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Date: 19/03/2012

DETERMINATION REPORT

OJSC "SUKHOLOGSKCEMENT"

DETERMINATION OF THE
"NEW DRY CEMENT LINE INSTALLATION AT OJSC "SUKHOLOZHSKCEMENT", SVERDLOVSK AREA, RUSSIA"

REPORT NO. RUSSIA-DET/0035/2009
REVISION 02

BUREAU VERITAS CERTIFICATION

Determination Report on JI project
"New dry cement line installation at OJSC "Sukholozhskcement", Sverdlovsk area, Russia"

Date of first issue:	Organizational unit:
01/12/2009	Bureau Veritas Certification Holding SAS
Client:	Client ref.:
OJSC "Sukhologskcement"	Ms A. Bykova

Summary:

Bureau Veritas Certification was commissioned by OJSC "Sukholozhskcement" to make the determination of the project "New dry cement line installation at OJSC "Sukholozhskcement", Sverdlovsk area, Russia" on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI guidelines and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

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

The first output of the determination process is a list of 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 3.1 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/0035-2/2009	JI

Project title:
"New dry cement line installation at OJSC "Sukholozhskcement", Sverdlovsk area, Russia"

Work carried out by:

Vera Skitina - Team Leader, Lead Verifier

Leonid Yaskin - Team Member, Lead Verifier

Work verified by:
Ivan Sokolov - Internal Technical Reviewer

Date of this revision:	Rev. No.:	Number of pages:
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Indexing terms:

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

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Abbreviations

AIE	Accredited Independent Entity
BV	Bureau Veritas
CAR	Corrective Action Request
CCGS	Climate Change Global Services (LLC)
CL	Clarification Request
CO_2	Carbon Dioxide
DDR	Draft Determination Report
DR	Document Review
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
ERU	Emission Reduction Unit
GHG	Green House Gas(es)
I	Interview
IE	Independent Entity
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MoV	Means of Verification
NGO	Non Governmental Organization
NPV	Net Present Value
PDD	Project Design Document
PP	Project Participant
RES	Regional Electricity System
tCO2e	Tonnes CO2 equivalent
UNFCCC	United Nations Framework Convention for Climate Change

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1 Introduction

OJSC "Sukholozhskcement" has commissioned Bureau Veritas Certification to determine its JI project "New dry cement line installation at OJSC "Sukholozhskcement", Sverdlovsk area, Russia" (hereafter called "the project") located in the city of Sukhoy-Log, Sverdlovsk oblast, Russian Federation. Global Carbon BV (hereafter called GC) being PDD developer coordinated the project and the determination process on behalf of the project participant OJSC "Sukholozhskcement" (hereafter called SLC).

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 SLC and GC. However, stated requests for corrective actions may have provided input for improvement of the project design.

1.3 GHG Project Description (quoted by PDD version 2.0 Section A.2)

Description of the enterprise

OJSC Sukholozhskcement (Sukholozhskcement further in the text) was established in 1992 as a legal successor of Novosukholozhsky cement plant started in 1972. It has been

fully controlled by the German cement producer Dyckerhoff AG since 1994. It is the eighth biggest cement producer in Russia and the largest cement plant in the Urals with annual capacity of 2.6 million tonnes of cement.

Project purpose
The goal of this proposed Joint Implementation (JI) project is to apply more energy efficient dry process of cement production and thus significantly reduce emissions associated with clinker production by construction a new dry cement production line with annual capacity of 1.3 million tonnes of cement.

Current status
Sukholozhskcement has four wet kilns. Average specific energy consumption from fossil fuel combustion is about 5,647 MJ per tonne of clinker. Present production of cement is about 2.3 million tonnes of cement per year. These kilns were constructed in 1972-1975. Proper maintenance and full repair combined with proper financing raise the reasonable expectations, that existing wet kilns will operate at least 2020. Operating of this type of equipment for such a long period of time is a common practice in Russia.

Natural gas is being used as a fuel at Sukholozhskcement. It is a typical fuel at Russian cement plants, except cement plants in Siberia, as it is cheaper and cleaner than heavy oil fuel and coal. Coal may become an alternative fuel if gas prices will make switch from natural gas to heavy oil fuel or coal economically reasonable.
Wet cement production technology is the conventional technology of cement production in Russia, while dry production technology has a very limited number of applications in the country. The dry method is used at 17 % of kilns in Russia. Only three percent of dry kilns are located in Urals region Therefore wet process is the predominant technology in Russia. All kilns were constructed before 1992 and some of them were renovated during 1970-2000. Only three new plants have been constructed in Russia since 1992, they are placed:

- in the Central part of Russia: one dry kiln on gas at OJSC Mordovcement (Komsomolskiy, Mordoviya republic, 2008);
- in Urals region:
  - two dry kilns on gas at OJSC Soda (Sterlitomak, Bashkortostan republic, 2007);
  - one wet kiln on gas at OJSC Magnitogorskiy cementno-ogneuporniy plant (Magnitogorsk, Chelyabinsk area, 2007).

Project scenario
A new dry cement production line is to be constructed in close proximity of the existing manufacturing plant (around two km). The new production line will be next to the existing production, and will have its own infrastructure, railway ramps, engineering facilities. Total cement production (after the project) will consist of existing wet lines and a new dry line. Annual cement production of the new line is about 1.3 million tonnes. According to the project, annual existing wet lines production will be reduced to 2.6-1.0 million tonnes of cement after the new dry line start up. Reducing volume will depend on market cement demand. Planned total annual project cement production is 2.3 million tonnes of cement (1

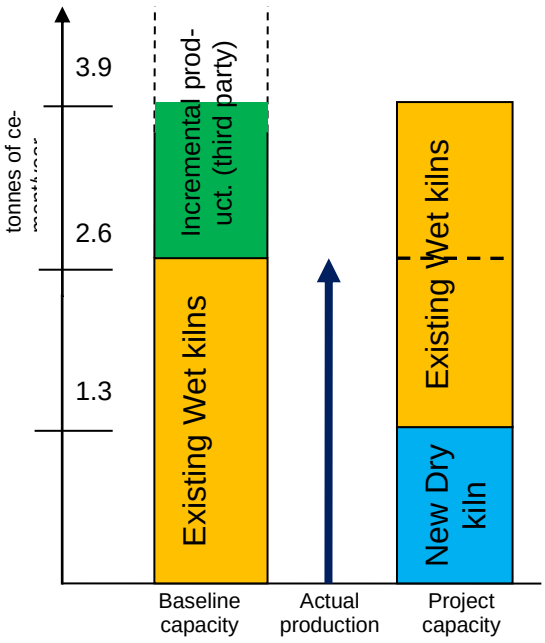
million tonnes to be manufactured by existing wet lines and 1.3 million tonnes to be manufactured by the new dry cement line).

Baseline scenario

In the baseline scenario it is assumed that all cement produced in line with the project scenario would otherwise have been produced on the existing wet kiln. However there is a limitation on the production capacity of the existing wet kilns and, depending on the actual monitored production in the project scenario, third party cement producer would have produced the remaining part. Baseline and project capacity are presented in the Figure A.2.1. Plant technical capacity (wet lines) is about 2.6 million tonnes of cement per year (2.27 million tonnes of clinker). In case of the project absence and increased market cement demand, existing wet production can reach its technical capacity: 2.6 million tonnes of cement or 2.27 million tonnes of clinker per year. Existing production is to be reduced (after new cement line construction) with possibility of recovery to 2.6 million tonnes year if required.

Planned total annual project cement production is 2.3 million tonnes of cement (1 million tonnes to be manufactured by existing wet lines and 1.3 million tonnes to be manufactured by the new dry cement line).

Figure A.2.1: Baseline and project capacity



In this case the project will consist of existing (operating with reduced production) and replacement (new) production.

In case of increased market cement demand, annual production of existing wet lines will exceed 1 million tonnes of cement. Potential total annual project production is 3.9 million tonnes. Potential total annual project cement production is a sum of existing (2.6 million tonnes a year) and new (1.3 million tonnes a year) technical production capacities. If total project cement production is higher than 2.6 million tonnes per year, the project will have incremental production. Thus CO_2 emissions in the baseline scenario consist of two parts: the existing capacity and the incremental capacity (the incremental capacity assumed zero if total annual project production volume is less than 2.6 tonnes of cement). Emissions associated with incremental capacity are calculated based on the other cement producers emissions. If the project is not implemented, market demand will be covered by incremental capacity of the other cement manufacturers. Also market demand will be satisfied by increasing cement production by the other cement manufacturers existing capaci-

ties by increasing the number of run-days, decreasing duration of stops or new capacities installation.

Project background and description
The Board of Directors of Sukholozhskcement with Dyckerhoff AG decided to conduct a feasibility study on the new dry cement production line at Sukholozhskcement in February 2006. Sukholozhskcement signed a contract with OJSC "Sibniiproektcement" for development of the detailed project design in September 2006. Sukholozhskcement started building of a new dry line of cement production in Sukhoy-Log (preparation of site) on 23 January 2007. Glavgosexpertiza of Russian Federation approved the design documents in January 2008.

