DETERMINATION REPORT JSC IVANO-FRANKIVSK CEMENT

DETERMINATION OF THE IVANO-FRANKIVSK CEMENT SWITCH FROM WET-TO-DRY CEMENT AND FUEL SAVINGS FOR COAL DRYING

REPORT NO. UKRAINE - 0043/2009

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BUREAU VERITAS CERTIFICATION

DETERMINATION REPORT

Date of first issue: 26/08/2009	Organizational unit: Bureau Veritas Certification Holding SAS
Client: JSC Ivano-Frankivsk Cement	Client ref.: Mykola Makoviychuk

Summary:
Bureau Veritas Certification has made the determination of the "Ivano-Frankivsk Cement Switch from Wet-to-Dry Cement and fuel savings for coal drying, Ukraine" project of JSC Ivano-Frankivsk Cement located in vil Yamnytsya, Tysmenytsya district, Ivano-Frankivsk Region, Ukraine on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Executive Board, as well as the host country criteria.

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

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

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

Report No.: UKRAINE -0043/2009	Subject Group: JI	
Project title: "Ivano-Frankivsk Cement Switch from Wet-to-Dry Cement and fuel savings for coal drying, Ukraine"		
Work carried out by: Ivan Sokolov – Lead Verifier Nadiya Kaiiun – Verifier Kateryna Zinevych – Verifier Denis Pishchalov – Financial Specialist		
Work verified by: Ashok Mammen		
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Indexing terms

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Abbreviations

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

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1 INTRODUCTION

JSC Ivano-Frankivsk Cement has commissioned Bureau Veritas Certification to determinate its JI project "Ivano-Frankivsk Cement Switch from Wet-to-Dry Cement and fuel savings for coal drying" (hereafter called "the project") at vil Yamnytsya, Tysmenytsya district, Ivano-Frankivsk Region, Ukraine.

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

1.1 Objective

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

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

1.2 Scope

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

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

1.3 GHG Project Description

Cement manufacturing is a highly complex process which requires the consumption of substantial amounts of energy. As a result of having high energy consumption, cement manufacturing produces significant amounts of greenhouse gas (GHG), specifically CO_2 emissions. Cement production

generally creates three main sources of emissions which are a result of the following main activities; (1) Combustion of fossil fuel (2) Electricity consumption, and (3) Chemical decomposition of limestone (referred to as the calcination process). This project aims at substantially reducing the first two streams of emissions by implementing two primary project activities, as follows:

1) Switch from wet-to-dry cement production (including capacity expansion) resulting in significant fuel savings
2) Utilization of waste heat for processing coal drying

JSC Ivano-Frankivsk Cement (IF Cement) has been producing cement since 1964. Currently the company produces approximately 450 000 tonnes of clinker per year using the wet technology for cement production. The current 450 000 tonnes of clinker are produced by three separate wet kilns.

The baseline scenario identified for the project is a hybrid between a project-specific and sector-wide baseline. This is due to a clinker production capacity expansion in project which must be compared against a sector-wide energy intensity, using the assumption that if the additional capacity had not been produced at the IF Cement facility, it would have been produced by other production facilities in the Ukraine. Therefore, for all production capacity up to 450 000 tonnes clinker/year (i.e. the previous production capacity) the baseline is derived from the energy intensity of the previous wet production process. For all increases in production beyond 450 000 tonnes clinker/year, the baseline is derived from the energy intensity in a sector wide baseline that has been estimated in the Volyn Cement PDD[*].

Under the project IF Cement will decommission one wet kiln and replace it with a new in-line dry technology kiln. The old wet kiln, with a 160 000 tonne clinker capacity, will be decommissioned as part of the project activity while the remaining two kilns will remain in operation while gradually reducing their production levels as the dry kiln replaces their capacity. Only one wet kiln, either wet kiln 1 or wet kin 2, will be running in unison with the new dry kiln; as all three kilns will not be operated simultaneously. In addition to the wet-to-dry switch, this component of the project will also result in a capacity expansion of more than 500 000 tonnes of clinker, all produced with the dry clinker production process.

The main component of the project is the set up and launch of a 4 stage In-Line Calciner kiln with dryer crusher, which represents Best Available

[*] Adapted from Volyn-Cement Project Design Document, PDD version 1.5, January 30, 2008, http://ji.unfccc.int/UserManagement/FileStorage/UWCFRFLURJEJMZ0SELJI9F7ECR33CU accessed on April 1, 2009

Technology (BAT)*. The new kiln will affect the whole production process, especially a) crushing, storage, grinding and drying of raw materials, b) raw meal silo and kiln feed system c) the preheater, calciner and clinker cooler. When fully implemented, energy consumption and carbon emissions from fuel combustion per tonne of clinker will be reduced significantly compared with the wet process. Overall annual production capacity will be increased from 450 000 tonnes of clinker to approximately 950 000 tonnes, as the new dry kiln has a production capacity of 750 000 tonnes clinker per year. As the dry kiln comes on line the remaining wet kilns will be used less and may eventually be put out of service, making the ultimate plant capacity 750 000 tonnes of clinker per year†.
Secondly, process changes in coal drying will utilize waste heat from the new dry kiln to eliminate the need to use natural gas for the purpose of drying. The moisture content of the coal requires that it be passed through a drying/crushing process before being used within the kilns. Under the project scenario waste heat from the new dry kiln will be utilized as opposed to drying coal via the combustion of natural gas for this process.

The use of JI mechanism was considered by IF Cement at the early stages of developing the project. The UKEEP energy efficiency programme has commissioned an energy audit report from IC Consulenten. The UKEEP report has covered the possibility of ERU commercialization from wet-to-dry conversion, and provided initial projections of the emission reductions. The Project Idea Note of IF Cement was submitted to the DFP of Ukraine in August 2008. A Letter of Endorsement (reference 668/23/7) has been provided to IF cement on August 8, 2008. The host country letter of approval is expected after completing of the determination process.

1.4 Determination team

The determination team consists of the following personnel:

Ivan Sokolov
Bureau Veritas Certification Team Leader, Climate Change Verifier

Nadiya Kaiiun
Bureau Veritas Certification, Climate Change Verifier

Kateryna Zinevych
Bureau Veritas Certification, Climate Change Verifier

* Best Available Techniques have been identified as dry to semi-dry processes. The most prevalent processes in CEMBUREAU countries are semi-dry processes. UKEEP Energy Assessment at JSC Ivano-Frankivskcement, Ukraine, report prepared for EBRD and BMF by denkstatt IC Consulenten.
† Capacity values provided by IF Cement from manufacturers specifications

Denis Pishchalov
Financial Specialist

Ashok Mammen
Bureau Veritas Certification, Internal reviewer

2 METHODOLOGY

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

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

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

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

The completed determination protocol is enclosed in Appendix A to this report.

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

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

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

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

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

Figure 1 Determination protocol tables

2.1 Review of Documents

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

To address Bureau Veritas Certification corrective action and clarification requests GreenStream Network revised the PDD and resubmitted it on 26/08/2009.

The determination findings presented in this report relate to the project as described in the PDD version 1.4.

2.2 Follow-up Interviews

On 22/06/2009 Bureau Veritas Certification performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of JSC "Ivano-Frankivsk Cement" were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
JSC "Ivano-Frankivsk Cement", GreenStream Network	➢ Additionality of the project, ➢ Emission factor of the project, ➢ EIA and its approval, ➢ Project design, ➢ Consulting process for stakeholder's comments , ➢ Approval status by the host country, ➢ Applicability of methodology, ➢ Monitoring Plan, ➢ QA issues, ➢ Baseline calculations.

2.3 Resolution of Clarification and Corrective Action Requests

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

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

3 DETERMINATION FINDINGS

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

1) The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are summarized. A more detailed record of these findings can be found in the Determination Protocol in Appendix A.
2) Where Bureau Veritas Certification had identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are

stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 14 Corrective Action Requests and 10 Clarification Requests.

3) The conclusions for determination subject are presented.

3.1 Project Design

The project is expected to be in line with host-country specific JI requirements because it is aimed to reduce GHG emissions with the help of implementation new technology and new measure in the process.
The Project Scenario is considered additional in comparison to the baseline scenario, and therefore eligible to receive Emissions Reductions Units (ERUs) under the JI, based on an analysis, presented by the PDD, of investment, technological and other barriers, and prevailing practice.

The project design is sound and the geographical (vil Yamnytsya, Tysmenytsya district, Ivano-Frankivsk Region, Ukraine) and temporal (10 years) boundaries of the project are clearly defined.

Corrective Action Request (CAR) 1
Please provide sectoral scope of the project in the section A.1. of the PDD.

Response
Sectoral scope is Mining/minerals sector (8). This has been added to the PDD (page 2).

Conclusion
Issue is closed.

Corrective Action Request (CAR) 2
Please provide brief description of the baseline scenario in the section A.2.

Response
A description was added to the PDD to explain baseline scenario of being hybrid of project-specific and sector wide baseline. Different sections were separated in order to make text clearer. Please refer to page 2.

Conclusion
Issue is closed.

Corrective Action Request (CAR) 3
Please include into section A.2. brief summary of the JI project history.

Response
The use of JI mechanism was considered by IF cement at the early stages of developing the project. The UKEEP energy efficiency programme has commissioned an energy audit report from IC Consulenten. The UKEEP report has covered the possibility of ERU commercialization from wet-to-dry conversion, and provided initial projections of the emission reductions. The Project Idea Note of IF Cement was submitted to the DFP of Ukraine in August 2008. A Letter of Endorsement (reference 668/23/7) has been provided to IF cement on August 8, 2008. The host country letter of approval is expected after completing of the determination process.

Conclusion
Issue is closed.

Corrective Action Request (CAR) 4
Please indicate in the Table 2 of the section A.3. which Party among the Parties involved is a host Party.

Response
Ukraine is the Host Party. This has been indicated in the table within A.3.

Conclusion
Issue is closed.

Corrective Action Request (CAR) 5
There is no evidence of written project approvals by the Parties involved.

Response
Host country Letter of Approval will be requested once a determination report is available, in accordance with the host country JI procedures. Investor's country approval will be applied after receiving the host country approval. This information has been inserted into the text; Please refer to page 14-15.

Conclusion
Issue is not closed. Must be checked during initial verification.

Clarification Request (CL) 1
Please clarify which external company is contracted to do maintenance work.

Response
At present, the contractor firms "Cemmash" and "Stanislavmash" provide the maintenance work at the plant. This information has been added to the PDD. Please refer to page 10.

Conclusion
Issue is closed.

3.2 Baseline and Additionality

The "Ivano-Frankivsk Cement Switch from Wet-to-Dry Cement and fuel savings for coal drying" project uses own format methodology since there is no approved CDM methodology that can be directly applied to the proposed project. However approved CDM Methodologies, such as ACM0003 v07.2 and ACM0005 v04, have been consulted in detail for general principals and guidance with regards to cement projects.
These methods are used as guidance, rather than full adoption, due to slight differences in project activity. Further guidance has been taken from two similar JI projects that have already been determined by an Independent Entity: the Podilsky Cement project[*] and the Volyn Cement project[†]. The Podilsky Cement PDD outlines a change in cement process from a wet technology to a dry process. Volyn Cement has also switched cement production from a wet process to semi-dry, as well as implementing changes in the raw material composition. The Podilsky Project Design Document (PDD) has passed the JISC review process, while the Volyn Cement PDD has passed stakeholder review, therefore using this guidance while developing the project design document for IF Cement is feasible.
The alternatives considered for determination of the baseline scenario in the context of the project activity include four different scenarios of the plant development.

