DETERMINATION REPORT

CLIMATE CHANGE GLOBAL SERVICES (CCGS)

Determination Report on JI Project "Evaporation System Modernization at OJSC "Ilim Group" Branch in Koryazhma"
RUSSIAN FEDERATION

BUREAU VERITAS CERTIFICATION

REPORT NO. RUSSIA/0023/2009, REV. 01

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DETERMINATION REPORT

Date of first issue:	Organizational unit:
18/05/2009	Bureau Veritas Certification Holding SAS
Client:	Client ref.:
CCGS Ltd.	Mr. Dmitry Potashev

Summary:

Bureau Veritas Certification has made the determination of the project "Evaporation System modernization at OJSC "Ilim Group" Branch in Koryazhma", on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI guidelines and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria. The determination is carried out under Track 1 as per Glossary of JI terms, in line with paragraph 23 of the JI guidelines.

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

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

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

Report No.:	Subject Group:
RUSSIA/0023-1/2009	JI

Project title:
Recovery, transportation and processing of associated petroleum gas from the Verkhnekamsk oil fields, Middle Urals, Russian Federation

Work carried out by:
Flavio Gomes – Team leader, Lead verifier

Leonid Yaskin – Team member, verifier

George Klenov – Team member, verifier

Work verified by:
Ashok Mammen - BVC Technical Manager for Climate Change, Internal reviewer

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Indexing terms:

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Abbreviations change / add to the list as necessary

AIE	Accredited Independent Entity
BV	Bureau Veritas
CAR	Corrective Action Request
CCGS	Climate Change Global Services (LLC)
CHP	Combined Heat and Power Station
CHPP	Combined Heat and Power Plant
CPP	Cardboard and paper production
CL	Clarification Request
CO_2	Carbon Dioxide
CPP	Cardboard and Paper Production
DDR	Draft Determination Report
DR	Document Review
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EPD	p.69
ERU	Emission Reduction Unit
ETHPS	Energy technological heat and power station
GHG	Green House Gas(es)
I	Interview
IBRD	International Bank of Reconstruction and Development
IE	Independent Entity
IETA	International Emissions Trading Association
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate Return
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MoV	Means of Verification
NGO	Non Governmental Organization
NPAF	National Polution Abatement Facility
NPV	Net Present Value
NSSP	Neutral Sulfite Semi-chemical Pulp
PCF	Prototype Carbon Fund (World Bank Carbon Finance Unit)
PDD	Project Design Document
PP	Project Participant
PPM	Pulp and Paper Mill
SAS	Softwood Sulfate Pulp
SBPP	Sulfate bleached pulp production
UNFCCC	United Nations Framework Convention for Climate Change
VPP	Sulfite viscose pulp production

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1 Introduction

Climate Change Global Services, LLC has commissioned Bureau Veritas Certification to determine its JI project "Evaporation System modernization at OJSC "Ilim Group" Branch in Koryazhma" (hereafter called "the project") located in Arkhangelsk Region, Russian Federation. Climate Change Global Services (CCGS) coordinates the project and the determination process on behalf of the project participant OJSC "Ilim Group" Branch in Koryazhma.

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

1.1 Objective

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

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

1.2 Scope

The determination scope is defined as an independent and objective review of the project design document (PDD), the project's baseline study (BLS) and monitoring plan (MP) and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements for Joint Implementation (JI) projects, the guidelines for the implementation of Article 6 of the Kyoto Protocol (Decision 16/CP.7) as agreed in the Marrakech Accords, in particular the verification procedure under the JI Supervisory Committee, and associated interpretations. Bureau Veritas Certification has, based on the recommendations in the Validation and Verification Manual (IETA/PCF), employed a risk based approach in the determination process, focusing on the identification of significant risks for project implementation and generation of ERUs.

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

1.3 GHG Project Description

The project is implemented on the site of OJSC "Ilim Group" Branch in Koryazhma (the former OJSC "Kotlas Pulp and Paper Mill"), Arkhangelsk Region, Russia.

OJSC "Ilim Group" was incorporated on September 27, 2006 in Saint-Petersburg. In 2007 OJSC "Kotlas PPM", OJSC "Pulp and Paperboard Mill", OJSC "Bratskcomplexholding" and OJSC "Ust-Ilim Timber Industry Production Association" joined the Group through single share issue.

The strategic partner of OJSC "Ilim Group" is International Paper, a pulp and paper company. The company is managed by an international Board of Directors.

The company's plant assets located in the Leningrad, Arkhangelsk and Irkutsk Regions are the largest enterprises of the Russian timber processing complex and account for 65% of Russia's overall market pulp production and for over 25% of cardboard production.

The Branch of OJSC "Ilim Group" in Koryazhma is one of the largest wood chemical producers in Europe. The first stage of the Mill was commissioned in 1961, the second – in 1965 and the third – in 1972. Currently the aggregate design capacity of Koryazhma Branch amounts to 938 000 tonnes of cooked pulp and 255 000 tonnes of cardboard per year. Due to the undertaken modernization, the enterprise's annual volume of pulping has been over 1 million tonnes since 2005.

The enterprise produces hardwood sulfate bleached pulp, viscose pulp, cardboard for flat layers of corrugated board (kraft liner), corrugating paper (fluting), offset paper for printing, products of wood chemical and biochemical processing. The Branch accounts for around 14% of Russia's commercial pulp production, for over 10% of all types of cardboard production and for over 6% of paper production.

Over 35% of the enterprise's products are sold in the domestic market; the remaining amount is exported to Europe, Near East and Northern America.
The PPM consists of 6 production lines, 22 independent workshops and three power stations. Being the principal employer in Koryazhma, the Mill also supplies the town with electricity, heat, cold and hot water, as well as renders wastewater collection and treatment services.

Quality, environment and industrial safety management systems at Koryazhma Branch meet the international standards of ISO 9001, ISO 14001 and OHSAS 18001. The enterprise manufactures products certified to be in compliance with the requirements of the Forest Stewardship Council (FSC).

The project is aimed at modernization of the Mill's evaporation system, which is intended to reduce power consumption of the pulp production process, stabilize

operation of the process equipment, mitigate negative environmental impacts and reduce greenhouse gases (GHG) emissions.