The project consists of two stages. The first stage includes construction of crusher plant, pre-blending storage, drying and grinding equipment, kiln and clinker storage. This stage has been completed. The second stage covers installation of cement mills, additives storage, cement silages, transporting equipment, carriages defrost equipment. Second stage is planned to be finished in August 2010. Project implementation schedule is presented in PDD Section A.4.2.

1.4 Determination team
The determination team consists of the following personnel:

Vera Skitina
Bureau Veritas Certification – Team Leader, Lead Verifier

Leonid Yaskin
Bureau Veritas Certification – Team Member, Lead Verifier

Ivan Sokolov
Bureau Veritas Certification – Internal Technical Reviewer

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

The determination consisted of the following three phases:

i) desk review of the project design document and the baseline and monitoring plan;
ii) on-site assessment on 12/11/2009 and on-line interactions with GC throughout the determination process;
iii) resolution of outstanding issues (ref. to Appendix A Table 5 with CAR's) and the issuance of the final determination report and opinion.

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

The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from validating the identified criteria. The determination protocol serves the following purposes:

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

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

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

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

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

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

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

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

Figure 1 Determination protocol tables

2.1 Review of Documents

Bureau Veritas Certification (BVC) signed the contract with SLC on 16/10/2009. The Project Design Document (PDD) Version 1.8 dated 13/10/2009 was received on 23/10/2009 together with supporting documentation including spreadsheets with investment analysis,

calculation of GHG emission, and calculation of operation margin emission factor of cement plants.

The completeness check made by BVC revealed some deviations of the PDD from the JISC format. Therefore, GC was requested to remake the PDD in conformity to JI PPD Form. On 26/10/2009, BVC received the finally remade PDD Version 1.9 dated 26/10/2009. The PDD was published on UNFCCC JI site on 27/10/2009 available for public comments from 28 October 2009 to 26 November 2009.

The PDD and supporting documentation as well as additional background documents related to the project design, baseline, and monitoring plan, such as Kyoto Protocol, host Country laws 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 first deliverable of the document review was the Draft Determination Report (DDR) Version 01 dated 03/11//2009 with 19 CAR's and 1 CL.

Following the site visit held on 12/11/2009, BVC issued DDR Version 02 dated 13/11/2009, which contained 3 additional CAR's. On 19/11/2009, GC submitted the amended version of PDD Version 2.0 dated 19/11/2009 together with summaries of responses to the BVC requests. The GC feedback was principally accepted by BVC. An update of PDD version 2.0 was issued on 19/11/2009.

Following that, GC issued the PDD Version 2.1 dated 30/11/09, which contained minor refinements. BVC reviewed this version and found it acceptable and not changing the earlier acceptance by BVC of GC responses.

The determination findings presented in this Determination Report version 1 relate to the project as described in the published PDD version 1.9 dated 26/10/2009 and the final PDD version 2.1 dated 30/11/2009.

2.2 Follow-up Interviews

Bureau Veritas Certification verifier Vera Skitina conducted a visit to the project site on 12/11/2009. On-site interviews with the project participant SLC and the PDD developer GC were conducted to confirm the selected information and to clarify some issues identified in the document review. The interview topics are listed in Table 6. The interviewees are listed in Section 6 References. Following the submission of the DDR Version 01, on-line interactions between BVC and GC took place to resolve pending issues.

Table 6 Interview topics

Date / Interviewed organization	Interview topics
12/11/2009 SLC GC	➢ Project history ➢ Project approach ➢ Baseline scenario ➢ Project boundary ➢ Implementation schedule ➢ Technical documentation ➢ Investment analysis ➢ Monitoring plan and procedures ➢ QC & QA procedures ➢ Project management organisation ➢ Calculation of emission reduction ➢ Permits and licenses ➢ Environmental Impact Assessment

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 02 summarising Bureau Veritas Certification's findings of the desk document review and project site visit was submitted to GC on 13/11/2009. The findings identified have been 22 Corrective Action Requests and one Clarification Request.

The amendments made by GC to the PDD Version 1.9 and finally reported in PDD Version 2.1 dated 30/11/2009 satisfactorily addressed the verifiers' requests. As a result, the present Determination Report Version 1 was issued on 01/12/2009 and sent, together with the final PDD Version 2.1, to BVC Internal Technical Reviewer (ITR) for review.

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

3 Determination Findings

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

i) the findings from the desk review of the original project design document and the findings from interviews during the site visit are summarized. A more detailed record of these findings can be found in the Appendix A Determination Protocol.
ii) where Bureau Veritas Certification had identified issues that represented a risk to the fulfillment of the determination protocol criteria or the project objectives, a Corrective Action Request has been issued. The Corrective Action Requests are stated in the in Appendix A Determination Protocol.
iii) where 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 to apply a more energy efficient dry process of cement production and thus to significantly reduce emissions associated with clinker production by construction of a new dry cement production line at the Sukholozhskcement plant equipped with wet production lines.

The dry cement production process is the state of the art cement production technology, which is not spread in the Russian Federation. In Russia, the majority of kilns at cement plants were constructed before 1988 (86% of cement production) using the wet method which is the predominant technology in Russia still. Only three percent of dry kilns are located in Ural Region.

Under the project scenario, the additional dry cement production capacity of 1.3 mln t of cement per year is constructed alongside of the existing cement plant with the use of its infrastructure, railway ramps, engineering facilities. The existing wet lines production will be reduced to 1 mln t of cement after the new dry line starts up (expectedly in August 2010). The total annual project cement production will be 2.3 mln t.
Under the baseline scenario, it is assumed that all cement produced in line with the project scenario with the total capacity of 2.3 mln t would otherwise have been produced by the existing wet kilns.

The project will result in the decrease of the specific energy consumption and hence in GHG emission reduction.

The project is expected to provide the reduction of GHG emissions by 496,205 tCO2e over the crediting period 2010-2012.

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 02, CAR 03).

The project received the approval issued by the Ministry for Economic Development of the Russian Federation by Order No 112 dated 12 March 2012. Hence CAR 01 is closed as regards the determination of the PDD.

3.2 Baseline and Additionality

A JI specific approach regarding baseline setting has been developed in accordance with JISC Guidance on criteria for baseline setting and monitoring (Version 02) [3]. It applies two steps: 1- Identification and listing of plausible alternative baseline scenarios and 2 - Identification of the most plausible alternative scenario. Under step 1, six alternative baseline scenarios are identified, all in compliance with mandatory applicable legal and regulatory requirements. Under step 2, an assessment of feasibility and plausibility of each of 6 alternatives is made. As a result, only two alternatives are identified as realistic and credible: operation of the existing wet lines and the project activity without JI registration. The former is identified as the most plausible scenario since the latter is proven by the benchmark analysis to be not economically/financially feasible.

To prove the project additionality the CDM Methodological "Tool for the demonstration and assessment of additionality" (Version 05.2) [4] is applied. Its step 1 -Identification of alternatives to the project and step 2 – Benchmark analysis, in fact, repeat the steps used to set the baseline. It is shown by step 2 that the project IRR is less than the established threshold, i.e. the project activity is not economically/financially attractive (without ERU sale). This conclusion is confirmed by a complementary sensitivity analysis. Under step 3, a common practice analysis is carried out to have proven that similar activities cannot be widely observed and the proposed project activity is not a common practice. Thus, the additionality analysis demonstrates that project emission reductions are additional to any that would otherwise occur.

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 04, CAR 05, CAR 06, CAR 07, CAR 08, CAR 09, CAR 10, CAR 11, CAR 12).

The identified area of concern as to Project Duration / Crediting Period, PP's response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR 13).

3.3 Monitoring Plan

The monitoring plan is established based on a JI specific approach, in accordance with JISC's Guidance on criteria for baseline setting and monitoring, Part B (Version 02) [3].

All categories of data to be collected in order to monitor project and baseline emissions (Option 1) as well as formulae for processing the collected data and calculation of GHG emissions are described in required details.

The project and baseline emissions subject to monitoring relate to the calcination process, the fuel combustion, and the electricity consumption at raw meal preparation and grinding of clinker as well as at the kilns and boilers. Baseline emissions would be generated in the existing carbon-intensive wet production lines. Project emissions will be generated in both the existing lines and the new low-carbon dry production lines.

A three level operational and management structure that the project participant will implement in order to monitor emission reduction is clearly described in the PDD. Monitoring related quality control and quality assurance procedures are well detailed.

The identified areas of concern as to Monitoring Plan, PP's response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR 14, CAR 15, CAR 16, CAR 17, CAR 18, CAR 19, CL 01).

3.4 Calculation of GHG Emissions

The formulae used for calculation of project and baseline emissions are presented in PDD Section D.

The initial data for calculations and the calculations per se are presented on the spreadsheet made available to Bureau Veritas Certification. The results are summarised in Section E. The verifiers checked the calculations and found them accurate.