The possible alternative baseline scenarios are the following:

(a) Replacement of existing wet kiln with new dry kiln
The baseline selected combines:

1. Historical emissions for the current wet production process up to and including to the capacity of the three wet kilns and
2. A sector-wide baseline for all incremental production that the new dry kiln may provide.

(b) Construction of a new plant with dry kiln technology at the existing functioning quarry
This baseline is rejected because it suffers from the same financial barriers as the project and is subject to several technological barriers, including:

[*] Switch from wet to dry process at Podilsky Cement, Ukraine, version 2.1, February 2, 2007, http://ji.unfccc.int/UserManagement/FileStorage/62HINFHR08HYV4Y0O6C0074UVY11VL, accessed April 1, 2009
[†] Volyn-Cement Project Design Document, PDD version 1.5, January 30, 2008, http://ji.unfccc.int/UserManagement/FileStorage/UWCFRFLURJEJMZ0SELJI9F7ECR33CU accessed on April 1, 2009

- Lack of a water supply and sewerage systems
- Lack of a reliable energy supply system
- Lack of storage rooms
- Lack of adequate transportation networks (motor roads, railway communication/service)
- Far distance (20km) for labour force to commute labour (most people employees/workers live in Ivano-Frankivsk).

(c) Reconstruction of kilns 1 and 2 and replacement with dry kiln technology

This baseline is rejected because it suffers from the same financial barriers as the project and is subject to a major technological barrier in that the site is too cramped to be considered for new construction. Kilns №1 and №2, sludge preparation facility, grinding facility, storages for raw materials, clinker and additives are all located on this site. Therefore, prolonged equipment shutdown would be required for the new kiln installation. A major portion of the clinker production would need to be shutdown to execute this alternative scenario.

(d) Replacement of kiln 3 with a dry kiln of smaller capacity

It is technically possible to install a new dry kiln of only 500,000 tonnes/yr of clinker capacity such that this kiln would replace only the existing capacity of the three wet kilns. This baseline is rejected because it suffers from the same financial barriers as the project but does not have the added advantages of increased sales of cement, leading to added revenue, and decreased energy intensity for clinker production, leading to added cost savings. This scenario also faces the same technological, training and resistance to change barriers as the project.

The baseline options considered do not include those options that:

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

The most economically attractive alternative among the alternatives mentioned above has been selected as the baseline scenario, since such alternative is not expected to face any prohibitive barriers that could have prevented it from being taken up as the project activity. (a) alternative is accepted as baseline scenario since it will produce the same quantity of clinker as the project activity, is allowed by current regulations and accounts for the capacity expansion that will result from the installation of the dry kiln in the project activity.

Corrective Action Request (CAR) 6

Please provide proper transparent description of the baseline chosen and included in the list of the considered alternatives. Also please define what

is considered under 'a sector-wide baseline for all incremental production that the new dry kiln may provide' since it is not clear if the baseline scenario is just the continuation of existing situation.

Response
Added section describes chosen baseline as one of the alternatives to the project. Alternative is continuation of status quo with incremental production provided by other Ukrainian plants.

Conclusion
Issue is closed.

Corrective Action Request (CAR) 7
Please provide appropriate reference to all the literature and numbers/factors, coefficients used in the PDD.

Response
References have been significantly updated and further referencing has been included throughout the PDD.

Conclusion
Issue is closed.

Corrective Action Request (CAR) 8
According to "Tool for the demonstration and assessment of additionality (version 05.2)" barrier analysis should be considered as step 3 not sub-step 3. Please provide appropriate corrections. Please also provide sub-steps a and b under step 3. Without conducting those steps project can not be proceeded to the next part and considered additional.

Response
The title of step 3 has been changed and the required sections 'sub-section 3a and 3b' have now been added to the PDD. Please refer to Page 22-23 of the PDD.

Conclusion
Issue is closed.

Corrective Action Request (CAR) 9
Please provide sub-steps 4a and 4b under step 4 because without conducting those steps project can not be considered additional.

Response
Added in sub steps to highlight wet process is the prevailing practice and that similar project activities are already registered or seeking registration

as JI projects. These required sections have now been included on page 24.

Conclusion
Issue is closed.

Corrective Action Request (CAR) 10
Please provide the date of the baseline setting in the given format (DD/MM/YYYY)

Response
The date of baseline setting is 05/05/2009. The date of baseline setting has now been included within the PDD, page 31.

Conclusion
Issue is closed.

Clarification Request (CL) 2
Please provide clear specification of the benchmark value.

Response
Rationale for the benchmark specification has been added to the PDD. The benchmark of 30.59% has been used for the investment analysis and justification of the project additionality. Please refer to page 19 in the PDD.

Conclusion
Issue is closed.

Clarification Request (CL) 3
It appears that financial calculations (SupportingSpreadsheetNo2_Investment_Analysis.xls) were made in fixed prices as of 2008. Please add the relevant remark in Sub-step 2a and Excel file. Please note that IRR obtained from calculations based on fixed prices can not be compared directly to benchmark value which is the nominal value i.e. accounts for inflation. Therefore either project IRR calculated or benchmark shall be adjusted for inflation.

Response
The project IRRs have been adjusted for inflation and the nominal IRRs have been used for the benchmark analysis. The nominal project IRR without sale of Emission Reduction Units is 26.3%, i.e. below the benchmark of 30.59 %. The sale of Emission Reduction Units makes the project more financially feasible with the IRR 29.8% which is close to the benchmark. Please refer to page 18 in the PDD and the supporting document #2 (supporting doc. #2 is further financial analysis files).

Conclusion
Issue is closed.

Clarification Request (CL) 4
Please re-check salaries indicated for year 2011 as they are lower than those indicated for 2012-2017 despite the same production level.

Response
The 2011 salary of operative personnel is forecasted at a lower rate as compared with the salary in 2012 and beyond due to the current crisis in the construction sector of the economy. This clarification has been obtained from the company's financial specialists.

Conclusion
Issue is closed.

Clarification request (CL) 5
For some reason calculations of NPV in the file do not include cash flow during investment period (UAH -501.0 mln.). Please correct the formulas. Elimination of NPV calculations can be also considered as this indicator is of no use in the present PDD.

Response
Corrections have been made and the project NPV calculations have been eliminated. Please refer to the supporting document #2.

Conclusion
Issue is closed.

Clarification Request (CL) 6
Please clarify technological barriers at the section B.2.

Response
These barriers have been clarified. Provided additional details on technological barriers and added in prevailing practice barrier and market barrier (see page 23).

Conclusion
Issue is closed.

Clarification Request (CL) 7
Please provide the summary of national policies and circumstances relevant to the baseline of the proposed project activity.

Response

Cement sector in Ukraine is 100% privatized and there is no particular state programs regarding the development of cement production. The Energy Strategy of Ukraine until 2030 sets improvement of energy efficiency and decreasing energy intensity in the heavy industry as one of the long-term priorities for the state. At the same time the Energy Strategy until 2030 does not impose any obligations regarding energy intensity improvements, neither it introduces any financial incentives for the companies who reduce their energy consumption. The proposed JI project is in line with the host country's energy strategy.

Conclusion
Issue is closed.

Clarification Request (CL) 8
Please clarify in a more transparent way the exclusion of the emissions for production/processing of fuel mix, emissions from transportation of final product in the baseline and in the project and all other emissions that are considered not significant for the project.

Response
Justification for exclusion of these emissions has been updated. These emission sources have been excluded as they are outside the project boundary. This is in line with general principals and guidelines for selecting project scope, as seen within CDM Approved Cement Manufacturing Methodologies (specifically ACM0003 v07.2 and ACM0005 v4).

Conclusion
Issue is closed.

Clarification Request (CL) 9
Please change Annex 2 to Annex 1 in the section B.4.

Response
This change has been made. Please refer to page 36.

Conclusion
Issue is closed.

3.3 Monitoring Plan

There is no approved CDM methodology that can be directly applied to the proposed project. However approved CDM Methodologies, such as ACM0003 v07.2 and ACM0005 v04, have been consulted in detail for general principals and guidance with regards to cement projects.
As described in section B.3 the project activities affect the combustion of kiln fuel, coal drying emissions and electricity consumption. For the

development of the baseline scenario, and the project case, only those sources identified within Table 3 are included within the project and have been included within the monitoring plan.
The following main assumptions were made defining Monitoring Plan:

- Calcination emissions do not change between the baseline and the project; as baseline and project raw materials mix remains constant;
- The cement to clinker ratio is determined by orders received from IF Cement customers and is not considered to not change between the project and the baseline
- There is no legal requirement to implement any of the project activities;
- The fuel mix for the kiln firing is unaffected by the implementation of the project;

Corrective Action Request (CAR) 11
Please provide information on the collection and archiving of information on the environmental impacts of the project.

Response
IF Cement's collection and archiving of data is regulated by Ukraine's Ministry of Environmental Protection. Data is collected and archived within the Laboratory Facility at the IF Cement plant, please see further details included into the PDD on Page 73.

Conclusion
Issue is closed.

Corrective Action Request (CAR) 12
Please provide reference to the relevant host party regulations.

Response
Text and reference has now been inserted into the PDD to complete this section. Please refer to page 59 for details.

Conclusion
Issue is closed.

Clarification Request (CL) 10
Please provide the name and number of the section and please add indication of level of uncertainty as high/medium/low.

Response
The proper title has now been included into the PDD. Please refer to page 66 of the PDD.

Conclusion
Issue is closed.

3.4 Calculation of GHG Emissions

As per own format methodology, the baseline emission sources considered are:

- Electricity use for raw material extraction and processing
- Electricity and fuel for coal preparation and drying
- Electricity Use for Water Pumping
- Electricity for slurry process and mixing
- Electricity use for Wet Kiln 1
- Emissions from Combustion of Fuel for Kiln 1
- Electricity use for Wet Kiln 2 Operation
- Emissions from Combustion of Fuel for Kiln 2
- Emissions from Combustion of Fuel for Wet Kiln #3
- Emissions from Calcining of Limestone and Marl in Kiln 3
- Electricity use for clinker storage and cement milling

The baseline emissions are calculated by:

$$BE_y = BE_{coal,y} + [BE_{existing\ capacity,\ y} + BE_{capacity\ expansion,y}]$$

Where

BE_y is the baseline emissions in year y (tCO_2)
$BE_{coal,y}$ is the baseline emissions from the coal mill in year y (tCO_2)
$BE_{existing\ capacity,y}$ is the baseline emissions from wet cement production in year y (tCO_2)
$BE_{capacity\ expansion,y}$ is the baseline emissions from incremental production (tCO_2),

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

The project emissions sources considered are:

- Electricity use for raw material extraction and processing
- Electricity and fuel for coal preparation and drying
- Electricity Use for Water Pumping
- Electricity for slurry process and mixing
- Electricity use for Wet Kiln 1
- Emissions from Combustion of Fuel for Kiln 1
- Electricity use for Wet Kiln 2 Operation
- Emissions from Combustion of Fuel for Kiln 2
- Electricity use for Dry Kiln #3 Operation
- Emissions from Combustion of Fuel for Wet Kiln #3

- Emissions from Calcining of Limestone and Marl in Kiln 3
- Electricity use for clinker storage and cement milling

The projectline emissions are calculated by:

$$PE_y = PE_{coal,y} + PE_{prod,y}$$

Where

PE_y is the project emissions in year y (tCO_2)
$PE_{coal,y}$ is the project emissions from the coal drying and crushing in year y (tCO_2)
PE_{prod} is the project emissions from dry cement production and any remaining wet production in year y (tCO_2)

The detailed algorithms are described later under sections D.1.1.2 of the PDD.