The pulp cooking process produces large quantities of spent liquor which contains wood dissolution products. Liquor is fed to the evaporator plant designed to remove excess water from spent liquor and to bring its concentration to at least 50% of dry matter, so that minerals could be further recovered and useful energy could be generated by firing liquor in liquor recovery boilers. Liquor evaporation process has very high requirements of steam, electricity and water and yields large quantities of contaminated condensate and malodorous gases.

Before the project implementation liquor had been evaporated by six evaporator plants characterized by low efficiency and lack of operation consistency. Average specific steam consumption was high; condensate and warm water were discharged into the sewerage system without recycling; harmful gases were emitted into the atmosphere. Significant proportion of liquors had to be evaporated at the plants which were not fitted with concentrators (designed to increase dry matter content up to 65%). Therefore liquor recovery boilers had high losses caused by water evaporation from the liquor during combustion.

Deficient operation of the evaporation system resulted in lower level of liquor separation in the pulp washing process; thus a significant part of liquor solids was irretrievably lost. Another negative side effect was the high demand of chemicals for pulping.

This project envisages construction of a new high-technology evaporator plant manufactured by “Andritz” (Finland) with the evaporating capacity of 600 tonnes per hour and decommissioning of the two old “Ramen” evaporator plants with the design capacity of 140 tonnes per hour, each.

The new evaporator unit, for the first time in Russia, uses a process flow scheme which provides for separation of condensates into relatively clean and highly contaminated streams and has an in-built stripping column for treatment of highly contaminated condensates. The scheme also envisages a system for collection and efficient utilization of sulfur-containing malodorous vapour gas emissions and methanol fraction in a special utilizing boiler with further desulfurization of gaseous emissions. Cooling water is not contaminated in the plant’s process flow scheme.

Prior to the project start its value had been estimated at USD 21.6 million. Without soft crediting the project would not be viable in terms of financial resources availability. And without extra revenues from sale of GHG emission reductions the project could not be efficient enough in terms of financial return. Therefore from the start the company’s management had undertaken measures to mobilize funds from these sources.

On October 24, 2002 Kotlas Pulp and Paper Mill submitted an application for a Subloan to the Executive Directorate of the National Pollution Abatement Facility (NPAF) for financing of the investment project “Pollution Abatement at OJSC “Kotlas Pulp and Paper Mill” through Replacement of Evaporator Plant”.

On January 15, 2003 the project was approved by the NPAF Supervisory Board. It is important to note that in terms of global environmental effects the planned complex of technical measures was categorized as a project aimed at reduction of GHG emissions and complying with the objective of the developed countries and countries with transition economy to meet their commitments as to reducing their GHG emissions in compliance with the Kyoto Protocol to the UN Framework Convention on Climate Change.

On April 23, 2003 the International Bank of Reconstruction and Development (IBRD) granted its “no objections” visa.

The loan in the amount of USD 11 million did not become available until a notification thereof was received from the Russian Ministry of Finance on April 23, 2004 Eventually, the actual project investments turned out to be almost twice as much as the estimated amount totaling to USD 40.6 million (of which the company’s internal resources account for 72.9%).

In 2003, in parallel with the execution of documents for obtaining the soft credit, Kotlas PPM sent a tender bid under the Emission Reduction Unit Procurement Tender (ERUPT) programme implemented by SENTER Agency of the Netherlands Ministry of Economic Affairs. The project documentation was developed by OJSC “Krzizhanovsky Power Engineering Institute” (KPEI) and the ED of NPAF. The project qualified, but since there was no official approval by the Russian Government of Russia’s participation in the ERUPT programme, the project had to be excluded from further consideration. However, later on, after the Kyoto Protocol was ratified by the Russian Federation and entered into force, OJSC “Ilim Group” (Kotlas PPM has been a part of the Group since 2007) made a decision to develop the Evaporator System Modernization Project as a JI project seeking to sell future GHG emission reductions in the world carbon market. To this end in 2008 the company began cooperation with CCGS Ltd., which acts as a consultant and a commercial agent of OJSC “Ilim Group”.
CCGS Ltd. is not a project participant.

Project implementation became possible due to Joint Implementation (JI) mechanism under the Kyoto Protocol. The revenue from sales of the emission reduction units (ERU) increases the investment attractiveness of this project. In the absence of a project the old evaporation equipment, provided that relatively inexpensive routine maintenance was carried out in good time, could have continued its operation at the previous production level without violating any Russian standards at least up until 2012.

1.4 Determination team

The determination team consists of the following personnel:

Flavio Gomes
Bureau Veritas Certification - Team Leader, Lead verifier

Leonid Yaskin
Bureau Veritas Certification – Team member, verifier

George Klenov
Bureau Veritas Certification - Team member, verifier

Ashok Mammen
Bureau Veritas Certification – Internal Technical Reviewer

2. Methodology

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

The determination consisted of the following three phases:

i) desk review of the project design document and the baseline and monitoring plan;
ii) on-site assessment (May 05th – 07th 2009);
iii) resolution of outstanding issues (ref. to Appendix A Table 5 with CAR's and CL's) and the issuance of the final determination report and opinion.

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

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

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

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

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

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

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

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

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

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

Figure 1 Determination protocol tables

2.1 Review of Documents

The Project Design Document (PDD) submitted by CCGS and additional background documents related to the project design, baseline, and monitoring plan, i.e. Kyoto Protocol, Host Country Laws, Guidelines for Users of the Joint Implementation Project Design Document Form, JISC Guidance on Criteria for Baseline Setting and Monitoring, Combined tool to identify the baseline scenario and demonstrate additionality and others were reviewed.

The deliverables of the document review were two version of the Draft Determination Report (DDR) with CAR's and CL's which was submitted to CCGS on 20 April 2009 and 08/05/2009 (Version 02). The determination findings presented in these DDR versions relate to the project as described in the original PDD version 1.0 dated 10.02.2009 as well as in PDD Version 1.1 dated 29/04/2009 which were issued by the PDD developer as responses to the DDR Versions 01 and 02 respectively.

CCGS has submitted the completed PDD version 1.2, dated 13.05.2009.