The calculated amount of project emission reduction over the crediting period 2010 - 2012 is 496,205 tCO2e. The annual average emission reduction is 165,402 tCO2e.

The identified areas of concern as to Calculation of GHG Emissions, PP's response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR 20, CAR 21, CAR 22).

3.5 Environmental Impacts

The project has all permissions, limits and license required by the Russian environmental legislation for the stage of technical design and construction. The evidence is presented in PDD Section F and by the list of documents obtained by the verifier at the site visit (refer to Section 6 References).

No areas of concern were identified as to Environmental Impacts.

3.6 Comments by Local Stakeholders

No comments from local stakeholders were received.

No areas of concern were identified as to Comments by 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 1.9 on UNFCCC JI site on 27/10.2009 and invited comments within 26/11/2009 by Parties, stakeholders and UNFCCC accredited observers. No comments have been received.

5 DETERMINATION OPINION

Bureau Veritas Certification has been engaged by OJSC "Sukholozhskcement" to perform a determination of the JI project "New dry cement line installation at OJSC "Sukholozhskcement", Sverdlovsk area, Russia". The determination was performed on the basis of UNFCCC criteria for JI projects, in particular the verification procedures under the JI Supervisory Committee, as well as host country criteria and the criteria given to provide for consistent project operations, monitoring and reporting.

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

The determination consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up on-line interviews on the project site 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 analysis and common practice analysis demonstrate that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that it is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The determination revealed two pending issues related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party (Russian Federation). If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Version 2.1 dated 30/11/2009 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

Bureau Veritas Certification Holding SAS
01 December 2009

Vera Skitina - Team Member, Lead Verifier

Leonid Yaskin - Team Leader , Lead Verifier

6 REFERENCES

Reviewed document or type of information available before the site visit

1	"New dry cement line installation at OJSC "Sukholozhskcement", Sverdlovsk area, Russia". PDD Version 1.9 dated 26.10.2009.
2	Guidelines for Users of the Joint Implementation Project Design Document Form/Version 04, JISC.
3	Guidance on criteria for baseline setting and monitoring/Version 02, JISC.
4	Tool for demonstration and assessment of additionality, Version 05.2, Methodological Tool, CDM Executive board.
5	Tool to calculate baseline, project and/or leakage emissions from electricity consumption, Version01, CDM Executive board.
6	RF Urban Development Code N 190-ФЗ (Federal Law).
7	"Regulation of realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change". Approved by the RF Government Decree # 843 of 28/10/2009 "About measures on realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change".

Reviewed document or type of information obtained at site visit

8	Project Design "OAO "Sukholozhskcement". Production extension. Construction of the fifth technological line", "109 SL5-PZ, vol.2, p.188, 2006, OJSC "SibNIIProjectCement"
9	Positive Conclusion on the Project Design "OAO "Sukholozhskcement". Production extension. Construction of the fifth technological line. Stage I", issued by the Sate Federal Agency Glavgosexpertiza Of Russia, Ural Federal District, #4-07-252, dated 30.01.08.
10	Positive Conclusion on the Project Design "OAO "Sukholozhskcement". Production extension. Construction of the fifth technological line. Stage II", issued by the Sate Federal Agency Glavgosexpertiza Of Russia, Ural Federal District, #645-09/ГГЭ-6335/03, dated 21.09.09.
11	Agreement on allotment of land to Project Design "OAO "Sukholozhskcement". Production extension. Construction of the fifth technological line", issued by the local State Authority of Borovichy, Sverdlovsk region, dated 24.04.06, #265-0.
12	Agreement on the Project Design "OAO "Sukholozhskcement". Production extension. Construction of the fifth technological line", issued by the local State Authority of the town of Sukhoy Log, dated 21.04.06, #443.
13	Construction Authorization granted to "OJSC "Sukholozhskcement" for "Production extension. Construction of the fifth technological line", issued by the local State Authority of the town of Sukhoy Log, dated 17.03.09, #04-08H.
14	Technical specifications to gas net connection of the developed gas transmission pipeline of CJSC "Sukholozhskcement" to the gas distribution network of the town of Sukhoy Log, dated 08.10.07, #PS-327.
15	Protocol of public hearings of the Project Design "OAO "Sukholozhskcement". Production extension. Construction of the fifth technological line", dated 28.11.06.

16	List of Registered Dangerous Objects of "OJSC "Sukholozhskcement"
17	Normative of maximum permissible emission in OJSC "Sukholozhskcement", 2008.
18	State ecological annual statistic forms: 2-tp (air) for 2008 of OJSC "Sukholozhskcement"
19	License for the right to use the subsoil granted to OJSC "Sukholozhskcement" by State Territorial Direction of natural resources for Moscow region. Expiry date is 2010.
20	Permits for Air Emissions granted to OJSC "Sukholozhskcement t" by Territorial Direction of Rostekhnadzor.
21	Permits for dirty discharge # 73, granted to OJSC "Sukholozhskcement t" by Territorial Direction of Rostekhnadzor, dated 29.01.09.
22	Permits for dirty discharge into body of water # 995, granted to OJSC "Sukholozhskcement t" by Territorial Direction of Rostekhnadzor, dated 29.01.09.
23	Agreement of the point for dirty discharge from the fifth technological line of OJSC "Sukholozhskcement", issued be the Territory State Service of Sverdlovsk region, dated 20.11.06.
24	License for the right to refuse collection, handling, transportation, and territorial distribution of dangerous industrial waste granted to OJSC "Sukholozhskcement" by Territorial Direction of Rostekhnadzor dated 19/07/2009.
25	Normative of maximum permissible industrial dangerous waste to be produced at OJSC "Sukholozhskcement", 19/07/2009 granted to OJSC "Sukholozhskcement" by Territorial Direction of Rostekhnadzor dated 19/07/2009 (Annex to the License for the right to refuse collection, handling, transportation, and territorial distribution of dangerous industrial dated 19/07/2009).
26	License for the water usage granted to OJSC "Sukholozhskcement" by State Territorial Direction of natural resources for Sverdlovsk region. Expiry date is 02.06.2011.
27	Production Data for calculation of raw mix at OJSC "Sukholozhskcement" dated August, 2009.
28	Data of finished goods shipment of OJSC "Sukholozhskcement" (cement), October, 2009
29	Report on new process line construction. OJSC "Sukholozhskcement", dated 09.09.
30	Unit Operation Report at OJSC "Sukholozhskcement" dated 09.09.
31	Data "Shipping& revenues", actual October 2009.
32	Investment Programs. PJSC-FC 2009/BD 2010/ES 2011.
33	Humidity data of raw materials, used at OJSC "Sukholozhskcement" for 01.01.08 – 01.12.08.
34	Daily Production Data of the Milling Shop, 30.08.09.
35	Production Data from 01.01.09 till Oct.09 at OJSC "Sukholozhskcement"
36	Raw Materials humidity data at OJSC "Sukholozhskcement" for the year 2008.
37	Quality certificate for Portland cement to conformity of the State Standard of RF GOST 31108-2003, produced at OJSC "Sukholozhskcement", issued by the State

	Gossstandard of RF, #РОСС RU.СЛ02.Н00404, expiry date 2010.
38	State statistic environmental form 2-tp (air) of OJSC "Sukholozhskcement",in 2008.
39	Annex "Environmental impact evaluation" (OBOC) to the Modernization Project documentation OJSC "Sukholozhskcement" "Cement Production extension. The fifth Technological production line construction. Stage I".

Persons interviewed:

1	Hans Urgen Behtler, Production Director OJSC " Sukholozhskcement"
2	R. Ivanova, Specialist.
3	A.Shashkov, Director OJSC " Sukholozhskcement"
4	A.Renker, Director of the directorate of constructive of the fifth Technological line
5	A.Bykova, Chief of Environmental Laboratory
6	S.Krivonogova, Chief of Controlling Department of OJSC " Sukholozhskcement"
7	R.Yumangulov, Technologist Engineer. Directorate of constructive of the fifth Technological line
8	W.Tayhler, Project manager of constructive of the fifth Technological line
9	M. Kokovina, energy supply Engineer OJSC " Sukholozhskcement"
10	E.Anikimova, Engineer - checker of energy resources
11	A.Mironov, Engineer of metrology
12	M.Butyakin, Consultant, Global Carbon Rus LLC.

APPENDIX A: COMPANY JI PROJECT DETERMINATION PROTOCOL

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

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
1. The project shall have the approval of the Parties involved.	Kyoto Protocol Article 6.1 (a)	**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 Party(ies),	Table 2, Section A.5.