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

The estimated annual average of approximately 168,701 tCO2e over the crediting period of emission reduction represents a reasonable estimation using the assumptions given by the project.

Corrective Action Request (CAR) 13
Please provide the table providing values of total CO_2.

Response
A summary table of project, baseline, and emission reductions has now been included within the PDD. Please refer to page 75.

Conclusion
Issue is closed.

3.5 Environmental Impacts

Cement production has a substantial impact on the local environment due to the combustion of fossil fuels as well as due to dust which is formed during the cement production cycle.

Controllable harmful substances emitted by various sources at the IF Cement include: nitrogen dioxide, sulfurous anhydride, carbon oxide as well as inorganic dust with SiO_2 content less than 20% and dust from the cement production. The plant's environment-relating activities are regulated by the Ukraine's Ministry of Environmental Protection. The Ministry approved Normative Permissible Levels of Emissions (Order #309

of June 27, 2006) and issued Permit # 262713 which established special normative permissible levels for the IF Cement for the period from May 28 2009 to January 28, 2014. Control over the emissions is conducted by the plant's laboratory which is certified to maintain sanitary-ecological norms. The laboratory conducts tests and keeps test records in accordance with the laboratory's passport and prescribed schedule.

Switching to a dry process will allow the company to significantly decrease fuel consumption, which in turn reduces emissions of harmful substances. The new dry technology will meet the existing Best Available Technology (BAT) benchmarks and will also decrease dust emissions compared to the existing emissions level.

As a result of the project implementation, specific (per one tonne of clinker) emissions from the new kiln #3 for the second half of 2008 decreased: dust – by 2.8 times, CO – 2 times, NO_x – 3 times and SO_2 - by 1.8 times as compared with the average emissions in 2005-2007. Improved environmental performance of three kilns in 2008 is demonstrated by the following emission reductions: dust - by 58%, CO – by 31%, NO_x – by 49%, SO_2 – by 44%*.

The Terms of Reference for the EIA production was prepared by the design institute Yuzhgiprocement" (February 16, 2007). The EIA document entitled "Reconstruction of Cement Production at the IF Cement with Introduction of Dry Method and New Energy-Saving Technologies" was prepared by the firm-subcontractor "BIO-PLUS", Ukraine, in February-May of 2007.

The EIA was reviewed and approved by the State Environmental Protection Agency in the Ivano-Frankivsk Oblast, (Decision of Expert Commission # 66, June 27, 2007) and the Ivano-Frankivsk Oblast Sanitary-Epidemiological Office, Ukraine's Ministry of Health (Decision of Expert Commission # 2008, May 16, 2007).

Corrective Action Request (CAR) 14

The information considering transboundary environmental effects is not provided. Please include one into section F of the PDD.

Response

In compliance with the national sanitary classification of production facilities the IF Cement pertains to the first group of facilities which requires the establishment of 1000 meters sanitary buffer zone. The distance between the plant and the state frontier is 200 kilometres. The surface-derived observations relating to nitrogen dioxide, sulphurous anhydride, carbon oxide and dust provide evidence that maximum

* Information provided IF Cements Laboratory, please refer to supporting documentation #3.

concentration levels of these harmful substances do not exceed the normative levels throughout the dissipation area. An aggregate maximum concentration of the substances at the border of the sanitary buffer zone is twice less than the maximum permissible level. Therefore, the plant does not have negative transboundary pollution impacts on the territories of foreign countries.
This information has been included into the PDD. Please refer to page 74 within section F.

Conclusion
Issue is closed.

3.6 Comments by Local Stakeholders

In compliance with the existing State Construction Standards relating to the EIA, IF Cement (Project Proponent) and "Yuzhgiprocement" (EIA Developer) prepared and published "The Notice of Intent" which outlined the anticipated project environmental impacts. The Notice was co-signed by State Environmental Protection Agency in the Ivano-Frankivsk Oblast, Ivano-Frankivsk Oblast Sanitary-Epidemiological Office, Ukraine's Ministry of Health and Yamnitsky Village Council (municipal authority).

IF Cement informed the public about the proposed reconstruction and anticipated environmental impacts through the municipal authority and mass media (Reference of May 10, 2007). The feedback from the public and results of the public hearings are summarized in the Minutes signed by the municipal authority, June 17, 2007.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

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

Bureau Veritas Certification Holding SAS published the project documents on the Bureau Veritas website (http://bureauveritas.com) on 17/07/2009 and invited comments within 17/08/2009 by Parties, stakeholders and non-governmental organizations. Comments were not received.

5 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the "Ivano-Frankivsk Cement Switch from Wet-to-Dry Cement and fuel savings for coal drying, Ukraine" Project in Ukraine. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the

criteria given to provide for consistent project operations, monitoring and reporting.

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

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

By employing a new technology and implementing a new measure in the process, the project is likely to result in reductions of GHG emissions partially. An analysis of the investment and technological barriers demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation version 1.4 and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

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

6 REFERENCES

Category 1 Documents:
Documents provided by GreenStream Network that relate directly to the GHG components of the project.

/1/ PDD file created 06.07.2009

/2/ PDD version 1.2. dated 10.07.2009

/3/ PDD version 1.4 dated 26.08.2009

/4/ Letter of Endorsement #668/23/7 dated 08.09.2008 issued by National Environmental Investment Agency of Ukraine

Category 2 Documents:

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

/1/ Supporting Spreadsheet #1Calculations of emission reductions

/2/ Supporting Spreadsheet#2 Investment analysis calculations

/3/ Supporting Document#2 Investment analysis calculations after financial specialist review

/4/ Financial specialist additionality review

/5/ Final report "UKRAINE ENERGY EFFICIENCY PROGRAMME - UKEEP Energy Assessment at JSC Ivano-Frankivskcement, Ukraine" dated March 2008, rev.1.1

/6/ Value calculation of 1 ton of conventional fuel for 2009

/7/ Fuel usage on clinker production from 2002 till 2008

/8/ Clinker production amount for 2008

/9/ Calculation of conventional fuel need for 2009 for wet kiln#3

/10/ Calculation of 1 ton of natural mixture, mud, peat for the 1st quarter of 2009

/11/ Calculation of 1 ton of natural mixture, mud, peat for the 2nd quarter of 2009

/12/ Calculation of 1 ton of natural mixture, mud, peat for the 3dquarter of 2009

/13/ Calculation of 1 ton of natural mixture, mud, peat for the 4th quarter of 2009

/14/ Price cost calculation of the preparation of 1 ton of coal for clinker production for 2009

/15/ Calculation of 1 ton of coal for wet kiln#3 for 2009

/16/ Table of the quality assurance of the metering equipment

/17/ Gas expenditure at JSC Ivano-Frankivsk Cement for January 2005

/18/ Gas expenditure at JSC Ivano-Frankivsk Cement for February 2005

/19/ Gas expenditure at JSC Ivano-Frankivsk Cement for March 2005

/20/ Gas expenditure at JSC Ivano-Frankivsk Cement for April 2005

/21/ Gas expenditure at JSC Ivano-Frankivsk Cement for May 2005

/22/ Gas expenditure at JSC Ivano-Frankivsk Cement for June 2005

/23/ Gas expenditure at JSC Ivano-Frankivsk Cement for July 2005

/24/ Gas expenditure at JSC Ivano-Frankivsk Cement for August 2005

/25/ Gas expenditure at JSC Ivano-Frankivsk Cement for September 2005

/26/ Gas expenditure at JSC Ivano-Frankivsk Cement for October 2005

/27/ Gas expenditure at JSC Ivano-Frankivsk Cement for November 2005

/28/ Gas expenditure at JSC Ivano-Frankivsk Cement for December 2005

/29/ Gas expenditure at JSC Ivano-Frankivsk Cement for May 2006

/30/ Gas expenditure at JSC Ivano-Frankivsk Cement for June 2006

/31/ Gas expenditure at JSC Ivano-Frankivsk Cement for July 2006

/32/ Gas expenditure at JSC Ivano-Frankivsk Cement for August 2006

/33/ Gas expenditure at JSC Ivano-Frankivsk Cement for September 2006

/34/ Gas expenditure at JSC Ivano-Frankivsk Cement for October 2006

/35/ Gas expenditure at JSC Ivano-Frankivsk Cement for November 2006

/36/ Gas expenditure at JSC Ivano-Frankivsk Cement for December 2006

/37/ Gas expenditure at JSC Ivano-Frankivsk Cement for January 2006

/38/ Gas expenditure at JSC Ivano-Frankivsk Cement for February 2006

/39/ Gas expenditure at JSC Ivano-Frankivsk Cement for March 2006

/40/ Gas expenditure at JSC Ivano-Frankivsk Cement for April 2006

/41/ Gas expenditure at JSC Ivano-Frankivsk Cement for September 2007

/42/ Gas expenditure at JSC Ivano-Frankivsk Cement for October 2007

/43/ Gas expenditure at JSC Ivano-Frankivsk Cement for November 2007

/44/ Gas expenditure at JSC Ivano-Frankivsk Cement for December 2007

/45/ Gas expenditure at JSC Ivano-Frankivsk Cement for January 2007

/46/ Gas expenditure at JSC Ivano-Frankivsk Cement for February 2007

/47/ Gas expenditure at JSC Ivano-Frankivsk Cement for March 2007

/48/ Gas expenditure at JSC Ivano-Frankivsk Cement for April 2007

/49/ Gas expenditure at JSC Ivano-Frankivsk Cement for May 2007

/50/ Gas expenditure at JSC Ivano-Frankivsk Cement for June 2007

/51/ Gas expenditure at JSC Ivano-Frankivsk Cement for July 2007

/52/ Gas expenditure at JSC Ivano-Frankivsk Cement for August 2007

/53/ Gas expenditure at JSC Ivano-Frankivsk Cement for January 2008

/54/ Gas expenditure at JSC Ivano-Frankivsk Cement for February 2008

/55/ Gas expenditure at JSC Ivano-Frankivsk Cement for March 2008

/56/ Gas expenditure at JSC Ivano-Frankivsk Cement for April 2008

/57/ Gas expenditure at JSC Ivano-Frankivsk Cement for May 2008

/58/ Gas expenditure at JSC Ivano-Frankivsk Cement for June 2008

/59/ Gas expenditure at JSC Ivano-Frankivsk Cement for July 2008

/60/ Gas expenditure at JSC Ivano-Frankivsk Cement for August 2008

/61/ Gas expenditure at JSC Ivano-Frankivsk Cement for September 2008

/62/ Gas expenditure at JSC Ivano-Frankivsk Cement for October 2008

/63/ Gas expenditure at JSC Ivano-Frankivsk Cement for November 2008

/64/ Gas expenditure at JSC Ivano-Frankivsk Cement for December 2008

/65/ Gas expenditure at JSC Ivano-Frankivsk Cement for January 2009

/66/ Gas expenditure at JSC Ivano-Frankivsk Cement for February 2009

/67/ Gas expenditure at JSC Ivano-Frankivsk Cement for March 2009

/68/ Gas expenditure at JSC Ivano-Frankivsk Cement for April 2009

/69/ Gas expenditure at JSC Ivano-Frankivsk Cement for May 2009

/70/ List of measuring equipment that is being under exploitation and must be checked

/71/ Certificate of working equipment checking #82 ТСПУ-0289 №066145 dated 23.01.2008 valid till 23.01.2010

/72/ Certificate of working equipment checking #47 МИНН-2А №04416312 dated 20.01.2008 valid till 20.01.2010