2.2 Follow-up Interviews

Bureau Veritas Certification verifier George Klenov conducted a visit to the project site on 5th -7th May 2009. On-site interviews with project stakeholders were conducted to confirm selected information and to resolve issues identified in the document review. Representatives of OJSC "Ilim Group" Branch in Koryazhma, and CCGS were interviewed (see References in Section 6). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
OJSC "Ilim Group" Branch in Koryazhma	➢ History of the project ➢ Business Plan ➢ OJSC "Ilim Group" Branch in Koryazhma pulp production programme ➢ Baseline scenario parameters ➢ Project management organisation ➢ Environmental Impact Assessment ➢ Public Hearings ➢ Attendance of production facilities ➢ Project monitoring responsibilities ➢ Monitoring equipments ➢ Technical project design ➢ Quality control and quality assurance procedures
CCGS	➢ Baseline scenario ➢ Monitoring plan ➢ Investment analysis ➢ Additionality justification ➢ Conformity of PDD to JI requirements

2.3 Resolution of Clarification and Corrective Action Requests

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

Corrective Actions Requests (CAR) are issued, where:

i) there is a clear deviation concerning the implementation of the project as defined the PDD;

ii) requirements set by the Methodological Procedure or qualifications in a verification opinion have not been met; or

iii) there is a risk that the project would not be able to deliver high quality ERUs.

Clarification Requests (CL) are issued where

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

A Draft Determination Report, version 01, summarising Bureau Veritas Certification's findings, was submitted to the project participants on 20/04/2009. The findings identified have been thirteen Corrective Action Requests, six Clarification Requests. Based on the findings of the Draft Determination Report, CCGS made necessity amendments to the PDD Version 1.0 and eventually the Version 1.1 dated 29/05/2009 was issued and submitted to Bureau Veritas Certification for review.

The additional CAR 14 has been issued following site-visit and the interviews held in Koryazhma and the Draft Determination Report version 02 was submitted to CCGS on 08 May 2009. CCGS has corrected some calculations (see Appendix A, Table 5) and submitted the completed PDD version 1.2, dated 13.05.2009.

The amendments and corrections made by the project participants to the PDD and the additional information and clarifications provided by them satisfactorily addressed BV Certifications' concerns and, as a result, the Determination Report Version 01 was issued on 19/05/2009. On the same day the Determination Report Version 01 and PDD Version 1.2 were conveyed to Bureau Veritas Certification Internal Technical Reviewer (ITR) for review.

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

3 Determination Findings

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

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

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

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

iv) the conclusions of the determination are presented consecutively.

3.1 Project Design

The project provides reduction of GHG emissions by reducing energy intensity of the production, and implementation of a state-of-art Mill evaporation system.

The outcomes of project activity will be the following effects:

- reduction of energy intensity of production and stable operation of technological equipment of all evaporator plants and other technological units aligned with it (washing installations, recovery boilers);
- increase of the rate of liquor separation at pulp washing;
- increase of heat and electricity supply from the Mill's energy technological heat and power station (ETHPS) through combustion of more liquor in the liquor recovery boilers and through increase of liquor calorific value;
- utilization of methanol fraction and malodorous gases (which have been earlier released into the atmosphere) ensuring additional production of heat;
- re-use of warm water, relatively clean and treated condensate streams from the new evaporator plant in the process flows, which leads to reduction of fresh water consumption for process needs and to reduction of heat consumption for water heating;
- reduction of fossil fuel consumption (natural gas) at the Mill's CHPP-1;
- reduction of chemicals consumption for pulp production;
- mitigation of adverse environmental impacts; and
- average reduction of GHG emissions by 175 988 tonnes of CO_2e/year over the period 2008-2012. Total estimated emission reductions will equal 879 939 tCO2e over 5 year crediting period starting in 2008.

The project design is sound. The geographical and spatial boundary is clearly defined. OJSC "Ilim Group" Branch in Koryazhma" made a decision on implementation of this project on January 11, 2005 (this date is considered to be the actual project starting date - the contract for procurement of evaporator plant was concluded), construction and installation works began in March 2005. The equipment was mounted in full and put into test operation on 20.12.2007.

Identified areas of concern as to Project Design, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 02, CAR 07, CAR 08, CAR 09, CAR 10, CAR 11. All of them concerned to PDD format requirements).

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

3.2 Baseline and Additionality

Following Clause 20 (b) of JISC "Guidance for baseline setting and monitoring", the project participants established their own baseline methodology that is in accordance with appendix B of the JI Guidelines.

The baseline scenario assumes that, without the project, the Mill would continue to operate its existing evaporator plants that could ensure satisfactory liquor evaporation at the same target level of pulp cooking. Basically, technical condition of the old "Ramen" evaporator plants No.1 and No.2 made it possible to keep their performance at the same level for a number of years under relatively cheap routine maintenance.

To prove the project additionality, the routine provisions of the CDM "Combined tool to identify the baseline scenario and demonstrate additionality" (Version 02.2) were implicitly followed.

The following Alternatives to the JI project were identified: 1 - Continuation of the current situation; 2 - Project activity without registration under JI and without NPAF (National Pollution Abatement Facility) soft loan; 3 - Project activity without registration under JI but with NPAF soft loan. These scenarios are not in contradiction with the mandatory legislation and regulations. Each alternative was reviewed.

The alternative analysis, investment and sensitivity analysis, barrier analysis and common practice analysis have demonstrated that the proposed project activity is not financially attractive and not economically or financially feasible, without the revenue from the sale of emission reduction units (ERUs). Accordingly, the Alternatives 1 was taken as the baseline.

The investment analysis was carried out in terms of NPV. The discount rate (hurdle rate of return) was duly derived from Russia-30 Eurobonds rates, increased by a suitable risk premium to reflect private investment and the project type in accordance with the verified project owner allowances, generally in line with the publicly available financial data referred to in the PDD.

Common practice analysis showed that Kotlas Pulp and Paper Mil, for the first time in Russia, implemented a unique set of technical solutions for modernization of its evaporation system using state-of-the-art technologies.

Identified areas of concern as to Baseline and Additionality, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 03, CAR 04, CAR 05, CL 01).

3.3 Monitoring Plan

The monitoring plan is defined on the basis of CCGS's approach in accordance with the specifics of the project and requirements of *Decision 9/CMP.1*, *Appendix B* without using any approved methodologies.

Collection of data required for estimation of GHG emission reductions is performed to high industry standard and the best practice of fuel and energy monitoring and environmental impact assessment.

