DETERMINATION REPORT

GLOBAL CARBON RUS LLC

DETERMINATION OF THE "ENERGY EFFICIENCY INTERVENTIONS AT OJSC MORDOVCEMENT KOMSOMOLSKIY TOWN, REPUBLIC OF MORDOVIA, RUSSIAN FEDERATION"

REPORT NO. RUSSIA-DET/0059/2010
REVISION 02

BUREAU VERITAS CERTIFICATION

Determination Report on JI project
"Energy efficiency interventions at OJSC Mordovcement Komsomolskiy town, Republic of Mordovia, Russian Federation"

Date of first issue:	Organizational unit:
21/07/2010	Bureau Veritas Certification Holding SAS
Client:	Client ref.:
Global Carbon B.V.	Mr. Anthony Khaskelis

Summary:

Bureau Veritas Certification was commissioned by Global Carbon B.V. to make the determination of the project "Energy efficiency interventions at OJSC Mordovcement Komsomolskiy town, Republic of Mordovia, Russian Federation" on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI guidelines and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria. The owner of the project is OJSC "Mordovcement". Global Carbon B.V.being PDD developer coordinated the project and the determination process on behalf of the project owner.

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

The first output of the determination process is a list of Corrective Actions Requests (CAR), presented in Appendix A, Table 5. Taking into account this output, the project proponent has revised its project design document.

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

In the Determination Report rev.01, Bureau Veritas Certification recommended the project for approval by the Host Party. The approval was issued by the Ministry for Economic Development of the Russian Federation by Order No 112 dated 12 March 2012. The Project Participant issued on 16 March 2012 the PDD version 6.0 which refers in Section A.5 to the received project approval. Due to the above, CAR 01 in the Determination Report rev.01 which addressed the absence of the project approval is closed and hence all implications in the Determination Report and Appendix A related to CAR 01 have become irrelevant to the approved project.

Report No.:	Subject Group:
RUSSIA-det/0059/2010	JI

Project title:
"Energy efficiency interventions at OJSC Mordovcement Komsomolskiy town, Republic of Mordovia, Russian Federation"

Work carried out by:

Vera Skitina – Lead Verifier
Grigory Berdin – Lead Verifier

Work verified by:
Leonid Yaskin - Internal Technical Reviewer

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Indexing terms:

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

Abbreviations

AIE	Accredited Independent Entity
BLS	Baseline Study
BVC	Bureau Veritas Certification
CAR	Corrective Action Request
CHPP	Combined Heat and Power Plant
CO_2	Carbon Dioxide
DDR	Draft Determination Report
DR	Document Review
EIA	Environmental Impact Assessment
ERU	Emission Reduction Unit
GHG	Greenhouse House Gas(es)
I	Interview
IETA	International Emissions Trading Association
IPCC	Intergovernmental Panel on Climate Change
IRCA	International Register of Certified Auditors
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MoV	Means of Verification
JSC	Joint Stock Company
MP	Monitoring Plan
NCSF	National Carbon Sequestration Foundation
OJSC	Open Joint Stock Company
NPV	Net Present Value
PCF	Prototype Carbon Fund (World Bank Carbon Finance Unit)
PDD	Project Design Document
PP	Project Participant
RF	Russian Federation
tCO2e	Tonnes CO2 equivalent
UNFCCC	United Nations Framework Convention for Climate Change

Table of Contents Page

1 INTRODUCTION

Global Carbon B.V. has commissioned Bureau Veritas Certification to determine its JI project "Energy efficiency interventions at OJSC "Mordovcement" Komsomolskiy town, Republic of Mordovia, Russian Federation" (hereafter called "the project") located near Komsomolskiy rural settlement, Chamzinskiy district, Republic of Mordovia, Russian Federation. Global Carbon B.V. being PDD developer coordinated the project and the determination process on behalf of the project owner.

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

1.1 Objective

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

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

1.2 Scope

The determination scope is defined as an independent and objective review of the project design document (PDD), the project's baseline study (BLS) and monitoring plan (MP) and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements for Joint Implementation (JI) projects, JI guidelines, in particular the verification procedure under the JI Supervisory Committee, JISC Guidance on criteria for baseline setting and monitoring, Guidelines for users of JI PDD Form, and associated interpretations. Bureau Veritas Certification has, based on the recommendations in the Validation and Verification Manual (IETA/PCF), employed a risk based approach in the determination process, focusing on the identification of significant risks for project implementation and generation of ERUs.

The determination is not meant to provide any consulting towards Global Carbon B.V. and OJSC "Mordovcement". However, stated requests for corrective actions may have provided input for improvement of the project design.

1.3 GHG Project Description (quoted by PDD Section A.2)

Purpose of the Project:
The purpose of the project is indicated as energy efficiency increase of cement manufacturing. In order to increase efficiency of cement manufacturing three sub-projects are implemented:
- Semi-dry method of clinker manufacturing construction, 690, 000 tonnes of clinker per year and, 760000 tonnes of cement per year capacity;
- Dry method of clinker manufacturing construction, 1,860,000 tonnes of clinker per year and 2350500 tonnes of cement per year capacity;
- Combined heat power plant construction, 72 MW and 61 Gcal/hour output.

Project Company:
Mordovcement is one of the biggest cement manufacturing enterprises in the Russian Federation. Its production capacity is rounded to 3,750 thousand tonnes of cement per year, produced at 8 wet kilns.
OJSC "Mordovcement" is a pioneer in Republic of Mordovia heavy industry known as Alexeevskiy cement plant. It is located in the Komsomolskiy town in the central part of Russia, near the city of Saransk. The plant was established in 1948 and started cement manufacturing in 1956.
A management quality system is being implemented at the enterprise since April of 2007 to ensure production quality. Based on audit studies carried out by Rosstroysertifikacia (certification body in Russian Federation), an ISO 9001-2001 certificate has been issued stating that management quality system is in compliance with ISO 9001-2001 requirements as well as GOST-R and Rosstroysertifikacia requirements.

Situation existing prior to the starting date of the project:
Prior to the project implementation OJSC "Mordovcement" produced cement using only "wet" method of clinker production. Eight wet kilns are located at two separate production sites: Staroalexeevskiy Cement Plant (Old Alexeevskiy Plant) and Alexeevskiy Cement Plant. Staroalexeevskiy Cement Plant is also known as production #1, Alexeevskiy Cement Plant internal abbreviation is production #2. Plants are placed 800 meters apart from each other. Both plants are independent one from another and have their own infrastructure for cement manufacturing, including raw materials preparation facilities, kilns, mills and other equipment to ensure independent operations. Dry manufacturing method is not widely used and does not represent the current common practice at the moment. Semi-dry method is represented by only one cement plant in the Russian Federation making this technology unique of its kind in Russia.
There were no own energy-generating facilities, and electricity was consumed from the grid.

Baseline Scenario:
The baseline scenario is formulated as follows - in the absence of the project cement required for consumers would have been supplied by other cement plants located within the

radius of cement transportation (542 km* from OJSC "Mordovcement") or would have been produced by the existing wet kilns at OJSC "Mordovcement" and electricity consumed from the GRID by old wet lines.

Project Scenario:

The project scenario includes construction of a semi-dry line, a dry line of clinker production and construction of CHPP.
Both semi-dry and dry methods of clinker production are much more energy efficient compared to the wet method of clicker production. Combined heat power plant will supply two existing plants including semi-dry and dry lines with on-site generated electricity and will use recovered heat for facility needs, utilizing this way all recoverable energy and exceeding efficiency of grid generated electricity.
Production capacities of three sub-projects are:
- Semi-dry line - 690,000 tonnes of clinker per year and, 760,000 tonnes of cement per year;
- Dry line - 1,860,000 tonnes of clinker per year and 2,350,500 tonnes of cement per year capacity;
- Combined heat power plant - 72 MW electric capacity and 61 Gcal/hour heat output.
The project fuel is natural gas. An alternate fuel – old tyres will be used in an amount

History of the Project:
In order to increase energy efficiency of cement manufacturing, decision has been made to construct a semi-dry technological line of cement production. Construction of the semi-dry line had started with the contract for the new equipment supplement dated 9 July 2004. It was clear that growing cement demand could not be covered with the only semi-dry line cement manufacturing capacities, so it was planned to construct later the dry line of cement production and to decrease adverse affects of growing electricity tariffs by constructing own electricity generating facility that would supply with electricity and heat both semi-dry and dry lines and also partially old wet technological lines.
The board of directors has considered the project as JI during investment decision process and possible revenue from emission reductions sale was taken into account.
The semi-dry line was commissioned at 28 September 2007. Commissioning of the dry line and CHPP is planned on the fourth quarter of 2010.

1.4 Determination team

The determination team consists of the following personnel:

Grigory Berdin
Bureau Veritas Certification – Team Leader, Lead Verifier

Vera Skitina
Bureau Veritas Certification - Team member, Lead Verifier

* NII Cement directory, 2008. Page 49. Table 43.

Leonid Yaskin
Bureau Veritas Certification – Internal Technical Reviewer

2 METHODOLOGY

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

The determination consisted of the following three phases:

i) desk review of the project design document and the baseline and monitoring plan;
ii) site visit and interviews with project owner and PDD developer on 11/03/2010;
iii) resolution of outstanding issues with Global Carbon B.V. (ref. to Appendix A Table 5 with CAR's and CL's) and the issuance of the determination report and opinion.

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

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

The original determination protocol consists of five tables. The different columns in these tables are described in Figure 1.
The completed determination protocol is enclosed in Appendix A to this report. It consists of four tables. Table 3 for "Baseline and Monitoring Methodologies" is omitted because the project participants established JI specific approach that is in accordance with appendix B of the JI Guidelines and because the questions regarding the used approach are presented in Table 2. Additionally Table 6 "List of inadequacies" was added to describe minor inadequacies which do not influence understanding of the project, formulae and calculations.

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

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

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

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

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

Figure 1 Determination protocol tables

2.1 Review of Documents

Global Carbon B.V. provided Bureau Veritas Certification (BVC) on 17/02/2010 the Project Design Document (PDD) Version 3.0 dated 16/02/2010 together with supporting documentation including calculation of GHG emission and investment analysis.

The completeness check made by BVC revealed some deviations of the PDD from the JISC format. Therefore, Global Carbon B.V. was requested to remake the PDD in conformity to JI PPD Form. BVC received the finally remade PDD Version 3.5 dated 19/02/2010. This version of PDD was made publicly available for public comments on UNFCCC site from 20 February 2010 till 21 March 2010.

PDD Version 3.5 and supporting documentation as well as additional background documents related to the project design, baseline, and monitoring plan, such as Kyoto Protocol, host Country laws and regulations, JI guidelines, JISC Guidance on criteria for baseline setting and monitoring, and Guidelines for users of the JI PDD Form were reviewed.

The final deliverable of the document review was the Draft Determination Report (DDR) Version 5 dated 16/06/2010 with 58 CAR's and 3 CL's.

PDD developer Global Carbon B.V. issued iteratively ten batches of responses to BVC requests which were eventually embedded in the amended PDD Version 5.0 dated 20/07/2010. ITR did not raise any points of concern.

The determination findings presented in this Determination Report Version 1 and Appendix A relate to the project as described in the PDD Version 1.0 (initial) and Version 5.0 (final).

2.2 Follow-up Interviews

Bureau Veritas Certification Lead Verifier Grigory Berdin conducted a site visit to the project site on 11/03/2010. On-site interviews with the project participant and Global Carbon were conducted to confirm the selected information and to resolve issues identified in the

document review. The interview topics are listed in Table 7. The interviewed persons are listed in Section 6 References.

Table 7 Interview topics

Date/ Site/ Interviewed organization	Interview topics
11/03/2010 OJSC Mordovcement cement production plants (near Komsomolskiy town) Sites: OJSC Mordovcement Organisations: Global Carbon B.V. OJSC Mordovcement	1. History of the project. 2. Starting date of the project (the date on which the implementation or construction or real action of the project has begun). 3. Substantiation of the operational lifetime of the project. 4. Substantiation that the project could not occur as the baseline scenario. 5. Distinctions of the project activity from similar activities. 6. Technical design document. 7. Verification of specific fuels consumption coefficients for project and baseline scenario; 8. IRR and NPV of the project as per the feasibility study and technical design in comparison with investment analysis in PDD. Capital costs and breakdown of operational costs of the project. 9. Operational and management structure. Responsibilities, roles, authorities (for verification stage). 10. Expertise of Environmental Impact Assessment Documentation. 11. Permits for air emissions at the construction and exploitation phases. 12. Public hearings, if any. 13. Training programme for the staff. 14. Pending issues.

2.3 Resolution of Clarification and Corrective Action Requests

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

Corrective Actions Requests (CAR) are issued, where:

i) there is a clear deviation concerning the implementation of the project as defined the PDD;
ii) requirements set by the Methodological Procedure or qualifications in a verification opinion have not been met; or
iii) there is a risk that the project would not be able to deliver high quality ERUs.

Clarification Requests (CL) are issued where:

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

DDR Version 5 summarising Bureau Veritas Certification's findings of the desk document review reported 58 CAR's and 3 CL's. The amendments made by Global Carbon B.V. to the PDD and summarised in PDD Version 5.0 dated 20/07/2010 satisfactorily addressed the verifier's requests. As a result, the Determination Report Version 1 was issued on 21/07/2010 and sent, together with the final PDD Version 5.0, to BVC Internal Technical Reviewer (ITR) for review. ITR did not raise any points of concern.

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

3 DETERMINATION FINDINGS

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

i) the findings from the desk review of the original project design document and the findings from interviews during the conference call are summarized. A more detailed record of these findings can be found in the Appendix A Determination Protocol.

ii) where Bureau Veritas Certification had identified issues that needed clarification or that represented a risk to the fulfillment of the determination protocol criteria or the project objectives, a Clarification or Corrective Action Request, respectively, has been issued. The Clarification and Corrective Action Requests are stated in the in Appendix A Determination Protocol.

iii) where Clarification and Corrective Action Requests have been issued, the response by the project participants to resolve these requests is summarized in Appendix A Table 5.

iv) the conclusions of the determination are presented consecutively.

3.1 Project Design

The purpose of the project is construction at Mordovcement site of two clinker production lines applying semi-dry and dry methods and construction of CHPP. CHPP will provide new lines with electricity, dry line with heat for materials drying (in form of exhaust gases from gas turbines) and heat for heating.

The project includes two sites located near each other - Staroalexeevskiy and Alexeevskiy (new) sites. Before the project realization four wet kilns were located at each site (in sum eight).

The project envisages:

- Construction of 1 semi-dry kiln at Staroalexeevskiy plant with clinker capacity 2 300 tonnes of clinker per day (~ 690 000 tonnes of clinker per year and about 760 000 tonnes of cement per year). The semi-dry kiln will consume 58.4 mln. m^3 of natural gas per year and about 17.5 ths. tonnes of alternate fuel (old automobile tyres). The whole semi-dry production line will also consume about 60 ths MW*h of electricity per year;

- Construction of 1 dry kiln at Alexeevskiy plant with clinker capacity 6 000 tonnes of clinker per day (~ 1 860 000 tonnes of clinker per year and about 2 350 500 tonnes of cement per year). The dry kiln will consume about 104 mln. m^3 of natural gas per year and about 72.7 ths. tonnes of alternate fuel (old automobile tyres). The whole dry production line will also consume about 332 ths MW*h of electricity per year;
- Construction of CHPP at Alexeevskiy plant with 72 MW electric capacity and 61 Gcal/hour heat output. Following equipment should be installed:

Equipment to be used in CHPP:

- Two gas turbines General Electric LM2500+G4DLE, power output 30 MW;
- Steam turbine is Siemens SST-PAC 300, power output up to 50 MW;
- Steam boiler, (steam parameters - 4 MPa, 440ºC);
- Reserve boiler Viessmann Vitomax 200HS.

The CHPP will consume about 146 mln. m^3 of natural gas per year.

The project is the greenfield state-of-the-art facility which positively influences the environment.

Reduction of GHG emissions as a result of the project realization will occur due to:
- More energy-efficient dry method of clinker production and semi-dry method of clinker production compared to commonly used in Russia wet method of clinker production;
- More efficient electricity generation at the CHPP than in Russian electric grid.

Construction of the semi-dry line started on 9th of July 2004 and was commissioned on 28th of September 2007. Construction activity of the dry line started on 22nd of April 2006 and planned for commissioning in the 4th quarter of 2010. The project technology is unlikely to be substituted by other or more efficient technologies within the project period.

The project is expected to provide the reduction of GHG emissions by 1,170,036 tCO2e over the crediting period 2008-2012.

The identified areas of concern as to Project Design, PP's response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR 01 – CAR 06, CAR 48, CL 01 and CL 03).

The project has no approvals by the Parties involved, therefore CAR 01 remains pending.

No areas of concern were identified as to Project Duration / Crediting Period.

3.2 Baseline and Additionality

A JI specific approach regarding baseline setting and additionality demonstration and assessment has been developed in accordance with JISC Guidance on criteria for baseline setting and monitoring (Version 02). In accordance with paragraph 24 of this Guidance, the baseline is identified by listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one.

Six alternative scenarios were considered for the project activity:
- Alternative 1: Keeping existing lines, continue consume electricity from the grid. Third party producers will satisfy cement demand instead, electricity for wet old lines is consumed from the grid;
- Alternative 2: Keeping existing lines and constructing a new line applying wet process;
- Alternative 3: Keeping existing lines and constructing new facilities not implementing it as JI project;
- Alternative 4: Constructing a new line applying wet process and dismantling the existing lines;
- Alternative 5: Constructing a new line applying semi-dry process and dismantling the existing lines;
- Alternative 6: Constructing a new line applying dry process and dismantling the existing lines.

After the assessment and screening of the Alternatives, only Alternative 1 was left as reasonable and feasible As a result, Alternative 1 it was selected as the plausible scenario thus representing the baseline.

Technological data and parameters that define the baseline were determined during the site visit.

The "Tool for the demonstration and assessment of additionality" (version 05.2) approved by the CDM Executive Board was used in order to prove the project additionality. Upon the proof of the additionality, the following series of steps is stipulated by the tool:

1. Identification of alternatives to the project activity consistent with current laws and regulations;
2. Investment analysis (including the sensitivity analysis);
3. Barrier analysis;
4. Common practice analysis.

To assess the project's additionality the steps one, two and four were implemented accordingly. Step 3 – barrier analysis is omitted, according to the tool it is not mandatory if the step 2 is implemented.
In Section B.2, it is demonstrated that the project without JI registration is not a plausible baseline scenario since it does not meet the benchmark for profitability. A supporting spreadsheet containing all assumptions and calculations was made available to the verifier.
Common practice analysis demonstrates that at the time of decision-making semi-dry and dry technologies of clinker production were not widespread throughout Russian Federation.