/73/ Protocol #04/2008 Checking of the multifunctional equipment for management and protection REF542plus

/74/ Certificate #199 of state metrological attestation of АСКОЕ system dated 10.12.2007 valid till 10.12.2011

/75/ Technical project of the АСКОЕ system

/76/ Passport of the meter ZMD405CT44.00752 -3x58/415 V 5(10)A #94916174 calibrated April 2008

/77/ Passport of the meter ZMD410CR44.4407.c2 -3x58/100 V 5(10)A #94977013 calibrated April 2008

/78/ Passport of the meter ZMD410CR44.4407.c2 -3x58/100 V 5(10)A #94977010 calibrated April 2008

/79/ Passport of the meter ZMD410CR44.4407.c2 -3x58/100 V 5(10)A #94977009 calibrated April 2008

/80/ Passport of the meter ZMD410CR44.0007.c52 -3x58/100 V 5(10)A #94344587 calibrated December 2007

/81/ Passport of the meter УНІВЕРСАЛ-02 #1356 last calibrated 26.08.2008

/82/ Passport of the gas meter DELTA 2050/100G65 #K4795304.04 last calibrated 24.01.2008

/83/ List of state calibrated equipment

/84/ Technical passport of the wages ВПП ПС – 100 №0203 last calibrated 25.03.2009

/85/ Technical passport of gas meter ЛГ-К-Ex 200-1600-0,5 last calibrated 20.03.2008

/86/ Technical passport of pressure meter МИДА-ДА -13П01Ex №06100901 last calibrated 23.01.2008

/87/ Technical passport of the wages ВЦПС – 150 №0204 last calibrated 30.03.2009

/88/ Certificate of working equipment checking #752 ТСМУ-0289 №003 dated 18.04.2008 valid till 18.04.2010

/89/ Certificate of working equipment checking #691/Т ТСМУ-0289 №001 dated 22.04.2009 valid till 22.04.2011

/90/ Technical passport of gas meter ЛГ-К 200-1600-1,6-01 #6129 last calibrated 11.05.2007

/91/ Technical passport of pressure meter МИДА-13П01Ex №07207241 last calibrated 20.01.2009

/92/ Passport of the meter УНІВЕРСАЛ-02 #1511 last calibrated 11.06.2008

/93/ Electricity consumption table from 2005 till 2008

/94/ List of the equipment of the commercial audit of gas expenditure dated 13.05.2009

/95/ Photo, electric meter ZMD410CR44.4407.c2 -3x58/415 V 5(10)A #94916174

/96/ Photo, electric meter ZMD410CR44.4407.c2 -3x58/100 V 5(10)A #94977009

/97/ Photo, electric meter ZMD410CR44.4407.c2 -3x58/100 V 5(10)A #94977010

/98/ Photo, electric meter ZMD410CR44.0007.c52 -3x58/100 V 5(10)A #94344587

/99/ Photo, computer metering system

/100/ Photo, electricity consumption

/101/ Photo, transformer #2 of the coal complex

/102/ Photo, journal of the operators' shift acceptance

/103/ Photo, journal of remarks on the mechanical part

/104/ Photo, journal of the accidental stops of the rotary kilns

/105/ Photo, raw mill chemical composition for 23.06.2009

/106/ Photo, clinker chemical composition for 23.06.2009

/107/ Photo, reports for 2009

/108/ Photo, Order of the National Accreditation Agency #405 dated 19 August 2008

/109/ Photo, Certificate of continuation of the certificate legitimacy dated 07.07.2009

/110/ Photo, Certificate of working equipment checking #1374 R4-12MN №066 dated 16.07.2008 valid till 16.07.2009

/111/ Photo, journal of the peat acceptance

/112/ Photo, results of the coal burned for May 2009

/113/ Photo, certificate on the conducting the control of the coal entering JSC Ivano-Frankivsk Cement

/114/ Photo, journal#17 of the clinker chemical analyses

/115/ Photo, journal#18 of the monthly chemical analyses

/116/ Photo, journal of the slam chemical analyses

/117/ Photo, journal#19 of the coal ashes chemical analyses

/118/ Photo, journal of the peat ashes chemical analyses

/119/ Photo, journal#16 of the entering raw material chemical analyses

/120/ Photo, Order#43 of the reconstruction of rotary kiln#3 dated 19.02.2008

/121/ Photo, Agreement dated 24.09.2007 between JSC Ivano-Frankivsk Cement and CEMEX Polska Sp.z.o.o.

/122/ Photo, programme of the working training of the JSC Ivano-Frankivsk Cement employees

/123/ Photo, programme of the working training of the JSC Ivano-Frankivsk Cement employees that are working with technological line #3

/124/ Photo, technological production scheme

/125/ Photo, scheme of the monitoring of the main equipment of the mechanical part of the cement production for 2008

/126/ Photo, calculation of the normative electricity consumption

/127/ Photo, calculation of the normative fuel consumption

/128/ Photo, chemical composition of the slam, clinker (for kiln #1 and kiln#2) for 2005-2008 years

/129/ Photo, chemical composition for kiln #3 of the slam, clinker for 2005-2007 years

/130/ Photo, consumption of fuel for clinker production Kiln#1,2,3 for 2006-2008 years

/131/ Photo, percentage of clinker content in cement for 2006-2008

/132/ Photo, calculation of working capacity of cement workshop for 2007

/133/ Photo, working project of the "Reconstruction of Cement Production with the Switch from Wet-to-Dry Cement and implementation of new energy saving technologies" dated 2007

/134/ Photo, Environmental Impact Assessment dated 2007

/135/ Photo, Notice of Environmental Consequences dated 2007

/136/ Photo, state constructional norms

/137/ Photo, Notice of Intensions dated 2007

/138/ Photo, License for performing constructional works #78 dated 18.07.2007

/139/ Photo, protocol of local stakeholders comments

/140/ Photo, conclusion of the state complex expertise dated 10.07.2007

/141/ Photo, expert conclusion dated 15.05.2007

/142/ Photo, expert conclusion32984/2289 dated 15.06.2007

/143/ Photo, protocol of the project consideration 16.05.2007

/144/ Photo, conclusion #66 of the state ecological expertise dated 27.06.2007

/145/ Photo, expert conclusion#07B1868542656092 dated 05.07.2007

/146/ Photo, conclusion of the labour safety expertise dated 05.07.2007

/147/ Photo, work instruction of the head metrologist

/148/ Photo, Notice of the metrological services of the JSC Ivano-Frankivsk Cement dated 2006

/149/ Photo, management structure

/150/ Photo, certificate of natural gas quality #186 dated 26.06.2009

/151/ Photo, certificate of natural gas quality #184 dated 17.06.2009

/152/ Photo, certificate of natural gas quality #80 dated 15.06.2009

/153/ Photo, Technical passport of the tensometric wages ТВА 60-20-18(8) Пр 10 (RC3) №271 last calibrated 17.04.2009

/154/ Photo, Technical passport of the tensometric wages ТВА 60-15(4) Кф 10 (RC3) №081 last calibrated 12.06.2009

/155/ Photo, Technical passport of the tensometric wages ТВА 60-15(4) Кф 10 (RC3) №059 last calibrated 07.10.2008

/156/ Photo, expert conclusion of the wages ВПП-100 №876 dated 17.01.2006

/157/ Photo, expert conclusion of the wages ВЦ-150 №4410 dated 17.01.2006

/158/ Photo, Technical passport of the tensometric wages ТВВ 150-50-13,5 (8) Пф 24ц(RC3) №265 last calibrated 26.03.2009

/159/ Photo, order#426 of acceptance of the constructional works dated 26.06.2008

/160/ Photo, act of acceptance of the constructional works dated 20.06.2008

/161/ Photo, journal of the audit of mechanical equipment on the "Випал" departement of the rotary kiln #3

/162/ Photo, defect list for rotary kiln#3 reconstruction dated 18.06.2009

/163/ Photo, defect list for rotary kiln#3 reconstruction dated 17.06.2009

/164/ Photo, defect list for rotary kiln#3 reconstruction dated 19.06.2009

/165/ Photo, technical passport of the dosator of coal dust MULTICOR K40 #043029 B1529- 2008 last calibrated 29.04.2009

/166/ Photo, technical passport of the dosator of coal dust MULTICOR K40 #V03531 B1503- 2007 last calibrated 27.04.2009

/167/ Photo, technical passport of the dosator of coal dust MULTICOR K40 #V03531 B1529- 2007 last calibrated 27.04.2009

/168/ Photo, technical passport of the dosator of coal dust MULTICOR K40 #V953103 B15 last calibrated 29.04.2009

/169/ Photo, technical passport of the wage dosator SHENK MTD 1220 (V51) #V002170.A01 last calibrated 03.06.2009

/170/ Photo, technical passport of the wage dosator SHENK MTD 1220 (V51) #V002169.A01 last calibrated 03.06.2009

/171/ Photo, technical passport of the wage dosator SHENK MTD 1220 (V51) #V002171.A01 last calibrated 03.06.2009

/172/ Photo, technical passport of the Low system of the source management #80008984 last calibrated 21.04.2009

/173/ Photo, technical passport of the wage dosator DOSIMAT #76912 last calibrated 17.04.2009

/174/ Photo, technical passport of the wage dosator DOSIMAT D/5.1 #76912.1 last calibrated 17.04.2009

/175/ Photo, technical passport of the wage dosator constant performance MULTIDOS DEL 1015 T9 #1BDD0013 last calibrated 10.06.2009

/176/ Photo, technical passport of the wage dosator constant performance MULTIDOS DEL 0820 T9 #1BDD0015 last calibrated 10.06.2009

/177/ Photo, technical passport of the wage dosator constant performance MULTIDOS DEL 0820 T9 #1BDD0407 last calibrated 11.06.2009

/178/ Photo, technical passport of the wage dosator constant performance MULTIDOS DEL 0820 T9 #1BDD0406 last calibrated 11.06.2009

/179/ Photo, technical passport of the wage dosator constant performance MULTIDOS DEL 0820 T9 #1BDD0405 last calibrated 11.06.2009

/180/ Photo, technical passport of the wage dosator constant performance MULTIDOS DEL 1015 T9 #V070446.B01 last calibrated 17.04.2009

/181/ Photo, technical passport of the wage dosator constant performance MULTIDOS DEL 1015 T9 #V070448.B01 last calibrated 17.04.2009

/182/ Photo, technical passport of the wage dosator constant performance MULTIDOS DEL 1015 T9 #V070447.B01 last calibrated 17.04.2009

/183/ Photo, technical passport of the wage dosator constant performance MULTIDOS DEL 0820 T9 #1BDD0014 last calibrated 10.06.2009

/184/ Photo, graphic of the calibration procedures at JSC Ivano-Frankivsk Cement for 2009

/185/ Photo, reports for 2007

/186/ Photo, economical values for 2007

/187/ Photo, cement production according to brands for 2007

/188/ Photo, raw materials for 2007

/189/ Photo, coal according to brands for 2007

/190/ Photo, coal expenditure according to brands for 2007

/191/ Photo, working report on the raw materials flow in December 2007

/192/ Photo, cement shipment in October 2007

Persons interviewed:

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

/1/ Bogdan Zayats – Chief Executiveof JSC Ivano-Frankivsk Cement

/2/ Oksana Kulyk – Head of the economical department

/3/ Stanislav Korchynskiy – Labor safety and environment

/4/ Nadiya Kovalska – Head ecologist

/5/ Galyna Kauch – engineer-chemist

/6/ Petro Kardash – Head energetic

/7/ Oleg Yarema – Head of the technological department

/8/ Lesya Ivantsiv – engineer-technologist

/9/ Vasyl Lishchynskyi – Head metrologist

/10/ Andriy Demkiv – Head of the cement production

/11/ Mykola Makoviychuk – Head of the binding materials department

/12/ Ivan Kovalchuk – Head of the village Yamnytsya

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APPENDIX A: COMPANY JI PROJECT DETERMINATION PROTOCOL

JI PROJECT Determination Protocol

Table 1 Mandatory Requirements for Joint Implementation (JI) Projects

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)	Letters of approval will be issued by the Parties involved upon submission of Determination Report with CARs and CLs clarified except CAR5. Remaining CAR5 will be closed after the issuance of the LoA by the Parties involved.	Table 2, Section A.5
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
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)	Article 5 requires "…Annex I Parties to having in place, no later than 2007, national systems for the estimation of greenhouse gas emissions by sources and removals by sinks." Article 7 requires "… Annex I Parties to submit annual	OK

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		greenhouse gas inventories, as well as national communications, at regular intervals, both including supplementary information to demonstrate compliance with the Protocol". The Netherlands has submitted its Initial Report on 21 December 2006 (http://unfccc.int/national_reports/initial_reports_under_the_kyoto_protocol/items/3765.php).	
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	OK
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 \	Both countries have designated their Focal Points. National guidelines and procedures for approving JI projects have been published. Contact data in Ukraine:. **National Environmental Investment Agency of**	Table 2 section A.5.