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		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
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

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
			United Nation Framework Convention on Climate Change". Approved by the RF Government Decree # 843 of 28/10/2009 "About measures on realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change".
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 dated 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 4th National Communication dated 12/10/06.
8. The host Party shall have in place a national registry in ac-	Marrakech Ac-	OK	Russian Federation

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
cordance with Article 7, paragraph 4.	cords, JI Modalities, §21(d)/24		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 Rus LLC has submitted a PDD to Bureau Veritas Certification, which contains all information needed for determination.
10. The project design document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments.	Marrakech Accords, JI Modalities, §32	OK	PDD version 1.9 was made publicly available for comments on UNFCC JI website from 28 October 2009 till 26 November 2009.
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

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
12. The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B.2
13. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B.2
14. The baseline methodology shall exclude to earn ERUs for decreases in activity levels outside the project activity or due to force majeure.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B.2
15. The project shall have an appropriate monitoring plan.	Marrakech Accords, JI Modalities, §33(c)	OK	Table 2, Section D
16. A project participant may be: (a) A Party involved in the JI project; or (b) A legal entity authorized by a Party involved to participate in the JI project.	JISC "Modalities of communication of Project Participants with the JISC" Version 01, Clause A.3	The Russian project participant will be authorized 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	DR	The title of the project is: "New dry cement line installation at OJSC "Sukholozhskcement", Sverdlovsk area, Russia". The indicated Sectoral Scope is (4) Manufacturing industries.		OK
A.1.2. Is the current version number of the document presented?	1,2	DR	The current version number of PDD is 2.01. CARs and CLs are issued based on a review of PDD Version 1.9 dated 26.10.2009, Version 2.01 dated 30.11.09, and findings of the project site visit held on 21/10/2009. The PDD Version 1.9 was published on UNFCCC JI website and is reviewed as a part of determination.		OK
A.1.3. Is the date when the document was completed presented?	1,2	DR	PDD Version 1.9 dated 26.10.2009. PDD Version 2.01 dated 30.11.2009		OK

A.2. Description of the project					
A.2.1. Is the purpose of the project included?	1,2	DR I	The purpose of the project is to apply a more energy efficient dry process of cement production and thus to significantly reduce emissions associated with clinker production by construction of a new dry cement production line at the Sukholozhskcement plant. Under the project scenario, the additional dry cement production capacity is constructed alongside of the existing cement plant with the use of its infrastructure, railway ramps, engineering facilities. Total technical capacity of the new dry cement production line is 1.3 mln t of cement per year. The existing wet lines production will be reduced to 1 mln t of cement after the new dry line starts up. Then, the total annual project cement production will be 2.3 mln t. Under the baseline scenario, it is assumed that all cement produced in line with the project scenario (2,3 mln t) would otherwise have been produced by the existing four wet kilns. At the maximum technical capacity of the exiting wet kilns of 2.6 mln t there is a possibility for the project to reach the total production capacity of 3.9 mln t (refer to PDD Figure A.2.1). If the total project cement production is higher	CAR 02 CAR 03	OK OK

			than 2.6 mln t then, in the baseline scenario, a deficit capacity forms which would have been covered by third party cement producers (incremental capacity). This situation is elaborated in PDD in sufficient detail. However, the emission reductions are estimated for the project scenario with maximum capacity 2.3 mln t to be achieved in 2012 and thus with the incremental capacity of third party cement plants equal zero. Project will result mainly in fuel consumption reduction and therefore in CO2 emission reduction. The history of the project and the situation existing prior to the starting day of the project is summarized as required in [2]. **CAR 02.** Section A.2 in PDD exceeds the limit of 2 pages [2]. **CAR 03.** There is no consistency in the description of the project scenario as regards the cement production capacity between Subsection "Project Scenario", Subsection "Baseline scenario" and Fig. A.2.1.		

A.2.2. Is it explained how the proposed project reduces greenhouse gas emissions?	1,2	DR	There are three main sources of GHG emissions at the plant: - chemical decomposition of limestone into calcium oxide and carbon dioxide; - fossil fuel combustion; - electricity consumption by the plant's motor driver's and other electrical equipment. GHG emissions are significantly reduced due to the reduction of the fuel consumption at the new dry kiln with the enhanced energy efficiency (estimated specific energy consumption for the dry process is 3,310 MJ/1t clinker versus 5,647 MJ/1 t clinker for wet process).		OK
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?	1,2	DR	Party A is the Russian Federation. Project participant for the Party A is OJSC Sukholozhskcement. Party B is the Netherlands. Project participant is Global Carbon BV.		OK
A.3.2. The data of the project participants are presented in tabular format?	1,2	DR	The data is presented in the tabular format as per [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	It is indicated that the Russian Federation is the host Party.		OK

A.4. Technical description of the project					
A.4.1. Location of the project activity					
A.4.1.1. Host Party(ies)	1,2	DR	The Russian Federation is indicated as the host Party in PDD Section A.3.		OK
A.4.1.2. Region/State/Province etc.	1,2	DR	The Moscow region, Russian Federation.		OK
A.4.1.3. City/Town/Community etc.	1,2	DR	The Sukhoy-Log town, 114 km to the East from Ekaterinburg, Sverdlovsk region.		OK
A.4.1.4. Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	1,2	DR	The unique identification is given by the following information: at the southeast outskirts of Sukhoy-Log town. The site coordinates are: 62° 1' 35" E longitude, 56° 54' 51" N latitude.		OK
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					
A.4.2.1. Does the project design engineering reflect current good practices?	1,2	DR, I	The use of the dry cement production process presents a current good practice.		OK
A.4.2.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	1,2	DR I	The dry cement production process is the state of the art cement production technology, which is not spread in the Russian Federation. In Russia the majority of kilns at cement plants were constructed before 1988 (86% of cement production) using the wet method which is the predominant technology in Russia still. Only three percent of dry kilns are located in Ural Region. The project aims at construction of the new dry cement pro-		OK

			duction line with enhanced efficiency than existing one.		
A.4.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1,2	DR I	The project technology is unlikely to be substituted by other or more efficient technologies within the project period.		OK
A.4.2.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	1,2	DR, I	The project envisages extensive initial training and maintenance efforts in order to work as presumed during the project period.		OK
A.4.2.5. Does the project make provisions for meeting training and maintenance needs?	1,2	DR	The project generates both direct and indirect local employment. A significant amount of workers in different industries would be involved in the new cement line construction period during 36 months. Provisions for meeting training and maintenance needs are outlined in PDD Section A.2.		OK
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances					
A.4.3.1. Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	1,2	DR	The explanation is given in Section A.4.3 as follows. The implementation of a new dry kiln with the enhanced energy efficiency will lead to the significant reduction of the kiln fuel consumption. In turn, this will result in a reduction of CO_2 emissions.		OK

			Low energy efficient capacity of the existing plant will be reduced as described in Section A.2 PDD. Besides, the project technology has an advantage of reducing the environmental impact as compared with the wet cement production process.		
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?	1,2	DR	The estimated GHG emission reduction is 495,506 tonnes of CO_2 equivalent over the crediting period 2010 - 2012. Refer to PDD Section A.4.3.1. Conclusion is pending responses to CAR 05, CAR 08, CAR 11, CAR 12, CAR 13, and CL 03, which may result in recalculation of the CO2 emissions.	Pending	OK
A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	1,2	DR	The estimated annual emission reduction is 90,375 (for the year 2010), 202,565 (for the year 2011), 2,397 (for the year 2012) tonnes of CO2 equivalent. Refer to PDD Section A.4.3.1. Conclusion is pending responses to CAR 05, CAR 08, CAR 11, CAR 12, CAR 13, and CL 03, which may result in recalculation of the CO2 emissions.	Pending	OK
A.4.3.4. Are the data from questions A.4.3.2 and A.4.3.3 above presented in tabular format?	1,2	DR	The data is presented in the tabular format. Refer to the Table in PDD Section A.4.3.1.		OK
A.5. Project approval by the Parties involved					
A.5.1. Are written project approvals by the Parties involved attached?	1,2	DR	Conclusion is pending a response to CAR 01.	Pending	OK

B. **Baseline**					
B.1. Description and justification of the baseline chosen					
B.1.1. Is the chosen baseline described?	1,2	DR	The baseline is defined as "Operating the existing cement (wet) lines. The nearest cement plants will produce the remaining cement demand". PDD Section B.1 and Annex 2 provide a description of the baseline approach in a complete and transparent manner. The assumptions, parameters, data sources and key factors are included in the description. PDD Section B.1 provides the key information and data used to establish the baseline (variables, parameters, data sources etc.) in the required tabular form [2]. **CAR 04.** Annex 2 (baseline information) does not contain a summary of the key elements in tabular form though this is required in [2].	CAR 04	OK
B.1.2. Is it justified the choice of the applicable baseline for the project category?	1,2,3	DR	The own baseline approach is used in line with Appendix B of JI Guidelines and the JISC Guidance on criteria for baseline setting and monitoring. The baseline approach applied for the JI project "Switch from wet-to-dry process at Podilsky Cement, Ukraine" (JI Track 2 ref. number: 0001), for which the determination has been deemed final, has been taken into	CAR 05	OK

			account. The identification and selection of the most plausible scenario for the baseline as well as common practice analysis are based on the current situation in Russian economy taking into account the economic and financial crisis of 2008, while investment analysis is 2006 reality based. The used approach to identify the baseline included two steps: - Step 1 Identification and listing of plausible alternative scenarios; - Step 2 Identification of the most plausible alternative scenario. Six alternatives were identified for analysis: - Alternative 1. Operating the existing cement (wet) lines. The nearest cement plants will produce the remaining cement demand; - Alternative 2. Operating the existing cement (wet) lines and constructing a new line applying a wet process of cement production; - Alternative 3. Operating the existing cement (wet) lines and constructing a new line applying a semi-dry process of cement production; - Alternative 4. Operating the existing cement (wet) lines and constructing a new line applying a dry process of cement production; - Alternative 5. Decommissioning existing		

