information was traceable and appropriately archived.
The identified areas of concern as to Accuracy of Emission Reduction Calculations, project participants response and BV Certification's conclusion are described in the Appendix A.

4.3 Quality Evidence to Determine Emissions Reductions

The origin of the data concerning the calculation of emission reductions is based on internal and external data which were explicitly checked. Inspection of calibration and maintenance records for key equipment was performed for all relevant meters. Necessary procedures have been defined in internal procedures and additional internal documents relevant for the determination of the various parameters.
The excel file submitted to AIE was checked. It contains algorithms to compute the annual value of the emission reductions. All equations and algorithms used in the different workbook sheets were checked.
The evidences that were obtained by the verification team in order to provide confidence in the emission reduction calculation, such as:

- Internal orders of OJSC ArcelorMittal Kryviy Rih on JI project implementation and GHG emission monitoring
- Duly maintained installation and operation of duly calibrated equipment
- Procedures for protection and back up of electronic and paper data
- Clear allocation of responsibilities and authorities
- Competence and commitments of personnel
- Implementation of data traceability
- A detail review for adequacy of any excel spreadsheet
- Collation of spot manual calculations with excel results
- Check for consistency of calculations and data in the final MR
- Appropriate archiving system
- IPCC data
- All used parameters were of sufficient and appropriate quality to assure an accurate monitoring.

4.4 Management System and Quality Assurance

The Management and operational system supporting GHG emission monitoring is a part of the company's management system. The procedures of receiving data for monitoring and responsibilities for its realization at OJSC ArcelorMittal Kryviy Rih is regulated by the special normative documents of the company.
Data are collected and stored in electronic database and in paper format. The data is reported in the monthly report of OJSC ArcelorMittal Kryviy Rih which are compiled into an annual monitoring report for verification process. The measurements are conducted constantly in accordance with national standards.
All measuring equipment is included in the verification schedule and verified with established periodicity. According to the schedule of verification, all devices are in satisfactory condition. The documented instructions to operate the facilities are stored at the working places.
Monitoring Report provide sufficient information about the elements of the system related to assigning roles, responsibilities and authorities for

implementation and maintenance of monitoring procedures including control of data. The verification team confirms effectiveness of this management system. The personnel responsible for monitoring are trained in appropriate manner.
The identified areas of concern as to Management System and Quality Assurance, project participants response and BV Certification's conclusion are described in the Appendix A.

5 PROJECT SCORECARD

Risk Areas		Conclusions			Summary of findings and comments
		Baseline Emissions	Project Emissions	Calculated Emission Reductions	
Completeness	Source coverage/ boundary definition	✓	✓	✓	All relevant sources are covered by the monitoring plan and the boundaries of the project are defined correctly and transparently.
Accuracy	Physical Measurement and Analysis	✓	✓	✓	State-of-the-art technology is applied in an appropriate manner. Appropriate backup solutions are provided.
	Data calculations	✓	✓	✓	Emission reductions are calculated correctly
	Data management & reporting	✓	✓	✓	Data management and reporting were found to be satisfying.
Consistency	Changes in the project	✓	✓	✓	Results are consistent to underlying raw data.

6 INITIAL AND PERIODIC VERIFICATION STATEMENT

Bureau Veritas Certification has performed the initial and 1st periodic verification of the JI project "Energy efficiency investment program at OJSC ArcelorMittal Steel Kryviy Rih". The verification 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 verification 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 verification report and opinion.

The management of the OJSC ArcelorMittal Kryviy Rih is responsible for the preparation of the GHG emissions data and the reported GHG

emissions reductions of the project on the basis set out within the determined PDD, version 04 and the revised monitoring plan presented in the MR version1.3 which was determined by Bureau Veritas Certification during this verification. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project is the responsibility of the management of the project.

Bureau Veritas Certification confirms that the project is implemented as per determined changes. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions.

Bureau Veritas Certification can confirm that the GHG emission reduction is calculated without material misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the valid and registered project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated, we confirm the following statement:

Reporting period: from 01/01/2008 to 31/12/2009
Baseline emissions: 221472 t CO_2 equivalents.
Project emissions: 125926 t CO_2 equivalents.
Emission Reductions: 95546 t CO_2 equivalents.

7 REFERENCES

Category 1 Documents:
Documents that relates directly to the GHG components of the project.

/1/ Project Design Document "Energy efficiency investment program at OJSC ArcelorMittal Steel Kryviy Rih", ver. 04, dated 04/08/2009

/2/ Monitoring Report "Energy efficiency investment program at OJSC ArcelorMittal Steel Kryviy Rih", ver. 1.0, dated 15/04/2010

/3/ Monitoring Report "Energy efficiency investment program at OJSC ArcelorMittal Steel Kryviy Rih", ver. 1.2, dated 06/07/2010

/4/ Monitoring Report "Energy efficiency investment program at OJSC ArcelorMittal Steel Kryviy Rih", ver. 1.3, dated 01/08/2010

/5/ Monitoring Report "Energy efficiency investment program at OJSC ArcelorMittal Steel Kryviy Rih", ver. 2.0, dated 06/09/2010

/6/ Determination Report by TÜV SÜD Industrie Service GmbH No. 1155637 dated 16/09/2009

/7/ Letter of Approval issued by Ministry of Sustainable development and infrastructures of Luxembourg, dated 28/05/2010

Category 2 Documents:

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

/8/ Documents checked during the verification onsite are presented in Annex C

Persons interviewed:

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

/1/ Doumik A. – developer representative, senior consultant
/2/ Salenko S. – deputy head of limestone heat-resistant shop
/3/ Drashko V. – head metrologist
/4/ Alyonina G. – head of environment control department
/5/ Tomashevskiy B. – deputy head of engineering department
/6/ Goncharenko V. – head of oxygen production
/7/ Kruskal L. – head of department of rationalization, invention, patenting, bibliography and novel technique
/8/ Omelyanets A. – manager on exploitation of automatic systems for technological processes operation
/9/ Volkov V. – acting director of power department
/10/ Petrukhov I. – head of sinter shop №1
/11/ Bychok O. – chief power engineer of sinter shop №1
/12/ Naiduk A. – chief power engineer of sinter shop №2
/13/ Tryapichkina T. – manager on normalization of heat and power recourses
/14/ Tryapichkina M. – head of central thermotechnical laboratory
/15/ Vinogradov S. – acting manager on effective use of heat and power recourses
/16/ Vkulenko S. – deputy director of rolling department
/17/ Shidlovskiy N. – deputy manager on exploitation of automatic systems for technological processes operation
/18/ Zaliznyak V. – deputy chief power engineer
/19/ Skrinnikov V. – deputy head of oxygen production
/20/ Schukin K. – deputy head of oxygen production
/21/ Kudinov D. – heating unit chief foreman
/22/ Boiko Ye. – specialist on control instrumentation and automatic systems equipment operation of rolling mill №3.

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APPENDIX A: JI PROJECT VERIFICATION PROTOCOL

Initial Verification Protocol Table 1

Objective	Reference	Comments	Conclusion (CARs/FARs)
1. Opening Session			
1.1. Introduction to audits	7	The intention and the target of the audit were illustrated to the participants of the audit. Participants of the audit were the following persons: Verification team: Sokolov I.– team leader, lead verifier, Bureau Veritas Certification; Skitina V. – team member, lead verifier, Bureau Veritas Certification Interviewed persons: Doumik A. – developer representative, senior consultant, Global Carbon BV Salenko S. – deputy head of limestone heat-resistant shop Drashko V. – head metrologist Alyonina G. – head of environment control department Tomashevskiy B. – deputy head of engineering department Goncharenko V. – head of oxygen production Kruskal L. – head of department of rationalization, invention, patenting, bibliography and novel technique Omelyanets A. – manager on exploitation of automatic	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
		systems for technological processes operation Volkov V. – acting director of power department Petrukhov I. – head of sinter shop №1 Bychok O. – chief power engineer of sinter shop №1 Naiduk A. – chief power engineer of sinter shop №2 Tryapichkina T. – manager on normalization of heat and power recourses Tryapichkina M. – head of central thermotechnical laboratory Vinogradov S. – acting manager on effective use of heat and power recourses Vkulenko S. – deputy director of rolling department Shidlovskiy N. – deputy manager on exploitation of automatic systems for technological processes operation Zaliznyak V. – deputy chief power engineer Skrinnikov V. – deputy head of oxygen production Schukin K. – deputy head of oxygen production Kudinov D. – heating unit chief foreman Boiko Ye. – specialist on control instrumentation and automatic systems equipment operation of rolling mill №3	
1.2. Clarification of access to data archives, records, plans, drawings etc.	6, 2, 3	The verification team got open access to the required plans, data, records and all relevant facilities. **CL1** Please indicate sectoral scope for the project.	**CL1**
1.3. Contractors for equipment and installation works	1, 2-4	Project has been implemented as defined in the PDD version 04 and the implementation is evidenced by statements of work completion. Some changes during project	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
		implementation occurred. Two more installations (not included in the PDD) were performed: fuel switch from natural gas to gas mixture at the wire rod rolling mill #3 and small section rolling mill #5 was completed in 2008 and 2009. The nature of these actions is fully similar to the sub-project #3 (described in the PDD) and do not lead to qualitative changes in monitoring. Changes during project implementation are described in details in the Annex 4 of the MR. The commissioning reports were available to the verification team during site-visit.	
1.4. Actual status of installation works	1, 2-4, 7	The project is performed in line with the PDD version 04. **CAR1** Please, add the information about the implementation status of the sub-projects described in the PDD to the MR. **CAR2** Please, indicate in the MR (Table 2) the date of commissioning for sub-projects already implemented (including new sub-projects: WRRM#3 and LSRM#5) **CAR3** Please, make the date of completion for RM#3 consistent with the information stated in the act of commissioning. Please, make it consistent through the MR (Table 2, Section A.6. and Annex 4).	**CAR1** **CAR2** **CAR3**
2. Open issues indicated in determination			

Objective	Reference	Comments	Conclusion (CARs/FARs)
report			
2.1. Missing steps to final approval	1, 6	**CAR4** There is no evidence of the project approval by the Host party. Please provide.	**CAR4**
3. Implementation of the project			
3.1. Physical components	1, 2-4, 7	According to the approved PDD the energy efficiency assessment conducted at AMKR had identified eight key measures which are being implemented. These measures will contribute in reduction of specific energy consumption and will lead to reduction of CO_2 emissions. Two sub-projects (#2 “Modernisation of compressor station” and #3 “Fuel switch from natural gas to gas mixture”) have been started within the monitoring period. Other subprojects are either in implementation stage or implementation of them is postponed and will start later. Two more installations within sub-project #3 have been carried out. (for more details, please, see Annex 4 of the MR).	OK
3.2. Project boundaries	1, 2-4, 7	The project boundaries of sub-projects #2 and #3 are as defined in the PDD version 04. No deviations form the estimated project boundaries were identified. **CL2** Please, clarify if the new sub-projects (WRRM3 and LSRM5) are within the project boundaries as presumed in the PDD.	**CL2**