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		Ukraine 35 Urytsky Str., Kyiv, P.O. 03035 Phone: +380 44 594 91 11 Fax: +380 44 5949115 Email: info.neia@gmail.com National guidelines and procedures for the approval of JI projects are available (www.neia.gov.ua) Contact data in the Netherlands: **Ministry of Economic Affairs** Catharijnesingel 59 P.O. Box 8242 3503 RE Utrecht Netherlands Phone: +31 30 239 3413 Email: d.de.haan@senternovem.nl National guidelines and procedures for the approving	

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		JI projects are available (http://ji.unfccc.int/UserManagement/FileStorage/XQ0CYFTBQDSELQJSZUKHKRMANMD6QD	
6. The host Party shall be a Party to the Kyoto Protocol	Marrakech Accords, JI Modalities, §21(a)/24	The Ukraine is a Party (Annex I Party) to the Kyoto Protocol and has ratified the Kyoto Protocol at April 12th, 2004.	Table 2 section A.5.
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	In the Initial Report submitted by Ukraine on 29. Dec. 2006 the AAUs are quantified with: 925 362 174.39 (x 5) = 4 626 810 872 tCO2-e	OK
8. The host Party shall have in place a national registry in accordance with Article 7, paragraph 4	Marrakech Accords, JI Modalities, §21(d)/24	The designed system of the national registry has been described in the Initial Report mentioned above	OK
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	OK
10. The project design document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days,	Marrakech Accords, JI Modalities, §32	The PDD was made publicly available trough AIE website form 17/07/2009 till	OK

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
provide comments		17/08/2009.	
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
12. The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B
13. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B
14. The baseline methodology shall exclude to earn ERUs for decreases in activity levels outside the project activity or due to force majeure	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B
15. The project shall have an appropriate monitoring plan	Marrakech Accords, JI Modalities, §33(c)	OK	Table 2, Section D
16. Are project participants authorized by a Party involved	JISC "Modalities	See CAR5.	Table 2, Section A

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
	of communication of Project Participants with the JISC" Version 01, Clause A.3	Conclusion is pending until Letters of Approval authorizing the project participants by Parties involved will be issued.	

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?		DR	The title of the project is indicated correctly. See section A.1.	OK	OK
A.1.2. Is the current version number of the document presented?			The current version of the project of the project is indicated. See section A.1.		OK
		DR	Corrective Action Request (CAR) 1 Please provide sectoral scope of the project in the section A.1. of the PDD.	CAR1	
A.1.3. Is the date when the document was completed presented?		DR	The date of the project is presented. See section A.1.	OK	OK
A.2. Description of the project					
A.2.1. Is the purpose of the project included?		DR I	The purpose of the project is stated clearly as separate abstract.	OK	OK
A.2.2. Is it explained how the proposed project reduces greenhouse gas emissions?			This project aims at substantially reducing the streams of emissions by implementing two primary project activities, as follows:		
		DR	3) Switch from wet-to-dry cement production (including capacity expansion) resulting in significant fuel savings		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			4) Utilization of waste heat for processing coal drying Corrective Action Request (CAR) 2 Please provide brief description of the baseline scenario in the section A.2. Corrective Action Request (CAR) 3 Please include into section A.2. brief summary of the JI project history.	CAR2 CAR 3	OK OK
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?		DR	Project participants and parties involved are listed in the Table 2 section A.3. of PDD version 1.4.	OK	OK
A.3.2. Are project participants authorized by a Party involved?		DR	See CAR5.	-	-
A.3.3. The data of the project participants are presented in tabular format?		DR	Project participants and parties involved are listed in the Table 2 section A.3. of PDD version 1.4.	OK	OK
A.3.4. Is contact information provided in annex 1 of the PDD?		DR	Yes, the information is provided in Annex 1 of the PDD version 1.4.	OK	OK
A.3.5. Is it indicated, if it is the case, if the Party involved is a host Party?		DR	None of the provided Parties involved is indicated as a host Party. Corrective Action Request (CAR) 4	CAR 4	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			Please indicate in the Table 2 of the section A.3. which Party among the Parties involved is a host Party.		
A.4. Technical description of the project					
A.4.1. Location of the project activity					
A.4.1.1. Host Party(ies)		DR	Ukraine is indicated as a host party.	OK	OK
A.4.1.2. Region/State/Province etc.		DR	Ivano-Frankivsk Region.	OK	OK
A.4.1.3. City/Town/Community etc.		DR	vil Yamnytsya, Tysmenytsya district	OK	OK
A.4.1.4. Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)		DR	All the information is provided in English according to the template and does not exceed one page.	OK	OK
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					
A.4.2.1. Does the project design engineering reflect current good practices?		DR	The project design engineering reflects the brief explanation of the technology to be employed and current good practices.	OK	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?		DR	The project consists of two main activities. The first is employing a new technology and the second is implementing a new measure in the process. First of all, one of the wet kilns will be replaced with a dry kiln	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			and a dryer crusher will be installed. Secondly, coal drying will use waste heat from the dry kiln, replacing natural gas usage. The dry process does not include the mixing of water with the raw material. Rather the raw materials must have a low moisture content. As there is no water, the evaporation of water from slurry is not required. Therefore this measure implemented by the project significantly reduces the level of energy consumption compared to a wet kiln, and therefore reduces the CO_2 emissions from fuel combustion. Technology that is about to be implemented according to the project is dry technology, which is commonly globally used, is not state of the art technology but at the same time is not common practice at the host Party. Technology, which is commonly used at the host Party, is wet technology. Implementation of the new technology and new measure will lead to better performance in comparison to any commonly used technologies in the host country.		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
A.4.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?		DR	The project technology is not likely to be substituted by other or more efficient technology within the project period since around 90% of Ukraine's cement producers are still using the "wet" production method, which is very energy intensive and considered an obsolete technology by modern standards. Converting to the "dry" method using modern equipment usually saves around 50% of energy consumption. But cheap energy has kept the Ukrainian cement industry from converting. (UKEEP report see section 6 for the reference)	OK	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?		DR	Since the project activity is supposed to be the implementation of new technology the extensive initial training and maintenance efforts in order to work as presumed is required.	OK	OK
A.4.2.5. Does the project make provisions for meeting training and maintenance needs?		DR	The project involves the installation and operation of a dry kiln and all the equipment necessary to operate it which is newer technology to Ukraine. Therefore IF Cement put in place an extensive training programme so that the staff will be familiar and able to operate this different process. Furthermore new operating personnel as well as a new processing line and shift		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			foremen will be required to operate the new technology. The training program is developed and delivered by FLSmidth of Denmark, the engineering firm involved in the project documents (mechanical and electrical) preparation as well as supply and transportation of the equipment and replacement parts. The program included on-the-job training which was held on a similar processing line designed by FLSmidth at the cement plant in the city of Chelm, Poland (Cementownia Chelm S.A.). The trainees were provided with the manual and those who completed the program also passed the internal factory exam before starting to work on the new dry processing line. Maintenance planning is carried out on the basis of annual schedules of equipment maintenance that are made on the basis of national maintenance standards. Routine maintenance work is done by the qualified personnel of IF Cement. In the case where maintenance procedures cannot be done internally, an external company is contracted to do the maintenance work. Clarification Request (CL) 1		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			Please clarify which external company is contracted to do maintenance work.	CL1	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)		DR	The project will affect the impact of the fuel combustion component and potentially the electricity consumption values. Emission reductions from this project are considered on the basis of reducing CO_2 emissions and do not take other GHG emissions, such as N_2O and CH_4, into account. This provides a conservative estimate of reductions. The wet technology for cement production requires mixing of marl, limestone and water to form slurry, where water contributes about 40% of the weight. This mixture is then passed through a rotary kiln. The process requires significant amounts of energy to evaporate the water contained in the slurry. When the dry technology for cement production is	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			applied, the mixing of marl and limestone is done without adding water, which creates the opportunity to save significant amounts of fossil fuel. In addition, the project will use waste heat that is recovered from the dry kiln to dry coal before it is crushed and used to fuel the clinker production process. Previously coal was dried using natural gas. This natural gas is now no longer needed, leading to an additional emission reduction. The section does not exceed one page and complies with all the requirements.		
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?		DR	The estimation of emission reductions over the crediting period is provided in the Table 3 in the Section A.4.3.1. of the PDD version 1.4.	OK	OK
A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?		DR	The estimation of annual reductions over the crediting period is provided in the Table 3 in the Section A.4.3.1. of the PDD version 1.4.	OK	OK
A.4.3.4. Are the data from questions A.4.3.2 to A.4.3.4 above presented in tabular format?		DR	Yes, see the section A.4.3.2. and A.4.3.3. of this protocol.	OK	OK
A.5. Project approval by the Parties involved					
A.5.1. Are written project approvals by the Parties involved attached?		DR	The Project Idea Note (PIN) for the project has been reviewed by the National		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			Environmental Investment Agency Ukraine in 2008. The Project had received the Letter of Endorsement № 668/23/7 dated 08.09.2008. After finishing of project determination procedure, the PDD and Determination Report will be submitted to National Environmental Investments Agency of Ukraine for receiving the Host Country Letter of Approval, and to the Ministry of Economic Affairsof the Netherlands. <u>Corrective Action Request (CAR) 5</u> There is no evidence of written project approvals by the Parties involved	CAR5	-
B. Baseline					
B.1. Description and justification of the baseline chosen					
B.1.1. Is the chosen baseline described?		DR	"Continuation of the existing situation" is accepted as the baseline scenario. <u>Corrective Action Request (CAR) 6</u> Please provide proper transparent description of the baseline chosen and included in the list of the considered alternatives. Also please define what is considered under 'a sector-wide baseline	CAR6	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			for all incremental production that the new dry kiln may provide' since it is not clear if the baseline scenario is just the continuation of existing situation.		
B.1.2. Is it justified the choice of the applicable baseline for the project category?		DR	The choice of the applicable baseline scenario is justified with the help of describing existing alternatives and proving the barriers which do not prevent the chosen baseline scenario only.	OK	OK
B.1.3. Is it described how the methodology is applied in the context of the project?		DR	There is no approved CDM methodology that can be directly applied to the proposed project. However, two similar JI projects have already been determined by an Independent Entity: the Podilsky Cement project and the Volyn Cement project. The Podilsky Cement PDD outlines a change in cement process from a wet technology to a dry process. Volyn Cement has also switched cement production from a wet process to semi-dry, as well as implementing changes in the raw material composition. The Podilsky Project Design Document (PDD) has passed the JISC review process, while the Volyn Cement PDD has passed stakeholder review, therefore using this guidance while developing the project design document for IF Cement is feasible.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			Therefore, according to Annex 1 of the JISC Guidance on Criteria for Baseline Setting and Monitoring "additionality can be proved by demonstrating that the baseline is conservative and that the project is not included in the baseline." This is shown by following steps one to four of the current "Tool for the Demonstration and Assessment of Additionality, Version 05.2"		
B.1.4. Are the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)?		DR	The basic assumptions of the baseline methodology in the context of the project are presented in the section B.1. of the PDD version 1.4.	OK	OK
B.1.5. Is all literature and sources clearly referenced?			<u>Corrective Action Request (CAR) 7</u>		
		DR	Please provide appropriate reference to all the literature and numbers/factors, coefficients used in the PDD.	CAR7	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?		DR	The most recent "Tool for the demonstration and assessment of additionality (version 05.2)" is applied to prove that the anthropogenic emissions are reduced below those that would have		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			occurred in the absence of the JI project. According to application of this tool the project is considered to be additional. Project IRR benchmark analysis was determined as relevant for the presented project. Project IRR was determined to be 26,3% for the project without the sale of ERUs (baseline scenario) and 29,8% with the sale of ERUs (projectline scenario). The IRR estimates show that without the sale of carbon credits and without a significantly long payback period this project is not feasible. The barriers to the project activity (besides the investment one) are: • few operating examples of dry cement production in Ukraine as the wet process is common practice. • low awareness levels and minimal technical expertise for dry production in the cement sector. • lack of examples or knowledge about the dry process. • IF Cement employees must undergo training on the entire		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			process and be capable of dealing with operating problems. Altogether investment, barrier and common practice analysis show that project activity is not feasible though is additional. <u>Corrective Action Request (CAR) 8</u> According to "Tool for the demonstration and assessment of additionality (version 05.2)" barrier analysis should be considered as step 3 not sub-step 3. Please provide appropriate corrections. Please also provide sub-steps a and b under step 3. Without conducting those steps project can not be proceeded to the next part and considered additional. <u>Clarification Request (CL) 2</u> Please provide clear specification of the benchmark value. <u>Clarification Request (CL) 3</u> It appears that financial calculations (SupportingSpreadsheetNo2_Investment_ Analysis.xls) were made in fixed prices as of 2008. Please add the relevant remark in Sub-step 2a and Excel file. Please note that IRR obtained from calculations based on fixed prices can not be compared	CAR8 CL2 CL3	OK OK OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			directly to benchmark value which is the nominal value i.e. accounts for inflation. Therefore either project IRR calculated or benchmark shall be adjusted for inflation. Clarification Request (CL) 4	CL4	OK
			Please re-check salaries indicated for year 2011 as they are lower than those indicated for 2012-2017 despite the same production level. Clarification request (CL) 5	CL5	OK
			For some reason calculations of NPV in the file do not include cash flow during investment period (UAH -501.0 mln.). Please correct the formulas. Elimination of NPV calculations can be also considered as this indicator is of no use in the present PDD. Clarification Request (CL) 6	CL6	OK
			Please clarify technological barriers at the section B.2. Corrective Action Request (CAR) 9	CAR9	OK
			Please provide sub-steps 4a and 4b under step 4 because without conducting those steps project can not be considered additional.		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
B.2.2. Is the baseline scenario described?		DR	See CAR 6.	-	OK
B.2.3. Is the project scenario described?		DR	The project scenario is clearly described and compared to the baseline one with the help of the "Tool for the demonstration and assessment of additionality (version 05.2)".	OK	OK
B.2.4. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario included?		DR	The section B.2. of the PDD version 1.4. contains an analysis that shows why the emissions in the baseline scenario would likely exceed the emissions in the project scenario. Since the project scenario (see A.4.2) comparing with the baseline scenario will lead to reduction anthropogenic emissions of GHG at Ukrainian energy system will be reduced below those that would have occurred in the absence of the JI project.	OK	OK
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?		DR	It is clearly demonstrated that the project activity itself is not a likely baseline scenario. Alternative "Continuation of existing situation" is considered to be baseline scenario. Barrier analysis was used in order to choose baseline scenario.	OK	OK
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?		DR	Currently there is no national regulation or other incentive on the national level that would require a change of technology at		OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			cement plants. Cement sector in Ukraine is 100% privatized and there is no particular state programme regarding the development of cement production.Though national policies and circumstances relevant to the baseline of the proposed project activity are not summarized. Clarification Request (CL) 7 Please provide the summary of national policies and circumstances relevant to the baseline of the proposed project activity.	CL7	
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?		DR	The project activities are limited physically by the premises of the IF Cement located at vil Yamnytsya, Tysmenytsya district. Clarification Request (CL) 8 Please clarify in a more transparent way the exclusion of the emissions for production/processing of fuel mix, emissions from transportation of final product in the baseline and in the project and all other emissions that are considered not significant for the project.	CL8	OK
B.4. Further baseline information, including the date of baseline setting and the name(s) of the					