An operational and management structure that the project participant will implement in order to monitor emission reduction is clearly described in the PDD. The site visit confirmed the availability and operationability of this structure. Monitored data quality assurance and quality control procedures are backed up by the Quality and Environmental Management Systems certified to ISO 9001 and ISO 14001.

Identified areas of concern as to Monitoring Plan, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 14).

3.4 Calculation of GHG Emissions

The formulas used for calculation of baseline and project emissions are presented in PDD Section D. The initial data for calculations and the calculated values are presented in Section E. The verifiers checked the calculations and found them accurate.

By the implemented project, the energy intensity of the production is reduced and additional heat and power are generated by means of non-fossil fuel combustion. The project emissions are insignificant.

The baseline scenario assumes that, without the project, the Mill would continue to operate its existing evaporator plants that could ensure satisfactory liquor evaporation at the same target level of pulp cooking. Warm water and condensate from evaporating units are contaminated and therefore are discharged into the sewer system without recycling. Harmful gases from evaporating units are emitted into the atmosphere.

Emissions from burning liquors are considered biogenic. Emissions of CH4 and N2O are reasonably assumed void.

The calculated value of project emission reduction over the crediting period 2008 – 2012 is 879 939 tCO2e. Annual average emission reduction is 175 939 tCO2e/year.

Identified areas of concern as to Calculation of GHG Emissions, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 06, CAR 09, CAR 12, CL02, CL03, CL04, CL05, CL06).

3.5 Environmental Impacts

There is no significant adverse environmental impacts resulting from implementation of activities within the frameworks of this project. On the contrary the most significant environmental impacts of the project are as

follows: improvement of the environmental situation in Koryazhma due to reduction of air emissions, including emissions of malodorous pollutants; and improvement of the water supply for the settlements which rely on the Vychegda and the Northern Dvina rivers as their source of industrial and drinking water, because the quality of the river water will be improved due to reduction of discharge into the Vychegda River, which is confirmed by the statement of the State Environmental Expertise of the Main Office of the Russian Ministry of Natural Resources in the Arkhangelsk Region dated 31.01.2003 No. 50 (prolonged by the statement of the State Environmental Expertise approved by the order of Rostechnadzor Office in the Arkhangelsk Region dated 09.06.2006 No. 353-9).

Furthermore, the project leads to reduction of pollutant emissions, pollutant discharge into the surface water bodies, solid wastes generation, fuel and chemicals consumption and GHG emissions.

Thereby the project has met the key requirements of Russian environmental legislation.

Identified area of concern as to Environmental Impacts, PP's responses and BV Certification's conclusions are described in Appendix A Table 5.

3.6 Comments by Local Stakeholders

The project support letters have been received from:

- Administration of the Arkhangelsk Region, dated 12.11.2002;
- Municipal Administration of Koryazhma, dated 25.11.2002;
- Main Office of the Russian Ministry of Natural Resources in the Arkhangelsk Region, 05.01.2003.

Municipal Administration of Koryazhma, Administration of the Arkhangelsk Region and Main Office of the Russian Ministry of Natural Resources in the Arkhangelsk Region voiced support of the project implementation, pointing out that it is aimed to improve the environment on site of the enterprise, in the town of Koryazhma and in the Arkhangelsk Region on the whole, and they think that it is real to achieve the environmental targets set forth by the project. Changes didn't need to be introduced to the project following the comments received from these entities.

The public of the town was informed of the planned modernization of the Mill's evaporation system via the local newspaper "Kotlassky Bumazhnik", No.13, 28.03.2003.
This publication has not given rise to any public comments.

Identified area of concern as to Comments by Local Stakeholders, their responses and BV Certification's conclusions are described in Appendix A Table 5 (refer CL13).

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

Similar to the Verification procedure under the Article 6 Supervisory Committee, Bureau Veritas Certification published the PDD Version 01 on BVC site www.bureau-veritas.ru on 25.03.2009 and invited comments within 23.04.2009 by Parties, stakeholders and non-governmental organizations.

No comments from third parties have been received.

5 DETERMINATION OPINION

Bureau Veritas Certification has been engaged by Climate Change Global Services (CCGS) to perform a determination of the JI project "Evaporation System Modernization at OJSC "Ilim Group" Branch in Koryazhma". The determination was performed on the basis of UNFCCC criteria for JI projects Track 1, in particular the verification procedures under the JI Supervisory Committee, as well as host country criteria and the criteria given to provide for consistent project operations, monitoring and reporting.

The determination 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 issuance of the determination report and opinion.

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

An analysis of the investment and 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 it is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The determination revealed two pending issues related to the current status of the project: the issue of the written approval of the project and the authorisation of the project participant by the Host country (Russian Federation). If the written approval and the authorisation by the host Party is awarded, it is our opinion that the project as described in the Project Design Document, version 3.3 dated 14/05/2009 meets all the relevant UNFCCC requirements for the JI for the determination stage and the relevant host country criteria.

Bureau Veritas Certification thus recommends this project for the formal approval by the Russian Federation as the JI project in accordance with the RF Government Decree N 332 dated 28/05/2007.

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

Flavio Gomes – Team leader, Lead verifier

Leonid Yaskin – Team member, verifier

George Klenov – Team member, verifier

Ashok Mammen – Internal Technical Reviewer

BUREAU VERITAS CERTIFICATION Reviewed Init Date: 28/05/09

Bureau Veritas Certification Holding SAS

6 REFERENCES

Reviewed document or Type of Information referred to in Appendix A

1	PDD ""Evaporation System Modernization at OJSC "Ilim Group" Branch in Koryazhma" Version 01, dated 10/02/2009.
2	Guidelines for Users of the Joint Implementation Project Design Document Form/Version 03, JISC.
3	Glossary of JI terms/Version 01, JISC.
4	Guidance on criteria for baseline setting and monitoring. Version 01. JISC.
5	Energy Passport No.231/E of an industrial consumer of fuel energy resources, OJSC "Kotlas Pulp and Paper Mill".
6	JISC "Clarification regarding the public availability of documents under the verification procedure under the Joint Implementation Supervisory Committee." Version 02.
7	Bureau Veritas Certification audit report on the Certification Audit of the OJSC "Ilim Group" Branch in Koryazhma" Integrate Management System to ISO 9001, ISO 14001, OHSAS 18001. 31 March – 3 April 2009.
8	2006 IPCC Guidelines for National Greenhouse Inventories, v.2, Energy.
9	Operational Guidelines for Project Design Documents of Joint Implementation Projects. Volume 1. General Guidelines. Version 2.3. Ministry of Economic Affairs of the Netherlands. May 2004.
10	B.V.Sazanov, V.I.Sitas. Heat Energy Systems at Industrial Enterprises. M.: Energoatomizdat, 1990.
11	On approval of methodological instructions for examination of project documentation. Order by the Ministry of Economic Development and Trade of the RF, dated 20 December 2007, N 444.
12	RF Government Decree No. 332, dated 28 May 2007, Procedure for Approval and Verification of Status of Projects Carried Out in Accordance with Article 6 Of the Kyoto Protocol to the United Nations Framework Convention on Climate Change.