Objective	Reference	Comments	Conclusion (CARs/FARs)
3.3. Monitoring and metering systems	1, 2-4, 7	The monitoring at OJSC ArcelorMittal Kryviy Rih is conducted on daily and monthly basis according to the PDD and the modified monitoring plan. The procedures of receiving data for monitoring and responsibility for its realization at OJSC ArcelorMittal Kryviy Rih are regulated by the normative documents of the company. All measuring equipment is verified with established periodicity; monitoring equipment is in satisfactory condition. **CAR5** Please, correct the data indicated in the column "recording frequency" (Tables 5-12 of the MR) in accordance with the actual frequency of monitoring.	**CAR5**
3.4. Data uncertainty	1, 2-4, 7	The best available techniques are used in order to minimize uncertainties. Uncertainties are generally low as all monitoring equipment used for monitoring purposes is in line with national legislative requirements and standards; this ensures that uncertainties are accounted in data collected. The uncertainty level for each parameter monitored is indicated in the Tables 12-13 of the MR.	OK
3.5. Calibration and quality assurance	1, 2-4, 7	Quality control and quality assurance procedures undertaken for data monitored as indicated in the PDD versin 04. The verification and calibration process is under strict control. All metering equipment is controlled by the Instrumental department. It makes periodical checking and verification of metering equipment as per approved schedule and equipment manual. Ukrainian Centre for Standardization and	**CAR6**

Objective	Reference	Comments	Conclusion (CARs/FARs)
		Metrology, State Dnepropetrovsk regional centre for standardization, metrology and certification (SE "Dneprstandartmetrology") is in charge of measuring devices calibration. **CAR6** Please, include the dates of calibration/verification within the monitoring period 2008-2009 for the metering devices indicated in the Table 14 (where applicable).	
3.6. Data acquisition and data processing systems	1, 2-4, 7	Data are collected and stored in paper (technological logs) as well as in electronic format. This was checked during site-visit. The responsibility for data acquisition and data processing is described in the section C.1.1 of the MR. **FAR1** Please, submit any documented instruction which indicates that the data monitored and required for ERUs calculation are to be kept for two years after the crediting period as per *JI determination and verification manual, v.01.*	**FAR1**
3.7. Reporting procedures	1, 2-4, 7	The data concerning compressed air production by the refurbished compressors and power consumed by the refurbished compressors are aggregated daily and monthly and annual reports are prepared. In order to calculate ERUs applicable to sub-project #3 the following parameters are monitored: - the full NG consumptions of RM#3, WRRM#3 and LSRM#5 which includes direct NG consumption and NG consumed as a part of BFG+COG+NG mixture; - gas mix consumptions;	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
		- NCV of NG; - NCV of COG; - NCV of BFG; - NCV of gas mix and the share of NG in the gas mix (calculated based on the metered data at the central gas mixing station and monitored NCVs of the gases). These data are aggregated monthly and annual reports are prepared. All the reports were presented on-site and were checked during verification.	
3.8. Documented instructions	1, 2-4, 7	MR provides with the necessary information relating the procedures for the monitoring and measurements. These were verified onsite and found satisfactory. The documented instructions to operate the facilities are stored at the working places. The monitoring of the data used to calculate ERUs is a part of organizational and quality management structure of OJSC ArcelorMittal Kryviy Rih. **CL3** Please, provide documented instruction for calculation of electricity consumption by compressor TK#21 (considering transformation coefficient).	**CL3**
3.9. Qualification and training	1, 2-4, 7	It was checked on-site that the management of OJSC ArcelorMittal Kryviy Rih has organized appropriate staff training to operate the project equipment. The management of the personnel training and retraining at the plant is carried out by the Technical Director. The activity with the personnel is organized and carried out in accordance with the plans approved by the Chief Engineer of	

Objective	Reference	Comments	Conclusion (CARs/FARs)
		the plant. The following methods are applied: - checking the knowledge of the regulations, norms and instructions related to process, labour protection, industrial and fire safety; - on-going training and retraining. Personnel involved in monitoring process is trained and instructed according to the revised monitoring plan.	
3.10. Responsibilities	1, 2-4, 7	OJSC ArcelorMittal Kryviy Rih has implemented provisions of the monitoring plan into its organizational and management structure. The general project management is implemented by Mrs. Liana Maximenko (the Director for Environment) and Mr. Vadim Yova (the head of energy management bureau) of AMKR through supervising and coordinating activities of the subordinates and other plant divisions. Mr. Vadim Yova is responsible for routine preparation and keeping the performance forms, which record the project variables. Within this responsibility he interacts with plant divisions in getting necessary performance data for subprojects included in the MR. The plant laboratory is responsible for measurement of NCV of fuels used. Ukrainian Centre for Standardization and Metrology, State Dnepropetrovsk regional centre for standardization, metrology and certification (SE “Dneprstandartmetrology”) is the body responsible for calibration and certification of the measuring equipment. Kryviy Rih transmission department of Ukrtransgas is the	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
		natural gas supplier to AMKR. It is responsible for submission of gas certificates containing data on NG NCV to AMKR.	
3.11. Troubleshooting procedures	1, 2-4, 7	The troubleshooting is made by maintenance mechanics or on-duty electrician/operator. The internal system requires that a broken meter has to be replaced in few hours by the Instrument department. The Chief of Instrument dpt., M-r Drazhko is in charge with the above activities. The troubleshooting procedures concerning the commercial electric meters which are property of the electricity distributing company are according to the national standards for that kind of equipment, i.e. in max. 5 days the distributing company has to replace the meter. During that period the data is taken on a historical basis for a similar period of time.	OK
4. Internal Data			
4.1. Type and sources of internal data	1, 2-4, 7	The internal parameters are obtained according to PDD version 04. Tables 5-12 of the MR contain internal parameters that are monitored. The tables 13-14 of the MR also provide information on the equipment used for monitoring of internal data. **CAR7** Please, indicate the parameters of transformers used for monitoring of electricity consumption by compressor TK#21 in the MR.	**CAR7**