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
person(s)/entity(ies) setting the baseline					
B.4.1. Is the date of the baseline setting presented (in DD/MM/YYYY)?		DR	The date of the baseline setting is not presented. Corrective Action Request (CAR) 10 Please provide the date of the baseline setting in the given format (DD/MM/YYYY)	CAR10	OK
B.4.2. Is the contact information provided?		DR	The contact information is provided in the Annex 1 of the PDD version 1.4. Clarification Request (CL) 9 Please change Annex 2 to Annex 1 in the section B.4.	CL9	OK
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?		DR	The entity is the project participant listed in Annex 1 of the PDD version 1.4.	OK	OK
C. Duration of the project and crediting period					
C.1. Starting date of the project					
C.1.1. Is the project's starting date clearly defined?		DR	The project's starting date is clearly defined in the section C.1. of the PDD version 1.4.	OK	OK
C.2. Expected operational lifetime of the project					
C.2.1. Is the project's operational lifetime clearly defined in years and months?		DR	The project's operational lifetime is clearly defined in years and months in the section C.2. of the PDD version 1.4.	OK	OK
C.3. Length of the crediting period					

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
C.3.1. Is the length of the crediting period specified in years and months?		DR	The length of the crediting period is specified in years and months in the section C.3. of the PDD version 1.4. Emission reductions generated after the crediting period may be used in accordance with an appropriate mechanism under the UNFCCC.	OK	OK
D. Monitoring Plan					
D.1. Description of monitoring plan chosen					
D.1.1. Is the monitoring plan defined?		DR	As described in section B.3 the project activities affect the combustion of kiln fuel, coal drying emissions and electricity consumption. For the development of the baseline scenario, and the project case, only those sources identified within Table 3**Ошибка! Источник ссылки не найден.** of the PDD version 1.4. are included within the project and have been included within the monitoring plan. A detailed records management system has been established to record and document all required data. The records management system includes paper records maintained by staff of the laboratory and production staff as well as electronic records maintained by the departments. These records are available	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			as part of the determination or verification process, as they outline all consumption values for the project site.		
D.1.2. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.		DR	Refer to item D.1.1.	OK	OK
D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.		DR	Data to be collected in order to monitor emissions from the project are presented in the Table D.1.1.1. in the PDD version 1.4. This data will be archived both in electronic and paper way.	OK	OK
D.1.4. Description of the formulae used to estimate project emissions (for each gas, source etc,; emissions in units of CO2 equivalent).		DR	See Section D.1.1.2. of the PDD version 1.4.	OK	OK
D.1.5. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived.		DR	Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary are presented in the Table D.1.1.3. in the PDD version 1.4. This data will be archived both in electronic and paper way.	OK	OK
D.1.6. Description of the formulae used to estimate baseline emissions (for each gas, source etc,; emissions in units of CO2 equivalent).		DR	See Section D.1.1.4. of the PDD version 1.4.	OK	OK
D.1.7. Option 2 – Direct monitoring of emissions reductions from the project (values should be		DR	Not applicable. See section D.1.2.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
consistent with those in section E)					
D.1.8. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived.		DR	Not applicable. See section D.1.2.1	OK	OK
D.1.9. Description of the formulae used to calculate emission reductions from the project (for each gas, source etc,; emissions/emission reductions in units of CO2 equivalent).		DR	Not applicable. See section D.1.2.2	OK	OK
D.1.10. If applicable, please describe the data and information that will be collected in order to monitor leakage effects of the project.		DR	No leakage has been identified within the project. See CL8	-	OK
D.1.11. Description of the formulae used to estimate leakage (for each gas, source etc,; emissions in units of CO2 equivalent).		DR	Not applicable. See section D.1.3.2	OK	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).		DR	See section D.1.4. of the PDD version 1.4.	OK	OK
D.1.13. Is information on the collection and archiving of information on the environmental impacts of the project provided?		DR, I	The information on the collection and archiving of information on the environmental impacts of the project is not provided. Corrective Action Request (CAR) 11 Please provide information on the collection and archiving of information on the environmental impacts of the project.	CAR11	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
D.1.14. Is reference to the relevant host Party regulation(s) provided?		DR, I	The reference to the relevant host Party regulations is not provided. Corrective Action Request (CAR) 12 Please provide reference to the relevant host party regulations.	CAR12	OK
D.1.15. If not applicable, is it stated so?		DR, I	See section D.1.13 Table 2 of this protocol.	OK	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?		DR	Clarification Request (CL) 10 Please provide the name and number of the section and please add indication of level of uncertainty as high/medium/low.	CL10	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		DR	IF Cement will use the traditional operational and management plans that have been developed and implemented by the company over the previous years to ensure high quality cement production, safe equipment operation and high performance of the facility. The standard operating procedures are available from the company and are used to train staff		OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			and ensure proper operation of equipment and facilities. See section D.1 of the PDD version 1.4 for management structure and responsibilities for data collection.	OK	
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
D.4.1. Is the contact information provided?		DR	The contact information is provided in the Annex 1 of the PDD version 1.4.	OK	OK
D.4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?		DR	The entity is the project participant listed in Annex 1 of the PDD version 1.4.	OK	OK
E. Estimation of greenhouse gases emission reductions					
E.1. Estimated project emissions					
E.1.1. Are described formulae used to estimate anthropogenic emissions by source of GHGs due to the project?		DR	The formulae used to estimate project emissions is described in the section D.1.1.2 of the PDD version 1.4. The calculation of GHG project emissions is presented in the section E.1 of the PDD version 1.4.	OK	OK
E.1.2. Is there a description of calculation of GHG project emissions in accordance with the formula specified in for the applicable project category?		DR	All the calculations are provided in the Supporting Spreadsheet 1.	OK	OK
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?		DR	Conservative assumptions have been used to calculate project GHG emissions.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
E.2. Estimated leakage					
E.2.1. Are described the formulae used to estimate leakage due to the project activity where required?		DR	Not applicable. See section D.1.3. of the PDD version 1.4.	OK	OK
E.2.2. Is there a description of calculation of leakage in accordance with the formula specified in for the applicable project category?		DR	See section E.2. of the PDD version 1.4.	OK	OK
E.2.3. Have conservative assumptions been used to calculate leakage?		DR	Not applicable	OK	OK
E.3. The sum of E.1 and E.2.					
E.3.1. Does the sum of E.1. and E.2. represent the small-scale project activity emissions?		DR	It is a large scale project	OK	OK
E.4. Estimated baseline emissions					
E.4.1. Are described the formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline using the baseline methodology for the applicable project category?		DR	The formulae used to estimate project emissions is described in the section D.1.1.4 of the PDD version 1.4. The calculation of GHG project emissions is presented in the section E.4 of the PDD version 1.4.	OK	OK
E.4.2. Is there a description of calculation of GHG baseline emissions in accordance with the formula specified in for the applicable project category?		DR	All the calculations are provided in the Supporting Spreadsheet 1.	OK	OK
E.4.3. Have conservative assumptions been used to calculate baseline GHG emissions?		DR	Not applicable	OK	OK
E.5. Difference between E.4. and E.3. representing the					