Document or Type of Information obtained at the site visit
References in Appendix A are underlined

1	Schedule of the Project Realization.
2	Project "Evaporator Plant with capacity 600 t/h", Arkhandelsk, 2006, v.1, book 1 "General Explanatory Note", v.2, book 2 "Environmental Protection during Construction and Exploitation".
3	Statement of the State Environmental Expertise (prolonged) approved by the order of Rostechnadzor Office in the Arkhangelsk Region, dated 09.06.2006, No. 353-9.
4	Statement of the State Environmental Expertise of the Main Office of the Russian Ministry of Natural Resources in the Arkhangelsk Region dated 31.01.2003, No. 50.
5	Project NPV calculation tables with input data.
6	Plan Performance Indicators for September 2008, OJSC "Ilim Group" Branch in Koryazhma", dd. 09.10.2008.
7	Business plan of OJSC "Ilim Group" Branch in Koryazhma" for the period 2008-2012.

8	Act of Acceptance “Acceptance of object completed by construction”, OJSC “Ilim Group” Branch in Koryazhma”, dd.15.05.2008.
9	Conclusion on compliance of the object constructed to requirements of norms, regulations, rules and project documentation, OJSC “Ilim Group” Branch in Koryazhma”, dd.04.06.2008, №6/08к.
10	Application for installation of additional measurement devices for monitoring of the GHG reduction achieved, CCGS, dd.10.02.2009.
11	Memo on installation of additional measurement devices for monitoring of the GHG reduction, OJSC “Ilim Group” Branch in Koryazhma”, dd.20.03.2009, №ФК-194.
12	Information Dispatch Service (electronic recording forms), The review of production performance output for January-May 2009, OJSC “Ilim Group” Branch in Koryazhma”.
13	Evaporator Plant “Andritz” Flowsheet (the scheme of the balance of the products), dd.26.05.2005, №343010151.
14	Calibration records and tags concerning testing equipment

All these documents have been available for auditors.

Persons interviewed:

1	Nikolay A. Volov, OJSC “Ilim Group” Brabch in Koryazhma, Senior technologist of energotechnological heat-and power station PL “Power”
2	Aleksey A. Bersenevskiy, OJSC “Ilim Group” Brabch in Koryazhma, Chief of energotechnological heat-and power station PL “Power”
3	Nikolay G. Isaev, OJSC “Ilim Group” Brabch in Koryazhma, Consultant on technical reconstruction - economist
4	Vyacheslav A. Panin, OJSC “Ilim Group” Brabch in Koryazhma, Head of ETHP station
5	Mikhail M. Vorontsov, OJSC “Ilim Group” Brabch in Koryazhma, Head of evaporator plant
6	Vasiliy P. Ponomarev, OJSC “Ilim Group” Brabch in Koryazhma, Head of SAS-1 pulp cooking workshop
7	Alexander V. Samorodov, CCGS, Director
8	Dmitry Potashev, CCGS, specialist, PDD-writer

7 DISCLAMER

This report contains the results of the determination of whether the project under consideration meets the relevant requirements of Article 6 of the Kyoto Protocol and the JI guidelines. The used determination procedure does not fall under the verification procedure under the JISC, as defined in the JI guidelines, paragraphs 30–45. Instead, paragraph 23 of the JI guidelines apples to the determination based on which Bureau Veritas Certification Holding SAS issues, in the frame of the contract with Climate Change Global Services (CCGS), an expert opinion on the project as per the RF Government Decree No. 332, dated 28 May 2007, “Procedure for approval and verification of status of projects carried out in accordance with Article 6 of the Kyoto Protocol to the United Nations Framework Convention on Climate Change”.

APPENDIX A: COMPANY JI APPENDIX A: COMPANY JI PROJECT DETERMINATION PROTOCOL

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

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

REQUIREMENT	REFERENCE	CONCLU
		the AIE when s first verification publication in ac paragraph 38 guidelines, at the
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
3. The sponsor Party shall not acquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7.	Kyoto Protocol Article 6.1 (c)	OK
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
5. Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects.	Marrakech Accords, JI Modalities, §20	OK

REQUIREMENT	REFERENCE	CONCLU
6. The host Party shall be a Party to the Kyoto Protocol.	Marrakech Accords, JI Modalities, §21(a)/24	OK
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts.	Marrakech Accords, JI Modalities, §21(b)/24	OK
8. The host Party shall have in place a national registry in accordance with Article 7, paragraph 4.	Marrakech Accords, JI Modalities, §21(d)/24	OK
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
10. The project design document shall be made publicly available	Marrakech	OK

REQUIREMENT	REFERENCE	CONCLU
and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments.	Accords, JI Modalities, §32	
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
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
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
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
15. The project shall have an appropriate monitoring plan.	Marrakech Accords,	OK

REQUIREMENT	REFERENCE	CONCLU
	JI Modalities, §33(c)	
16. A project participant may be: (a) A Party involved in the JI project; or (b) A legal entity authorized by a Party involved to participate in the JI project.	JISC "Modalities of communication of Project Participants with the JISC" Version 01, Clause A.3	The Russian proj will be authorise Party through th the approval for th Conclusion is per up on CAR 0 Verifiers' Note in 1

Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENT
A. General Description of the project			
A.1 Title of the project			
A.1.1. Is the title of the project presented?	1,2	DR	The title of the project System Modernization at O Branch in Koryazhma". The Sectoral Scope is industries (4).
A.1.2. Is the current version number of the document presented?	1,2	DR	The PDD Version 01 is the c
A.1.3. Is the date when the document was completed presented?	1,2	DR	Verifier obtained PDD Vers February 2009.