Objective	Reference	Comments	Conclusion (CARs/FARs)
4.2. Data collection	1, 2-4, 7	The data and parameters monitored are measured, collected, and recorded at the designated frequency as described in the revised monitoring plan. Data are collected and stored in electronic database as well as in paper format. The data is reported in monthly and annual technical reports of OJSC ArcelorMittal Kryviy Rih which are compiled into a monitoring report for the defined period (2008-2009). **CAR8** The values of compressed air production in the Excel file (spreadsheet SP2, C5 and D5 cells) are inconsistent with the primary data checked during site-visit. Please, correct/clarify. **CAR15** Please, add to the MR the information/process flow diagram, describing the entire process from raw data to reported totals **CL4** Please, clarify why the "volumetric share of NG in gas mix in year y" is monitored for project emissions calculations for RM3 but not monitored for WRRM3 and LSRM5. (as stated in the Tables 10-12 of the MR)	**CAR8** **CAR15** **CL4**
4.3. Quality assurance	1, 2-4, 7	Section C of the MR contains procedure for data collection and processing, and also reflects monitoring, metering and reporting procedures. This information was verified during the visit of OJSC ArcelorMittal Kryviy Rih and was found satisfactory.	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
4.4. Significance and reporting risks	1, 2-4, 7	In case of defect, discovered in the monitoring equipment, the actions of the staff are determined in Guiding Metrological Instructions. The measurements are conducted constantly in accordance with national standards. The internal system requires that a broken meter has to be replaced in few hours by the Instrument department. The Chief of Instrument department is in charge of the above activities. Distributing company has to replace the broken electric meter in max. 5 days. During that period the data is taken on a historical basis for a similar period of time.	OK
5. External Data			
5.1. Type and sources of external data	1, 2-4, 7	The external data are obtained according to the PDD and the revised monitoring plan included in the MR. The list of fixed default and baseline values is presented in the Tables 15-16 of the MR.	OK
5.2. Access to external data	1, 2-4, 7	The external data are obtained according to the PDD and the revised monitoring plan included in the MR. All documents and references that confirmed external data were available for the verification team.	OK
5.3. Quality assurance	1, 2-4, 7	Kryviy Rih transmission department of Ukrtransgas provides gas certificates containing data on NG NCV to AMKR. Its laboratory has all necessary permits and accreditation for conducting trials. Ukrtransgas is responsible for quality assurance of the NCV parameter.	OK
5.4. Data uncertainty	1, 2-4, 7	See section 5.3 above.	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
5.5. Emergency procedures	-	Not applicable for the project.	OK
6. Environmental and Social Indicators			
6.1. Implementation of measures	1, 2-4, 7	An environmental impact assessment in accordance with Ukrainian legislation has been conducted for the sub-projects already implemented within 2008-2009. This was checked during site-visit to OJSC ArcelorMittal Kryviy Rih. **CAR9** Please, add the information concerning monitoring of the environmental impacts for the measures implemented at RM#3, WRRM#3 and LSRM#5 to the MR.	**CAR9**
6.2. Monitoring equipment	1, 2-4, 7	Monitoring of environmental impacts due to operation of the plant is performed in accordance to the company standard STP 192-09-2008 named "System of environmental management. Monitoring and measurements" which conforms applicable environmental, health and safety norms of Ukraine in force. Monitoring includes the instrumental control of: - industrial emissions caused by stationary sources; - efficiency of operation of de-dusting and flue gas cleaning installations; - quality of ambient air at the plant sanitary boundaries and zones of influence of different plant units; - quality of ambient air at the places of waste removal, places where the explosive work are being carried out and	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
		also at the living districts of the city of Kryvyi Rih; - quality of sewage waters, waste waters and recycled waters; - quality of soil at the sanitary border of AMKR and at the waste disposal areas. Waste management is prescribed by the plant standard STP 192-13-2006 which conforms the state standard DSTU 1.5.2003 and ISO 14001:2004.	
6.3. Quality assurance procedures	1, 2-4, 7	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 - State Construction Standard DBN A.2.2.-1-2003 :"Structure and Contents of the Environmental Impact Assessment Report for Designing and Construction of Production Facilities, Buildings and Structures" State Committee Of Ukraine On Construction And Architecture, 2004.	OK
6.4. External data	1, 2-4, 7	N/A	OK
7. Management and Operational System			
7.1. Documentation	1, 2-4, 7	The first periodic monitoring was conducted based on the established responsibility structure as well as the PDD and revised monitoring plan, and numerous instructions for personal with regard to control of measured data and calibration of measuring devices as a part of the company operation. The company complies with all legal and statutory requirements of the Ukraine and the same were made	OK