The identified areas of concern as to Baseline and Additionality, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 07 – CAR 29, CAR 49, CAR 50, CAR 53-56 and CL 02).

3.3 Monitoring Plan

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

Option 1 – "Monitoring of the emissions in the project scenario and the baseline scenario" was chosen. All categories of data to be collected in order to monitor GHG emission reductions from the project are described in required details.

The project activity leads to greenhouse gas emissions from the following emission source:
- CO_2 emissions from natural gas combustion in kilns of semi-dry and dry lines;
- CO_2 emissions from natural gas combustion in the CHPP;
- CO_2 emissions from alternate fuel combustion;
- CO_2 emissions from calcination process;
- CO_2 emissions due to electricity consumption from the grid;

The project activity helps to avoid greenhouse gas emissions from cement production by third parties which would produce cement in the absence of the project activity and CO_2 emissions due to electricity consumption by old wet lines in the absence of the project activity. Cement production by third parties includes following emission sources:
- CO_2 emissions from fossil fuels combustion;
- CO_2 emissions from calcination process;
- CO_2 emissions due to electricity consumption;

All emission sources identified above have been included in the monitoring plan. The monitoring approach explicitly and clearly distinguishes:
a) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination regarding the PDD; and
b) Data and parameters that are monitored throughout the crediting period.

All categories of data to be collected in order to monitor GHG emission reductions from the project are described in required details.

Leakages where excluded for the purposes of simplification and conservatism. It is proven in PDD that semi-dry and dry lines of cement manufacturing are more energy efficient technologies compared to the wet method of clinker production (the baseline scenario), meaning that less fossil fuel e.g. natural gas needs to be consumed and essentially burnt. Less fuel consumption leads to the less leakage associated with natural gas extraction, processing and transportation.

Operational and management structure that OJSC Mordovcement implements to monitor emission reduction is clearly described in the PDD. Monitoring related quality control and quality assurance procedures are outlined subject to checking at the verification phase.

The identified areas of concern as to Monitoring Plan, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 30 - CAR 40 and CAR 57).

3.4 Calculation of GHG Emissions

Formulae used for calculation of GHG emissions are presented in PDD Section B and Section D. Input data for calculations and the calculations are presented in the comprehensive excel spreadsheet, which was made available to the verifier. The final calculations are observed as accurate. The results are summarized in Section E.

The calculated amount of project emission reduction over the crediting period 2008 - 2012 is 1,170,036 tCO2e. The annual average emission reduction is 234,007 tCO2e.

The identified areas of concern as to calculation of GHG emissions, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 41 - CAR 43, CAR 51, CAR 52 and CAR 58).

3.5 Environmental Impacts

Verifiers studied environmental impacts assessment during the site visit. It was observed that OJSC "Mordovcement" had granted positive conclusions from the regional office of Glavgosexpertiza, in Republic of Mordovia for the semi-dry line construction, dry line construction and CHPP construction. "Mordovcement" also granted permissions on emission of pollutants into the atmosphere.

The project related environmental documents are in compliance with the state environmental and sanitary-epidemiological standards. The State Ecological Examination of the project did not identify any non-compliance issues with regards to the Russian Federation legislation and normative documents relating to the environmental protection. The project complies with all environmental laws, and emissions are well within legal limits.

The identified areas of concern as to Environmental Impacts, PP's response and BV Certification's conclusion is described in Appendix A Table 5 (refer to CAR 44 – CAR 47).

3.6 Comments by Local Stakeholders

No comments of concern were received from local stakeholders.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

In accordance with the Section E "Verification procedure under the Article 6 Supervisory Committee" of the JI guidelines, Bureau Veritas Certification published the PDD Version 3.5 on UNFCCC site on 20/02/2010 and invited comments within 21/03/2010 by Parties and stakeholders. No comments have been received.

5 DETERMINATION OPINION

Bureau Veritas Certification has been engaged by Global Carbon B.V. to perform a determination of the JI project "Energy efficiency interventions at OJSC Mordovcement Komsomolskiy town, Republic of Mordovia, Russian Federation" owned by OJSC "Mordovcement". The determination was performed on the basis of UNFCCC criteria for JI projects, in particular the verification procedures under the JI Supervisory Committee, as well as host country criteria and the criteria given to provide for consistent project operations, monitoring and reporting.

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

The determination consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) project site visit and follow-up interviews with the project participant and PDD developer; iii) the issuance of the determination report and opinion.

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

The investment and common practice analyses demonstrate that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that it is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The determination revealed two pending issues related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party (Russian Federation). If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Version 5.0 dated 20 July 2010 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

Bureau Veritas Certification thus recommends this project for the formal approval by the RF Ministry for Economic Development as the JI project in accordance with the RF Government Decree # 843 dated 28/10/2009 and the Order of the RF Ministry for Economic Development # 485 dated 23/11/2009.

Bureau Veritas Certification Holding SAS
21 July 2010

Vera Skitina - Team Leader, Lead Verifier

Grigory Berdin – Team member, Lead Verifier

6 REFERENCES

Reviewed document or type of Information available before the site visit

1.	PDD "Energy efficiency interventions at OJSC Mordovcement Komsomolskiy town, Republic of Mordovia, Russian Federation". Version 3.5, dated 19/02/10.
2.	Guidelines for Users of the Joint Implementation Project Design Document Form. Version 04, JISC.
3.	List of sectoral scopes (version 02) http://ji.unfccc.int/Ref/Documents/List_Sectoral_Scopes.pdf
4.	JI Guidelines. Annex to decision 9/CMP.1.
5.	JISC Guidance on criteria for baseline setting and monitoring. Version 02.
6.	Methodological Tool "Tool for the demonstration and assessment of additionality". Version 05.2
7.	Approved consolidated baseline and monitoring methodology ACM0009 "Consolidated baseline and monitoring methodology for fuel switching from coal or petroleum fuel to natural gas". Version 03.2.
8.	The study "Development of grid GHG emission factors for power systems of Russia" commissioned by "Carbon Trade and Finance" in 2008
9.	Excel spreadsheet with emission reductions calculation.
10.	Excel spreadsheet with baseline emission factor calculation.
11.	Excel spreadsheet with investment analysis for CHPP subproject calculation.
12.	Excel spreadsheet with investment analysis for semi-dry subproject calculation.
13.	Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD) 2005, CO_2 Accounting and Reporting Standard for the Cement Industry.
14.	2006 IPCC Guidelines for National Greenhouse Gas Inventories. Volume 2, Energy (http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.htm).
15.	Minutes of investment committee meeting for the dry line and CHPP. 21 April 2006.
16.	Business plan for the semi-dry line.
17.	Business plan for the dry line and CHPP.

Reviewed document or type of Information obtained at the site visit

1.	Project design of the dry line construction (includes CHPP)
2.	Project design of the semi-dry line construction
3.	Business-plan of the semi-dry line construction
4.	Business-plan of the dry line construction (includes CHPP)

5.	State expertise positive conclusion on the semi-dry line construction
6.	State expertise positive conclusion on the dry line construction
7.	Construction permission for the dry line construction (includes CHPP);
8.	Construction permission for the semi-dry line construction;
9.	Permissions on emissions and their limits
10.	Implementation schedule for the dry line
11.	Protocol of investment decision making
12.	Passports for gas and steam turbines
13.	Contract on equipment purchasing for the semi-dry line
14.	Clinker production process procedure (Tekhnologicheskiy reglament)
15.	Contract on waste waters utilization
16.	Measurement devices passports
17.	Environment impact assessment procedure (OVOS) for the dry line
18.	Environment impact assessment procedure (OVOS) for the semi-dry line
19.	Contract on equipment purchasing for the dry line
20.	Fuel consumption historical data from the Technology and production department of OJSC "Mordovcement"
21.	Wastes limits
22.	NII Cement directory(electronic)
23.	Positive conclusion of State Environmental Expertise for semi-dry line
24.	Project of formatives of maximum permissible emissions (PDV)
25.	Environment impact assessment procedure (OVOS) for the CHPP

Persons interviewed:

1.	Erastova Albina Ivanovna – OJSC Mordovcement, Deputy chief engineer on environmental, project manager
2.	Sivov Vitaly Ivanovich – OJSC Mordovcement, Chief engineer
3.	Konovalov Vladislav Valentinovich – OJSC Mordovcement, Chief of Production-Technological Service (PTS)
4.	Tutaeva Natalia Fedorovna – OJSC Mordovcement, chief process engineer
5.	Semechkin Evgeniy Alexandrovich – OJSC Mordovcement, Deputy chief engineer on energetics
6.	Obroskina Larisa Alexeevna – OJSC Mordovcement, Chief metrologist
7.	Zybakova Galina Mikhailovna – OJSC Mordovcement, Chief economist
8.	Papkov Sergey – Global Carbon B.V, JI consultant

APPENDIX A: COMPANY JI PROJECT DETERMINATION PROTOCOL

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

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

		ty(ies), should be provided to the AIE and made available to the secretariat by the AIE when submitting the first verification report for publication in accordance with paragraph 38 of the JI guidelines, at the latest.	
2. Emission reductions, or an enhancement of removal by sinks, shall be additional to any that would otherwise occur.	Kyoto Protocol Article 6.1 (b)	OK	Table 2 Section B.2.1
3. The sponsor Party shall not acquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7.	Kyoto Protocol Article 6.1 (c)	OK	N/A
4. The acquisition of emission reduction units shall be supplemental to domestic actions for the purpose of meeting commitments under Article 3.	Kyoto Protocol Article 6.1 (d)	OK	N/A
5. Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects.	Marrakech Accords, JI Modalities, §20	OK	The Russian national focal point is the Ministry of Economic Development. The Russian national guidelines and procedures are established by the "Regulation of realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change". Ap-

			proved by the RF Government Decree # 843 of 28/10/2009 "About measures on realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change".
6. The host Party shall be a Party to the Kyoto Protocol.	Marrakech Accords, JI Modalities, §21(a)/24	OK	Russia has ratified the Kyoto Protocol by Federal Law N 128-ФЗ dd. 04/11/04
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts.	Marrakech Accords, JI Modalities, §21(b)/24	OK	The Russian Federation's assigned amount has been calculated and recorded In the 5th National Communication dated 12/02/10.
8. The host Party shall have in place a national registry in accordance with Article 7, paragraph 4.	Marrakech Accords, JI Modalities, §21(d)/24	OK	Russian Federation has established the GHG Registry by the RF Government Decree N 215-p dated 20/02/06.
9. Project participants shall submit to the independent entity a project design document that contains all information needed for the determination.	Marrakech Accords, JI Modalities, §31	OK	Global Carbon BV has submitted the PDD Version 3.0 dated 16 February 2010 to Bureau Veritas Certifica-

			tion, which contains all information needed for determination.
10. The project design document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments.	Marrakech Accords, JI Modalities, §32	OK	PDD Version 3.5 dated 19 February 2010 was made publicly available for comments on UNFCCC JI website from 20 February 2010 till 21 March 2010.
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, in accordance with procedures as determined by the host Party shall be submitted, and, if those impacts are considered significant by the project participants or the host Party, an environmental impact assessment in accordance with procedures as required by the host Party shall be carried out.	Marrakech Accords, JI Modalities, §33(d)	OK	Table 2, Section F
12. The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B
13. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B
14. The baseline methodology shall exclude to earn ERUs for decreases in activity levels outside the project activity or due to force majeure.	Marrakech Accords, JI Modalities, Ap-	OK	Table 2, Section B

	pendix B		
15. The project shall have an appropriate monitoring plan.	Marrakech Accords, JI Modalities, §33(c)	OK	Table 2, Section D
16. A project participant is a legal entity authorized by a Party involved to participate in the JI project.	"Glossary of Joint Implementation Terms", Version 02.	The Russian project participant will be authorised by the Host Party through the issuance of the approval for the project. Conclusion is pending a follow-up on CAR 01. Refer to Verifiers' Note in 1 above.	Table 2, Section A

Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A. General Description of the project					
A.1. Title of the project					
A.1.1. Is the title of the project presented?	1,2,3	DR	The title of the project is: "Energy efficiency interventions at OJSC Mordovcement Komsomolskiy town, Republic of Mordovia, Russian Federation". **CAR 02.** Please indicate the full name of Sectoral Scope 1 according to [3]. The Sectoral Scopes are identified in the PDD as: (4) Manufacturing industries and (1) Energy.	CAR 02	OK
A.1.2. Is the current version number of the document presented?	1,2	DR	PDD Version 3.5 was reviewed.		OK
A.1.3. Is the date when the document was completed presented?	1,2	DR	PDD Version 3.5 is dated 19/02/2010.		OK
A.2. Description of the project					
A.2.1. Is the purpose of the project included?	1,2	DR	The purposes of the project are construction of: - semi-dry line of clinker production; - dry line of clinker production; - combined heat power plant (further referred	CAR 03 CL 03	OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			as CHPP). Cement produced by new lines will substitute cement produced by other cement manufacturers within 542 km radius from OJSC "Mordovcement". PDD also provides mechanism to calculate "replacement part" of clinker production (clinker produced by new lines could substitute clinker previously produced by wet lines located on-site in case then clinker production on the old lines is decreased from current levels). Heat and electricity generated by constructed CHPP will substitute electricity previously supplied from the grid and heat generated by fossil fuel fired boilers located on-site. **CAR 03.** Section A.2 does not provide a concise, summarizing explanation of the history of the project (especially its JI component and explanation how 3 sub-projects are connected between themselves within a framework of one JI project) as per [2]. **CL 03.** Please provide the industrial procedure or: production sheet for clinker. This document(s) should contain information regarding how mush raw materials it is needed to produce 1 unit of clinker.		
A.2.2. Is it explained how the proposed project reduces	1,2	DR	It is explained in PDD Section A.2 and Section A.4.3. Refer to A.4.3.1 below.		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
greenhouse gas emissions?					
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?	1,2	DR	Party A is the Russian Federation. Legal entity of Party A is OJSC "Mordovcement". Party B is the Netherlands. Legal entity of Party B is Global Carbon BV.		OK
A.3.2. The data of the project participants is presented in tabular format?	1,2	DR	The data of the project participants is presented in the tabular format as required by [2].		OK
A.3.3. Is contact information provided in Annex 1 of the PDD?	1,2	DR	The contact information is provided in PDD Annex 1.		OK
A.3.4. Is it indicated, if it is the case, if the Party involved is a host Party?	1,2	DR	Russian Federation is indicated as a host Party.		OK
A.4. Technical description of the project					
A.4.1. Location of the project activity					
A.4.1.1. Host Party(ies)	1,2	DR	The Russian Federation is indicated as the host Party in the PDD Section A.4.1.1.		OK
A.4.1.2. Region/State/Province	1,2	DR	Republic of Mordovia.		OK
A.4.1.3. City/Town/Community etc.	1,2	DR	Komsomolskiy town.		OK
A.4.1.4. Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page).	1,2	DR	PDD Section A.4.1.4 defines in detail the physical location, including information allowing the unique identification of the project sites. OJSC "Mordovcement" is located Komsomol-		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			skiy town, Chamzinskiy district near Nuya river, 50 kilometers north-east from Saransk city. Its coordinates: latitude 54°26'60'', longitude 45°52'39''.		
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					
A.4.2.1. Does the project design engineering reflect current good practices?	1,2	DR	The project design engineering reflects current good practices in cement production using high-efficiency dry and semi-dry clinker production lines. The new combined heat power plant (CHPP) provides high-efficiency heat and electricity generation. **CAR 04.** The Section A.4.2 contains discrepancies/mistakes in data listed below: - different cement production capacities are stated throughout PDD. 3 562 ths. tonnes per year (p.2); 2 957 tonnes per year (p.11); 930 000 tonnes per year for Staroalexeevsky plant (Table A.4.2.3, p.12) + 2 800 ths. tones per year for Alexeevsky plant (Table A.4.2.3, p.12) = 3 750 tonnes for the OJSC "Mordovcement; - different values for NCV of natural gas. 8200 kcal/nm3 (p.16); 8000 kcal/m3 (p.18) - parameter 1 is missing on figure A.4.2.3 (p.19);	CAR 04 CAR 05 CAR 48	OK OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			- there is no steam turbine on figure A.4.2.3 (p.19); - different dates of project implementation are indicated. 9 July 2004 (p.2) 2005 (Table A.4.2.15, p.20). **CAR 05.** Please describe and justify the needs for electricity for the semi-dry and dry lines of clinker production. **CAR 48.** During the site visit it was observed that the project includes combustion of "rubber chips" (old, cut tyre casings) which is not included in PDD.		
A.4.2.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	1,2	DR	The project uses state-of-the-art technology for clinker production, heat and electricity generation.		OK
A.4.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1,2	DR	The project technology is unlikely to be substituted by other or more efficient technologies within the project period.		OK
A.4.2.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	1,2	DR	**CL 01.** Please clarify if the project requires extensive initial training and maintenance efforts in order to work as presumed during the project period.	CL 01	OK
A.4.2.5. Does the project make provisions for meeting training and maintenance needs?	1,2	DR	Conclusion is pending a response to CL 02.	Pending	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances					
A.4.3.1. Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	1,2	DR	It is explained in PDD Section A.4.3 that the reduction of anthropogenic GHG emission will occur due to: - reduction of fossil fuel consumption , which is burned in the kilns during clinker production; - discontinuation of the electricity consumption from the grid due to electricity generation at the site. The verifiers observe this explanation as correct.		OK
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?	1,2	DR	Total estimated emission reductions over the crediting period equals 2 230 079 tCO_2e (refer to PDD Section A.4.3.1).		OK
A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	1,2	DR	The estimated annual reduction over the crediting period equals 446 015 tCO_2e (refer to PDD Section A.4.3.1).		OK
A.4.3.4. Are the data from questions A.4.3.2 to A.4.3.3 above presented in tabular format?	1,2	DR	The data are presented in the tabular format as required by [2]. Refer to PDD Section A.4.3.1.		OK
A.5. Project approval by the Parties involved					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A.5.1. Are written project approvals by the Parties involved attached?	1,2	DR	Written project approvals by the Parties involved was received. CARs closed. **CAR 06.** The statement in PDD Section A.5 that a determination report is issued by AIE after the project has been determined is inadequate. Determination of PDD finishes after the approval of the host Party is received. Conclusion is pending also a follow-up on CAR 01.	CAR 06 Pending	OK
B. Baseline					
B.1. Description and justification of the baseline chosen					
B.1.1. Is the chosen baseline described?	1,2,5	DR	It is explicitly indicated that JI specific approach was chosen to establish the baseline. **CAR 07.** Paragraph 21 (b) (p.24) mentioned in Section B.1 of PDD relates to the obsolete version 01 of [5] although it is stated that version 02 of [5] was used. **CAR 08.** Assessment of alternatives does not include the alternative "the project not implemented as JI" although it is declared. Please note that the project includes construction of both semi-dry and dry line of cement production and construction of CHPP. **CAR 09.** Section B.1 provides an explanation and justification of two different baselines for sub-project 1, 2 and for Subproject 3 as if they	CAR 07 CAR 08 CAR 09 CAR 10 CAR 11 CAR 12	OK OK OK OK OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			are two different projects. It is not explained how they are connected between themselves within a framework of one JI project. **CA9 10.** The Section B.1 and Annex 2 contains discrepancies/mistakes in data listed below: - version 05.3 of [6] is mentioned on page 28 although the latest existing version is 05.2; - chapter of 2006 IPCC Guidelines on National GHG Inventories is missing in section Source of data for EF_{fuel_i}; - footnote 22 (p.90) is inadequate. **CAR 11.** The assumption that wet lines of clinker production can continue operation at least until 2020 is not justified. **CAR 12.** Leakage assessment lacks transparency as to how values of leakages associated with fuel consumptions were derived from ACM0009 data. Applied value of natural gas upstream emissions (340 tonnes of CH4 per PJ) is not in compliance with ACM0009. The default value is 921 t CH4 per TJ. It is also stated that leakages associated with new semi-dry and dry lines are higher than leakages connected with wet process but it is not explained why they are neglected (old wet lines will be also in operation).		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
B.1.2. Is it justified the choice of the applicable baseline for the project category?	1,2	DR	Conclusion is pending a response to CAR 08, CAR 09, CAR 20, CAR 22, CAR 23, CAR 24, CAR 25, CAR 26 and CAR 27.	Pending	OK
B.1.3. Is it described how the methodology is applied in the context of the project?	1,2	DR	Inapplicable since a JI specific approach is used.		OK
B.1.4. Are the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)?	1,2,5,8	DR	**CAR 13.** The mentioned paragraphs20 (a), 20 (b) and 21 (b) (p.84) relate to the obsolete version 01 of [5] although it is stated that version 02 of [5] was used. **CAR 14.** Assumption that electricity consumption in the baseline scenario will be equal to the electricity consumption of new semi-dry and dry line of clinker production is not justified. **CAR 15.** Obsolete version 01.1 Methodological Tool "Tool to calculate the emission factor for an electricity system" was used. **CAR 16.** Please justify in a transparent manner the process to include facilities in the group of manufacturers which will produce cement for the "incremental production". Please clearly identify the radius, amount of cement production and all the other data needed to establish the $BEF_{incr,y}$ calculation. Please also correct Anx.2.2 and Anx. 2.3 (Annex 2) they are not in compliance with excel spreadsheet. The presented excel spreadsheet presents data for the	CAR 13 CAR 14 CAR 15 CAR 16 CAR 17	OK OK OK OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			year 2006, however data for the year 2007 is mentioned throughout PDD. **CAR 17.** Emissions from electricity consumption are calculated with the use of grid emission factors: for RES "Mid Volga" 0.534 t CO_2/MWh, for RES "Center" 0.526 t CO_2/MWh, for RES "Urals" 0.602 t CO_2/MWh and for RES "North-West" $EF_{el,y}$ = 0.591 t CO2/MWh for the conditions of reduction of electricity consumption whereas the conditions of increase of electricity consumption from the grid both in project and baseline scenarios apply.		
B.1.5. Is all literature and sources clearly referenced?	1,2	DR	Relevant literature and sources are generally referenced through the text of PDD. **CAR 18.** The reference for $EF_{calcin,y}$ is inadequate. **CAR 19.** Please provide full reference (including page or table number) for the radius of cement transportation for Mordovcement throughout the PDD. Please also reduce values to the one (542 m, 500 m, and 1000 m radius is mentioned in PDD, in some cases diameter is mentioned).	CAR 18 CAR 19	OK OK
B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
B.2.1. Is the proposed project activity additional?	1,2,6,10,11	DR	It is explicitly indicated that the "Tool for the demonstration and assessment of additionality" (version 05.2) is used to assess the additionality of the project. **CAR 20.** Section B.2 provides an assessment of additionality independently for 3 subprojects. It is not explained and justified how such approach correlates to one JI project. **CAR 21.** Please correct mistakes listed below: - on page 33 it is simultaneously stated that Additionality Tool was used for assessment of two and three alternatives. - different IRR Benchmarks for one subproject are mentioned throughout Section B.2(16% and 16.5%); - excel calculations for the subproject 1 are not in compliance with PDD; - Lifetime of the subproject 3 is set to 20 years (p.39) according to the lifetime of dry kiln (subproject 3 is CHPP construction); - investments for the subproject 3 are not in compliance with excel spreadsheet (50 mln. versus 58 mln. euro); - CDM-PDD is mentioned on page 40 whereas it is JI PDD.	CAR 20 CAR 21 CAR 22 CAR 23 CAR 24 CAR 25 CAR 26 CAR 27 CAR 49 CAR 50 CAR 53 CAR 54 CAR 55 CAR 56	OK OK OK OK OK OK OK OK OK OK OK OK OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			CAR 22. Assessment of IRR benchmark for subproject 1 comprises a lot of mistakes and confusions. Firstly "Central bank discount rate" (p.35) was mentioned. In the next sentence "Bank interest rate" was mentioned (16% and 16.5% in different places). These indicators have different meaning. Please explicitly describe the assessment of IRR benchmark. Please also note that "Central bank discount rate" was 13% from the period 15 June 2004 till 25 December 2004 (it is stated that calculations were made in July 2004 p.35). **CAR 23.** Please justify the following parameters applied in investment analysis for subproject 1: - Weighted average cement price; - Average natural gas tariff; - Average electricity tariff from the grid. **CAR 24.** Investment analysis for subproject 1 implies only consumption of electricity from the grid whereas cheaper electricity from own CHPP is available from 2010. **CAR 25.** Additionality assessment of subproject 2 could not be approved by determination team. JI project 0192 "Switch from wet to dry process at OJSC "Shchurovsky Cement", Rus-		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			sia" does not have the final determination. Moreover the projects could not be considered as similar because current project includes construction of semi-dry line and construction of own CHPP. **CAR 26.** 6 alternatives were identified through additionality assessment of the subproject 3. But only 1 of them was considered in further analysis. **CAR 27.** Please justify in a transparent manner the "cost of own generated electricity". Justification should include the transparent calculation of that cost including indication and justification of all components. **CAR 49.** No proofs there found during the site visit that any of the two projects (first - construction of the semi-dry line and second - construction of dry line and CHPP) was considered as a JI project. Moreover, submitted documents [15-17] do not say that two projects were started as JI projects. Please note that emission reductions generated by JI projects should be additional to any that otherwise occur, and in this particular case two projects automatically becomes "any that otherwise occur" because they were not initially considered as JI projects. **CAR 50.** The excel spreadsheets with the investment analysis presented to the verifiers		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			together with PDD are not in compliance with the business plans submitted by Mordovcement. [16,17] which indicate that both projects are economically feasible. With the unresolved CAR 20, CAR 22, CAR 23, CAR 24, CAR 25, CAR 26, CAR 27, CAR 49 and CAR 50 the additionality of the project activity is not demonstrated. **CAR 53.** The new investment analysis which includes all three subprojects contains following mistakes: - the value of annual electricity consumption of dry line used in the investment analysis is incorrect (371 828 MWh); the annual values of "Labor cost" and "Maintenance cost" are equal for all years. It is wrong because they can not be equal for years 2007 and 2011(in 2007 there is no dry line and CHPP). **CAR 54.** Please justify in a transparent manner following parameters applied in the investment analysis: - "Labor cost"; - "Maintenance cost"; - "Total investment cost";		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Justification should include the transparent calculation of that cost including indication and justification of all components. **CAR 55.** According to the production sheet presented as answer on CL 03, 1.384 tonnes of chalk, 128 kg of clay and 28.1 kg of cinder are necessary for producing 1 tonne of clinker. According to the investment analysis presented to verifiers, 3.254 tonnes of chalk, 299 kg of clay and 64.2 kg of cinder are necessary for producing 1 tonne of clinker for the years 2007-2009 and 2.049 tonnes of chalk, 188 kg of clay and 40.4 kg of cinder are necessary for producing 1 tonne of clinker for the years 2011-2030. **CAR 56.** Please provide the industrial procedure or production sheet for cement (for all marks produced on the plant) and transparent calculations how much cement of different marks is planned to be produced on the plant. A production sheet should contain information regarding how mush raw materials it is needed to produce 1 unit of cement of exact mark.		
B.2.2. Is the baseline scenario described?	1,2	DR	The baseline scenario is described in sufficient detail in PDD Sections B.1 and B.2.		OK
B.2.3. Is the project scenario described?	1,2	DR	The project scenario is described in sufficient detail in PDD Sections A.4.3 and B.1.		OK
B.2.4. Is an analysis showing why the emissions in the	1,2	DR	The assessment and demonstration of addi-		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
baseline scenario would likely exceed the emissions in the project scenario included?			tionality explicitly shows why the emissions in the baseline scenario will exceed the emissions in the project scenario.		
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?	1,2	DR	Conclusion is pending a response to CAR 20, CAR 22, CAR 23, CAR 24, CAR 25, CAR 26 and CAR 27.	Pending	OK
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?	1,2	DR	There are no particular national policies and circumstances which could influence the baseline scenario of the proposed project activity.		OK
B.3. Description of how the definition of the project boundary is applied to the project activity					
B.3.1. Are the project's spatial (geographical) boundaries clearly defined?	1,2	DR	The project's spatial (geographical) boundaries are defined in Section B.3. **CAR 28.** Exclusion of emissions due to transportation is not justified. **CAR 29.** Emissions occurring due to natural gas transportation, production, etc. are not included in Section B.3. **CL 02.** The description of emissions is loose. Please provide clear description. For example divide emissions relate to baseline/project emissions or to both of them.	CAR 28 CAR 29 CL 02	OK OK OK
B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
B.4.1. Is the date of the baseline setting presented (in DD/MM/YYYY)?	1,2	DR	The date of the baseline setting is presented in DD/MM/YYYY format.		OK
B.4.2. Is the contact information provided?	1,2	DR	Contact information: Global Carbon BV Sergey Papkov E-mail: Papkov@global-carbon.com		OK
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	It is indicated that the person/entity is also a project participant listed in annex 1 as per [2].		OK
C. Duration of the project and crediting period					
C.1. Starting date of the project					
C.1.1. Is the project's starting date clearly defined?	1,2	DR	The starting date of the project is clearly defined. It is 09/07/2004.		OK
C.2. Expected operational lifetime of the project					
C.2.1. Is the project's operational lifetime clearly defined in years and months?	1,2	DR	The project's operational lifetime is 20 years/240 months.		OK
C.3. Length of the crediting period					
C.3.1. Is the length of the crediting period specified in years and months?	1,2	DR	It is specified as 5 years (60 months) starting on 01/01/2008.		OK
D. Monitoring Plan					
D.1. Description of monitoring plan chosen					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
D.1.1. Is the monitoring plan defined?	1,2, 5	DR	It is explicitly indicated that JI specific approach is used to establish the monitoring plan. **CAR 30.** Obsolete version of the Guidance on Criteria for Baseline setting and monitoring is used in Section D.1 of PDD. **CAR 31.** Please correct mistakes listed below: - names of parameters P1, P2, P3, P5, P12, P12, P14, P15, P21, P24, P34 in Section D.1.1.1 are not in compliance with names mentioned throughout Section D.1.1.2; - names of parameters B13, B14 in Section D.1.1.3 are not in compliance with names mentioned throughout Section D.1.1.4; - parameters B3, B4, B15, B17 and B18 listed in Section D.1.1.3 are not used afterwards; - names of parameters in the formula 4 are not in compliance with names in the description; - two similar parameters are included in section D.1.1.1 (P29 and P33) - MWt are mentioned in clarifications to the parameters to the formula 7 (p. 55) and formula 13 (p. 57). MWh should be; - MW are mentioned in clarifications to the parameters to the formula 15 (p. 59). MWh should	CAR 30 CAR 31	OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			be; - formulae numbers contain two numbers 15; - description of the parameter $NCV_{fuel\_i,y}$ is incorrect (tonnes or m3); - description of the formula 20 does not provide the explanation of parameters $BE^{CHPP}_{hot\_wate\_and\_heating,y}$ and $BE^{CHPP}_{raw\_materials\_drying}$; - description of the formulae 16 and 17 does not provide the description of parameter x (please also include the value). Emissions from CHPP are double accounted. It is conservative.		
D.1.2. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.	1,2	DR	Option 1 is chosen.		OK
D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.	1,2	DR	Data to be collected in order to monitor emissions from the project is generally presented in PDD Section D.1.1.1. **CAR 32.** Section D.1.1.1 does not contain following parameters which will be monitored: - P_y^{CHPP}; - $HEAT_{hot\_water\_and\_heating,y}$;	CAR 32 CAR 57	OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			$HEAT_{raw\_materials\_drying,y}$. **CAR 57.** Please delete P7, P10, P13, P16, P17, P18 parameters from the Section D.1.1.1 since they are not used in monitoring. Please also correct "h" to "y" for P22 and P24 since these parameters are annual values but not hourly values.		
D.1.4. Description of the formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2	DR	**CAR 33.** Section D.1.1.2 does not contain a formula to calculate $PE_{CHPP,y}$. **CAR 34.** The formula 6 (p.54) observed as incorrect. Dividing of $PERCENT^{GRID}$ and $PERCENT^{CHPP}$ to 100 is incorrect because mentioned above values are already stated in %. **CAR 35.** The formula 15 is incorrect (Calculation of the parameter $EF_{el,y}^{CHPP}$).	CAR 33 CAR 34 CAR 35	OK OK OK
D.1.5. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived.	1,2	DR	Data to be collected in order to monitor baseline emissions is generally presented in PDD Section D.1.1.3. **CAR 36.** Section D.1.1.3 does not contain following parameters which will be monitored: - BE_{rep};	CAR 36	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			- $CEMPROD(wet)^{i}_{level2}$; - NCV_{fuel}; - EF_{fuel}; - $CLNK(wet)^{i}_{level2}$; - $CEMPROD_{semi-dry,y}$; - $CEMPROD_{dry,y}$; - EF_{fuel_i}; - $BE^{CHPP}{}_{y}$; - $BE^{CHPP}{}_{electricity,y}$.		
D.1.6. Description of the formulae used to estimate baseline emissions (for each gas, source etc, emissions in units of CO2 equivalent).	1,2	DR	The formulae are generally presented in PDD Section D.1. **CAR 37.** Formulae 21 and 22(p.66) are incorrect. Efficiency coefficient is accounted in a wrong manner in the formula 21 and it is not included in the formula 22. **CAR 38.** Please explicitly indicate in Section D.1.1.4 if $CEMPROD(wet)^{i}_{level1}$, $CLNK(wet)^{i}_{level1}$ and $EL(wet)^{i}_{level1}$ are values which include run factor or it is the 100% of the	CAR 37 CAR 38 CAR 39	OK OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			capacity. **CAR 39.** Section D.1.1.4 does not provide the explanation how $EF_{el,y}^{GRID}$ should be chosen from 5 values presented in Annex 2. The same pertains to $EF_{el,y}$.		
D.1.7. Option 2 – Direct monitoring of emissions reductions from the project (values should be consistent with those in section E)	1,2	DR	Not applicable.		OK
D.1.8. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived.	1,2	DR	Not applicable.		OK
D.1.9. Description of the formulae used to calculate emission reductions from the project (for each gas, source etc; emissions/emission reductions in units of CO2 equivalent).	1,2	DR	Not applicable.		OK
D.1.10. If applicable, please describe the data and information that will be collected in order to monitor leakage effects of the project.	1,2	DR	Conclusion is pending a response to CAR 29	Pending	OK
D.1.11. Description of the formulae used to estimate leakage (for each gas, source etc,; emissions in units of CO2 equivalent).	1,2	DR	Conclusion is pending a response to CAR 29	Pending	OK
D.1.12. Description of the formulae used to estimate emission reductions for the project (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2	DR	The formula is given in section D.1.4: $ER_y = BE_y - PE_y$		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
D.1.13. Is information on the collection and archiving of information on the environmental impacts of the project provided?	1,2	DR	It is stated that Environmental Department is responsible for environmental aspects of the project.		OK
D.1.14. Is reference to the relevant host Party regulation(s) provided?	1,2	DR	References to the relevant host Party regulation are provided in Section D.1.5 as per [2].		OK
D.1.15. If not applicable, is it stated so?	1,2	DR	Refer to Section D.1.14		OK
D.2. Qualitative control (QC) and quality assurance (QA) procedures undertaken for data monitored					
D.2.1. Are there quality control and quality assurance procedures to be used in the monitoring of the measured data established?	1,2	DR	It is stated in PDD that OJSC "Mordovcement" is certified on ISO 9001:2000. Quality control and quality assurance procedures are generally established. Refer to PDD Section D.2. **CAR 40.** Only 5 of more than 50 parameters monitored are described in Section D.2.	CAR 40	OK
D.3. Please describe of the operational and management structure that the project operator will apply in implementing the monitoring plan					
D.3.1. Is it described briefly the operational and management structure that the project participants(s) will implement in order to monitor emission reduction and any leakage effects generated by the project.	1,2	DR	A description of the operational and management structure is provided in Section D.3 of PDD.		OK
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
D.4.1. Is the contact information provided?	1,2	DR	Two entities establishing the monitoring plan are indicated in Section D.4 of PDD. - OJSC "Mordovcement" Albina Ivanovna Erastova, Deputy Chief engineer in technical supervision and ecology. E-mail: viryaskin@mordovcement.ru - Global Carbon BV Sergey Papkov, JI Consultant. E-mail: Papkov@global-carbon.com		OK
D.4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	It is indicated that the entities are also the project participants listed in Annex 1 of PDD.		OK
***E.* Estimation of greenhouse gases emission reductions**					
E.1. Estimated project emissions					
E.1.1. Are described the formulae used to estimate anthropogenic emissions by source of GHGs due to the project?	1,2,9,10	DR	The formulae to calculate project emissions are presented and described in PDD Section D.1.1.2. The excel spreadsheet, with calculations of GHG project emissions, provided to verifiers was checked and found correct with three exceptions. **CAR 41.** The value of natural gas consumption for the semi-dry line in the excel spreadsheet is not in compliance with data in PDD (Table A.4.2.8 p .15).	CAR 41 CAR 42 CAR 43 CAR 52 CAR 58	OK OK OK OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			CAR 42. Two different values of calorie to Joule conversation factor are used in the excel spreadsheets presented to verifiers (4.19 and 4.186). **CAR 43.** Calculation of CO2 emissions from calcination process on dry line is incorrect (the emission factor multiplies on the amount of cement production and not on the amount of clinker production). **CAR 52.** Calculation of project emissions from electricity consumption for semi-dry line in 2010 is incorrect (please refer to the cell T 68 of [9]. **CAR 58.** Project emissions from CHPP are not included in recalculated excel spreadsheet.		
E.1.2. Is there a description of calculation of GHG project emissions in accordance with the Formula specified in for the applicable project category?	1,2	DR	The excel spreadsheet, with calculations of GHG project emissions, provided to verifiers was checked and found correct with exceptions. Conclusion is pending a response to CAR 41, CAR 42 and CAR 43.	Pending	OK
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	1,2	DR	There is no explicit indication that conservative assumptions were made.		OK
E.2. Estimated leakage					
E.2.1. Are described the Formulae used to estimate leakage due to the project activity where required?	1,2	DR	Not applicable.		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
E.2.2. Is there a description of calculation of leakage in accordance with the Formula specified in for the applicable project category?	1,2	DR	Not applicable.		OK
E.2.3. Have conservative assumptions been used to calculate leakage?	1,2	DR	Not applicable.		OK
E.3. The sum of E.1 and E.2.					
E.3.1. Does the sum of E.1. and E.2. represent the project activity emissions?	1,2	DR	As no leakage is expected, E1+E2=E1.		OK
E.4. Estimated baseline emissions					
E.4.1. Are described the Formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline using the baseline methodology for the applicable project category?	1,2	DR	The excel spreadsheet, with calculations of GHG baseline emissions, provided to verifiers was checked and found correct.		OK
E.4.2. Is there a description of calculation of GHG baseline emissions in accordance with the formula specified for the applicable project category?	1,2	DR	Please refer to section E.4.1 above.		OK
E.4.3. Have conservative assumptions been used to calculate baseline GHG emissions?	1,2	DR	There is no explicit indication that conservative assumptions were made.		OK
E.5. Difference between E.4. and E.3. representing the emission reductions of the project					
E.5.1. Does the difference between E.4. and E.3. represent the emission reductions due to the project during a given period?	1,2	DR	Yes, it does. Refer to PDD Section E.5.		OK
E.6. Table providing values obtained when applying					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Formulae above					
E.6.1. Is there a table providing values of total CO_2 abated?	1,2	DR	PDD Section E.6 provides the total values of project emissions, baseline emissions, and emission reductions. **CAR 51.** Calculation of emission reductions was not updated according to the new value of emission factor for RES "Mid Volga" 0.506 (the wrong factor 0.534 is used in excel spread-sheet.	CAR 51	OK
***F.* Environmental Impacts**					
F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party					
F.1.1. Has an analysis of the environmental impacts of the project been sufficiently described?	1,2	DR	Analysis of the environmental impacts of the project is presented in PDD Section F1. **CAR 44.** There is nonconformity between the project realization started in 2005 (according to the Table A.4.2.15) and environmental as-sessment done in 2007 and taking into account amendments adopted in 2007. **CAR 45.** No information on environmental as-sessment of dry line and CHPP is presented in Section F.1 of PDD. **CAR 46.** Please provide a list of relevant doc-	CAR 44 CAR 45 CAR 46	OK OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			uments.		
F.1.2. Are there any host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	1,2	DR	Environmental Impact Assessment (EIA) was done by Mordovcement according to the Russian legislation. The EIA was checked during the site visit and found appropriate.		OK
F.1.3. Are the requirements of the National Focal Point being met?	1,2	DR	The National Focal Point (MED) issued an Order dated 23/11/2009 # 485 which requires the inclusion in the submitted project documentation (not PDD) a short description of the EIA carried out in accordance with the established order. Verifiers observe that given EIA is available this requirement will be met.		OK
F.1.4. Will the project create any adverse environmental effects?	1,2	DR	The project will generate the following contaminants of atmospheric air: - Non-organic dust; - Nitrogen and sulphur dioxides; - Carbon dioxide. Environmental documentation was checked during the site visit and found appropriate.		OK
F.1.5. Are transboundary environmental impacts considered in the analysis?	1,2	DR	**CAR 47.** Please provide documentation on the analysis of the transboundary environmental impacts.	CAR 47	OK
F.1.6. Have identified environmental impacts been addressed in the project design?	1,2	DR	Refer to F.1.2.		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
F.2. If environmental impacts are considered significant by the project participants or the host Party, provision of conclusions and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party					
F.2.1. Has an analysis of the environmental impacts of the project been sufficiently described?	1,2	DR	The analysis of the environmental impacts of the project is sufficiently described in PDD Sections F.1 and F.2		OK
***G.* Stakeholders' comments**					
G.1. Information on stakeholders' comments on the project, as appropriate					
G.1.1. Is there a list of stakeholders from whom comments on the project have been received?	1,2	DR	It is stated that public hearings were organised in Chamzinka rural settlement on 18 February 2008 and confirmed by the corresponding "Record on public hearings took place in Chamzinka rural settlement dated 18 February 2008". No negative responses encountered. Public hearings were supported by the publication in the local newspaper "Znamya" in the issue dated 22 February 2008. The information presented in Section G.1 of PDD was checked during the site visit and found correct.		OK
G.1.2. The nature of comments is provided?	1,2	DR	Not applicable		OK
G.1.3. Has due account been taken of any stakeholder	1,2	DR	Not applicable		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
comments received?					