A.2. Description of the project			
A.2.1. Is the purpose of the project included?	1,2	DR	The project is implemente OJSC "Ilim Group" Branch i former OJSC "Kotlas Pulp and is aimed at moderniz evaporation system, which reduce power consumptio production process, stabiliz process equipment, m environmental impacts greenhouse gases (GHG) e
A.2.2. Is it explained how the proposed project reduces greenhouse gas emissions?	1,2, 5, 2	DR I	It is stated in PDD Section A cooking process produces l spent liquor, which contains products. Liquor is fed to the evaporat to remove excess water fron to bring its concentration to dry matter, so that minerals recovered and useful e generated by firing liquor i boilers. Liquor evaporation proces requirements of steam, ele and yields large quantities condensate and malodorous The new evaporator unit, fo Russia, uses a process flo provides for separation of

			relatively clean and high streams and has an in-built for treatment of highl condensates. The scheme also envisag collection and efficient uti containing malodorous vap and methanol fraction in a boiler with further des gaseous emissions. Cooli contaminated in the plan scheme. Due to the project the M opportunity to reuse warm relatively clean and treated liquor evaporation in its pro result, not only the fresh reduced but also heat (ste for water heating in the so Mill. With the project implemen possible to reduce energy production, redistribute between the evaporator operation of the technolo increase black liquors separ reduce fossil fuel consum emission. This Section also summariz the project (including its JI c

A.3. Project participants			
A.3.1. Are project participants and Party(ies) involved in the project listed?	1,2	DR	Party A is the Russian Fede
A.3.2. The data of the project participants is presented in tabular format?	1,2,3	DR	The data of the project presented in the tabular entity A1 only. Legal entity B1 is to be det months upon approval of t Russian Government. Refe A.3 and to Verifier's Note in Conclusion is pending a f 01.
A.3.3. Is contact information provided in Annex 1 of the PDD?	1,2	DR	Refer to PDD Annex 1.
A.3.4. Is it indicated, if it is the case, if the Party involved is a host Party?	1,2	DR	Russian Federation is indi Party in PDD Section A.4.1.
A.4. Technical description of the project			
A.4.1. Location of the project activity			
A.4.1.1. Host Party(ies)	1,2	DR	The Russian Federation.
A.4.1.2. Region/State/Province etc.	1,2	DR	The Arkhangelsk Region
A.4.1.3. City/Town/Community etc.	1,2	DR	The Town of Koryazhma
A.4.1.4. Detail of the physical location, including information allowing the unique identification of the project.	1,2	DR	PDD Section A.4.1. defin physical location, includ allowing the unique iden

(This section should not exceed one page)			project. Latitude: 61°18'. L Time zone GMT: +3:00. This section exceeds one pa accordance with [2].
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project			
A.4.2.1. Does the project design engineering reflect current good practices?	1	DR	The project design engine current good practices in us systems in the pulp and pap
A.4.2.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	1,5, 2	DR	The project uses the state- It envisages construction technology evaporator plant "Andritz" with the evaporatir tonnes per hour and decom two old "Ramen" evaporato design capacity of 140 tonne
A.4.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1	DR	The project technology is substituted by other or technologies within the proje
A.4.2.4. Does the project extensive initial training and maintenance efforts in order to work as presumed during the project period?	1	DR	This issue is reflected in PD
A.4.2.5. Does the project make provisions for meeting training and maintenance needs?	1	DR	It is stated In PDD Sect personnel of the evapora undergone certification in the requirements of Rostekh

			Furthermore, in connec commissioning of the evap personnel underwent trai framework of the contract w supplier, "Andritz OY", in ac personnel's job profile. The actions required by the all relevant technical implementation schedule implemented and described A.2 and A.4.2.
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances			
A.4.3.1. Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	1,2, INT	DR I	It is stated how anthropogen reductions are to be achieve Due to the implemented pr intensity of the production additional heat and power means of non-fossil fuel con Energy intensity decreases of steam consumption for l and fresh water heating. Ac generated by the Mill tec plant due to more black

			liquor recovery boilers and c net calorific value of red l through combustion of meth malodorous gases in the boiler. As a result, combustion of f gas) at CHPP-1 (Mill main cogeneration type) is reduc by respective reduction of C The project emissions are attributed to additional consu gas in the utilizing boiler (flaring takes place only shutdown of the utilizing boi Leakages outside the proje substantial and are entailed heat consumption ba generation at CHPP-1, ther of electricity in the genera made up for from the grid.
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?	1,2	DR	Total estimated emission 879 939 tCO2e over 5 yea starting in 2008.
A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	1,2	DR	The estimated annual redu 2008 -2012 of the crediting in tCO2e (ref to PDD Sectio The annual average of es reductions over the cre

			175 988 tCO2e/year.
A.4.3.4. Is the data from questions A.4.3.2 and A.4.3.3 above presented in tabular format?	1, 2	DR	The data is presented in th Refer to PDD Section A.4.3.1
A.5. Project approval by the Parties involved			
A.5.1. Are written project approvals by the Parties involved attached?	1,2	DR	The written project approva are to be provided after the the PDD. Conclusion is pending a fo 01.
B. Baseline			
B.1. Description and justification of the baseline chosen			
B.1.1. Is the chosen baseline described?	1,2, 4	DR	The baseline scenario as existing evaporating equipm operation in the previous m cooking volumes being m planned level.
B.1.2. Is it justified the choice of the applicable baseline for the project category?	1,2, 4	DR	Following Clause 20 (b) of for baseline setting and m project participant has methodology in accordance of the JI guidelines. The baseline is the most technically feasible scenario violate Russian legal require
B.1.3. Is it described how the methodology is applied	1,2,	DR	The description of how the