Objective	Reference	Comments	Conclusion (CARs/FARs)
		available to the verification team. OJSC ArcelorMittal Kryviy Rih has all the necessary permissions and licenses. The order concerning organization of production activity key parameters monitoring and appropriate administrative duties were checked during site-visit and found satisfactory.	
7.2. Qualification and training	1, 2-4, 7	See chapter 3.9 of this protocol.	OK
7.3. Allocation of responsibilities		The responsibilities and authorities are described for each individual in job descriptions as required statutorily. Persons working at sites are aware of their responsibilities, and relative records are maintained.	OK
7.4. Emergency procedures	1, 2-4, 7	See section 3.11 of the present protocol.	OK
7.5. Data archiving	1, 2-4, 7	All stored data are kept during the whole operation period of the plant and furthermore for at least 5 years. Both in paper and electronic format. Responsible personnel are defined.	OK
7.6. Monitoring report	1, 2-4, 7	Global Carbon B.V. (director Lennard de Klerk) is responsible for MR preparation. The responsibilities for data collection are described in the MR. **CAR10** Please, compare the values of ERUs calculated in the MR with the ones stated in the PDD. Please, explain the difference between these values. **CAR11** Please, add to the MR formulas used to calculate emission reductions for the sub-projects at WRRM3 and LSRM5. **CAR12**	**CAR10** **CAR11** **CAR12** **CAR13** **CL5** **CL6**

Objective	Reference	Comments	Conclusion (CARs/FARs)
		Please, provide/correct clear references for the next statements in the MR: - "...period indicated in 4.1." (p.3 of the MR) - "...period stated in A.4." (p.4 of the MR) - "Calculated using the formulae c.4 in Section D.1.1.2 of the PDD" (p.7 of the MR) **CAR13** Please, make changes in the monitoring plan, taking into account project implementation at the WRRM#3 and LSRM#5. **CL5** Please, add all abbreviations and their meanings to the Annex 1 of the MR. **CL6** Please, state why the text "n/appl" is indicated in the Table 21 for the LSRM#5.	
7.7. Internal audits and management review	1, 2-4, 7	Internal cross-checks and audits are performed for all of the data monitored as the raw documents used for monitoring are also used in the commercial dealings of the company. The management of the company reviews monthly and yearly reports and conducts selective cross-checks with the raw documents. **CAR14** Please, describe the procedure of internal audits (including allocation of responsibilities) concerning ERUs monitoring and calculation in the MR.	**CAR15**

Periodic Verification Checklist Protocol Table 2: Data Management System/Controls

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
1. Defined organizational structure, responsibilities and competencies		
1.1. Position and roles	Full	Position and role of each person in the GHG data management process is clearly defined and implemented from raw data generation to submission of the final data. Internal orders of assignment are available.
1.2. Responsibilities	Full	The general project management is implemented by Mrs. Liana Maximenko (the Director for Environment) and Mr. Vadim Yova (the head of energy management bureau) of AMKR through supervising and coordinating activities of the subordinates and other plant divisions. Mr. Vadim Yova is responsible for routine preparation and keeping the performance forms, which record the project variables. Within this responsibility he interacts with plant divisions in getting necessary performance data for subprojects included in the MR.
1.3. Competencies needed	Full	The competencies, responsibilities and authorities are described for each individual in job descriptions as required statutorily. Training needs were identified in advance and training was delivered that was

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
		checked onsite.
2. Conformance with monitoring plan		
2.1. Reporting procedures	Full	Reporting procedures used reflects the monitoring methodology content.
2.2. Necessary Changes	Partial	Some changes have occurred during project implementation. Two more installations (not included in the PDD) were performed: fuel switch from natural gas to gas mixture at the wire rod rolling mill #3 and small section rolling mill #5 was completed in 2008 and 2009. The nature of these actions is fully similar to the sub-project #3 (described in the PDD) and do not lead to qualitative changes in monitoring. Changes during project implementation are described in details in the Annex 4 of the MR. The commissioning reports were available to the verification team during site-visit. The Management and Operational Systems are eligible for reliable project monitoring according to the monitoring plan. Also please refer to CAR1-CAR3, CAR14 from the Table 1 above.
3. Application of GHG determination methods		
3.1. Methods used	Full	The reporting procedures reflect the monitoring plan and PDD content. The calculation of the emission reduction is correct.

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
3.2. Information/process flow	Full	Data are collected and stored in paper format as well as in electronic database. The data is reported in the monthly report of the OJSC ArcelorMittal Kryviy Rih which are compiled into a monitoring report for the defined period for verification process.
3.3. Data transfer	Partial	Data transfer between or within different areas of responsibilities is highlighted in the internal procedures. The complete data is stored electronically and are also the part of Management information system which is controlled by accounts. Also please refer to CAR5, CAR7-CAR8, CL3 from the Table 1 above.
3.4. Data trails	Partial	The necessary procedures have been defined in internal procedures and additional internal documents relevant for the determination of the all the parameters listed in the monitoring plan. Requirements for documented data trials are implemented in general as defined in internal procedures Also please refer to CAR8, CL4 from the Table 1 above.
4. Identification and maintenance of key process parameters		
4.1. Identification of key parameters	Full	The critical parameters for the determination of GHG emissions are the parameters listed in section D of the approved PDD version 04. All these key parameters are reflected in the Monitoring Report.

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
4.2. Calibration/maintenance	Partial	The calibration for each of the equipment is carried out in time and in compliance with the standard specification. The audit team verified the status for all the equipment at the sites sampled for the audit and found them to be in conformity with calibration and verification requirements. Also please refer to CAR5, CAR6 from the Table 1 above.
5. GHG Calculations		
5.1. Use of estimates and default data	Full	The estimates and default data used are indicated in the PDD as well as in the Monitoring Report together with their values.
5.2. Guidance on checks and reviews	Partial	The data is cross checked as well as corrective actions are taken in case of any nonconformity is detected. Responsibilities for JI monitoring are indicated in the Monitoring Report. The Project Developers supervise the implementation of the Monitoring Plan for the project regularly. Also please refer to CAR15 from the Table 1 above.
5.3. Internal validation and verification	Full	Internal cross-checks and audits are performed for all of the data monitored as the raw documents used for monitoring are also used in the commercial dealings of the company. Management of the company reviews monthly and yearly reports and conducts selective cross-checks with the raw documents.
5.4. Data protection measures	Partial	The necessary procedures relating to Information technology are in place to provide necessary data security, and also prevent the unauthorized use of the same. All data are stored in paper as well as in the electronic format. The IT and data storage system containing

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
		this information at the head office has back-ups and allows for reliable data storage with virtually no chance of data loss. Also please refer to FAR1 from the Table 1 above.
5.5. IT systems	Full	The monitored data are collected in electronic database (prepared in Excel format) simultaneously with the origin data in paper format.