			(wet) lines and building of new lines applying dry process; - Alternative 6. Decommissioning existing (wet) lines and building of new lines applying semi-dry process. None of these Alternatives contradicts with the current legislation. Alternative 1 will use the existing lines and technological process. There are no legal or other requirements in Russia which would force Sukholozhskcement plant to discontinue using the wet production process. No additional investment is required. This alternative is reasonable and feasible one. Alternatives 2 and more expensive 3 will use the out-dated wet process and semi-wet process for cement production which would lead to high production costs due to significant volume of natural gas consumption versus the dry production process. Besides, Alternative 3 with a semi-dry method could be realized if the moisture content of the raw material is more than 25 % (inappropriate requirement to the moisture of the raw material used by Sukholozhskcement). For this reason, Alternatives 2 and 3 were excluded from the further analysis. Alternative 4 will use a dry method which requires a significant investment in comparison		

			to Alternative 1 but results in significant reduction of the kiln fuel consumption and, hence, CO2 emissions. This Alternative is regarded as reasonable and feasible one. Alternative 5 will use the dry method with costs which are tripled to Alternative 4. Therefore, it was excluded from the further analysis. Alternative 6 which is almost similar to alternative 5 but applies a semi-dry method, which could not be realized because of inappropriate requirement to the moisture of the raw material used by Sukholozhskcement. It was excluded from the further analysis. In conclusion, only Alternatives 1 and 4 were left for identification of the viable baseline scenario. To define what of the two should be accepted as the baseline, the results of the investment analysis carried out according to "Tool for the demonstration and assessment of additionality" in PDD Section B.2 were used. Eventually, Alternative 1 was reasonably taken as the most plausible baseline scenario. **CAR 05.** Please explain and justify, as per [3, para 25], the differences between the approach to baseline setting applied for the JI project "Switch from wet-to-dry process at Podilsky Cement, Ukraine" (JI Track 2 ref. number: 0001), for which the determination has been deemed final, and that applied in		

			PDD.		
B.1.3. Is it described how the methodology is applied in the context of the project?	1,2	DR	Not applicable since this is the own project-specific approach.		OK
B.1.4. Are the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)?	1,2	DR	Main assumptions of the baseline approach are as follows: - The baseline scenario consists of two parts: production at existing four wet kilns (replacement production) and production by other third party cement producers (incremental production); - The maximum technical cement production capacity of the existing four wet kilns is 2.6 million tonnes of cement per year; - Production of the four wet lines will be reduced to 1 million tonnes of cement per year after the project commissioning; - The incremental production is estimated to be zero on the assumption that the total production of 3,9 million tonnes of cement per year is ensured; - The existing facility would work at maximum technical capacity of 2.6 million tonnes of cement per year if an increased cement demand in the market would occurs; - The incremental production due to the project implementation and due to an increased cement demand in the market will be 1.3 million tonnes of cement per year.	CAR 06 CAR 07 CAR 08	OK OK OK

			- In the baseline calculation incremental part is assumed zero; - For the replacement production, the characteristics of the existing facilities are used; - Changes in cement production in one plant can have a potential influence on the production of other cement capacities within a radius of 1,108 km from the project site; according to the approach used, the weighted average of specific CO2 emissions of the nearest cement plants (10) within a radius of 1,108 km is used; - The ex-ante emission factor for the incremental cement production (CM_y) is estimated as 0.774 tCO_2/t cement, subject for monitoring and calculation ex-post, if the project capacity will exceed the existing technical capacity; the above value is the average for the 10 cement plants selected; - GHG emissions due to technical transmission and distribution electricity losses in baseline emission calculations are reasonably neglected as a conservative assumption; - GHG emissions from the sources fuel and electricity consumption at the quarry, fuel consumption at the raw material transportation are reasonably neglected; - The ex-ante combined margin grid emission factor for RES "Urals" $EF_{el,\ y}$ = 0.602 t CO_2/MWh (CTF data) is used for calculation of		

			emissions due to electricity consumption. **CAR 06.** The used grid emission factor for RES "Urals" does not take into account the emission related characteristics of RES "Mid Volga" where Ulyanovskcement and Volskcement are located. **CAR 07.** Please specify the approach to calculating main technical data of the existing plant (wet production lines) used in GHG baseline emission calculation (refer to PDD Section A.4.2 Table A.4.2.1). **CAR 08.** The original Project Design [8] considers cement packaging and its shipment to the clients in the form of in bulk. The spreadsheets for calculation of project emissions presented to the verifier are based on the assumption that bagging and palletization would be applied to shipping operations.		
B.1.5. Is all literature and sources clearly referenced?	1,2	DR	Relevant literature and sources are referenced through the text of PDD. **CAR 09**. There is no reference to the used 2006 IPCC Volume and Chapter. The baseline is lacking the transparency as to the sources of data necessary to make calculations of OM_y by formula (4) in PDD Annex 2.	CAR 09	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					

B.2.1. Is the proposed project activity additional?	1,2,4 I, 8	DR	To substantiate the additionality of the Project, the PDD developer applied the most recent version of the "Tool for the demonstration and assessment of additionally" (version 05.2) [4]. At Step 1, Alternative 1 (baseline) and Alternative 4 (project without registration under JI) were identified as realistic and credible alternatives compliant with the mandatory legislation and regulations. At Step 2, the investment analysis of Alternative 4 was carried out with the use of the benchmark analysis method according to [4]. The internal financial indicator IRR = 12% was conservatively applied as the minimal benchmark. The discount rate was taken equal to Central Bank RF refinancing rate of 12 %. The calculations show that IRR is well below the applied internal benchmark. Fuel consumption and electricity generation as well as additional revenue generated by additional sales of cement produced by the new dry kiln in comparison with Alternative 1 were taken into account within the limits of the new technical capacity of 1.3 million tonnes of cement per year. A sensitivity analysis was conducted to check the conclusion regarding the financial/economic attractiveness of the proposed project. As critical assumptions key indicators	CAR 10	OK

			were subjected to reasonable variations (investment cost, cement prices, electricity and gas tariffs) [4]. The results show that the IRR of Alternative 4 remained below the given IRR benchmark. Hence, the sensitivity analysis supports the conclusion that Alternative 4 (project) is unlikely to be financially and economically attractive (without ERU sale). The spreadsheet with IRR calculations was made available to the verifiers and, following the completion of determination, it will be submitted as supporting documentation to JISC together with the PDD At Step 4, the common practice analysis was conducted. Only two dry cement plans operate in the considered geographical area, which were constructed in soviet era characterized by dissimilar investment climate [4]. **CAR 10.** The analysis of Investment Efficiency made in the frame of Project Design [8] shows that the project is financially attractive with IRR > threshold. This contradicts the above conclusion of Step 2.		
B.2.2. Is the baseline scenario described?	1,2	DR	Please refer to PDD Section B.2.		OK
B.2.3. Is the project scenario described?	1,2	DR	The project scenario, being Alternative 4, is described in PDD Sections A.4.2. A.4.3, B.2.		OK
B.2.4. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emis-	1,2	DR	The analysis presented in PDD Section A.4.3 shows that the emissions in the baseline sce-		OK

sions in the project scenario included?			nario would likely exceed the emissions in the project scenario due to a reduction of the kiln fuel consumption as a result of implementation of the energy efficient technology. Besides, low energy efficient capacity of existing old plant will be reduced to 1.0 million tonnes of cement after the project starts up. New dry technology is environmentally friendly compared to the wet method.		
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?	1,2	DR	Please refer to PDD Section B.2. The project activity without registration under JI mechanism is not a likely baseline scenario; in addition to it is not most economically and financially attractive as compared with the chosen baseline scenario.		OK
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?	1,2	DR	Information about relevant regulations in the Russian Federation concerning the use of the wet cement production process is presented in PDD Sections A.2 p.6, B.1 p.18, and Section B.2 p. 22.		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?	1,2,3	DR I	The project's spatial (geographical) boundaries are defined. Refer to PDD Section B.3 Figure B.3.1. Remove or correct the inadequate statement "Fuel consumption is included for reasons of conservativeness (see below)."	CAR 11	OK