Table 4 Legal requirements

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Legal requirements					
1.1. Is the project activity environmentally licensed by the competent authority?	1	DR, I	The project received the Rostekhnadzor Permit for air emissions. Refer to F.1.2.		OK
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?	1	DR, I	Please refer to 1.1 above.		OK
1.3. Is the project in line with relevant legislation and plans in the host country?	1	DR, I	Yes, the project is in line with relevant legislation and plans in the host country.		OK

Table 5 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
CAR 01 The project has no approval of the host Party.	Table 1	Response 1 of 17/03/2010 The project will have approval of the host Party as soon as positive pre-determination report is issued and second tender through the Ministry of Economic development is organized. Host Party approval will be granted.	Conclusion on Response 1 This CAR is closed based on issuance of host country LoA.
CAR 02 Please indicate the name of Sectoral Scope 1 according to [3].	A.1.1	Response 1 of 17/03/2010 Sectoral scope name is corrected to: Energy industries (renewable / non-renewable sources).	Conclusion on Response 1 This CAR is closed based on the adequate corrections made to the PDD.
CAR 03 Section A.2 does not provide a concise, summarizing explanation of the history of the project (especially its JI component and explanation how 3 sub-projects are connected between themselves within a framework of one JI project) as per [2].	A.2.1	Response 1 of 17/03/2010 JI component is added in the "Project purpose and history" clause.	Conclusion on Response 1 This CAR is closed based on the adequate corrections made to the PDD.
CAR 04	A.4.2.1	Response 1 of 17/03/2010	Conclusion on Response 1

The Section A.4.2 contains discrepancies/mistakes in data listed below: - different cement production capacities are stated throughout PDD. 3 562 ths. tonnes per year (p.2); 2 957 tonnes per year (p.11); 930 000 tonnes per year for Staroalexeevsky plant (Table A.4.2.3, p.12) + 2 800 ths. tones per year for Alexeevsky plant (Table A.4.2.3, p.12) = 3 750 tonnes for the OJSC "Mordovcement; - different values for NCV of natural gas. 8200 kcal/nm3 (p.16); 8000 kcal/m3 (p.18) - parameter 1 is missing on figure A.4.2.3 (p.19); - there is no steam turbine on figure A.4.2.3 (p.19); - different dates of project implementation are indicated. 9 July 2004 (p.2)		3 562 ths. tonnes value has been corrected to 3750 ths. tonnes. 930 000 tonnes per year for Staroalexeevsky plant is the correct value whereas 2,820,000 tonnes per year for Alexeevskiy plant is the correct value. NCV of natural gas is corrected to 8000 kcal/m3. Parameter 1 is added to the picture. Steam turbine is added on the figure as the continuation of the picture (due to lack of space). In the table A.4.2.15 2004 column is added Response 2 of 21/04/2010 Table A.4.2.14 is corrected to "Power of CHPP left after fulfilling needs of the dry line" Electricity requirements are updated "Part of electricity generated by the steam turbine is used to serve CHPP own needs"	All discrepancies/mistakes initially listed in CAR 04 were corrected. Added information contains discrepancies/mistakes in data listed below: - It is stated on page 21 that "Steam turbine is used to serve CHPP own needs". Instead of the steam turbine the CHPP has 2 gas turbines with power output 30 MW each. So it is non-conformity between 60 MW real capacity and the Figure A.4.2.4 in which the illustrated real capacity of the CHPP is equal to 65 MW; - Table A.4.2.14 is not in compliance with Figure A.4.2.4 (in Figure A.4.2.4 power of CHPP left after fulfilling needs of semi-dry and dry lines is 26 MW and in the Table A.4.2.14 energy directed to the "Common purpose distribution unit" from CHPP is also equal to 26 MW

2005 (Table A.4.2.15, p.20).			though the semi-dry line is feed from "Common purpose distribution unit"); - The Table A.4.2.14 is not in compliance with [9]. Electricity requirement at Dry line according to the table is 39 MW and according to the excel spreadsheet circa 44.44 MW (371828.24/365/24 =44.44). Electricity requirement at Semi-dry line according to the table is 4.5 MW and according to the excel spreadsheet circa 6.82 MW (59778.461/365/24 =6.82). Please correct Table A.4.2.14 and Figure A.4.2.4. The CAR will be closed after due correction. <u>Conclusion on Response 2</u> This CAR is closed based on the adequate corrections made to the PDD.
CAR 05 Please describe and justify	A.4.2.1	<u>Response 1 of 17/03/2010</u> Table A.4.2.14: Electricity requirements at the plant has been added. Figure A.4.2.4:	<u>Conclusion on Response 1</u> Conclusion is pending a

needs for electricity at each site.		Electricity distribution at the plant has been created. <u>Response 2 of 13/05/2010</u> Supporting documents SD_06_210100513_Semi-dry line_electricity And SD_05_210100513_Electriciry dry line Were forwarded to the verifier. <u>Response 3 of 24/05/2010</u> Values applied: Electricity consumption semi-dry line: 59778 MWh per year; Electricity consumption semi-dry line: 332626 MWh per year; Supporting document SD_15_2010100524_Electricity consumption semi-dry and dry lines is forwarded to the verifier <u>Response 4 of 04/06/2010</u> Values are added in the tables A.4.2.8: Main technical data for Semi-Dry line at Staroalexeevskiy (first) cement plant and A.4.2.9: Main technical data for the dry line at Alexeevskiy (second) cement plant. Values are defined as total electricity consumption per year. Electricity consumptions were marked as designed capacity,	response to CAR 04. <u>Conclusion on Response 2</u> Response is not accepted Please provide documented evidences which confirm the applied values (dry line – 371 828 MWh per year, semi-dry line, 59 778 MWh per year). <u>Conclusion on Response 3</u> Justification is accepted. Please include the values applied in relevant sections of PDD. Please also include explanations how these values are derived and for which values of cement production they correspond. The CAR will be closed after the values and the explanations are added to PDD. <u>Conclusion on Response 4</u> This CAR is closed based on explanations given by PDD developers and

		760,000 tonnes of cement per year and designed capacity, 1,860,000 tonnes of cement per year.	amendments made to the PDD.
CAR 06 The statement in PDD Section A.5 that a determination report is issued by AIE after the project has been determined is inadequate. Determination of PDD finishes after the approval of the host Party is received.	A.5.1	Response 1 of 17/03/2010 Section A. 5 calls "Project approval by the Parties involved". Project approval process is described. This section has nothing to do with determination.	Conclusion on Response 1 This CAR is closed based on the adequate corrections made to the PDD.
CAR 07 Mentioned in Section B.1 of PDD paragraph 21 (b) (p.24) relates to the obsolete version 01 of [5] although it is stated that version 02 of [5] was used.	B.1.1	Response 1 of 17/03/2010 The text has been corrected according to version 02	Conclusion on Response 1 This CAR is closed based on the adequate corrections made to the PDD.
CAR 08 Assessment of alternatives does not include the alternative "the project not implemented as JI" although it is declared. Please note that the project includes construction of both semi-dry and dry line of cement production and construc-	B.1.1	Response 1 of 17/03/2010 Text from the PDD reads: "4) Keeping the existing lines and constructing a new line applying dry process not implementing it as JI project This alternative is similar to alternatives 2 and 3 above, but the new cement production lines will use the dry method. And, additionally, JI revenue will not be gained." Assessment from the PDD: "Assessment of alternative 4: Keeping the existing	Conclusion on Response 1 Response is not accepted The clarification given is inadequate and does not correspond to the matter of the CAR. The CAR remains open. Conclusion on Response 2

tion of CHPP.		lines and constructing a new line applying dry process not implementing it as JI project Cement demand in Russia is constantly growing and it is not fully covered by existing Russian cement producers. Manufacturing of cement using old wet process causes more expenditures on fuel and energy, but gives benefits from commercial sale of cement. It is not reasonable to shut down available facilities even if they consume more energy, they still make profit, so, it is more likely to keep existing facilities running in order to generate some additional revenue in support of modern dry and semi-dry lines, then simply shutting them down. Because semi-dry method has more steps in raw materials preparation, such as press filters for dehydrating of slurry, it is generally more energy intensive than the dry method. Taking into account the fact that fuel prices and energy prices are constantly climbing, it was decided to build the next line (after the semi-dry line construction completion) for cement manufacturing utilizing complete dry technology of clinker manufacturing and keep the existing wet lines. The project requires significant capital expenses and the investment is not financially feasible (demonstrated below). Dry line construction is implemented as JI project. This alternative cannot be identified as the baseline." <u>Response 2 of 21/04/2010</u> Assessment of alternatives "the project not implemented as JI" is added <u>Response 3 of 11/05/2010</u>	Response is not accepted Verifiers cannot determine the baseline scenario as described in PDD: in the project absence, cement would be produced by other manufacturers located within the radius of 1000 km from the plant location and electricity would be consumed from the grid. According to PDD, in the baseline scenario, three products would be generated: heat, electricity and cement. However, in fact, the project itself generates only one product – cement. Heat and electricity are generated only for cement production needs at Mordovcement and there products would not have been generated somewhere in the absence of the project since there is no identified demand for them. Moreover, Dry-line and CCGT unit are the one technical project (according

		Baseline is determined as: • In the project absence (not constructing semi-dry, dry lines and CHPP) cement would have been produced by the other, third party cement manufacturers, located within the radius of 1000 km from the plant location or at the existing wet kilns located at Mordovcement plant; and electricity would have been consumed from the grid. Heat generation is excluded from consideration in the baseline and in the project scenario. Formulae are adjusted accordingly. Assessment of the project is done as one JI project that combines semi-dry, dry lines and CHPP construction. <u>Response 4 of 07/06/2010</u> Baseline is determined as: • In the project absence (not constructing semi-dry, dry lines and CHPP) cement would have been produced by the other, third party cement manufacturers, located within the radius of 1000 km from the plant location or at the existing wet kilns located at Mordovcement plant.	to the technical documentation obtained by verifiers during the site visit) and, hence, can not be assessed separately. Without CCGT unit, Dry-line is not viable. Therefore, Dry-line and CCGT unit should be assessed together. The approach applied in PDD leads to double accounting of emissions from the heat generation in the baseline. <u>Conclusion on Response 3</u> Response is not accepted Verifiers cannot determine the baseline scenario as described in PDD: in the project absence, cement would be produced by other manufacturers located within the radius of 1000 km from the plant location and electricity would be consumed from the grid. Please see explanations in Conclusion on Response 2 above.

			The CAR remains open. Conclusion on Response 4 This CAR is closed based on the adequate corrections made to the PDD.
CAR 09 Section B.1 provides an explanation and justification of two different baselines for sub-project 1, 2 and for Subproject 3 as if they are two different projects. It is not explained how they are connected between themselves within a framework of one JI project.	B.1.1	Response 1 of 17/03/2010 There is the same and only one baseline used for cement manufacturing lines. And separate baseline used for CHPP. Electricity and cement production by its definition are different matters. Therefore cement may be compared to cement and electricity may only be compared to electricity. Baseline for cement production is cement manufactured by the other plants and baseline for electricity generation is electricity generated in the grid. It is clearly indicated throughout the PDD that CHPP is constructed ONLY to serve own cement manufacturing needs, but not to supply with electricity other consumers, whereas semi-dry and dry line are constructed to satisfy growing cement demand. Therefore clear connection is proved between the semi-dry, dry and CHPP projects within one JI project framework. Response 2 of 21/04/2010 Explanation is added into the PDD that there is one baseline for the project. Response 3 of 11/05/2010 Baseline is adjusted to reflect cement production and electricity displacement from the grid. Heat is excluded from the baseline and from the project scenario. Baseline is set as: • In the project absence (not constructing semi-dry, dry lines and CHPP) cement would have been produced by the other, third party cement manufacturers, lo-	Conclusion on Response 1 The clarification given is inadequate and does not correspond to the matter of the CAR. Please note that according to the GLOSSARY OF JOINT IMPLEMENTATION TERMS (Version 2), Baseline is the scenario that reasonably represents the anthropogenic emissions by sources or anthropogenic removals by sinks of greenhouse gases (GHGs) that would occur in the absence of the proposed JI project. Please also note that current JI project includes simultaneously construction of semi-dry line, dry line and CHPP.

		cated within the radius of 1000 km from the plant location or at the existing wet kilns located at Mordovcement plant; and electricity would have been consumed from the grid. Response 4 of 07/06/2010 Baseline is determined as: • In the project absence (not constructing semi-dry, dry lines and CHPP) cement would have been produced by the other, third party cement manufacturers, located within the radius of 1000 km from the plant location or at the existing wet kilns located at Mordovcement plant.	The CAR remains open. Conclusion on Response 2 Response is not accepted The added explanation does not correspond to the actual situation. In fact, two different baselines are established in PDD: for cement and for energy production. Conclusion is pending a follow-up on CAR 08. Conclusion on Response 3 Conclusion is pending a follow-up on CAR 08. Conclusion on Response 4 This CAR is closed based on the adequate corrections made to the PDD.
CAR 10 The Section B.1 And Annex 2 Contains Discrepancies/Mistakes In Data Listed Below: - Version 05.3 Of [6] Is Mentioned On Page 28 Although The Latest Exist-	B.1.1	Response 1 of 17/03/2010 - Version number is fixed to 02 - EF_{fuel_i} is identified in the field "Description" as emission factor of natural gas. This value is esily found at Volume 2, page 16, table 2.2 of http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.html	Conclusion on Response 1 The points 2 and 3 are still not corrected. Please note that 2006 IPCC Guidelines on National GHG Inventories, Volume 2 has six chapters.

ing Version Is 05.2; - Chapter Of 2006 Ipcc Guidelines On National Ghg Inventories Is Missing In Section Source Of Data For EF_{fuel_i}; - Footnote 22 (P.90) Is Inadequate.		- Footnote 22 is pointing at the table which contains values of emission factors applied for each RES grid. All emission factors are referenced to the STUDY. <u>Response 2 of 21/04/2010</u> Chapter is added	The sources should also include the chapter. Inadequate explanation for the point 3 does not correspond with also inadequate correction made to the PDD (incorrect number 19 was changed to the incorrect number 13, and correct number 14 should be). The CAR remains open. <u>Conclusion on Response 2</u> This CAR is closed based on the adequate corrections made to the PDD.
CAR 11 Assumption that wet lines of clinker production can continue operation at least until 2020 is not justified.	B.1.1	<u>Response 1 of 17/03/2010</u> The plant is operating since 1956. It calculates to 54 years from now. All kilns since then are operational. This implies the fact that there was a lack of financing during Soviet Union collapse. Irregular and incomplete maintenance and so on. During the site visit at was clearly stated that the plant has definite and transparent schedule of kilns maintenance, financing and so on. Moreover during the site visit three kilns were having scheduled maintenance. Based on the facts stated, it is more than realistic to make an assumption that with the proper maintenance and repair program being implemented, the kilns will operate until 2020 and beyond. <u>Response 2 of 21/04/2010</u> Proofs are included in the PDD	<u>Conclusion on Response 1</u> Explanation given is not accepted. Concrete proofs should be presented. The explanation should be also included in PDD. The CAR remains open. <u>Conclusion on Response 2</u> The CAR is closed based on the maintenance timesheets checked by verifiers.