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
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?		DR	Difference between E.4. and E.3. represents the emission reductions due to the project during a given period.	OK	OK
E.6. Table providing values obtained when applying formulae above					
E.6.1. Is there a table providing values of total CO_2 abated?		DR	See section E.6. of the PDD version 1.4. Corrective Action Request (CAR) 13 Please provide the table providing values of total CO_2 .	CAR13	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?		DR, I	Cement production has a substantial impact on the local environment due to the combustion of fossil fuels as well as due to dust which is formed during the cement production cycle. Switching to a dry process will allow the company to significantly decrease fuel consumption, which in turn reduces emissions of substances such as sulphur oxides, nitrogen oxides and other harmful	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			substances. The new dry technology will meet the existing Best Available Technology (BAT) benchmarks and will also decrease dust emissions compared to the existing emissions level.		
F.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is and EIA approved?		DR, I	According to Ukrainian legislation, an Environmental Impact Assessment (EIA), as a part of the project design documents, has been done for the proposed project and approved by local authority (seen onsite).	OK	OK
F.1.3. Are the requirements of the National Focal Point being met?		DR, I	The National Focal Point issued letter of endorsement. Letter of approval need to be received (see CAR5).	-	-
F.1.4. Will the project create any adverse environmental effects?		DR, I	Analysis of Environmental Impact Assessment (EIA) shows that introduction of the CHP will not have any adverse environmental effects.	OK	OK
F.1.5. Are transboundary environmental considered in the analysis?		DR, I	<u>Corrective Action Request (CAR) 14</u> The information considering transboundary environmental effects is not provided. Please include one into section F of the PDD.	CAR14	OK
F.1.6. Have identified environmental impacts been addressed in the project design?		DR, I	See section F.1.1. of this protocol.	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
***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?		DR	In compliance with the existing State Construction Standards relating to the EIA, IF Cement (Project Proponent) and "Yuzhgiprocement" (EIA Developer) prepared and published "The Notice of Intent" which outlined the anticipated project environmental impacts. The Notice was co-signed by State Environmental Protection Agency in the Ivano-Frankivsk Oblast, Ivano-Frankivsk Oblast Sanitary-Epidemiological Office, Ukraine's Ministry of Health and Yamnitsky Village Council (municipal authority). IF Cement informed the public about the proposed reconstruction and anticipated environmental impacts through the municipal authority and mass media (Reference of May 10, 2007). The feedback from the public and results of the public hearings are summarized in the Minutes signed by the municipal authority, June 17, 2007.	OK	OK
G.1.2. The nature of comments is provided?		DR	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
G.1.3. Has due account been taken of any stakeholder comments received?		DR	Not applicable	OK	OK

Table 3 Baseline and Monitoring Methodologies: Own format

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Baseline Methodology					
1. 1. General					
1.1.1. Does the baseline cover emissions from all gases, sectors and source categories listed in Annex A, and anthropogenic removals by sinks, within the project boundary?		DR I	Section B.3 of the PDD establishes project boundaries.	OK	OK
1.1.2. Is baseline established on a project-specific basis and/or using a multi-project emission factor?		DR I	A multi-project emission factor is used for baseline establishing.	OK	OK
1.1.3 Is baseline established in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors?		DR I	The baseline is established in a transparent manner. Choice of approach was described, assumptions, methodologies, parameters, data sources are clearly indicated (Sections B.1. and B.2. of the PDD)	OK	OK
1.1.4 Is baseline established taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector?		DR	Applicable local laws and regulations are taken into account. Economic situation in the project sector is taken into account (Sections B.1. and B.2. of the PDD)	OK	OK
1.1.5 Is baseline established in such a way that ERUs cannot be earned for decreases in activity levels outside the project activity or due to *force majeure?*		DR I	Baseline does not envisage earning ERUs for activity level decrease outside the project or due to *force majeure.*	OK	OK
1.1.6 Is baseline established taking account of uncertainties and using conservative assumptions?		DR I	Uncertainties and conservative assumptions are taken into account (Section B of the PDD)	OK	OK
1.2. Additionality					
1.2.1. Was the additionality of the project activity demonstrated and assessed?		DR	Project is additional on the basis of justification and assessment.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
2. Monitoring Methodology					
2.1. Monitoring plan					
2.1.1. Is a monitoring plan included?		DR I	Yes, monitoring plan is included.	OK	OK
2.1.2. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimating or measuring anthropogenic emissions by sources and/or anthropogenic removals by sinks of greenhouse gases occurring within the project boundary during the crediting period?		DR I	Monitoring plan provides for the collection and archiving of all relevant data necessary for estimating or measuring anthropogenic emissions by sources of greenhouse gases occurring within the project boundary during the crediting period (see section D.1.1.1. of the PDD).	OK	OK
2.1.3. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining the baseline of anthropogenic emissions by sources and/or anthropogenic removals by sinks of greenhouse gases within the project boundary during the crediting period?		DR I	Monitoring plan provides for the collection and archiving of all relevant data necessary for determining the baseline of anthropogenic emissions by sources of greenhouse gases within the project boundary during the crediting period (see section D.1.1.3. of the PDD).	OK	OK
2.1.4. Does the monitoring plan provide for the identification of all potential sources of, and the collection and archiving of data on increased anthropogenic emissions by sources and/or reduced anthropogenic removals by sinks of greenhouse gases outside the project boundary that are significant and reasonably attributable to the project during the crediting period?		DR	Increase of anthropogenic emissions outside the project boundary that are significant and reasonably attributable to the project during the crediting period is not anticipated.	OK	OK
2.1.5. Does the project boundary encompass all anthropogenic emissions by sources and/or removals by sinks of greenhouse gases under the control of the project participants that are significant and reasonably attributable to the JI project?		DR	Significant anthropogenic emissions by sources and/or removals by sinks of greenhouse gases under the control of the project participants are not envisaged by the project. Validated onsite.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
2.1.6. Does the monitoring plan provide for the collection and archiving of information on environmental impacts, in accordance with procedures as required by the host Party, where applicable?		DR	No adverse environmental impacts are foreseen. Validated onsite.	OK	OK
2.1.7. Does the monitoring plan provide for quality assurance and control procedures for the monitoring process?		DR	Quality assurance is planned, see section D.2. of the PDD, that was validated onsite.	OK	OK
2.1.8. Does the monitoring plan provide for procedures for the periodic calculation of the reductions of anthropogenic emissions by sources and/or enhancements of anthropogenic removals by sinks by the proposed JI project, and for leakage effects, if any?		DR I	The monitoring plan provides formulae for the periodic calculation of the reductions of anthropogenic emissions (see section D.1.1.2.). Leakage is not applicable.	OK	OK
2.1.9. Does the monitoring plan provide for documentation of all steps involved in the calculations?		DR I	The monitoring plan provides for documentation of all steps involved in the calculations. See Supporting Spreadsheet 1.	OK	OK
2.2. Quality Control (QC) and Quality Assurance (QA) Procedures					
2.2.1. Did all measurements use calibrated measurement equipment that is regularly checked for its functioning?		DR I	In all measurements calibrated measurement equipment is used and it is regularly checked for its functioning.	OK	OK
2.2.2 Is frequency of monitoring the parameters defined?		DR I	Frequency of monitoring the parameters is defined.	OK	OK

Table 4 Legal requirements

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
1. **Legal requirements**					
1.1. Is the project activity environmentally licensed by the competent authority?		DR, I	Yes, the project is licensed by the competent authority. This was checked on-site. Project activity is permitted by: Environmental Impact Assessment of the project "Reconstruction of Cement Production at the IF Cement with Introduction of Dry Method and New Energy-Saving Technologies" prepared by the firm-subcontractor "BIO-PLUS", Ukraine, in February-May of 2007, reviewed and approved by the State Environmental Protection Agency in the Ivano-Frankivsk Oblast, (Decision of Expert Commission # 66, June 27, 2007) and the Ivano-Frankivsk Oblast Sanitary-Epidemiological Office, Ukraine's Ministry of Health (Decision of Expert Commission # 2008, May 16, 2007). The Notice of Environmental Intent "Reconstruction of Cement Production at the IF Cement with Introduction of Dry Method and New Energy-Saving Technologies" dated 2007. State constructional norms of Ukraine "Content of the materials of EIA during	OK	OK

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			planning and constructing of the buildings" dated 2004. "The Notice of Intent" co-signed by State Environmental Protection Agency in the Ivano-Frankivsk Oblast, Ivano-Frankivsk Oblast Sanitary-Epidemiological Office, Ukraine's Ministry of Health and Yamnitsky Village Council (municipal authority). The Notice of Environmental Consequences co-signed by State Environmental Protection Agency in the Ivano-Frankivsk Oblast, Ivano-Frankivsk Oblast Sanitary-Epidemiological Office, Ukraine's Ministry of Health and Yamnitsky Village Council (municipal authority). Permit on the performance of constructional works #78 dated 18.07.2007 Conclusion of the Complex State Expertise #74.84.0-244 dated 10.07.2007. Expert conclusion of the Ivano-Frankivsk regional Ukrainian State Investment Expertise dated 15.05.2007. Expert conclusion #2984/2289 of the State fire surveillance of Ukraine dated 15.06.2007. Conclusion #208 on the considering of the		

CHECKLIST QUESTION	Ref.	MoV *	COMMENTS	Draft Concl	Final Concl
			construction dated 16.05.2007. Conclusion #66 of the State Environmental Expertise dated 27.06.2007. Expert conclusion on the compliance of the project to the legslative documents on the energy efficiency #07B1868542656092 dated 05.07.2007. Expert conclusion on the labour safety #26.01-11-2215.07 dated 05.07.2007.		
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?		DR, I	Environmental permits are presented, please see section 1.1. table 4.	OK	OK
1.3. Is the project in line with relevant legislation and plans in the host country?		DR, I	Yes, the project is in line with legislation of the host Party	OK	OK