			CAR 11. Sources of emissions from packaging and palletization are not analysed though they are under control of the project participant and directly attributable to the JI project. Refer to the Technological scheme on Figure A.4.2.3 on p. 11.		
B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline					
B.4.1. Is the date of the baseline setting presented (in DD/MM/YYYY)?	1,2	DR	The date of the baseline setting is 26/10/2009.		OK
B.4.2. Is the contact information provided?	1,2	DR	The baseline was developed by Global Carbon BV. Contact person: Mikhail Butyaykin Tel. +31 30 850 6724 Fax +31 70 891 0791 e-mail: butyaykin@global-carbon.com		OK
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	**CAR 12.** It is not indicated that Global Carbon BV is the project participant listed in Annex 1 of the PDD [2].	CAR 12	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	**CAR 13.** The date of decision to conduct a feasibility study on the new dry cement produc-	CAR 13	OK

			tion technology (28/02/2006) cannot be considered as the starting date of the project. Please refer to [2] for clarity.		
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	Operation life time of the project is 15.42 years or 185 months, defined as the period during which the project assets (the dry kiln) will be fully depreciated and are not subject to restoring.		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 defined as 2.42 years or 29 months starting from 01 August 2010.		OK
***D.* Monitoring Plan**					
D.1. Description of monitoring plan chosen					
D.1.1. Is the monitoring plan defined?	1,2,3	DR	The monitoring plan is established based on a JI specific approach, in accordance with JISC Guidance on criteria for baseline setting and monitoring, Part B [3]. Option 1 – Monitoring of the emissions in the project scenario and baseline scenario – is chosen. The emissions subject for monitoring are those affected by the project and related to (1) the project (wet and dry lines) fuel combustion; (2) calcination (wet and dry lines); (3) the electricity consumption (wet and dry lines) of the raw milling, the kilns and boilers.	CAR 14	OK

			Data to be collected is defined in PDD Sections D.1.1.1 and D.1.1.3. **CAR 14.** Section D.1 lacks a justification referring to the JISC's Guidance on criteria for baseline setting and monitoring as required in [2] with regard to the applied JI specific approach to monitoring.		
D.1.2. [2]Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.	1,2	DR	This option is selected.		OK
D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.	1,2	DR I	Data to be collected in order to monitor emissions from the project are defined in PDD Section D.1.1.1. These data and relevant monitoring points are as follows: - Emissions due to calcination, fuel combustion, and electricity consumption (existing four wet and a new dry kilns); they are calculated on the basis of the following parameters: - Production of clinker (calculated & measured); - Consumption of fuel in (existing four wet and a new dry kilns), boiler houses, drying sections (measured); - Electricity consumption at cement production (raw material transportation and preparation, wet and dry kilns and grinding clinker), boilers (measured); - Emission factors of clinker production, fuels by type, electric grid (calculated);	CAR 15 CL 01	OK OK

			- Net caloric values of fuels by type (calculated). It is defined that the data will be archived electronically and on paper. **CAR 15.** Project emissions due to fuel consumption by dump trucks (during raw material transportation) in the dry line are not considered in Section D.1.1.1 (refer to p. 36). **CL 01.** Please clarify if the above emissions relate to wet process.		
D.1.4. Description of the Formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2,5	DR	These are Formulae (1) – (11) on p. 34-38 presented in PDD Section D.1.1.2. They allow calculating CO2 project emissions on the basis of data defined in D.1.3 above.		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 I	Data to be collected in order to monitor baseline emissions are defined in PDD Section D.1.1.3. The parameters to be monitored are related to the two sources of CO_2 emissions: (1) production at the existing kilns (on-site replacement production with a maximum technical capacity) and (2) production by other cement plants (incremental production). There are 28 parameters necessary to monitor baseline emissions related to: - Clinker and cement production, calcination, fuel consumption, electricity consumption (all in replacement production);		OK

			- Incremental cement production. The collected data are both calculated and measured type and include the same parameters that were defined in D.1.3 above for project emission monitoring. To calculate baseline emissions in the incremental production, averaged data for 10 cement plants is used (ref. to PDD Annex 2). The ex-ante resulting value 0.774 tCO2/ t cement can be used. The plant data is in possession of the verifiers. It is defined that the data will be archived electronically or on paper.		
D.1.6. Description of the Formulae used to estimate baseline emissions (for each gas, source etc, emissions in units of CO2 equivalent).	1,2	DR	These are Formulae (10) – (28) presented in PDD Section D.1.1.4, which allow to uniformly calculate CO_2 emissions from calcination process, fuel consumption, and electricity consumption in both the replacement and incremental production. It is proposed that the existing wet kilns would continue production on the maximum technical capacity (replacement). Yearly clinker production in the replacement part of the baseline is set as minimum of the total clinker production in the project scenario and technical clinker capacity of the existing wet kilns. Cement production in the incremental part of the baseline is defined as cement production in		OK

			the project less that in the replacement part.		
D.1.7. Option 2 – Direct monitoring of emissions reductions from the project (values should be consistent with those in section E)	1,2	DR	Not applicable.		OK
D.1.8. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived.	1,2	DR	Not applicable.		OK
D.1.9. Description of the Formulae used to calculate emission reductions from the project (for each gas, source etc; emissions/emission reductions in units of CO2 equivalent).	1,2	DR	Not applicable.		OK
D.1.10. If applicable, please describe the data and information that will be collected in order to monitor leakage effects of the project.	1,2	DR	"Not applicable" is stated in PDD Section D.1.3.2. **CAR 16**. There is no evidence that assessment of potential leakage of the project is undertaken and an explanation is given as to which source of leakage is to be calculated and which can be neglected. Refer to [2] para 18, p.6.	CAR 16	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 16.	Pending	OK
D.1.12. Description of the Formulae used to estimate emission reductions for the project (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2	DR	This is the straightforward Formula (25) $ER_y = BE_y – PE_y$. Refer to PDD Section D.1.4.		OK
D.1.13. Is information on the collection and archiving of information on the environmental impacts of the project provided?	1,2	DR I	The environmental monitoring at Sukholozhskcement is carried out in accordance with environmental legislative requirements of the		OK

			Russian Federation. The company periodically monitors its emission parameters, according to the schedule of environmental impact monitoring. Supporting documentation was subject of a review during the site visit.		
D.1.14. Is reference to the relevant host Party regulation(s) provided?	1,2	DR	References to the Russian Federation regulations with regard to the environmental impacts of the project are provided in PDD as required in [2], Section D.1.5.		OK
D.1.15. If not applicable, is it stated so?	1,2	DR	Refer to 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 I	Quality control and quality assurance procedures are outlined as appropriate in tabular forms in PDD Section D.2. **CAR 17.** Please specify the QA/QC procedures planned for preliminary data P10 ($CLNK_y^{wet}$ Production of clinker (wet lines) in the project scenario in year y (tonnes) and P11 ($CLNK_y^{dry}$ Production of clinker (dry line) in the project scenario year y (tonnes)).	CAR 17	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 I	Refer to PDD Section D.3. **CAR 18.** The scheme on Figure D.3.1 does not reflect the actual operational and management structure of Sukholozhskcement to monitor emission reduction and any leakage effects generated by the project. The verifier familiarized with this structure during the site visit.	CAR 18	OK

D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
D.4.1. Is the contact information provided?	1,2	DR	The monitoring plan was developed by - OJSC " Sukholozhskcement", Head of the Contact person: Ms. Ms. Alena Bykova, Head of the Ecology laboratory Tel. +7 34373 799727 Fax +7 34373 7997 e-mail: alena.bykova@sl-cement.ru - Global Carbon BV Contact person: Mr. Mikhail Butyaykin, JI Consultant Tel. +31 30 850 6724 Fax: +31 70 891 0791 E-mail: butyaykin@global-carbon.com		OK
D.4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	**CAR 19.** It is not indicated if OJSC "Sukholozhskcement" and Global Carbon BV are the project participants listed in Annex 1 of PDD.	CAR 19	OK
***E.* Estimation of greenhouse gases emission reductions**					
E.1. Estimated project emissions					
E.1.1. Are described the Formulae used to estimate anthropogenic emissions by source of GHGs due to the project?	1,2	DR	These are Formulae (1) – (11) on p. 34-38 presented in PDD Section D.1.1.2. The Formulae were checked and found correct.	CAR 20	OK