in the context of the project?	5, 2		applied in the context is give B.1. The following main factors GHG emissions in the b project scenarios were sufficient detail: - pulp cooking volumes; - liquors supply for evaporat - heat and electricity consu evaporation; - heat and electricity supp (technological power plant - reuse of warm water and the Mill; - heat supply from the operating on methanol gases; - heat and electricity CHPP-1.
B.1.4. Are the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)?	1,2, 3,4, 10, 11 12, 13	DR	The basic assumptions methodology in the conte activity are presented in F and Annex 2. The baseline scenario assu the project, the Mill would co its existing evaporator p ensure satisfactory liquor e same target level of pulp c technical condition of th

			evaporator plants No.1 ar possible to keep their per same level for a number relatively cheap routine mair Warm water and co evaporating units are co therefore are discharged system without recycling. Harmful gases from evap emitted into the atmosphere Emissions from burnin considered biogenic. Emiss N2O are reasonably assume Essentially, baseline GHG calculated with the use c parameters recalculated by for the first three quarter specific yield of black liquor, electricity consumption by plants). The values of these not adjusted for their uncerta The key information and establish the baseline are n prescribed tabular form [Ref Volume output measureme clean condensate and trea determined by the contro “Andritz” evaporation plant

			on 06 May 2009 was equa the plant evaporating capa t/h. In accordance with "Ar dd.26.05.2005 # 3430101 condensate output will be project plant evaporating ca This data is in contrac estimations given in the t rows 3 and 4) which do no in the case of continued ope
B.1.5. Is all literature and sources clearly referenced?	1,2	DR	Relevant literature and referenced through the text
B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project			
B.2.1. Is the proposed project activity additional?	1,2,4	DR	The alternative analysis, sensitivity analysis, barrie common practice a demonstrated that the p activity is not financially a economically or financially the revenue from the s reduction units (ERUs). The following Alternatives were identified: 1 - Continua situation; 2 - Project

			registration under JI and (National Pollution Abatem loan; 3 - Project activity w under JI but with NPAF alternative was reviewed. The investment analysis analysis which were under Alternatives 2-3 are not t input data for operatio revenues/losses are not pro not enable the verifier to project is additional. Acco Cl.2(e), "information use whether reductions in emissions by sources are not be considered as confidential". The investment analysis Alternatives 2 and 3 have they are not financially att Table B.2-2). This result m analysis superfluous. Common practice analys Kotlas Pulp and Paper Mil, f Russia, implemented a technical solutions for mo evaporation system using technologies. Other distin are described in A.2.2 abov to other pulp and paper m

			2008, the verifiers confirm t not a common practice.
B.2.2. Is the baseline scenario described?	1,2	DR	The baseline scenario sufficient detail in PDD Sect
B.2.3. Is the project scenario described?	1,2	DR	The project scenario envisa of a new high-technology "A plant to replace "Ramen" e decommissioned. 58% of bl as all red liquor are fed for e new evaporator plant. Methanol fraction and malo be burnt in the utilizing boi under the project to produce Warm water, relatively cl condensates from evapora returned to the Mill heat bala The project scenario is desc detail in PDD Sections A.4 and B.1 (quantitatively). Considering that the new began to operate in enterprise's reporting data quarters of 2008, available calculation model develop for the projections of the m the project scenario. The pulp cooking volume equal in the baseline and

			However the quantity of higher (by 2%) in the projec PDD Table B.1-7). Please cl Please clarify why the proje red liquor is higher than th (by 12%). The specific yield of red liq $\alpha_{RL,PJ}$ is assumed to be eq baseline value $\alpha_{RL,BL}$ (s $\alpha_{RL,BL}=\alpha_{RL,PJ}$ = 0.16 contradiction with the data B.1-6 and B.1-7, where α_{R} has to be corrected. The relative heat consumpti boiler's auxiliary needs in fo assumed constant over the k_B = 0.05 though the heat auxiliary needs of the Mi according to [R5] (see PDD, around 12%. In verifiers' op value of the auxiliary needs any heat output and therefo given in PDD "12% in proportion of constant co does not depend on addition the boilers" seems to be que clarify this issue. The relative value of re consumption for auxiliary ne the formula (B.1-83) is a

			over the years and equal t though the electricity auxiliary needs of the Mi according to [R5] amounts t verifiers' opinion, the relat auxiliary needs equally appl output and therefore the ex PDD "a minor value is assu electricity generation becau proportion of constant electricity for CHPP-1's seems to be questionable. issue.
B.2.4. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario included?	1,2	DR I	The quantitative analysis is Section B.1. The GHG emission reducti are due to the reduction consumption at the Mi Reloading of the power plan total heat savings in the cycle, as a result of the pro savings of heat consu evaporation in the new ev additional heat supply from power plant due to highe liquor recovery boilers; 3) t due to reuse of cool condensates from the new (contribution 70%); 4) the supply due to operation of th

B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?	1,2,4	DR	Refer to PDD Sections B.1 a The project activity without JI mechanism is not a likely due to the existing investm operational barriers to implementation. It is shown analysis that the project economically and financiall the revenue from the s reductions units (ERUs).
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?	1,2	DR	Financial circumstances baseline of the proposed p summarised in PDD Section
B.3. Description of how the definition of the project boundary is applied to the project activity			
B.3.1. Are the project's spatial (geographical) boundaries clearly defined?	1,2	DR	The project's spatial boundaries clearly defined Figures B.3.1 and B.3-2.
B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline			
B.4.1. Is the date of the baseline setting presented (in DD/MM/YYYY)?	1,2	DR	The date of the baseline se as December 20 2008. Please provide date of (DD/MM/YYYY).
B.4.2. Is the contact information provided?	1,2	DR	CCGS Ltd, Arkhagelsk; Contact persons:

			Dmitry Potashev E-mail: d.potashev@ccgs.ru
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	It is not indicated that CCGS project participant listed in A
C. Duration of the small-scale project and crediting period			
C.1. Starting date of the project			
C.1.1. Is the project's starting date clearly defined?	1,2,3	DR	April 23, 2004 (date on whi was made available to t indicated as the project's sta Section C1. The starting date of a JI pro which the implementation c real action of the proj Availability of the loan does definition.
C.2. Expected operational lifetime of the project			
C.2.1. Is the project's operational lifetime clearly defined in years and months?	1,2	DR	25 years / 300 months.
C.3. Length of the crediting period			
C.3.1. Is the length of the crediting period specified in years and months?	1,2	DR	5 years / 60 months (from Ja December 31, 2012).
D. Monitoring Plan			