Table 5 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Corrective Action Request (CAR) 1 Please provide sectoral scope of the project in the section A.1. of the PDD.	A.1.2.	Sectoral scope is Mining/minerals sector (8). This has been added to the PDD (page 2)	The sectoral scope was provided in the new version of PDD. Issue is closed.
Corrective Action Request (CAR) 2 Please provide brief description of the baseline scenario in the section A.2.	A.2.2.	A description was added to the PDD to explain baseline scenario of being hybrid of project-specific and sector wide baseline. Separated different sections to make text clearer. Please refer to page 2.	The baseline scenario description was provided in the new version of PDD. Issue is closed.
Corrective Action Request (CAR) 3 Please include into section A.2. brief summary of the JI project history.	A.2.2.	The use of JI mechanism was considered by IF cement at the early stages of developing the project. The UKEEP energy efficiency programme has commissioned an energy audit report from IC Consulenten. The UKEEP report has covered the possibility of ERU commercialization from wet-to-dry conversion, and provided initial projections of the emission reductions. The Project Idea Note of IF Cement was submitted to the DFP of Ukraine in August 2008. A	Explanation was provided in the new version of PDD and found satisfactory. Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		Letter of Endorsement (reference 668/23/7) has been provided to IF cement on August 8, 2008. The host country letter of approval is expected after completing of the determination process.	
Corrective Action Request (CAR) 4 Please indicate in the Table 2 of the section A.3. which Party among the Parties involved is a host Party.	A.3.5.	Ukraine is the Host Party. This has been indicated in the table within A.3.	Correction was provided in the new version of the PDD. Issue is closed.
Clarification Request (CL) 1 Please clarify which external company is contracted to do maintenance work.	A.4.2.5	At present, the contractor firms "Cemmash" and "Stanislavmash" provide the maintenance work at the plant. This information has been added to the PDD. Please refer to page 10.	Explanation was provided in the new version of PDD and found satisfactory. Issue is closed.
Corrective Action Request (CAR) 5 There is no evidence of written project approvals by the Parties involved	A.5.1.	Host country Letter of Approval will be requested once a determination report is available, in accordance with the host country JI procedures. Investor's country approval will be applied after receiving the host country approval. This information has been inserted into the text; Please refer to page 14-15.	Issue is not closed. Must be checked during verification.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Corrective Action Request (CAR) 6 Please provide proper transparent description of the baseline chosen and included in the list of the considered alternatives. Also please define what is considered under 'a sector-wide baseline for all incremental production that the new dry kiln may provide' since it is not clear if the baseline scenario is just the continuation of existing situation.	B.1.1.	Added section describing chosen baseline as one of the alternatives to project. Alternative is continuation of status quo with incremental production provided by other Ukrainian plants.	Transparent description of the baseline chosen was provided in the new version of PDD. Issue is closed.
Corrective Action Request (CAR) 7 Please provide appropriate reference to all the literature and numbers/factors, coefficients used in the PDD.	B.1.5.	References have been significantly updated and further referencing has been included throughout the PDD.	References were checked. Issue is closed.
Corrective Action Request (CAR) 8 According to "Tool for the demonstration and assessment of additionality (version 05.2)" barrier analysis should be considered as step 3 not sub-step 3. Please provide appropriate corrections. Please also	B.2.1.	The title of step 3 has been changed and the required sections 'sub-section 3a and 3b' have now been added to the PDD. Please refer to Page 22-23 of the PDD.	Corrections were checked and found satisfactory. Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
provide sub-steps a and b under step 3. Without conducting those steps project can not be proceeded to the next part and considered additional.			
Clarification Request (CL) 2 Please provide clear specification of the benchmark value.	B.2.1.	Rationale for the benchmark specification has been added to the PDD. The benchmark of 30.59% has been used for the investment analysis and justification of the project additionality. Please refer to page 19 in the PDD.	Clarification was provided in the PDD version 1.4. and found satisfactory. Issue is closed.
Clarification Request (CL) 3 It appears that financial calculations (SupportingSpreadsheetNo2_Investment_Analysis.xls) were made in fixed prices as of 2008. Please add the relevant remark in Sub-step 2a and Excel file. Please note that IRR obtained from calculations based on fixed prices can not be compared directly to benchmark value which is the nominal value i.e. accounts for inflation. Therefore either project IRR calculated or benchmark shall be adjusted for inflation.	B.2.1.	The project IRRs have been adjusted for inflation and the nominal IRRs have been used for the benchmark analysis. The nominal project IRR without sale of Emission Reduction Units is 26.3%, i.e. below the benchmark of 30.59%. The sale of Emission Reduction Units makes the project more financially feasible with the IRR 29.8% which is close to the benchmark. Please refer to page 18 in the PDD and the supporting document #2 (supporting doc. #2 is further financial analysis files).	Clarification was provided in the PDD version 1.4. and found satisfactory. Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Clarification Request (CL) 4 Please re-check salaries indicated for year 2011 as they are lower than those indicated for 2012-2017 despite the same production level.	B.2.1.	The 2011 salary of operative personnel is forecasted at a lower rate as compared with the salary in 2012 and beyond due to the current crisis in the construction sector of the economy. This clarification has been obtained from the company's financial specialists.	Clarification was provided in the PDD version 1.4. and found satisfactory. Issue is closed.
Clarification Request (CL) 5 For some reason calculations of NPV in the file do not include cash flow during investment period (UAH -501.0 mln.). Please correct the formulas. Elimination of NPV calculations may be also considered as this indicator is of no use in the present PDD.	B.2.1.	Corrections have been made and the project NPV calculations have been eliminated. Please refer to the supporting document #2.	Corrections have been checked and found satisfactory. Issue is closed.
Clarification Request (CL) 6 Please clarify technological barriers at the section B.2.	B.2.1.	These barriers have been clarified. Provided additional details on technological barriers and added in prevailing practice barrier and market barrier (see page 23)	Clarification was provided in the PDD version 1.4. and found satisfactory. Issue is closed.
Corrective Action Request (CAR) 9 Please provide sub-steps 4a and 4b	B.2.1.	Added in sub steps to highlight wet process is the prevailing practice and	Corrections were checked and found satisfactory. Issue is

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
under step 4 because without conducting those steps project can not be considered additional.		that similar project activities are already registered or seeking registration as JI projects. These required section have now been included on page 24	closed.
<u>Clarification Request (CL) 7</u> Please provide the summary of national policies and circumstances relevant to the baseline of the proposed project activity.	B.2.6.	Cement sector in Ukraine is 100% privatized and there is no particular state programme regarding the development of cement production. The Energy Strategy of Ukraine until 2030 sets improvement of energy efficiency and decreasing energy intensity in the heavy industry as one of the long-term priorities for the state. At the same time the Energy Strategy until 2030 does not impose any obligations regarding energy intensity improvements, neither it introduces any financial incentives for the companies who reduce their energy consumption. The proposed JI project is in line with the host country's energy strategy.	Clarification was provided in the PDD version 1.4. and found satisfactory. Issue is closed.
<u>Clarification Request (CL) 8</u> Please clarify in a more transparent	B.3.1.	Justification for exclusion of these emissions has been updated. These emission sources have been excluded	Clarification was provided in the PDD version 1.4. and found

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
way the exclusion of the emissions for production/processing of fuel mix, emissions from transportation of final product in the baseline and in the project and all other emissions that are considered not significant for the project.		as they are outside the project boundary. This is in line with general principals and guidelines for selecting project scope, as seen within CDM Approved Cement Manufacturing Methodologies (specifically ACM0003 v07.2 and ACM0005 v4)	satisfactory. Issue is closed.
Corrective Action Request (CAR) 10 Please provide the date of the baseline setting in the given format (DD/MM/YYYY)	B.4.1.	The date of baseline setting is 05/05/2009. The date of baseline setting has now been included within the PDD, page 31.	Corrections were checked and found satisfactory. Issue is closed.
Clarification Request (CL) 9 Please change Annex 2 to Annex 1 in the section B.4.	B.4.2.	This change has been made. Please refer to page 36	Correction was provided in the new version of the PDD and found satisfactory. Issue is closed.
Corrective Action Request (CAR) 11 Please provide information on the collection and archiving of information on the environmental impacts of the project.	D.1.13.	IF Cement's collection and archiving of data is regulated by Ukraine's Ministry of Environmental Protection. Data is collected and archived within the Laboratory Facility at the IF Cement plant; please see further details included into the PDD on Page 73.	Corrections were checked and found satisfactory. Issue is closed.
Corrective Action Request (CAR) 12	D.1.14.	Text and reference has now been	Corrections were checked and

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
Please provide reference to the relevant host party regulations.		inserted into the PDD to complete this section. Please refer to page 59 for details.	found satisfactory. Issue is closed.
Clarification Request (CL) 10 Please provide the name and number of the section.	D.2.1.	The proper title has now been included into the PDD. Please refer to page 66 of the PDD.	Correction was provided in the new version of the PDD and found satisfactory. Issue is closed.
Corrective Action Request (CAR) 13 Please provide the table providing values of total CO_2 .	E.6.1.	A summary table of project, baseline, and emission reductions has now been included within the PDD. Please refer to page 75	Corrections were checked and found satisfactory. Issue is closed.
Corrective Action Request (CAR) 14 The information considering transboundary environmental effects is not provided. Please include one into section F of the PDD.	F.1.5.	In compliance with the national sanitary classification of production facilities the IF Cement pertains to the first group of facilities which requires the establishment of 1000 meters sanitary buffer zone. The distance between the plant and the state frontier is 200 kilometres. The surface-derived observations relating to nitrogen dioxide, sulphurous anhydride, carbon oxide and dust provide evidence that maximum concentration levels of these harmful substances do not exceed the	Corrections were checked and found satisfactory. Issue is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 2, 3 and 4	Summary of project owner response	Determination team conclusion
		normative levels throughout the dissipation area. An aggregate maximum concentration of the substances at the border of the sanitary buffer zone is twice less than the maximum permissible level. Therefore, the plant does not have negative transboundary pollution impacts on the territories of foreign countries. This information has been included into the PDD. Please refer to page 74 within section F.	

APPENDIX B: VERIFICATION TEAM

The verification team consists of the following personnel:

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

Bureau Veritas Ukraine Head of the HSE departement.

He has over 25 years of experience in Research Institute in the field of biochemistry, biotechnology, and microbiology. He is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered), Quality Management System (IRCA registered), Occupational Health and Safety Management System, and Food Safety Management System. He performed over 130 audits since 1999. Also he is Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and Lead Tutor of the IRCA registered ISO 9000 QMS Lead Auditor Training Course. He has undergone intensive training on Clean Development Mechanism /Joint Implementation and he is involved in the validation of 6 JI projects.

Nadiya Kaiiun, M.Sci. (environmental science)
Verifier

Bureau Veritas Ukraine HSE Department manager.

She has graduated from National University of Kyiv-Mohyla Academy with the Master Degree in Environmental Science. She is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered). She performed over 15 audits since 2008. She has undergone intensive training on Clean Development Mechanism /Joint Implementation and she is involved in the validation of 6 JI projects.

Kateryna Zinevych, M.Sci. (environmental science)
Verifier

Bureau Veritas Ukraine HSE Department manager.

She has graduated from National University of Kyiv-Mohyla Academy with the Master Degree in Environmental Science. She is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered). She performed 6 audits since March of 2009. She has undergone intensive training on Clean Development Mechanism /Joint Implementation and she is involved in the validation of 5 JI projects.

Denis Pishchalov
Financial Specialist
Master of foreign trade, he has more than five year of experience in foreign trade and procurement. In particular one year as foreign trade manager in the Engineering Corporation (manufacturer and contractor in the municipal sector) and one year in the NIKO publishing house, one year as sales manager in the ITALCOM srl. In addition Denis has spent four years working as procurement specialist in Ukrainian Energy Service Company and two years as chief product manager in the Altset JSC. At the moment Denis is deputy director for finance and economy in the SUD of UTEM JSC.

Ashok Mammen - PhD (Oils & Lubricants)

Bureau Veritas Certification Internal reviewer
Over 20 years of experience in chemical and petrochemical field. Dr. Mammen is a lead auditor for environment, safety and quality management systems and a lead verifier for GHG projects. He has been involved in the validation and verification processes of more than 60 CDM/JI and other GHG projects.