			CAR 20. Please provide estimates of anthropogenic emissions of GHGs by sources of the project within the project boundary for each source, identified in the monitoring plan as required in [2].		
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	GHG project emissions PE are calculated by Formulae (1) – (11) on the excel spreadsheet, which was made available to the verifiers. Calculations of GHG emissions PE by the Formulae (1) – (11) are shown in PDD Section D.1.1.2 and in Table E.1.1. **CAR 21.** The spreadsheet includes calculation of project emissions (existing capacity) due to electricity consumption for packaging operations whereas the monitoring plan does not take this source into account. The same item of concern pertains to the new dry capacity. Conclusion is pending responses to CAR 05, CR 11, CAR 13, and CAR 14, which may result in recalculation of the CO_2 emissions.	CAR 21	OK
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	1,2	DR	Not explicitly defined.		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	Conclusion is pending a response to CAR 12.	Pending	OK
E.2.2. Is there a description of calculation of leakage	1,2	DR	Conclusion is pending a response to CAR 12.	Pending	OK

in accordance with the Formula specified in for the applicable project category?					
E.2.3. Have conservative assumptions been used to calculate leakage?	1,2	DR	Conclusion is pending a response to CAR 12.	Pending	OK
E.3. The sum of E.1 and E.2.					
E.3.1. Does the sum of E.1. and E.2. represent the ale project activity emissions?	1,2	DR	The project falls under category of large scale projects. As no leakage is expected, E1+E2=E1. Refer to Table E.3.1		OK
E.4. Estimated baseline emissions					
E.4.1. Are described the Formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline using the baseline methodology for the applicable project category?	1,2	DR	These are Formulae (10) – (28) presented in PDD Section D.1.3. The Formulae were checked and found correct. **CAR 22.** The value of specific consumption of electricity in the existing wet lines is incorrect (refer to PDD Section A.4.2.1 Table A.4.2.1).	CAR 22	OK
E.4.2. Is there a description of calculation of GHG baseline emissions in accordance with the Formula specified for the applicable project category?	1,2	DR	GHG baseline emissions BE are calculated by Formulae (10) – (28) on the excel spreadsheet, which was made available to the verifiers. Calculations of GHG baseline emissions BE by the Formulae (10) – (28) are shown in PDD Section D.1.1.4 and Table E.4.1. Conclusion is pending responses to CAR 05 which may result in recalculation of the CO_2 baseline emissions.	Pending	OK
E.4.3. Have conservative assumptions been used to	1,2	DR	Technical transmission and distribution losses	Pending	OK

calculate baseline GHG emissions?			were conservatively excluded. Conclusion is pending responses to CAR 05 which may result in recalculation of the CO_2 baseline emissions.		
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 Formula (25) ER = BE – PE in PDD Section D.1.4 and Table E.5. Conclusion is pending responses to CAR 05, CAR 08, CAR 11, CAR 12, CAR 13, and CL 03, which may result in recalculation of the CO_2 emissions.	Pending	OK
E.6. Table providing values obtained when applying Formulae above					
E.6.1. Is there a table providing values of total CO_2 abated?	1,2	DR	The presented Table E.6 provides the yearly and total values of project emissions, leakages, baseline emissions and emission reductions for the crediting period in accordance with the JI reporting format. Conclusion is pending responses to CAR 05, CAR 08, CAR 11, CAR 12, CAR 13, and CL 03, which may result in recalculation of the CO_2 emissions..	Pending	OK

F. **Environmental Impacts**					
F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party					
F.1.1. Has an analysis of the environmental impacts of the project been sufficiently described?	1,2	DR I	A sufficient analysis of the environmental impacts of the project is described in PDD Section F1.		OK
F.1.2. Are there any host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	1,2,6	DR I	Under the RF Urban Development Code N 190-ФЗ [6], the capital construction cannot start without an authority's permission. The latter is granted if there is a positive conclusion of the state expertise on the project documentation, which shall contain the results of EIA. Permissions of the environmental authority Rostekhnadzor shall also be issued for both the construction of the object and for its exploitation. Once the new dry kiln and supporting equipment have been constructed and commissioned, it should have all the permissions granted. The Environmental Permissions were checked during verifier's site-visit.	Pending	OK
F.1.3. Are the requirements of the National Focal Point being met?	1,2, 7	DR I	To meet the requirements of Regulation [7], the application for the project approval shall include, inter alia, the substantiation of environmental effectiveness of the project. The application will be submitted following the deter-		OK

			mination of the project.		
F.1.4. Will the project create any adverse environmental effects?	1,2	DR I	The Environmental Permissions were checked during verifier's site visit.		OK
F.1.5. Are transboundary environmental impacts considered in the analysis?	1,2	DR I	The project activity has no transboundary environmental impacts.		OK
F.1.6. Have identified environmental impacts been addressed in the project design?	1,2	DR I	Environmental impacts were addressed in the section "Environment Protection" of the "Project Design" as described in Section F.1 PDD. It was checked during verifier's site-visit.		OK
***G.* Stakeholders' comments**					
G.1. Information on stakeholders' comments on the project, as appropriate					
G.1.1. Is there a list of stakeholders from whom comments on the project have been received?	1,2	DR I	Sukholozhskcement provided stakeholders with project information. Sukholozhskcement had publications about the project in mass media. List of publications is presented in PDD Section G.1. There is no information about any comments from stakeholders.		OK
G.1.2. The nature of comments is provided?	1,2	DR I	Refer to G.1.1.		OK
G.1.3. Has due account been taken of any stakeholder comments received?	1,2	DR I	Refer to G.1.1.		OK

Table 4 Legal requirements

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Legal requirements					
1.1. Is the project activity environmentally licensed by the competent authority?	1,2	DR	Refer to F.1.4		OK
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?	1,2	DR	The conditions of the environmental permit were checked during the site.		OK
1.3. Is the project in line with relevant legislation and plans in the host country?	1,2	DR	Yes, the project is in line with relevant legis-lation 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.	1 Table 1	Host country letter of approval was issued on 12th of March 2012.	The CAR is closed based on the due adjustments made to the PDD
CAR 02. Section A.2 in PDD exceeds the limit of 2 pages [2].	A.2.1	Description of existing wet process has been moved in section A.4.2. (This information was added in Section A.4.2 on p.8-9). Section A.2 has been reduced to 2 pages.	The CAR is closed based on the due adjustments made to the PDD
CAR 03. There is no consistency in the description of the project scenario as regards the cement production capacity between Subsection "Project Scenario", Subsection "Baseline scenario" and Fig. A.2.1.	A.2.1	Description of "Project scenario" has been changed. According to the project, existing wet lines production will be reduced to 2.6-1.0 million tonnes of cement after the new dry line start up. Reducing volume will depend on market cement demand. Planned total annual project cement production is 2.3 million tonnes of cement (1 million tonnes to be manufactured by existing wet lines and 1.3 million tonnes to be manufactured by the new dry cement line). Description of "Baseline scenario" has been corrected. (This information has been changed in Section A.2.1 on p.3-4).	The CAR is closed based on the due adjustments made to the PDD in Section A.2.1 on p.3-4.
CAR 04. Annex 2 (baseline information) does not contain a summary of the key elements in	B.1.1	The key data used to establish the baseline in tabular form were presented in Annex 2.	The key data used to establish the baseline in

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
tabular form though this is required in [2].		(This information was added in Annex 2 on p.70-77).	tabular form are presented now in PDD Annex 2. The CAR is closed based on appropriate justification made to the PDD.
CAR 05. Please explain and justify, as per [3, para 25], the differences between the approach to baseline setting applied for the JI project "Switch from wet-to-dry process at Podilsky Cement, Ukraine" (JI Track 2 ref. number: 0001), for which the determination has been deemed final, and that applied in PDD.	B.1.2	This approach can not be applied directly to the project as this is the new built with possible incremental production. (This information was added in B.1 on p.14).	The CAR is closed based on appropriate justification made to the PDD.
CAR 06. The used grid emission factor for RES "Urals" does not take into account the emission related characteristics of RES "Mid Volga" where Ulyanovskcement and Volskcement are located.	B.1.4	For calculation of emission from Ulyanovskcement and Volskcement RES "Mid Volga" was applied and fixed ex-ante $EF_{el,y}$ = 0.534 tCO2/MWh. (This information was added in Annex 2 on p.76).	The CAR is closed based on appropriate justification and amendments made to the PDD.
CAR 07. Please specify the approach to calculating main technical data of the existing plant (wet production lines) used in GHG	B.1.4	Reference N 4 has been added to the PDD (page 8). Three years average technical data (2006-2008)	

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
baseline emission calculation (refer to PDD Section A.4.2 Table A.4.2.1).			
CAR 08. The original Project Design [8] considers cement packaging and its shipment to the clients in the form of in bulk. The spreadsheets for calculation of project emissions presented to the verifier are based on the assumption that bagging and palletization would be applied to shipping operations.	B.1.4	Figure A.4.2.2 on page 10 (Dry cement production technology) has been corrected. Palletization and shipment were deleted. The project emission does not change, because total electricity consumption did not include bagging and palletization in Project Design document.	Based on the interview results with OJSC "Sukholozhskcement" managers, at the first stage of Project Design discussion it was considered a cement packaging and its shipment to the clients in the form of in bulk. Then, this was revised and the final Project Design [8] does not include the palletization and shipment operations. The explanations are accepted by the verifier. The CAR is closed based on appropriate justification.
CAR 09. There is no reference to the used	B.1.5	Reference N 22, 24 and 26 have been added to the	The CAR is closed based