Periodic Verification Protocol Table 3: GHG calculation procedures and management control testing

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
Potential reporting risks based on an assessment of the emission estimation procedures can be expected in the following fields of action: ➢ raw data collection and sources of supporting documentation, ➢ the calculation methods, ➢ reports/databases/information systems from which data is obtained. Key source data applicable to the project assessed are hereby: ➢ metering records, ➢ process monitors, ➢ operational logs (metering records), ➢ laboratory/analytical data (for energy content of fuels), ➢ utility/vendor data, Appropriate calibration and maintenance of equipment resulting in high accuracy of data supplied is in place. It is hereby needed to focus on those	Regarding the potential reporting risks identified in the left column the following mitigation measures have been observed during the document review and during site visit: • All installed measuring devices are to high industry standard; • Only skilled and trained personnel is allowed to operate the relevant equipment and take metering records; • Regular visual inspection of equipment; • Immediate replacement of dysfunctional equipment; • Proper maintenance of data and document control procedure; • Responsibilities for the raw data collection are established; • Appropriate archiving system established. The metering equipments are installed appropriately in the enclosure panels and same are of reputed make.	The issue remaining is the way data obtained is used to calculate the emission reduction in conservative manner according to the approach prescribed in the PDD version 04 and the revised monitoring plan as well as the way data obtained is used to calculate the emissions reductions.

Identification of potential reporting risk	**Identification, assessment and testing of management controls**	**Areas of residual risks**
risks that impact the accuracy, completeness and consistency of the reported data. Risks are weakness in the GHG calculation systems and include: ➢ manual transfer of data/manual calculations, ➢ unclear origins of data, ➢ accuracy due to technological limitations, ➢ lack of appropriate data protection measures.	Calculation methods: • Quality of input data is ensured; • Validated methodology and electronic tool for calculation emission reduction; • Detailed review of excel spreadsheet.	

Periodic Verification Protocol Table 4: Detailed audit testing of residual risk areas and random testing

Areas of residual risks	Additional verification testing performed	Conclusions and Areas Requiring Improvement (including Forward Action Requests)
The issue remaining is the way data obtained is used to calculate the emission reduction in a conservative manner according to the approach prescribed in the PDD.	There has been a complete check of data transferred from daily consumption and generation readings to the calculation tool. The error has been only detected during the data transfer from the primary sources to Excel file. The correct installation of the metering equipment can be confirmed.	Having investigated the residual risks, the audit team comes to the following conclusion: Those corrections have been considered during the verification process, so no residual risk is open. Immediate action is not needed with respect to the current emission reduction calculation. The correction of the error occurred during the data transfer from the primary sources to Excel file for ERUs calculation was requested. The unconformity has been eliminated.

Verification Protocol Table 5: Resolution of Corrective Action and Clarification Requests

Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
CAR1 Please, add the information about the implementation status of the sub-projects described in the PDD to the MR.	Table 1, 1.4	Added to table 2 MR ver1.3	The monitoring report was checked. Issue is closed.
CAR2 Please, indicate in the MR (Table 2) the date of commissioning for sub-projects already implemented (including new sub-projects: WRRM#3 and LSRM#5)	Table 1, 1.4	Added to table 2 MR ver1.3	The monitoring report was checked. Issue is closed.
CAR3 Please, make the date of completion for RM#3 consistent with the information stated in the act of commissioning. Please, make it consistent through the MR (Table 2, Section A.6. and Annex 4).	Table 1, 1.4	Corrected in table 2 MR ver1.3	The monitoring report was checked. Issue is closed.

Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
CAR4 There is no evidence of the project approval by the Host party. Please provide.	Table 1, 2.1	LoA form Luxembourg is obtained and submitted to the AEI, LoA from Ukraine expected to be signed in August-September 2010.	The document was checked. This CAR will be closed after submitting of LoA from Ukraine
CAR5 Please, correct the data indicated in the column "recording frequency" (Tables 5-12 of the MR) in accordance with the actual frequency of monitoring.	Table 1, 3.3	The data concerning recording frequency have been removed from tables 5 to 12 and the description of recording procedure is included in section B.1 monitoring equipment.	The MR was checked. Issue is closed.
CAR6 Please, include the dates of calibration/verification within the monitoring period 2008-2009 for the metering devices indicated in the Table 14 (where applicable).	Table 1, 3.5	Calibration data included in table 14 MR ver1.3	The MR was checked. Issue is closed.
CAR7 Please, indicate the parameters of transformers used for monitoring of electricity consumption by compressor	Table 1, 4.1	Data on current and tension transformers used with power meter Wh21 have been Included in table 13 of MR ver1.3.	The MR was checked. Issue is closed.

Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
TK#21 in the MR.			
CAR8 The values of compressed air production in the Excel file (spreadsheet SP2, C5 and D5 cells) are inconsistent with the primary data checked during site-visit. Please, correct/clarify.	Table 1, 4.2	The values of compressed air production and TK-21 power consumption has been checked and corrected in SD ER ver1.3 and in the MR ver1.3	The Excel file and the MR were checked. Issue is closed.
CAR9 Please, add the information concerning monitoring of the environmental impacts for the measures implemented at RM#3, WRRM#3 and LSRM#5 to the MR.	Table 1, 7.6	See supporting document to PP response where the procedures and standards applied are described	The supporting document and the MR were checked. Issue is closed.
CAR10 Please, compare the values of ERUs calculated in the MR with the ones stated in the PDD. Please, explain the difference between these values.	Table 1, 7.6	See the SD to PP response "Difference between expected volume of ERUs (PDD ver4.0) and MR000 ver1.3 for project Energy efficiency investment program at AMKR" where the difference in shown and explanations are provided.	The supporting document was checked. Issue is closed.
CAR11 Please, add to the MR formulas used to calculate emission reductions for the sub-projects	Table 1, 7.6	Section D of MP ver1.3 has been modified to include calculations of BE, PE and ER for WRRM#3 and LSRM#3	The MR was checked. Issue is closed.

Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
at WRRM3 and LSRM5.			
CAR12 Please, provide/correct clear references for the next statements in the MR: - "...period indicated in 4.1." (p.3 of the MR) - "...period stated in A.4." (p.4 of the MR) - "Calculated using the formulae c.4 in Section D.1.1.2 of the PDD" (p.7 of the MR)	Table 1, 7.6	Corrected in MR ver1.3: - "...period indicated in A.4." (p.3 of the MR); - "Calculated using the formulae c.4 in Section D.1.1.4 of the PDD (see PDD ver4.0 p.116)" (p.7 of the MR)	The MR was checked. Issue is closed.
CAR13 Please, make changes in the monitoring plan, taking into account project implementation at the WRRM#3 and LSRM#5.	Table 1, 7.6	MP ver1.3 has been modified to include variables, default parameters and calculations of BE, PE and ER for WRRM#3 and LSRM#3	The MR was checked. Issue is closed.
CAR14 Please, describe the procedure of internal audits (including allocation of responsibilities) concerning ERUs monitoring and calculation in the MR.	Table 1, 7.7	Description of procedure and standards used is included in section C.3 of MR ver1.3	The MR was checked. Issue is closed.
CAR15 Please, add to the MR the	Table 1, 4.2	Process flow diagram has been added into MR ver2.0 from 6 September 2010 at section C.1.	The MR was checked. Issue

Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
information/process flow diagram, describing the entire process from raw data to reported totals			is closed.
FAR1 Please, submit any documented instruction which indicates that the data monitored and required for ERUs calculation are to be kept for two years after the crediting period as per *JI determination and verification manual, v.01.*	Table 1, 3.6	The order of Director for Energy of AMKR will be prepared and will be brought to personnel's notice.	All documents and primary data relating to calculation of ERUs for the period 2008-2009 of monitoring were kept in place and were available for the verification team. The corresponding order must be checked during next verification process.
CL1 Please indicate sectoral scope	Table 1, 1.2	Added to table 2 MR ver1.3	The MR was checked. Issue

Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
for the project.			is closed.
CL2 Please, clarify if the new sub-projects (WRRM3 and LSRM5) are in the project boundary as presumed in the PDD.	Table 1, 3.2	The new subprojects WRRM#3 and LSRM#3 stay within the same project boundaries. Detailed explanation can be found in Annex 4 to MR ver.1.3	The MR was checked. Issue is closed.
CL3 Please, provide documented instruction for calculation of electricity consumption by compressor TK#21 (considering transformation coefficient).	Table 1, 3.8	Abbreviations added into Annex 1 of MRver1.3	The MR was checked. Issue is closed.
CL4 Please, clarify why the "volumetric share of NG in gas mix in year y" is monitored for project emissions calculations for RM3 but not monitored for WRRM3 and LSRM5. (as stated in the Tables 10-12 of the MR)	Table 1, 4.2	The gas mix consisting of NG, COG and BFG is being prepared at central gas mixing station and then supplied to RM3, WRRM3, LSRM5 and other consumers. The composition of mix (and share of NG in it) is the same for all gas mix consumers, therefore monitoring of NG share in gas mix is performed only once (for RM3) and the data are applied to all consumers.	Issue is closed.
CL5 Please, add all abbreviations and their meanings to the Annex 1 of the MR.	Table 1, 7.6	Abbreviations added into Annex 1 of MRver1.3	The MR was checked. Issue is closed.

Report clarifications and corrective action requests	Ref. to checklist question tables	Summary of project owner response	Verification conclusion
CL6 Please, state why the text "n/appl" is indicated in the Table 21 for the LSRM#5.	Table 1, 7.6	Gas mix was not consumed by LSRM#5 in 2008, fuel switch was commissioned 16.11.2009	Issue is closed.

APPENDIX B: VERIFICATION TEAM

The verification team consists of the following personnel:

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)
Internal Technical Reviewer, 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 of 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.

The verification report was reviewed by:
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 Krrzhizhanovsky 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.