		"The plant is operating since 1956. All kilns since then are operational. This implies the fact that there was a lack of financing during Soviet Union collapse, irregular and incomplete maintenance. The plant has clear and transparent schedule of kilns maintenance and financing required for maintenance. It is realistic to make an assumption that with the proper maintenance and repair program being implemented, wet kilns will operate until 2020 and beyond."	
CAR 12. Leakage assessment lacks transparency how values of leakages associated with fuel consumptions were derived from ACM0009 data. Applied value of natural gas upstream emissions (340 tonnes of CH4 per PJ) is not in compliance with ACM0009. The default value is 921 t CH4 per TJ. It is also stated that leakages associated with new semi-dry and dry lines are higher than leakages connected with wet process but it is not explained why they are neglected (old wet lines will be also in operation).	B.1.1	Response 1 of 17/03/2010 - leakages associated with new semi-dry and dry lines are lower than leakages connected with wet process. It is proven that specific fuel consumption is less at semi-dry and dry lines than at wet lines, therefore leakages associated with those processes are lower and if accounted for will lead to emission reduction due to lower leakage. To preserve conservativeness leakages are excluded. ACM0009 used to provide with the link to http://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch1ref10.pdf, but not to use it in its totality. Emission factor of 340 tonnes of CH4 per PJ can easily be found at the link provided. Regardless of the emission factor value used the following is always true: a<c b<c constant>0 a*constant<c*constant b*constant<c*constant Considering a as semi-dry, b as dry and c as wet it is proven that semi-dry and dry leakages will always be lower than wet leakages, regardless what emission factor is used, therefore semi-dry and dry leakages are excluded from further consideration.	Conclusion on Response 1 The clarification given is inadequate and does not correspond to the matter of the CAR. Please note that description of well-known facts and obvious things will not lead to the closure of the CAR. The CAR remains open. Conclusion on Response 2 This CAR is closed based on the adequate corrections made to the PDD.

		Response 2 of 21/04/2010 Direct reference to the emission factor is provided, ACM0009 is removed. Emission factor of 921 t CH4 per TJ is used in calculations.	
CAR 13 Mentioned paragraph 20 (a), 20 (b) and 21 (b) (p.84) relate to the obsolete version 01 of [5] although it is stated that version 02 of [5] was used.	B.1.4	Response 1 of 17/03/2010 The text has been corrected according to version 02 Response 2 of 21/04/2010 The text has been corrected according to version 02 Response 3 of 11/05/2010 The text has been corrected according to version 02. A baseline shall be established on a project-specific basis and/or using a multi-project emission factor, taking into account the project boundary (paragraph 20 (a) of the Guidance) and establish a baseline that is in accordance with appendix B of the JI guidelines (paragraph 23), shall cover emissions from all gases, sectors and source categories listed in Annex A of the Kyoto Protocol, and/or anthropogenic removals by sinks, within the project boundary (paragraph 20 (b) of the Guidance). Response 4 of 07/06/2010 The text has been changed to: A baseline is the scenario that reasonably represents the anthropogenic emissions by sources or net anthropogenic removals by sinks of GHGs that would occur in the ab-	Conclusion on Response 1 No corrections were implemented though it is stated that "The text has been corrected according to version 02" The CAR remains open. Conclusion on Response 2 Response is not accepted No corrections were implemented though it is stated that "The text has been corrected according to version 02" The CAR remains open. Conclusion on Response 3 Paragraph 20 (a) of the Guidance does not correspond to the text added (A baseline shall be established on a project-specific basis and/or using a multi-project emission factor, taking into account the project

		sence of the project; (paragraph 20 (a) of the Guidance) and shall be establishedin accordance with appendix B of the JI guidelines (paragraph 23), shall cover emissions from all gases, sectors and source categories listed in Annex A of the Kyoto Protocol, and/or anthropogenic removals by sinks, within the project boundary (paragraph 20 (b) of the Guidance).	boundary). The CAR will be closed after due correction. Conclusion on Response 4 This CAR is closed based on the adequate corrections made to the PDD.
CAR 14 Assumption that electricity consumption in the baseline scenario will be equal to the electricity consumption of new semi-dry and dry line of clinker production is not justified.	B.1.4	Response 1 of 17/03/2010 Such assumption has not been found in the section mentioned. Electricity consumption in the baseline is estimated according to approach of the operating margin. Project electricity consumption is measured directly at the plant. These two values are different and cannot be equal. Response 2 of 21/04/2010 Such assumption is found irrelevant and have been removed.	Conclusion on Response 1 The assumption was found in Annex 2. Please refer to the section "baseline electricity consumption" (p.88, Annex 2), especially Table Anx.2.1 (p.88). The CAR remains open. Conclusion on Response 2 This CAR is closed based on the adequate corrections made to the PDD.
CAR 15 Obsolete version of Methodological Tool "Tool to calculate the emission factor for an electricity system" was used.	B.1.4	Response 1 of 17/03/2010 "Tool to calculate the emission factor for an electricity system" is mentioned in the table B1.1.1. The study "Development of grid GHG emission factors for power systems of Russia" commissioned by "Carbon Trade and Finance" in 2008 (further in the text – Study); The Study was verified by Bureau Veritas Certification in 2008. Version number 02 is referenced. Response 2 of 21/04/2010	Conclusion on Response 1 No corrections were implemented. The CAR remains open. Conclusion on Response 2 Response is not accepted

		Tool version is corrected. Response 3 of 11/05/2010 Tool version is corrected.	No corrections were implemented. The CAR remains open. Conclusion on Response 3 This CAR is closed based on the adequate corrections made to the PDD.
CAR 16 Please justify in a transparent manner the process to include facilities in the group of manufacturers which will produce cement for the "incremental production". Please clearly identify the radius, amount of cement production and all the other data needed to establish the $BEF_{incr,y}$ calculation. Please also correct Anx.2.2 and Anx 2.3 (Annex 2) they are not in compliance with excel spreadsheet. The presented excel spreadsheet presents data for the year 2006, however data for the year 2007 is mentioned	B.1.4	Response 1 of 17/03/2010 The approach of indentifying combined margin, operating margin and build margin is clearly defined in Annex 2, page 91. The radius of transportation is defined as 1000 km. Parameters used to establish OM are presented in Annex 2, page 91. Anx.2.2 and Anx 2.3 and excel spreadsheet are rectified. Year number is fixed. Response 2 of 21/04/2010 The value is corrected to 1000 km. Response 3 of 11/05/2010 Tables are harmonized between themselves and excel spreadsheet. Supporting documents were forwarded to the verifier: SD_07_210100513_NII Cement p24	Conclusion on Response 1 The process to include facilities is not justified in a transparent manner. Please provide the OJSC "NIICEMENT" annual statistical report "Russian Cement Industry in 2007" (the part which was used for establishing the baseline) to the verifiers. The CAR remains open. Conclusion on Response 2 Response is not accepted Data from Anx.2.2 and Anx.2.3 are not in compliance with the excel spreadsheet as well as between themselves (Anx.2.2 is not in compliance with

throughout PDD.		SD_08_210100513_NII Cement p37 SD_09_210100513_NII Cement p80 SD_10_210100513_NII Cement p81 SD_11_210100513_NII Cement p82 SD_12_210100513_NII Cement p83 <u>Response 4 of 07/06/2010</u> Values for Sterlitamakskoye AO "Soda" applied in excel calculations are split into dry and wet production. 216.1 kg c.e/t clinker used for wet production. 108.9 kg c.e/t clinker used for dry production. Cement and clinker production values for each manufacturing method are adjusted accordingly. Table Anx.2.2 is corrected to: 2 Lipetskcement dry gas 1,483,0 Description of Baseline CO2 emissions due to electricity consumption in Annex 2 is changed to: For estimation of electricity consumption for incremental part of cement production the individual specific factor of electricity consumption is used for each plant.	Anx.2.3). Also, please provide to verifiers the OJSC "NIICEMENT" annual statistical report "Russian Cement Industry in 2007" (that part, which was used for establishing the baseline) The CAR remains open. <u>Conclusion on Response 3</u> Data were checked against NIICEMENT Directory. Following mistakes were found: - Specific factor of fuel consumption for Sterlitamakskoye AO "Soda" applied in excel calculations is incorrect (236.8 kg c.e/t clinker). The plant include both wet and dry kilns but only emission factor for wet kilns was applied; - It is wrongly stated in Table Anx.2.2 that Lipetskcement applies wet production method; - Description of Baseline

		Shurovsky cement will be monitored continuously, without excluding it from monitoring since 2010.	CO2 emissions due to electricity consumption in Annex 2 is incorrect. It is stated in Annex 2 (p.97 and 98) that average value is used, but in excel spreadsheet the emissions are calculated for each plant independently; The approach not to include Shurovsky Cement (as JI project) for calculation of OM/BM/CM cannot be approved by verifiers. The baseline for the current JI project should just represent the plants on which cement would have been produced in the absence of the project. Relation to JI or not JI does is irrelevant here. The CAR will be closed after due correction. Conclusion on Response 4 This CAR is closed based on the adequate corrections made to the PDD.
CAR 17	B.1.4	Response 1 of 17/03/2010	Conclusion on Response 1

Emissions from electricity consumption are calculated with the use of grid emission factors: for RES "Mid Volga" 0.534 t CO_2/MWh, for RES "Center" 0.526 t CO_2/MWh, for RES "Urals" 0.602 t CO_2/MWh and for RES "North-West" $EF_{el, y}$ = 0.591 t CO2/MWh for the conditions of reduction of electricity consumption whereas the conditions of increase of electricity consumption from the grid both in project and baseline scenarios apply.		Emission factors are corrected as follows: RES "Center" 0.511 RES "North-West" 0.548 RES "Mid Volga" 0.506 RES "Urals" 0.541 RES "South" 0.500 RES "Siberia" 0.894 Response 2 of 21/04/2010 Corrected.	Although Emission factors were corrected, the description was not changed in Annex 2 (p. 102). The value of $EF_{el,y}^{GRID}$ used in formula 6 (p.56) is not indicated in PDD. The emission factor for Maltsovskiy Portland cement included in excel spreadsheet is not mentioned in Section "Standardized grid emission factors" (p. 102). Please also correct a following mistake. In sentence on p. 102 "For calculation of emissions related to electricity consumption in the baseline scenario for incremental part of cement production, corresponding operating margin emission factors (for RES "Centre", RES "Mid Volga", RES "North-West" and RES "South") were applied as grid emission factors." the operation emission factor

			for RES "Urals" is not listed. The CAR will be closed after due correction. <u>Conclusion on Response 2</u> This CAR is closed based on the adequate corrections made to the PDD.
CAR 18 The reference for $EF_{calcin,y}$ is inadequate.	B.1.5	<u>Response 1 of 17/03/2010</u> Reference has been checked and found working. The value provided by the reference is 0.54 tCO2/t clinker. The value applied is adjusted for Mg carbonates and equals 0.525 tCO2/t clinker. Value applied is less than reference value, this represents conservative approach. <u>Response 2 of 21/04/2010</u> Corrected	<u>Conclusion on Response 1</u> The clarification given is inadequate and does not correspond to the matter of the CAR. The CAR will be closed after due correction. <u>Conclusion on Response 2</u> This CAR is closed based on the adequate corrections made to the PDD.
CAR 19 Please provide full reference (including page or table number) for the radius of cement transportation for Mordovcement throughout the PDD. Please also reduce values	B.1.5	<u>Response 1 of 17/03/2010</u> NII Cement directory, 2008. Page 49. Table 43. Only radius of approximately 1000 km (depending on the nearest plant location) is mentioned. Corrected. <u>Response 2 of 21/04/2010</u>	<u>Conclusion on Response 1</u> Please provide NII Cement directory, 2008. Page 49. Table 43 to the verifiers. Values of radius are still not reduced to the one value. Please also replace wrong

to the one (542, 500, 1000 radius is mentioned in PDD, in some cases diameter is mentioned).		Values are corrected to 1000 km. <u>Response 3 of 13/05/2010</u> Supporting documents were forwarded to the verifier: SD_13_210100513_NII Cement p145 <u>Response 4 of 07/06/2010</u> Uglegorsk zement does not produce clinker, but only grind bought products from the other plants, therefore excluded from monitoring. Following plants were included in the baseline calculations: Oskolcement Lipetskcement Voskresenskcement Shchurovsky cement Mikhailov cement Sterlotamakskoye AO "Soda" Zhigulevskiye stroymaterialy Volskcement	words "diameter" to "radius" on p. 93. The CAR will be closed after due correction. <u>Conclusion on Response 2</u> Response is not accepted. Please provide for evidence NII Cement directory, 2008. Page 49. Table 43 to the verifiers. The CAR will be closed after the directory is provided. <u>Conclusion on Response 3</u> Following cement plants located within 1000 km radius are not included in calculation of the baseline emission factor: - Podolsk zement; - Belgorodskiy zement; - Podgorenskiy zementnik; - Uglegorsk zement; - Nevyanskiy zementnik; - Katavskiy zement;

		Ulyanovskcement Sebryakovcement Maltsovskiy Portlandcement Pikalevskiy cement Gornozavodskcement Novotroickiy cementniy zavod Podolsk-cement Belgorodskiy cement Podgorenskiy cementnik Nevyanskiy cementnik Katavskiy cement Magnitogorskiy COZ <u>Response 5 of 16-06-2010</u> "Additives quantities" and "specific fuel consumption for additives drying" columns were added to the baseline emissions calculation sheet. Calculations were updated accordingly. Word "weighted" is taken out of the text. <u>Response 6 of 6-07-2010</u>	- Magnitogorskiy ZOS. <u>Conclusion on Response 4</u> Wrong specific factors of fuel consumption (the factors do not include fuel consumption for drying) were applied for Sterlotamakskoye AO "Soda", Podgorenskiy zementnik, Nevyanskiy zementnik, Katavskiy zement, Magnitogorskiy ZOS. Please also correct the statement on p.101 that specific factor of electricity consumption 115.3 KWh/t is a weighted average value. In fact it is the simple average value. This CAR will be closed after due correction. <u>Conclusion on Response 5</u> The correction is not accepted. The added parameters are already summed in the row "Specific factor of fuel consumption" (column H in the

		Summing in the file is fixed. Response 7 of 9-07-2010 Specific factor of fuel consumption" for Pikalevskiy cement is corrected (column H in the excel spreadsheet).	excel spreadsheet). Conclusion on Response 6 "Specific factor of fuel consumption" was not corrected for Pikalevskiy cement (column H in the excel spreadsheet). Conclusion on Response 7 This CAR is closed based on adequate corrections made to the excel spreadsheet with baseline emission factor calculation.
CAR 20 Section B.2 provides an assessment of additionality independently for 3 sub-projects. It is not explained and justified how such approach correlates to one JI project.	B.2.1	Response 1 of 17/03/2010 Each construction project has its own schedule, suppliers, contractors, commissioners and so on. Each project has its own capacities and expenses, salary funds. Different materials and equipment are used during project operation, therefore it is incorrect to use combined indicators. Different performance indicators are applied, this correlates with the structure currently functioning at the plant, when each sub-division (such as old plant, new plant, heat suppliers) have their own performance indicators, own management, directors, etc. Response 2 of 21/04/2010 The letter from the plant (SD_01_20100421Letter_from _the _plant) has been submitted to the AIE stating that all three subprojects were considered as one JI project.	Conclusion on Response 1 The clarification given is inadequate and does not correspond to the matter of the CAR. The CAR remains open. Conclusion on Response 2 Response is not accepted. The provided letter does not explain why additionality for three sub-projects was assessed separately, though the three sub-projects were considered

		Response 3 of 13/05/2010 Assessment of the project is done as one JI project that combines semi-dry, dry lines and CHPP construction. Investment analysis is changed accordingly.	as the one JI project. The CAR remains open. Conclusion on Response 3 Assessment of the project is done as one JI project that combines semi-dry, dry lines and CHPP construction. This CAR is closed based on the adequate corrections made to the PDD.
CAR 21 Please correct mistakes listed below: - on page 33 it is simultaneously stated that Additionality Tool was used for assessment of two and three alternatives. - different IRR Benchmarks for one subproject are mentioned throughout Section B.2(16% and 16.5%); - excel calculations for the subproject 1 are not in compliance with PDD;	B.2.1	Response 1 of 17/03/2010 - Page 33 corrected; - 16.5% pertains to the interest rate when 16% pertains to refinancing rate, these are different values.; - Excel calculations are checked against the PDD and found correct. - CHPP is constructed with only one purpose – to fulfill electricity needs of the dry line, therefore it is reasonable to assume that the CHPP will be kept operational at least until the end of the lifetime of the dry line. -investment is corrected; - CDM-PDD phrase is removed; Response 2 of 21/04/2010 The plant economical department has sent the actual expenses and confirmed the figure stated in the PDD. The excel spreadsheet was updated according to the information obtained.	Conclusion on Response 1 Following issues were not appropriately corrected: - excel calculations for the subproject 1 are not in compliance with PDD; - investments applied by project participants for the investment analysis for Subproject 3 are not in compliance with those appointed in the business plan obtained by verifiers during the site visit - 58 mln. EUR versus 1646 mln. RUB = ~46 mln. EUR (applying the exchange rage

- Lifeteme of the subproject 3 is set to 20 years (p.39) according to the lifetime of dry kiln (subproject 3 is CHPP construction); - investments for the subproject 3 are not in compliance with excel spreadsheet (50 mln. versus 58 mln. euro); - CDM-PDD is mentioned on page 40 whereas it is JI PDD.			appointed in PDD 35.9). The explanation presented by project developer should be included in PDD. The CAR will be closed after due correction. <u>Conclusion on Response 2</u> This CAR is closed based on the adequate corrections made to the PDD.
CAR 22 Assessment of IRR benchmark for subproject 1 comprises a lot of mistakes and confusions. Firstly "Central bank discount rate" (p.35) was mentioned. In the next sentence "Bank interest rate" was mentioned (16% and 16.5% in different places). These indicators have different meaning. Please explicitly describe the assessment of IRR	B.2.1	<u>Response 1 of 17/03/2010</u> - rates are explained in CAR 21 - IRR bench mark is described in the clause "Sub-step 2b: Option III. Apply benchmark analysis", page 37. - Discount rate is corrected; <u>Response 2 of 21/04/2010</u> IRR section has been updated according to the corrected discount rates. Risk premiums attributable to the investment were applied. <u>Response 3 of 14/05/2010</u> Central Bank refinance rate is changed to 13%. Benchmark is taken as Central Bank	<u>Conclusion on Response 1</u> The approach to change the main component of the IRR benchmark is not approved by verifiers because is it both not correct and less conservative than previous (16% Central bank refinancing rate was changed to 16.5% Bank interest rate). The CAR remains open. <u>Conclusion on Response 2</u> Response is not accepted.