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
2006 IPCC Volume and Chapter. The baseline is lacking the transparency as to the sources of data necessary to make calculations of OM_y by formula (4) in PDD Annex 2.		PDD (page 68). Reference N 22: "The data of grid emission factors for the nearest 10 cement plants within a radius of 1,108 km from the project are taken from the study commissioned by "Carbon Trade and Finance". Grid emission factor values are presented in Annex 2. Reference N 24: "The data of annual cement and clinker production and annual fuel and electricity consumption at Russian cement plants are taken from the OJSC "NIICEMENT" annual statistical report "Russian Cement Industry in 2006". Reference N 26: "Guidelines for National Greenhouse Gas Inventories, Volume 2: Energy, Chapter 2: Stationary Combustion (corrected chapter as of April 2007), IPCC, 2006".	on appropriate amendments made to the PDD.
CAR 10. The analysis of Investment Efficiency made in the frame of Project Design [8] shows that the project is financially attractive with IRR > threshold. This contradicts the above conclusion of Step 2.	B.2.1	The referred Investment Efficiency analysis was prepared in December 2006. The document was prepared in accordance with Russian legislation for the purpose to obtain Approval of Glavgosexpertiza of Russia only. When the Investment Efficiency was prepared a rather optimistic forecast was used, because the construction boom taking place at that moment. The cement price for	The explanation of the approach to the investment analysis is accepted. The CAR is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		example doubled. However, it should be noted that the starting date of the project is February 2006. This is the date on which the investment decision was made. The Investment Efficiency Analysis referred above was made for the purpose of Russian regulatory requirements only and well after the investment decision making. Therefore this analysis is not representative for the decision making context. The method used in PDD gives more realistic result because it uses actual market data at the decision making moment. Also note that in 2009, the cement market in the region has dramatically worsened. The IRR of approximately 10% was, with hindsight, too optimistic. The text (below) was been added in Section B.2 p.22-23. 1. Investment decision: 28 February 2006, commissioning date: 01 August 2010; 2. Average cement price is 1375 rubles; Note that the above assumptions reflect the actual market situation during the decision making process (28	

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
		February 2006). Later a so-called Investment Efficiency Analysis was prepared as part of the Technical and Economical Substantiation (or Technichko-ekonomichesko obasnovanye, TEO, in Russian). This document is required by Russian authorities, like Glav-gosexpertiza, to provide the necessary permits. This TEO is normally followed by detailed (technical) designs before a construction permit is given. This TEO used assumptions that reflected the market situation when this document was prepared, which happened after the investment decision. It mainly takes into account a surge in cement demand and prices (which in the mean time have dramatically dropped in 2008/2009 due to the financial crisis). However, for the purpose of proving additionality in the context of a JI project, assumptions relevant during the decision making process have been used.	
CAR 11. Sources of emissions from packaging and palletization are not analysed though they are under control of the project participant and directly attributable to the JI project. Refer to the Technological scheme on Figure A.4.2.3 on p. 11.	B.3.1	Figures A.4.2.1 A.4.2.2 on page 9, 10 has been corrected.	The CAR is closed based on due corrections made to the PDD.

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 12. It is not indicated that Global Carbon BV is the project participant listed in Annex 1 of the PDD [2].	B.4.3	The Global Carbon is project participant. It is in Section A.3. (This information is added in Section B.4, D4 and Annex 1on p.28, 53, 63).	The CAR is closed based on due corrections and adjustments made to the PDD.
CAR 13. The date of decision to conduct a feasibility study on the new dry cement production technology (28/02/2006) cannot be considered as the starting date of the project. Please refer to [2] for clarity.	C.1.1	Decision by board of Directors of Sukholozhskcement with Dyckerhoff AG dated 28th February 2006. (This information has been corrected in C.1 on p.29). This document was transferred to determinator.	The CAR is closed based on due corrections and adjustments made to the PDD. Sufficient evidence has been verified by the verifier.
CAR 14. Section D.1 lacks a justification referring to the JISC's Guidance on criteria for baseline setting and monitoring as required in [2] with regard to the applied JI specific approach to monitoring.	D.1.1	In accordance with paragraph 28 of the JISC's Guidance, as part of the PDD of a proposed JI project, a monitoring plan has to be established by the project participants in accordance with appendix B of the JI guidelines. In this context two options apply: a) Project participants may apply approved CDM baseline and monitoring methodologies; b) Alternatively, a monitoring plan may be established in accordance with appendix B of the JI guidelines, i.e. a JI specific approach may be developed. In this case, inter alia, selected elements or combinations of approved CDM baseline and monitoring methodologies	The CAR is closed based the appropriate justification made in the PDD Section D1 page 30.

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
		may be applied, if deemed appropriate. This text has been added in Section D1 page 30.	
CAR 15. Project emissions due to fuel consumption by dump trucks (during raw material transportation) in the dry line are not considered in Section D.1.1.1 (refer to p. 36).	D.1.3	There will be several consumers of fuels after project implementation: the new kiln, the drying section (hot gas generator during drying of raw material), the boiler house. (This information has been corrected in D.1.1 on p.35).	The CAR is closed based on due addition made to the PDD Section D.1.1 on p.35.
CAR 16. There is no evidence that assessment of potential leakage of the project is undertaken and an explanation is given as to which source of leakage is to be calculated and which can be neglected. Refer to [2] para 18, p.6.	D.1.10	Leakage is not taken into account to preserve conservativeness, because in the baseline scenario energy (gas, electricity) consumption and associated leakage are bigger causing even bigger non-conservative emissions reduction. Therefore estimated leakage is neglected by applying conservative method of ER calculation. (This text has been added in D.1.3.2 on p.47).	The CAR is closed based on due sufficient explanation and amendments made to the PDD Section D.1.3.2 on p.47. The conservative approach is applied regards both the baseline and project CO2 emissions.
CAR 17. Please specify the QA/QC procedures planned for preliminary data P10 ($CLNK_y^{wet}$ Production of clinker (wet lines) in the project scenario in year y (tonnes) and P11 ($CLNK_y^{dry}$ Production of clinker (dry line) in the project scenario	D.2.1	Calculated as sum of daily reports in controlling department during month. Monthly data is checked. The check is based on the monthly inventory reports of remaining raw materials and cement taking into account cement sold. The cement sold is measured by a weighing apparatus. On-site cement, clinker and raw material are measured by volume-to-mass conversion method.	The CAR is closed based on due sufficient explanation and corrections made to the PDD Section D.2 on p.49.

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
year y (tonnes)).		The weighing apparatus is calibrated annually. Information will be calculated by the Controlling department and transferred to the Ecology laboratory. This text has been corrected in D.2 on p.49).	
CAR 18. The scheme on Figure D.3.1 does not reflect the actual operational and management structure of Sukholozhskcement to monitor emission reduction and any leakage effects generated by the project. The verifier familiarized with this structure during the site visit.	D.3.1	Figure D.3.1 and its description on page 51, 52 have been corrected.	The CAR is closed based on due corrections made to the PDD Section D.3.1 on pp.51-52.
CAR 19. It is not indicated if OJSC "Sukholozhskcement" and Global Carbon BV are the project participants listed in Annex 1 of PDD.	D.4.2	It is in Section A.3. (This information was added in Section B.4, D4 and Annex 1on p.28, 53, 63).	The CAR is closed based on appropriate additions made to the PDD.
CAR 20. Please provide estimates of anthropogenic emissions of GHGs by sources of the project within the project boundary for each source, identified in the monitoring plan as required in [2].	E.1.1	The tables have been corrected in Section E1-E5. Table B.3.1has been corrected on page 26.	The CAR is closed based on appropriate additions made to the PDD Section E1-E5 and Table B.3.1. It was carefully checked by the verifier and found correct.
CAR 21. The spreadsheet includes calcula-	E.1.2	Figure A.4.2.2 on page 10 (Dry cement production	The CAR is closed based

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
tion of project emissions (existing capacity) due to electricity consumption for packaging operations whereas the monitoring plan does not take this source into account. The same item of concern pertains to the new dry capacity.		technology) has been corrected. Palletization and shipment were deleted. The project emission does not change, because total electricity consumption did not include bagging and palletization in Project Design document. The plant have plan of packaging line construction but there it is not under construction Because packaging is not included in the Project Design document.	on appropriate corrections made to the PDD. Additionally refer to the comments in CAR 08 verifier's response.
CAR 22. The value of specific consumption of electricity in the existing wet lines is incorrect (refer to PDD Section A.4.2.1 Table A.4.2.1).	E.4.1	Specific consumption of electrical energy has been corrected in Section A.4.2.1 Table A.4.2.1	The CAR is closed based on appropriate corrections made to the PDD. It was carefully checked by the verifier and found correct.
CL 01. Please clarify if the above emissions relate to wet process.	D.1.3	Emission during transportation is not included in emissions related to wet process.	The CAR is closed based on appropriate explanation made to the verifier.

Appendix B: Verifiers CV's

Mr Vera Skitina, PhD (metallurgy)
Lead Verifier
Bureau Veritas Certification Rus Technical Director - Lead Auditor, Lead Tutor, Lead Verifier

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

Mr. Leonid Yaskin, PhD (thermal engineering)
Lead Verifier.
Bureau Veritas Certification Rus General Director - Lead Auditor, 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 verification of over 40 JI projects.