APPENDIX C: DOCUMENTS CHECKED DURING VERIFICATION

1	Acceptance and transfer certificate #1 "Compressor K1500, №4909 modernization" dated 14.12.2007.
2	Certificate # 1 dated 12.11.2007. Statement on repair of centrifugal compressor 1500-62-2 with installation of new wheelspace K1700-61-1.
3	Acceptance and transfer certificate on compressor K1500-62-2 in complex with reducing gear, according to the contract on work performance #4296 dated 23.08.2007.
4	Acceptance and transfer certificate on work performance #2, "Compressor K1500, №4909 modernization" dated 24.12.2007.
5	Acceptance and transfer certificate on work performance #3, "Compressor K1500, №4909 modernization" dated 03.03.2008.
6	Acceptance and transfer certificate on work performance #4, "Compressor K1500, №4909 modernization" dated 14.04.2008.
7	Acceptance and transfer certificate on work performance #5, "Compressor K1500, №4909 modernization" dated 15.05.2008.
8	Acceptance and transfer certificate on work performance #6, "Compressor K1500, №4909 modernization" dated 13.10.2008.
9	Certificate that the turbocompressor unit K-1500 (1700) ser. № 4909 (after modernization) was delivered to the customer (according to the contract #4296 dated 23.08.2007).
10	Contract # 4296 on work performance dated 23.08.2007.
11	Statement on the main indicators of the centrifugal compressor technical condition, 2008.
12	Instruction for energy department #126 dated 16.09.2008.
13	Actions of transferring of continuous furnace of rolling mills MC-5, FS-3 and ICP-6 on heating by mixed gas dated 07.01.2006.
14	Protocol of the technical meeting on the transferring furnaces to the mixed gas dated 25.04.2008.
15	Acceptance certificate on repaired and upgraded facilities dated 23.10.2002.
16	Newspaper #136-137 (20366-20367) dated 06.09.2007. Statement on environmental effects. Sintering unit, sintering machine #1-5, mount. Gas -stove burners pipeline with mixed gas at OJSC "ArcelorMittall Kryviy Rih".
17	Protocol of the meeting of Kryviy Rih residents dated 11.09.2007.
18	Statement of intention dated 24.07.2008.

19	Protocol on approval of the working project "Rolling mill shop #3 DDS-250/150-6" dated 06.12.2007.
20	Letter #23-23,7728 dated 12.10.06 to the head of "ArcelorMittall Kryviy Rih" Siakerinu M.M.
21	Expert opinion #605 of the division #4 of State Fire Service unit number dated 23.11.2006.
22	Opinion of state environmental expertise on working projects of transferring the unit of metallurgical production of OJSC "ArcelorMittall Kryviy Rih" dated 15.03.07.
23	Opinion of state sanitation-and-epidemiological expertise dated 03.03.2007.
24	Environmental impact assessment 030.386-06-ОВОС. Volume 3. "Rolling mill MPS-250-5/150-6", 2006.
25	Design assignment #386-06. МПС 250/450-6.
26	General explanatory note. 033.386-06-ПЗ. Volume 1.1. Rolling mill 3. МПС 250/150-6, 2006.
27	Permit №19 dated 09.11.2006 on implementation of the project "СПЦ-2. ПС-250-3".
28	Statement of intention dated 26.09.2006.
29	Protocol on approval of the working project "СПЦ-2. ПС 250-3" dated 21.04.2007.
30	General explanatory note. 033.266-06-ПЗ. Volume 1. СПЦ-2. ПС 250-3, 2006.
31	СПЦ-2. ПС 250-3. Transferring heating furnaces #1 and #2 to the coke and blast furnace natural mixture. Environmental impact assessment (EIA) 030.266-06-ОВОС. Volume 3, 2006.
32	Annex B to "ОВОС СПЦ-2. ПС-250-3". Statement of intention.
33	Permit #15 dated 03.11.2006 on transferring furnaces #1 and #2 to the coke and blast furnace natural mixture.
34	Protocol on approval of the working project "СПЦ-2. МС 250-5. Transferring furnaces #1 and #2 to the coke and blast furnace natural mixture, 2007 "
35	Acceptance certificate on repaired facility dated 16.11.2009. #3.
36	Acceptance certificate of heating furnace #1 ПС 250 -3 after reconstruction in June 2008 dated 27.06.2008.
37	Acceptance certificate on repaired facility dated 16.11.2009. #2.
38	Acceptance certificate of repaired (upgraded) facilities dated 07.10.2008.
39	Passport on electric meter САЗУ-И670М, ser. #227667. Date of the last verification: 07.07.2006.
40	Passport on flowmeter. КСД3 218646, ДМ3564 1878. Date of the last verification: 21.07.2009.
41	Photo. Turbine ТК-20.
42	Technological logbook for compressor unit К-1500. #2.

	Started: 30.08.2009, finished 23.10.2009.
43	Thermometer for measuring temperature of air, oil and water.
44	Table of variations in temperature and pressure dated 19 September 2009. Oxygen plant #2.
45	Table of variations in temperature and pressure dated 20 September 2009. Oxygen plant #2.
46	Photo. Electric meter to turbocompressor.
47	Manometer К 1500 #21 (inv. #420537) for measuring air pressure in the collector.
48	Protocol #63 of the meeting commission for verifying knowledge on occupational safety and fire safety dated 25.06.2010.
49	Certificate of qualification level of working professionals #07689.
50	Protocol #61 of knowledge re-verification dated 03.07.2007.
51	Protocol #91 of knowledge re-verification dated 21.10.2008.
52	Protocol #79 of knowledge re-verification dated 30.07.2009.
53	Protocol #63 of knowledge re-verification dated 25.06.2010.
54	Register of furnace temperature by areas dated 07.07.2010.
55	Logbook of accounting production of compressed air and energy consumption by turbocompressor K-1500 #21. Started 2008.
56	Certificate # 0222/19026 issued for Moskalenko Konstantin Nikolayevich for participation in the course for stappers 04.06.2001.
57	Protocol #84 of verifying strapper knowledge dated 7 May 2008.
58	Protocol #11 of verifying metal heater knowledge dated 20 January 2009
59	Protocol of verifying strapper knowledge #89 dated 7 May 2009.
60	Clarification regarding monitoring of production activity impact on the environment
61	Supporting document "Difference between expected volume of ERUs (PDD version 4.0) and MR000 ver1.3 for project Energy efficiency investment program at AMKR", dated 22.07.10