<table>
<tr>
<td>benchmark. Please also note that "Central bank discount rate" was 13% from the period 15 June 2004 till 25 December 2004 (it is stated that calculations were made in July 2004 p.35).</td>
<td></td>
<td>refinance rate + country risk 8% (The project plans to increase sales volumes as soon as incremental production capacity will be installed. This is in line with "Methodological Recommendations on Investment Project Efficiency Assessment "approved by the Ministry of Finance RF, Ministry of Economy RF, Gosstroi RF, June 21 1999 N VK – 477 (the document is still in force) this type of projects has the medium risk factor of 8-10%. Thus the lowest range is applied to be conservative) .

Response 4 of 09/06/2010

Benchmark is set in accordance with the following methodology:

<table>
<tr><th>#</th><th>FACTOR</th><th>RATE</th><th>DESCRIPTION</th><th>SOURCE</th></tr>
<tr><td>1</td><td>Risk-free rate</td><td>4,24%</td><td>German long-term interest rate in euro as a secondary market yields of government bonds with a remaining maturity close to ten years, July 2004. This rate is taken as Germany is the largest Euro economy.</td><td>European Central Bank</td></tr>
<tr><td>2</td><td>Russian interest rate</td><td>7,5%</td><td>YTM of the Russia-30 Eurobonds in July 2004. Russia-30 is the largest Eurobonds issue by Russia.</td><td>FIDaily</td></tr>
<tr><td>3</td><td>Country risk premium</td><td>3,26%</td><td>Non-specific risk associated with investments in Russia. Equals to Russian interest rate less Risk-free rate.</td><td>-</td></tr>
<tr><td>4</td><td>Euro infla-</td><td>2,04%</td><td>5-year average inflation in</td><td>EuroStat</td></tr>
</table>
</td>
<td>The applied Central Bank refinance rate 14% is incorrect. As of July 2004 it was 13%.

The approach to change the IRR benchmark is not approved by verifiers because:

- country risk should be summed with risk-free and inflation-free discount rate. Russian Federation Central Bank discount rate already includes country risk and inflation expectation.

-IRR benchmark applied in the investment analysis for sub-project 1 and sub-project 3 includes inflation (since the RF Central Bank refinancing rate includes inflation). However, the cash flows used for the projects' IRR calculation do not take into account inflation. Please provide consistency.

The CAR pertains to the investment analysis for subprojects 1 and 3.</td>
</tr>
</table>

			tion		EuroZone	
		5	Real risk-free rate	**2,1%**	*Real interest rate=(1+Nominal Interest Rate)/(1+Inflation)-1*	-
		6	Company related risk premium	**3.6%**	Company-specific risk premium associated with company stability, reputation, overall estimation.	
		7	Project risk premium	**8%**	This type of projects has the medium risk factor of 8-10%. Thus the lowest range is applied to be conservative.	Methodological recommendations on evaluation of investment projects efficiency. Approved by Ministry of Economy of the RF, Ministry of Finance of the RF, State Committee of the RF on Construction, Architecture and Housing Policy of the RF 21.06.1999 N BK 477.
			TOTAL EXPECTED RETURN	**17,02%**	This rate **TAKES INTO ACCOUNT REAL (INFLATION ADJUSTED) RISK-FREE RATE INCREASED BY A GENERAL EXPECTED MARKET RETURN, COUNTRY RISK AND SPECIFIC PROJECT RISK.**	

Response 5 of 22-06-2010

Project participant risk is implemented.

The CAR will be closed after due correction.

Conclusion on Response 3

IRR benchmark applied in the investment analysis includes inflation (since the RF Central Bank refinancing rate includes inflation). However, the cash flows used for the projects' IRR calculation do not take into account inflation. Please provide consistency.

The CAR will be closed after due correction.

Conclusion on Response 4

The approach is in general accepted except one point. Inclusion of the market risk premium for developed markets (3.8%) in the IRR benchmark can not be approved by verifiers because it is unclear how it correlates with another risk premiums. According to the Methodological recommendations on evaluation of investment projects effi-

		Supporting document 20100705_Project participant risk.doc is forwarded to the verifier.	ciency, three risk premiums exist – country risk, risks connected with project participants and project risk premium. Specific market risk premiums are already included in the presented three risk categories. The CAR will be closed after due correction. <u>Conclusion on Response 5</u> This CAR is closed based on the evidence provided to the verifier.
CAR 23 Please justify following parameters applied in investment analysis for subproject 1: Weighted average cement price; Average natural gas tariff; Average electricity tariff from the grid.	B.2.1	<u>Response 1 of 17/03/2010</u> All prices are provided by the planning and economics department of the plant. Prices are available to the verifier at request. <u>Response 2 of 25/03/2010</u> Documents are forwarded to the verifier by the plant economical department.	<u>Conclusion on Response 1</u> Please provide the supporting documentation. The CAR will be closed after the documentation is provided. <u>Conclusion on Response 2</u> This CAR is closed based on evidences studied by verifiers.
CAR 24 Investment analysis for subproject 1 implies only	B.2.1	<u>Response 1 of 17/03/2010</u> CHPP construction could be canceled, postponed, or experience significant delays, therefore calculations made only accounting for the grid electricity.	<u>Conclusion on Response 1</u> Explanation is miserable and can not be accepted by

consumption electricity from the grid whereas cheaper electricity from own CHPP is available from 2010.		Response 2 of 21/04/2010 Electricity tariff corrected.	verifiers. Moreover, it was confirmed during the site visit that construction of the CHPP is implementing without significant delays. The CAR will be closed after due correction. Conclusion on Response 2 This CAR is closed based on adequate corrections made to the Investment analysis for subproject 1.
CAR 25 Additionality assessment of subproject 2 could not be approved by determination team. JI project 0192 "Switch from wet to dry process at OJSC "Shchurovsky Cement", Russia" does not have the final determination. Moreover the projects could not be considered as similar because current project includes construction of semi-dry line and construction of own CHPP.	B.2.1	Response 1 of 17/03/2010 JI project 0192 "Switch from wet to dry process at OJSC "Shchurovsky Cement", Russia" has positive determination report issued by the AIE. This means that the project is positively determined by the AIE. DVM paragraph 28 reads: "28. If the PDD indicates that it selected the JI specific approach referred to in paragraph 22 above,the AIE should assess which of the following approaches is used to demonstrate additionality:(b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances (same GHG mitigation measure, same country, similar technology, similar scale) would result in a reduction of anthropogenic emissions by sources or an enhancement of net anthropogenic removals by sinks that is additional to any that would otherwise occur and a justification why this determination is relevant for the project at hand; 29. For any approach referred to in paragraph 28 above, the AIE should assess whether: (a) The PDD provides a justification of the applicability of the approach with a clear	Conclusion on Response 1 The explanation given is not accepted because the projects could not be considered as similar because current project includes construction of semi-dry line and construction of own CHPP. The CAR remains open. Conclusion on Response 2 Response is not accepted The explanation given is not accepted because the present project and JI 0192

		and transparent description;[vi] [vii] [viii] [ix] [x] (b) Additionality proofs are provided;[vii] [viii] [ix] [x] UNFCCC/CCNUCC Page 10 Joint Implementation Supervisory Committee (c) Additionality is demonstrated appropriately as a result of the analysis using the approach chosen." Determination and verification manual does not require final determination, but only positive determination by an AIE. Word "final" determination or any other cross-reference to JISC registration is not mentioned. <u>Response 2 of 21/04/2010</u> As required in the CDM additionality should be proven for each individual subproject separately. The same approach has been taken in this project. Subproject #2 "Dry line of cement manufacturing construction" is implemented under comparable circumstances with JI project 0192 "Switch from wet to dry process at OJSC "Shchurovsky Cement", Russia" that has positive determination report issued by the AIE, and therefore is comparable to the project passed the determination routine. Determination report for the project 0192 "Switch from wet to dry process at OJSC "Shchurovsky Cement", Russia" will be made publicly available at the Global Carbon website. Link to the website is provided http://www.global-carbon.com/en/projects/ruprojects/shchurovsky-cement-plant.html. <u>Response 3 of 13/05/2010</u>	cannot be considered as similar since the current project includes additionally construction of semi-dry line and construction of own CHPP whuch are not present in JI 0192. The evidence obtained by the verifiers during interviews with project participant at the site visit clearly indicates that construction of the dry line and construction of CHPP are the one technical business project; hence additionality can not be assessed separately. The CAR remains open. <u>Conclusion on Response 3</u> The CAR is withdrawn since assessment of the project was remade as one JI project that combines semi-dry, dry lines and CHPP construction.

		Assessment of the project is done as one JI project that combines semi-dry, dry lines and CHPP construction.	
CAR 26 6 alternatives were identified through additionality assessment of the subproject 3. But only 1 of them was considered in further analysis.	B.2.1	<u>Response 1 of 17/03/2010</u> JI specific approach narrows down number of alternatives to only one which calls "most plausible". Most plausible alternative is then undergoing investment analysis. <u>Response 2 of 21/04/2010</u> Explanation is given in the PDD. <u>Response 3 of 13/05/2010</u> Assessment of the project is done as one JI project that combines semi-dry, dry lines and CHPP construction.	<u>Conclusion on Response 1</u> The clarification given is inadequate and does not correspond to the matter of the CAR. Please note that a project developer has no authority to reject any CAR. Project developer could give an explanation or made adequate correction based on which verifier may close or withdrawn a CAR. The CAR remains open. <u>Conclusion on Response 2</u> Response is not accepted. No added information is found in the PDD v.3.7. According to the information obtained during the site visit construction of the dry line and construction of CHPP (subproject 2 and

			subproject 3) are the one technical business project, thus additionality can not be assessed separately. Conclusion on Response 3 The CAR is withdrawn since assessment of the project was remade as one JI project that combines semi-dry, dry lines and CHPP construction.
CAR 27 Please justify in a transparent manner the "cost of own generated electricity". Justification should include the transparent calculation of that cost including indication and justification of all components.	B.2.1	Response 1 of 17/03/2010 Cost of 1 MW generated electricity is provided by the plant and includes very complex and extensive calculations and include cost of operating two gas turbines, boiler, steam turbine, salary fund, supplements. Cost is available to the verifier at request. Response 2 of 21/04/2010 Documents forwarded to the AIE by the plant economical department. Response 3 of 13/05/2010 Savings due to own generating facilities construction are calculated as the difference between grid electricity tariff and internal cost of 1 MWh generation, for instance in 2004:	Conclusion on Response 1 Please provide the supporting documentation. The CAR will be closed after the documentation is provided. Conclusion on Response 2 Response is not accepted. Please justify the average cost of electricity from the grid applied in the investment analysis for sub-project 3 (436 RUR/kWh) and explain why it differs from the same parameter in the investment analysis for sub-project 1 (1342

		1342,45 (grid tariff)-1200 (internal cost)=142.45 Rubles Assessment of the project is done as one JI project that combines semi-dry, dry lines and CHPP construction. Internal cost of generated electricity is included in the investment analysis. Supporting document is forwarded to the verifier: SD_14_210100513_prices <u>Response 4 of 09/06/2010</u> The price mentioned in the business plan is the indexed price and cannot be used in investment analysis that uses flat prices. Supporting document SD_17_20100609_CHPP_electricity_cost is forwarded to the verifier for transparency and components justification. <u>Response 5 of 16-06-2010</u> Supporting document SD_19_20100622_Electricity cost CHPP stamped.pdf is forwarded to the verifier	RUR/kWh). Please clarify, why the internal cost of electricity from the investment analysis for sub-project 1 (1200 RUR/kWh) is not used in the investment analysis for subproject 3. Please also provide reference to the document which justifies the "cost of own generated electricity". The CAR remains open. <u>Conclusion on Response 3</u> According to the business plan [17] (p.5) the cost price of electricity is indicated as 0,597 RUR/kWh (this price is actual for 2009). Please provide explanations why it differs from the price used (1200 RUR/MWh) as well as transparent calculation of that cost including indication and justification of all components. <u>Conclusion on Response 4</u>

		Own generated electricity cost components were included in the general investment analysis, therefore own generated electricity cost is already included in the analysis. The car is no longer relevant. <u>Response 6 of 06-07-2010</u> Value is fixed to 19.18 MW <u>Response 7 of 09-07-2010</u> Scenarios 5 and 6 were corrected to take into account electricity price deviations for "Electricity savings revenues" parameter.	The answer is not accepted because: - the provided evidence is not a manageable document. It does not have a date, stamps or signatures; - the explanation about indexation is not accepted because without indexation the price should be lower in last years. The CAR remains open. <u>Conclusion on Response 5</u> The recalculated investment analysis is not accepted the parameter "Electricity export" is taken as 19.82 MW whether 19.18 MW should be. <u>Conclusion on Response 6</u> The recalculated investment analysis contains following flaw – sensitivity analysis for scenarios 5 and 6 does not take into account electricity price deviations for "Electricity

			savings revenues" parameter. Conclusion on Response 7 This CAR is closed based on adequate corrections made to the excel spreadsheet with investment analysis.
CAR 28 Exclusion of emissions due to transportation is not justified.	B.3.1	Response 1 of 17/03/2010 Paragraph 14 (a) (iii): "[In the case of a JI project aimed at reducing emissions, the project boundary shall encompass all anthropogenic emissions by sources of GHGs which are] significant, i.e., as a rule of thumb, would by each source account on average per year over the crediting period for more than 1 per cent of the annual average anthropogenic emissions by sources of GHGs, or exceed an amount of 2,000 tonnes of CO2 equivalent, whichever is lower; Assessment of emissions connected with diesel consumption is done in the excel spreadsheet. The value calculated is 902 tCO2. Based on the guidance above, these emissions are excluded from further consideration. Response 2 of 21/04/2010 Corrected.	Conclusion on Response 1 The explanation given is accepted. Please include the explanation in PDD. The CAR will be closed after due correction. Conclusion on Response 2 This CAR is closed based on the adequate corrections made to the PDD.

		• Fuel consumed by heavy duty trucks that are used for raw materials delivery, and also by diesel locomotives, and reloaded by excavators; • Minor source of emissions (less than 1%); • Belt conveyor will replace rail transport used for chalk. Clay will still be transported by trucks. Clay is not the main raw material used and considered as additive, therefore clay represent minor, compared to chalk, raw material, causing even smaller emission due to fuel consumption at the quarry.	
CAR 29 Emissions occurring due to natural gas transportation, production, etc. are not included in Section B.3.	B.3.1	<u>Response 1 of 17/03/2010</u> These emissions are called "leakage". It assessment is done on page 35 in the PDD. Based on assessment made, leakage is excluded from further consideration. <u>Response 2 of 21/04/2010</u> Explanation is added. • Leakage is the net change of anthropogenic emissions by sources which occurs outside of the project boundary, and that can be measured and is directly attributable to the JI project. • Based on the assessment made, leakages are excluded from further consideration, Table B.1.2.	<u>Conclusion on Response 1</u> The explanation given is obvious. Please include the explanation in the Table B.3.1 of PDD (p. 43). The CAR will be closed after due correction. <u>Conclusion on Response 2</u> This CAR is closed based on the adequate corrections made to the PDD.
CAR 30 Obsolete version of the Guidance on Criteria for Baseline setting and monitoring is used in Section	D.1.1	<u>Response 1 of 17/03/2010</u> Corrected.	<u>Conclusion on Response 1</u> This CAR is closed based on the adequate corrections made to the PDD.

D.1 of PDD.			
CAR 31 Please correct mistakes listed below: - names of parameters P1, P2, P3, P5, P12, P12, P14, P15, P21, P24, P34 in Section D.1.1.1 are not in compliance with names mentioned throughout Section D.1.1.2; - names of parameters B13, B14 in Section D.1.1.3 are not in compliance with names mentioned throughout Section D.1.1.4; - parameters B3, B4, B15, B17 and B18 listed in Section D.1.1.3 are not used afterwards; - names of parameters in the formula 4 are not in compliance with names in the description; - two similar parameters are included in section D.1.1.1 (P29 and P33)	D.1.1	<u>Response 1 of 17/03/2010</u> - parameters B15, B17 and B18 are used in calculations with appropriate production level indication (indices). - parameters in the formula 4 are being redefined, therefore description should be different; - rest of the parameters are fixed; - parameter x is defined during monitoring, value cannot be assigned now; <u>Response 2 of 21/04/2010</u> Parameters monitored are updated Parameter x was given the explanation in B.1. and Annex 2. <u>Response 3 of 12/05/2010</u> Parameter x is excluded from the PDD. Three options were introduced to the monitoring plan. It is described in the PDD what option shall be chosen in any given circumstances. <u>Response 4 of 07/06/2010</u> Parameters:	<u>Conclusion on Response 1</u> Following mistakes were not corrected appropriately: - names of parameters P2, P3, P5, P12 in Section D.1.1.1 are not in compliance with names mentioned throughout Section D.1.1.2; - names of parameters B13, B14 in Section D.1.1.3 are not in compliance with names mentioned throughout Section D.1.1.4; - parameters B15, B17 and B18 listed in Section D.1.1.3 are not used afterwards; - names of parameters in the formula 4 are not in compliance with names in the description. - description of the formulae 16 and 17 does not provide the description of parameter x (please also include the value). The explanation given is inade-

- MWt are mentioned in clarifications to the parameters to the formula 7 (p. 55) and formula 13 (p. 57). MW hours should be; - MW are mentioned in clarifications to the parameters to the formula 15 (p. 59). MW hours should be; - description of the parameter $NCV_{fuel\_i,y}$ is incorrect (tonnes or m3); - description of the formula 20 does not provide the explanation of parameters $BE^{CHPP}_{hot\_wate\_and\_heating,y}$ and $BE^{CHPP}_{raw\_materials\_drying}$; description of the formulae 16 and 17 does not provide the description of parameter x (please also include the value).		- FCS^i; - CEMPROD(wet)$^i_{level1;}$ - CLNK(wet)$^i_{level1;}$ Were added to D.1.1.3 <u>Response 5 of 16-06-2010</u> Parameters B4, B18 and B19 were deleted from Section D.1.1.3	quate. The parameter RF_i will be defined during monitoring and the parameter x is the threshold. The CAR will be closed after due correction. <u>Conclusion on Response 2</u> Response is not accepted. Description should be added to the PDD, Section D.1.1.4 as to how is parameter *x* calculated <u>Conclusion on Response 3</u> Parameter x was excluded. Instead three options were introduced. They clearly differentiate incremental and replacement parts of cement production. Following parameters needed to monitor emissions in the baseline scenario are not included in Section D.1.1.3: - FCS^i; - CEMPROD(wet)$^i_{level1;}$

			- $CLNK(wet)^{i}_{level1;}$ If they are fixed parameters please include their values. The CAR will be closed after due correction. <u>Conclusion on Response 4</u> Please delete B4, B18 and B19 parameters from Section D.1.1.3 because they are not used in further calculations. The CAR will be closed after due correction. <u>Conclusion on Response 5</u> This CAR is closed based on the adequate corrections made to the PDD.
CAR 32 Section D.1.1.1 does not contain following parameters which will be monitored: - P_y^{CHPP}; - $HEAT_{hot\_water\_and\_heating,y}$;	D.1.3	<u>Response 1 of 17/03/2010</u> Corrected.	<u>Conclusion on Response 1</u> This CAR is closed based on the adequate corrections made to the PDD.

- $HEAT_{raw\_materials\_drying,y}$.			
CAR 33 Section D.1.1.2 does not contain a formula to calculate $PE_{CHPP,y}$.	D.1.4	Response 1 of 17/03/2010 Formula 14 included.	Conclusion on Response 1 This CAR is closed based on the adequate corrections made to the PDD.
CAR 34 The formula 6 (p.54) observed as incorrect. Dividing of $PERCENT^{GRID}$ and $PERCENT^{CHPP}$ to 100 is incorrect because mentioned above values are already stated in %.	D.1.4	Response 1 of 17/03/2010 Formula is fixed.	Conclusion on Response 1 This CAR is closed based on the adequate corrections made to the PDD.
CAR 35 The formula 15 is incorrect (Calculation of the parameter $EF_{el,y}^{CHPP}$).	D.1.4	Response 1 of 17/03/2010 Dimension of result in formula is TCO2/MW, which represents emission coefficient for the CHPP. Formula found correct. Response 2 of 21/04/2010 Formula is adjusted to reflect electricity only. Response 3 of 13/05/2010 Heat is excluded from consideration in the baseline and in the project scenario.	Conclusion on Response 1 The formula 15 was not corrected. The CAR will be closed after due correction. Conclusion on Response 2 Conclusion is pending a response to the CAR 08. Conclusion on Response 3 This CAR is withdrawn since baseline emissions

			from CHPP were removed from the monitoring plan.
CAR 36 Section D.1.1.3 does not contain following parameters which will be monitored: - BE_{rep}; - $CEMPROD(wet)^{i}_{level2}$; - NCV_{fuel}; - EF_{fuel}; - $CLNK(wet)^{i}_{level2}$; - $CEMPROD_{semi-dry,y}$; - $CEMPROD_{dry,y}$; - EF_{fuel_i}; - $BE^{CHPP}{}_{y}$; - $BE^{CHPP}{}_{electricity,y}$.	D.1.5	Response 1 of 17/03/2010 Parameters included; - Parameter EF_{fuel} and EF_{fuel_i} are the same parameters Response 2 of 21/04/2010 Corrected.	Conclusion on Response 1 All necessary parameters were added to Section D.1.1.3 of PDD. Please include the explanation given to PDD. Please also correct the location of the parameters B24 and B25 in table D.1.1.3. The same pertains to the parameters P12, P30, P36 and P37 in Section D.1.1.1. Please also add the included parameters to the Figure D.3.1. The CAR will be closed after due correction. Conclusion on Response 2 This CAR is closed based on the adequate corrections made to the PDD.
CAR 37 Formulae 21 and 22(p.66) are incorrect. Efficiency coefficient is accounted in	D.1.6	Response 1 of 17/03/2010 Formula 27 is adjusted; Formula 28 assumes that no heat losses are exist on the way of heat from the gas	Conclusion on Response 1 Although the formula 27 was corrected in a right manner, no changes have

a wrong manner in the formula 21 and it is not included in the formula 22.		turbines to the technology, this heat is not utilized, but used in the technology directly; Response 2 of 21/04/2010 Excel file is updated.	been implemented to the excel spreadsheet with calculations. The explanation given to formula 28 is inadequate but the verifiers withdraw the part of the CAR 37 which pertains to formula 28. Although not accounting the efficiency is incorrect, it is conservative. The CAR will be closed after due correction. Conclusion on Response 2 This CAR is closed based on the adequate corrections made to the excel spreadsheet.
CAR 38 Please explicitly indicate in Section D.1.1.4 if $CEMPROD(wet)^{i}_{level1}$, $CLNK(wet)^{i}_{level1}$ and $EL(wet)^{i}_{level1}$ are values which include run factor or it is the 100% of the capacity.	D.1.6	Response 1 of 17/03/2010 There is the reference after the heading of D.1.1.4 "As further described in Annex 2, the baseline emissions have two sources: ....." Annex 2 defines index 1 as "designed" and index 2 as "actual", therefore appropriate values are designed and actual, run factor does not accounted for; Response 2 of 21/04/2010 Description is added.	Conclusion on Response 1 The clarification given is inadequate and does not correspond to the matter of the CAR. The CAR remains open. Conclusion on Response 2 This CAR is closed based on the adequate correc-

			tions made to the PDD.
CAR 39 Section D.1.1.4 does not provide the explanation how $EF_{el,y}^{GRID}$ should be chosen from 5 values presented in Annex 2. The same pertains to $EF_{el,y}$.	D.1.6	Response 1 of 17/03/2010 As in the PDD: "$EF_{el,y}^{GRID}$ Standardized CO_2 emission factor of the relevant regional electricity grid in year *y* (tCO_2/MW), fixed ex-ante (see Annex 2)" Annex 2 explains in detail how appropriate emission factor is chosen for each RES. $EF_{el,y}^{GRID}$ is essentially equal to $EF_{el,y}$	Conclusion on Response 1 Conclusion is pending a follow-up on CAR 17. Conclusion on Response 2 This CAR is closed based on the adequate corrections made to the PDD.
CAR 40 Only 5 of more than 50 parameters monitored are described in Section D.2.	D.2.1	Response 1 of 17/03/2010 Data essential for emission reduction calculations is carefully managed and quality assurance procedure is described. Parameters that are not included in the table either taken from the other sources, such as directory, IPCC and so on and their quality have already been managed. Or those parameters are calculated and their quality doesn't need management, as calculations are done with sufficient accuracy. Response 2 of 21/04/2010 D.2. Is updated according to the parameters to be monitored Response 3 of 11/05/2010 Parameters used to establish the baseline have been added to QA/QC procedures section.	Conclusion on Response 1 Explanation given is not accepted. All values monitored should be included in Section D.2. The CAR will be closed after due correction. Conclusion on Response 2 Response is not accepted. QA and QC procedures for the parameters monitored to determine the baseline emissions are still not included in Section D.2. The CAR will be closed after due correction. Conclusion on Response 3

			This CAR is closed based on the adequate corrections made to the PDD.
CAR 41 The value of natural gas consumption for the semi-dry line in the excel spreadsheet is not in compliance with data in PDD (Table A.4.2.8 p .15).	E.1.1	Response 1 of 17/03/2010 Calculations are made assuming that the kiln is producing at its maximum designed capacity. For the most accurate calculations actual gas consumption at the kiln is used. Since the kiln most of the time was running in the test mode, run factor of this kiln is only 0.5109, which represents only half of all available time for the kiln operation. The following equation was solved to find out that the actual gas consumption would be if run factor equals 1: 37,370,222 - 0.5109 x – 1 x=73140000 Response 2 of 21/04/2010 The explanation is given	Conclusion on Response 1 The explanation given is accepted. The CAR will be closed after the explanation is added to PDD. Conclusion on Response 2 This CAR is closed based on the adequate corrections made to the PDD.
CAR 42 Two different values of calorie to Joule conversation factor are used in the excel spreadsheets presented to verifiers (4.19 and 4.186).	E.1.1	Response 1 of 17/03/2010 4.186 is rounded up to 4.19. By default, excel calculates and presents only two decimal places after the comma, which means that the program rounded up values automatically. Unless the AIE can present requirements pertaining how many symbols should be used after the comma (calculations precision), the calculations are correct. Values are corrected to 4.186.	Conclusion on Response 1 This CAR is closed based on the adequate corrections made to the PDD.
CAR 43	E.1.1	Response 1 of 17/03/2010	Conclusion on Response 1

Calculation of CO2 emissions from calcination process on dry line is incorrect (the emission factor multiplies on the amount of cement production and not on the amount of clinker production).		Corrected. <u>Response 2 of 21/04/2010</u> NII Cement directory is used to monitor clinker production. The directory reflects all clinker manufactured, regardless of it further use, therefore all clinker produced is accounted for, even if part of the clinker produced is being sold. The calculations are corrected to account emissions from decarbonization using clinker produced, but not cement.	Calculation of Baseline Emission Factor for incremental production (BEF) is incorrect. The part of BEF which accounts emissions from decarbonization is calculated based on the amount of produced cement and not on the amount of produced clinker (this approach does not account the clinker sold). The CAR will be closed after the explanation is added to PDD. <u>Conclusion on Response 2</u> The CAR is closed because the approach applied provides less emission reductions and thus is conservative.
CAR 44 There is nonconformity between the project realization started in 2005 (according to the Table A.4.2.15) and environmental assessment done in 2007 and taking into ac-	F.1.1	<u>Response 1 of 17/03/2010</u> Table A.4.2.15 represents construction schedule for the dry line. Year 2005 is not mentioned in the table. Project implementation schedule is spread throughout time, therefore environmental assessment could be done later, when it is become clear what equipment to be used and what assessment should be undertaken.	<u>Conclusion on Response 1</u> Table A.4.2.16 was meant by verifiers so the explanation does not make sense. All necessary permissions were checked during the site visit and found correct.

count amendments adopted in 2007.			The CAR is closed based on the observed documents.
CAR 45 No information on environmental assessment of dry line and CHPP is presented in Section F.1 of PDD.	F.1.1	Response 1 of 17/03/2010 Environmental assessment for the dry line is done in the special section of the project documentation called OVOS in 2006 by the project institute OJSC "Giprocement". Environmental assessment for CHPP is done in the special section of the project documentation called OVOS in 2006 by the project institute "Uralvnipienergoprom".	Conclusion on Response 1 This CAR is closed based on the adequate corrections made to the PDD and observed documentation which was provided to the verifiers during the site visit.
CAR 46 Please provide a list of relevant documents.	F.1.1	Response 1 of 17/03/2010 Relevant documents provided during site visit. Response 2 of 21/04/2010 The list is included on the page 90. Response 3 of 13/05/2010 Above mentioned documents were corrected to: - State expertise positive conclusion #148.01.06.01.02.05 dated 03.08.2005 on Semi-dry technological line for cement manufacturing	Conclusion on Response 1 All relevant documents were checked during the site visit and found correct. Please include the list of relevant documents (e.g. permissions) in Section F.1 and Section F.2 of PDD. The CAR will be closed after due correction. Conclusion on Response 2 Response is not accepted. The list of relevant documents was added to PDD Section F.1.1 and checked by verifiers.

		- Construction permit #151 dated 06.05.2005 for Semi-dry technological line for cement manufacturing construction Supporting document was forwarded to the verifier: SD_02_20100428_Related_documents	Please correct the following errors: - The number and date of the state expertise positive conclusion for the semi-dry line mentioned in PDD Section F.1. are incorrect (#148.01.06.00.02.05.06.07 dated 11.01.2007). #148.01.06.01.02.05 dated 03.08.2005 should be. - number and date of the "construction permit" for the semi-dry line mentioned in PDD Section F.1. are incorrect (#21 dated 08.12.2007). #151 dated 06.05.2005 should be. Also please provide verifiers a copy of the state expertise positive conclusion for the CHPP (#13-1-5-0438-08 dated 19.08.2008). The CAR will be closed after due correction. <u>Conclusion on Response 3</u> Necessary corrections

			were implemented. The required document was provided. This CAR is closed.
CAR 47 Please provide documentation on the analysis of the transboundary environmental impacts.	F.1.4	<u>Response 1 of 17/03/2010</u> Project is realized on the territory of the Russian Federation. Russian Federation is big enough to consider transboundary effects absence. Project affects only few kilometers of the territory surrounding the plant. <u>Response 2 of 21/04/2010</u> Section F. is updated.	<u>Conclusion on Response 1</u> During the site visit the environmental documentation which successful undergone the environmental expertise was checked. According to the documentation the project does not have any transboundary impacts. Please include this information to Section F.1 of PDD. The CAR will be closed after due correction. <u>Conclusion on Response 2</u> This CAR is closed based on the amendments made to the PDD.
CL 01 Please clarify if the project requires extensive initial training and maintenance	A.4.2.4	<u>Response 1 of 17/03/2010</u> Initial training is done at the plant premises. Majority of the staff has already been issued certificates allowing operating new equipment.	<u>Conclusion on Response 1</u> It was observed during the site visit that the project requires extensive initial

efforts in order to work as presumed during the project period.			training and maintenance efforts in order to work as presumed during the project period. It was confirmed during the site visit that all necessary requirements regarding trainings and maintenance were fulfilled. The CL is closed.
CL 02 The description of emissions is crumpled. Please provide clear description. For example divide emissions relate to baseline/project emissions or to both of them.	B.3.1	<u>Response 1 of 17/03/2010</u> Emissions have very well structure, detailed description and presented in the Table B.3.1 <u>Response 2 of 21/04/2010</u> Table B.3.1: sources clarifications has been added to the table.	<u>Conclusion on Response 1</u> No clarification is presented. The CL remains open. <u>Conclusion on Response 1</u> This CL is closed based on the amendments made to the PDD.
Draft report clarifications and corrective action requests by determination team subsequent to the results of a site visit			
CAR 48 During the site visit it was observed that the project includes combustion of "rubber chips" (old, cut tyre casings) which is not included in PDD.	A.4.2.1	<u>Response 1 of 17/03/2010</u> Alternate fuel plant was built at different time with the proposed project, was not included in the decisions presented, operating for several years, regardless of the new lines construction schedule, and therefore considered outside the project boundary, same way as wet lines are not accounted for with incremental production only. <u>Response 2 of 21/04/2010</u>	<u>Conclusion on Response 1</u> The explanation does not make sense. Combustion of "rubber chips" (old, cut tyre casings) should be included in PDD. It exists and saves up to 20% of natural

		Explanation added on page 18-19, emission reductions tables updated, monitoring plan updated, formulae added. <u>Response 3 of 13/05/2010</u> Units are fixed to tonnes Mass of consumed rubber tires will be determined at the end of the monitoring period, taking in to account sum of the tires consumed throughout the period. Consumption throughout the monitoring period (essentially – annual consumption) is used. Formulae 14 and 16 were adjusted accordingly. Approach 24 hours*365 days is taken only in the excel spreadsheet in order to estimate annual rubber tires consumption, due to actual data unavailability (alternate fuel plant only recently was launched in the test mode). This represents conservative approach.	gas consumed in the project scenario. So only 80% of fuel consumed in the project scenario is accounted. The CAR will be closed after due correction. <u>Conclusion on Response 2</u> The source of project emissions -"rubber chips" is included in PDD. Response is not accepted. It is unclear how parameters P22 and P24 (Section D.1.1.1) are calculated. It is stated at one time in Section D.1.1.1 that it is hourly and yearly consumption. The approach to take fixed time periods (24 hours*365 days) is incorrect. Either annually rubber chips consumption should be used or clear explanation should be added as to how the average annually consumption is calculated and what is frequency of monitoring.

			The CAR will be closed after due correction. Conclusion on Response 3 Descriptions of parameters P22 and P24 were corrected accordingly. The explanation given is accepted. This CAR is closed.
CAR 49 No proofs there found during the site visit that any of the two projects (first - construction of the semi-dry line and second - construction of dry line and CHPP) was considered as a JI project. Moreover, submitted documents [15-17] do not say that two projects were started as JI projects. Please note that emission reductions generated by JI projects should be additional to any that otherwise occur, and in this particular case two projects automatically be-	B.2.1	Response 1 of 17/03/2010 JI component of the project was discussed at the meeting since the beginning, this proved by the conversation took place during site visit, however documents adopted at the board of directors meeting have legal permission for execution and all decision taken are due to realize. At the moment of decision making, procedure for project approval and overall JI mechanism were not clear, therefore it was decided to postpone JI component realization until clear JI procedure in the Russian Federation is adopted. As soon as new procedure was in place, a contract with JI developer was concluded to complete JI component of the project. The contract with the PDD developer is available to the verifier at request. Additionality of the project is proved using most recent version of the Additionality tool, and it is clearly showed that all projects are additional to any that otherwise occur. Response 2 of 25/03/2010 The letter stating that before the Starting Date of the project JI was considered is provided to the AIE by the plant as SD_01_20100421Letter_from _the _plant	Conclusion on Response 1 No proofs there found during the site visit that any of the two projects was considered as a JI project. Moreover it was stated by Erastova Albina Ivanovna that the JI project started in 2009. The CAR remains open. Conclusion on Response 2 The CAR is closed based on evidences provided to the verifiers.

comes "any that otherwise occur" because they were not initially considered as JI projects.			
CAR 50. The excel spreadsheets with the investment analysis presented to the verifiers together with PDD are not in compliance with the business plans submitted by Mordovcement. [16,17] which indicate that both projects are economically feasible..	B.2.1	Response 1 of 17/03/2010 $$NPV = -IC + \sum_{t=1}^{N} \frac{CF_t}{(1+IRR)^t} = 0$$ From the formula above it can be seen that IRR is the function of NPV, so despite the fact the IRR value was calculated it depends on NPV. NPV value calculations may be done in many ways with many assumptions and expectations, that may be optimistic or pessimistic, with constant or rising or descending prices, cost of operation variations, include or not include inflation, taxes, risks, third party costs, insurance, etc. Therefore many values of IRR may be achieved, - positive, null. As per economics theory (http://ru.wikipedia.org/wiki/IRR), - from the different IRR values the highest IRR value should be chosen, therefore by definition IRR value calculated by economists will always be optimistic. Additionality tool proposes different approach which ensures constant prices, inflation absence, and indicators performance as of the day when decision is taken. It is demonstrated in the transparent way that IRR calculated by economists and IRR calculated according to the guidance of Additionality tool will differ. IRR calculated in the PDD represents approach chosen in the Additionality tool and as such represents pure JI overview on the project performance. A per analysis made, all projects are additional to any that would otherwise occur. Response 2 of 25/03/2010	Conclusion on Response 1 The explanation is not accepted. Please note that description of well-known facts and obvious things will not lead to the closure of the CAR. The CAR remains open. Conclusion on Response 2 The explanation is not accepted. It is not explained why the more conservative business plans provided by Mordovcement to the verifier should be neglected and the calculation attached to the PDD should be accepted. Please take note that business plans provided by Mordovcement are official documents (with signatures and stamps).

		Explanation is given why investment analysis made in the PDD dedifferentiates with the analysis made in the business plan. Page 44. <u>Response 3 of 13/05/2010</u> According to the additionality tool, investment analysis is made to determine that the proposed project activity is not the most economically or financially attractive or economically or financially feasible, without the revenue from the sale of certified emission reductions. Business plan definition (http://ru.wikipedia.org/wiki/%D0%91%D0%B8%D0%B7%D0%BD%D0%B5%D1%81-%D0%BF%D0%BB%D0%B0%D0%BD): is the plan or the program to conduct business operation, company actions, that contain information about the company, its product, realization market, marketing, operations planning and their efficiency. Business plan serves for the three main purposes: - Give an answer to investor about decision to invest money to the particular project; - Serves as the information source for the parties realizing the project; - Give proper representation to the bank about the debtors business when decision about the crediting is made. As it can be seen from the definitions and the goals that each document pursues, investment analysis made in accordance with the Additionality tool is made to demonstrate that the project is additional in terms of Kyoto protocol, when business plan is	The CAR remains open. <u>Conclusion on Response 3</u> The response is not accepted. Please see explanations in Conclusion on Response 2 above. The CAR remains open. <u>Conclusion on Response 4</u> This CAR is closed based on the explanations and evidences provided to verifiers.

		made to attract investors and bank credits. Therefore, different assumptions on cash performance are made in those two different documents. Business plan uses optimistic values and assumptions, includes inflation, prices fluctuations and so on, when investment analysis as per additionality tool uses flat prices, excludes inflation and overall is more conservative on cash performance. Based on analysis made, it can be seen that when it gets to the choice of what document should be used if more than one cash performance document exist, analysis made in accordance with the additionality tool shall be used to assess if the project is additional to any that would occur otherwise; and business plan shall be used when decision on investing money or obtaining the credit is made. The answer to the CAR is that two documents do not create confusion, but instead helping to get on the right track. To assess if the project is additional in terms of Kyoto protocol, one should use investment analysis made according to the additionality tool. To decide if the project worth investing in to it, the one should follow the business plan. Therefore, in this particular case, business plan shell be neglected and additionality tool investment analysis used. As it can be seen from the analysis made, the project is additional to any that would otherwise occur. On top of that, business plan does not reflect ERUs sale and as such cannot be used to assess additionality of the project. <u>Response 4 of 09/06/2010</u> The following facts describe differences between business plan provided by the plant and investment analysis made in accordance with the additionality tool: Sentence has been added to the PDD:	

<table>
<tr>
<td></td>
<td></td>
<td>The originally developed business plan by the plant has undergone correction, therefore the corrected business plan was provided by the plant. Corresponding differences were submitted to the verifier on the confidentiality basis.

<table>
<tr><th>Indicator</th><th>Business plan provided by the plant (corrected)</th><th>Investment analysis made in the PDD</th></tr>
<tr><td>Project life for the semi-dry line</td><td>8 years</td><td>23 years (matched with CHHP and dry line)</td></tr>
<tr><td>Project life for the dry line</td><td>9 years</td><td>20 years</td></tr>
<tr><td>Prices were taken as of</td><td>01.01.08</td><td>9 July 2004</td></tr>
<tr><td>Prices</td><td>indexed</td><td>constant</td></tr>
</table>
</td>
<td></td>
</tr>
<tr>
<td colspan="4">Draft report clarifications and corrective action requests by determination team subsequent to the results of Response 2</td>
</tr>
<tr>
<td>CAR 51

Calculation of emission reductions was not updat-</td>
<td>E.6.1</td>
<td><u>Response 1 of 14/05/2010</u>

Correct emission factor 0.506 TCO2/MWh is used in calculations made in excel spreadsheet.</td>
<td><u>Conclusion on Response 1</u>

This CAR is closed based on the adequate correc-</td>
</tr>
</table>

ed according to the new value of emission factor for RES "Mid Volga" 0.506 (the wrong factor 0.534 is used in excel spreadsheet.			tions made to the excel spreadsheet with calculations.
CAR 52 Calculation of project emissions from electricity consumption for semi-dry line in 2010 is incorrect (please refer to the cell T 68 of [9].	E.6.1	Response 1 of 14/05/2010 Cell T68 is fixed.	Conclusion on Response 1 This CAR is closed based on the adequate corrections made to the excel spreadsheet with calculations.
Draft report clarifications and corrective action requests by determination team subsequent to the results of Response 3			
CAR 53 The new investment analysis which includes all three subprojects contains following mistakes: - the value of annual electricity consumption of dry line used in the investment analysis is incorrect (371 828 MWh); - the annual values of "Labor cost" and "Maintenance cost" are equal for all years. It is wrong because they can not be	B.2.1	Response 1 of 07/06/2010 Value for electricity consumption by the dry line has been corrected to 332626 MWh/year Labor costs and maintenance costs were matched with the appropriate commissioning dates.	Conclusion on Response 1 This CAR is closed based on the adequate corrections made to the excel spreadsheet with investment analysis.

equal for years 2007 and 2011(in 2007 there is no dry line and CHPP).			
CAR 54 Please justify in a transparent manner following parameters applied in the investment analysis: - "Labor cost"; - "Maintenance cost"; - "Total investment cost"; Justification should include the transparent calculation of that cost including indication and justification of all components.	B.2.1	Response 1 of 09/06/2010 Labor cost and maintenance cost were corrected to thousand Euros. Response 2 of 01/07/2010 Cost origination is explained the verifier.	Conclusion on Response 1 The justification is not provided. The CAR remains open. Conclusion on Response 2 This CAR is closed based on evidences provided to verifiers.
CL 03 Please provide the industrial procedure or: production sheet for clinker. This document(s) should contain information regarding how mush raw materials it is needed to produce 1 unit of clinker.	A.4.2.1	Response 1 of 09/06/2010 Supporting document SD_18_20100906_Raw materials balance is forwarded to the verifier.	Conclusion on Response 1 This CL is closed based on the clarification provided.
Draft report clarifications and corrective action requests by determination team subsequent to the results of Response 4			

CAR 55 According to the production sheet presented as answer on CL 03, 1.384 tonnes of chalk, 128 kg of clay and 28.1 kg of cinder are necessary for producing 1 tonne of clinker. According to the investment analysis presented to verifiers, 3.254 tonnes of chalk, 299 kg of clay and 64.2 kg of cinder are necessary for producing 1 tonne of clinker for the years 2007-2009 and 2.049 tonnes of chalk, 188 kg of clay and 40.4 kg of cinder are necessary for producing 1 tonne of clinker for the years 2011-2030.	B.2.1	<u>Response 1 of 17-06-2010</u> Raw materials specific consumptions applied: Chalk - 1,821 tonnes/tonne of clinker; Clay - 0,167 tonnes/tonne of clinker; Cinder - 0,0352 tonnes/tonne of clinker; Values for wet raw materials were used because raw materials come from quarry with moister content around 20%. Even if raw materials are stored in the warehouse, they absorb moister from the air and yet still reach around 20% moister content. Dried raw materials are mentioned in the technological map to indicate necessary quantities of the dried raw materials for further engineering calculations required by the project, such as crusher hourly productivity, conveyors mode of operation and so on.	<u>Conclusion on Response 1</u> The amounts of raw materials applied in the investment analysis were corrected according to the production sheet. This CAR is closed based on adequate corrections made to the investment analysis.
CAR 56 Please provide the industrial procedure or production sheet for cement (for all marks produced on the plant) and transparent calculations how much cement of different marks is planned to be produced on	B.2.1	<u>Response 1 of 22-06-2010</u> Supporting document SD_20_20100622_Technological scheme on cement production.pdf is forwarded to the verifier.	<u>Conclusion on Response 1</u> The investment analysis was cross-checked with technological scheme and found correct. This CAR is closed based on evidences provided to verifiers.

the plant. A production sheet should contain information regarding how mush raw materials it is needed to produce 1 unit of cement of exact mark.			
CAR 57 Please delete P7, P10, P13, P16, P17, P18 parameters from the Section D.1.1.1 since they are not used in monitoring. Please also correct "h" to "y" for P22 and P24 since these parameters are annual values but not hourly values.	D.1.3	<u>Response 1 of 17-06-2010</u> Parameters P7, P10, P13, P16, P17, and P18 were deleted from the Section D.1.1.1. "H" is replaced with "Y" for P22 and P24	<u>Conclusion on Response 1</u> This CAR is closed based on adequate corrections made to PDD.
CAR 58 Project emissions from CHPP are not included in recalculated excel spreadsheet.	E.1.1	<u>Response 1 of 17-06-2010</u> Excel file is fixed. <u>Response 2 of 17-06-2010</u> Cell T78 is fixed CHPP baseline emissions calculations are fixed	<u>Conclusion on Response 1</u> Recalculated excel spreadsheet contains following mistakes: 1) Calculation of emissions from grid electricity consumption is incorrect for the semi-dry line for the year 2010 (cell T78); 2) Calculation of baseline

			emissions for CHPP are incorrect (project emissions are wrongly included in baseline emissions). Conclusion on Response 2 This CAR is closed based on adequate corrections made to excel spreadsheet with emission reductions calculations.

Table 6 Resolution of Inadequacies

Inadequacies requested by determination team to be corrected	Page No in PDD	Summary of project owner response	Determination team conclusion
1. Please update the baseline description according to the new approach (i.e. cement production by the third parties and electricity consumption from the GRID by old wet lines).	Section A.2 (p.2); Section B.1 (p.29); Annex 2	Response 1 of 12-06-2010 Corrected to : • In the project absence (not constructing semi-dry, dry lines and CHPP) cement would have been produced by the other, third party cement manufacturers, located within the radius of 1000 km from the plant location or at the existing wet kilns located at Mordovcement plant and electricity is consumed by old wet lines from the grid.	Conclusion on Response 1 The inadequacy was corrected accordingly.
2. Please delete blank pages.	p.5 ;p.69	Response 1 of 12-06-2010 Blank pages were deleted	Conclusion on Response 1 The inadequacy was corrected accordingly.
3. Please add description for EF_{fuel_i} in formulae 5, 11 and 13. Please indicate the value if the parameter is not monitored.	57, 59, 60	Response 1 of 12-06-2010 Description is given as:	Conclusion on Response 1 The inadequacy was corrected accordingly.

Inadequacies requested by determination team to be corrected	Page No in PDD	Summary of project owner response	Determination team conclusion
		EF_{fuel_i} Emission factor of fuel of type i (natural gas) (tCO2/GJ), see Table B 1.1 for details;	
4. Please correct MW to MWh.	57, 68	Response 1 of 12-06-2010 Corrected to MWh.	Conclusion on Response 1 The inadequacy was corrected accordingly.
5. Please add descriptions for parameters $EF_{el,y}$ and $EF_{dec,y}$ in formula 21.	66	Response 1 of 13-06-2010 Explanation given: $EF_{el,y}^{GRID}$ Standardized CO_2 emission factor of the relevant regional electricity grid in year *y* (tCO_2/MWh), fixed ex-ante (see Annex 2);	Conclusion on Response 1 The inadequacy was corrected accordingly.

Inadequacies requested by determination team to be corrected	Page No in PDD	Summary of project owner response	Determination team conclusion
		$EF_{calcin,y}$ Default emission factor (tCO_2/t clinker)*	
6. Please add the monitored parameters $CEM_{OM,y}$, $EL(wet)^{i}_{level1}$ and $EL(wet)^{i}_{level2}$ in Section D.1.1.3.		Response 1 of 13-06-2010 Parameters were added to D1.1.3	Conclusion on Response 1 The inadequacy was corrected accordingly.
7. Please delete parameters B7 – B10 from the Section D.1.1,3 since they are not used in the monitoring plan,		Response 1 of 13-06-2010 Parameters B7 – B10 were deleted from D.1.1.3	
8. Please update tables D.2 and D.3 according to the parameters added/deleted in Sections D.1.1.1 and D.1.1.3		Response 1 of 13-06-2010 Tables D.2 and D.3 were corrected according to the parameters added/deleted in Sections D.1.1.1 and D.1.1.3 Response 2 of 19-06-2010	Conclusion on Response 1 Sections D.2 and D.3 were not corrected accordingly. Conclusion on Response 2 Sections D.2 and D.3 were not corrected accordingly. Please delete P13 parameter from Section D.2. Please add B.1,B.2 and B.3 parameters to

* Cement Sustainability Initiative (CSI) of the World Business Council for Sustainable Development (WBCSD) 2005, CO_2 Accounting and Reporting Standard for the Cement Industry, www.wbcsd.org, http://www.wbcsd.org/DocRoot/hnvVGp31rApruOH35k2O/ghg-account.pdf , page 102, parameter CO2 emission factor for calcination from a tonne of clinker

Inadequacies requested by determination team to be corrected	Page No in PDD	Summary of project owner response	Determination team conclusion
		Tables D.2 and D.3 were double checked against Sections D.1.1.1 and D.1.1.3 and necessary corrections made to D.2. and D.3. Response 3 of 20-06-2010 Parameter P13 is deleted from Section D.2. Parameters B.1,B.2 B.3 added to Section D.3	Section D.3 Conclusion on Response 3 The inadequacy was corrected accordingly.
9. Please derive two parameters B.14 in Section D.1.1.3.		Response 1 of 13-06-2010 Parameters were derived.	Conclusion on Response 1 The inadequacy was corrected accordingly.
10. Tables E.5.3 and E.6.3 are incorrect		Response 1 of 13-06-2010 Tables E.5.3 and E.6.3 were corrected. Response 2 of 19-06-2010 Tables E.5.3 is corrected.	Conclusion on Response 1 The Table E.5.3 was not corrected accordingly. Conclusion on Response 2 The inadequacy was corrected accordingly.
11. Please update Annex 2 accordingly (now it contains inadequate formulae and		Response 1 of 13-06-2010	Conclusion on Response 1 Annex 2 was not corrected ac-

Inadequacies requested by determination team to be corrected	Page No in PDD	Summary of project owner response	Determination team conclusion
descriptions from previous versions of PDD.		Annex 2 is corrected to reflect recent changes. <u>Response 2 of 19-06-2010</u> Annex 2 has been corrected. In the project absence (not constructing semi-dry, dry lines and CHPP) cement would have been produced by the other, third party cement manufacturers, located within the radius of 1000 km from the plant location or at the existing wet kilns located at Mordovcement plant and electricity is consumed by old wet lines from the grid; Part of electricity displaced by CHPP in the relevant grid (RES "Mid Volga") due to consumption of this part of electricity by the wet lines in year y (MWh); Grid emission factors and appropriate cement plants were updated in the Annex 2.	cordingly. <u>Conclusion on Response 2</u> Annex 2 was not corrected accordingly. Sterlotamakskoye AO "Soda" was included in the URES "Mid Volga" whereas it pertains to the URES "Ural" (Sterlitamak is located in Bashkortostan republic which pertains to the URES "Ural". Please correct accordingly and update the calculations. <u>Conclusion on Response 3</u> The inadequacy was corrected accordingly.

Inadequacies requested by determination team to be corrected	Page No in PDD	Summary of project owner response	Determination team conclusion
		Response 3 of 20-06-2010 Sterlotamakskoye AO "Soda" is included in the URES "Ural"URES and calculations were updated.	
12. The statement that "JI projects with a final positive determination under the JI Track 2 procedure and projects approved under the JI Track 1 procedure* and listed accordingly on the UNFCCC JI website are excluded from the sample units for the OM/BM/CM emission factor calculation because it was proven that those projects are not representing the baseline, and therefore cannot be used for the baseline emissions monitoring" is incorrect and cannot be approved by verifiers. Please delete.	35,103	Response 1 of 19-06-2010 The statement is removed.	Conclusion on Response 2 The inadequacy was corrected accordingly.

* Under the JI Track 1 procedure, it is the sole responsibility of the host Party to verify emission reductions (or enhancements of removals) as being additional to any that would otherwise occur.

Appendix B: Determination Team's CV's

Vera Skitina, PhD (chemicals)

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

She has over 15 years of experience in powder metallurgy, aluminium metallurgy, plastic metal working, physical-chemistry processes, gas production at power plant, environmental science. She worked in Irkutsk Aluminium Plant, SUAL powder metallurgy plant, Nadvoitzky aluminium plant, Central Scientific Institute of Metals. She is a Lead auditor of Bureau Veritas Certification for Quality Management Systems (IRCA registered), Environmental Management System (IRCA registered), Occupational Health and Safety Management System (IRCA registered). She performed over 200 audits since 2004. Also she is a Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and a Lead Tutor of the IRCA registered ISO 9001 Lead Auditor Training Course. She is an Assuror of Social Reports. She has undergone intensive training on Clean Development Mechanism /Joint Implementation and was/is involved in the determination/verification of over 20 JI projects.

Grigory Berdin. (accounting, analysis, inspection and audit)

Lead Verifier

Bureau Veritas Certification Rus – Lead Verifier.

He has over 4 years of experience in implementing of JI & CDM projects. He was developer of more than 10 PDDs in different sectors. He was responsible for supervision of technical implementation for more than 30 JI projects on regional natural gas leakage reduction at distribution pipelines and for 5 JI projects of other types.

He has undergone intensive training on Clean Development Mechanism /Joint Implementation and he was/is involved in the determination/verification of 15 JI projects.

Mr. Leonid Yaskin, PhD (thermal engineering)

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