D.1. Description of monitoring plan chosen			
D.1.1. Is the monitoring plan defined?	1,2, 13	DR	The monitoring plan is defin CCGS's approach in acco specifics of the project and *Decision 9/CMP.1*, *Appendi* any approved methodologie Collection of data required GHG emission reductions high industry standard and of fuel and energy environmental impact asses
D.1.2. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.	1,2, 13	DR	The monitoring endpo parameters and formulae u (ref. to PDD Sections D.1.1.
D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.	1,2	DR	Data to be collected and archiving them are prese scope in the PDD Section D
D.1.4. Description of the formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2, 10	DR	Refer to PDD Section D (D.1-1) - (D.1-5). Detailed description of the formulae formulae were checked and
D.1.5. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived.	1,2	DR	Data to be collected and collecting and archiving the in sufficient scope in PDD S

D.1.6. Description of the formulae used to estimate baseline emissions (for each gas, source etc, emissions in units of CO2 equivalent).	1,2, 10, 11	DR	Refer to PDD Section D (D.1-6) - (D.1-37). Detailed description of the formula formulae were checked and
D.1.7. Option 2 – Direct monitoring of emissions reductions from the project (values should be consistent with those in section E)	1,2	DR	Not applicable.
D.1.8. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived.	1,2	DR	Not applicable.
D.1.9. Description of the formulae used to calculate emission reductions from the project (for each gas, source etc; emissions/emission reductions in units of CO2 equivalent).	1,2	DR	Not applicable.
D.1.10. If applicable, please describe the data and information that will be collected in order to monitor leakage effects of the project.	1,2	DR	Data to be collected and collecting and archiving the in sufficient scope in the Sec
D.1.11. Description of the formulae used to estimate leakage (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2	DR	Refer to PDD Section D.1.3 38) - (D.1-50). Detailed description of the formul formulae were checked and
D.1.12. Description of the formulae used to estimate emission reductions for the project (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2	DR	This is the straightforward F
D.1.13. Is information on the collection and archiving of	1,2,7	DR	The environmental monitori

information on the environmental impacts of the project provided?			Group" is carried out in environmental legislative re Russian Federation. periodically monitors its emi according to the schedule impact monitoring, which during the certification audit Management System to 14001, OHSAS 18001 m Veritas Certification auditors April 2009. Supporting doc possession of the verifiers. Refer to PDD Section D.1.5.
D.1.14. Is reference to the relevant host Party regulation(s) provided?	1,2	DR	Refer to PDD Section D.1.5
D.1.15. If not applicable, is it stated so?	1,2	DR	Refer to D.1.14, Table 2.
D.2. Qualitative control (QC) and quality assurance (QA) procedures undertaken for data monitored			
D.2.1. Are there quality control and quality assurance procedures to be used in the monitoring of the measured data established?	1,2,7	DR	The company has quality c assurance procedures. OJ Koryazhma Branch Qualit certified QHSE Managemer 9001, ISO 14001 and Supporting documentation is the verifiers. The particular QC and QA outlined in PDD Section D.2

D.3. Please describe of the operational and management structure that the project operator will apply in implementing the monitoring plan			
D.3.1. Is it described briefly the operational and management structure that the project participants(s) will implement in order to monitor emission reduction and any leakage effects generated by the project	1,2	DR	Refer to PDD Section D. Table D.3-1. CCGS specialists are calculation of the GHG em based on the provided data up a monitoring report at reporting year.
D.4. Name of person(s)/entity(ies) establishing the monitoring plan			
D.4.1. Is the contact information provided?	1,2	DR	LLC CCGS, Arkhangelsk; Contact persons: Dmitry Potashev E-mail: d.potashev@ccgs.ru
D.4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	It is not indicated that CCG project participant listed in A
E. Estimation of greenhouse gases emission reductions			
E.1. Estimated project emissions			
E.1.1. Are described the formulae used to estimate anthropogenic emissions by source of GHGs due to the project?	1,2, 10, 11, 2	DR	These are Formulae (E.1 presented in PDD Section B were checked and found co PDD Table B.1-23.

E.1.2. Is there a description of calculation of GHG project emissions in accordance with the formula specified in for the applicable project category?	1,2, 8,9	DR	GHG project emissions a formulae (E.1-2) with the Table B.1-23 (natural gas c utilising boiler and in the flar value of CO2 emission fact from [8]. Please clarify how was the natural gas in the utilizing flare in 4th quarter 2008 was is the influence of the u yearly value 111 639 G emission reduction values.
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	1,2, 2	DR	For the purposes of estim and flare performance pa period 2009-2012 were a and equal to their respective Conclusion is pending a follo
E.2. Estimated leakage			
E.2.1. Are described the formulae used to estimate leakage due to the project activity where required?	1,2	DR	These are Formulae (E.2 presented in PDD Section E were checked and found co PDD Table B.1-23.
E.2.2. Is there a description of calculation of leakage in accordance with the formula specified in for the applicable project category?	1,2,9	DR	Leakage is calculated by with the use of data from reduction of electricity supp to the project) and the defa electricity grid emission facto
E.2.3. Have conservative assumptions been used to	1,2,	DR	The variation of electricity g

calculate leakage?	10		power plant turbines de variation of heat supply fro steam extraction is de averaged equation from Annex 2.4). Please clarify if the turbine types operate equal time and if not what is the influ equality effect on the reduction values.
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?	1,2	DR	The project falls under categ projects. The calculated values of project GHG emissions a presented in PDD Table E.3 right column is incorrect.
E.4. Estimated baseline emissions			
E.4.1. Are described the formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline using the baseline methodology for the applicable project category?	1,2	DR	These are Formulae (E.4 presented in PDD Section E were checked and found co PDD Formulae (D.1-6) – (D.
E.4.2. Is there a description of calculation of GHG baseline emissions in accordance with the formula specified for the applicable project category?	1,2,9	DR	GHG project emissions a Formulae (E.4-2) with the (D.1-6) – (D.1-37) and the CO2 electricity grid emissior
E.4.3. Have conservative assumptions been used to	1, 2	DR	For estimations, temperatu

calculate baseline GHG emissions?			condensates were assume equal to their reported aver in the first three quarter quarterly values are not p other process parameters) allow assessing the uncertai
E.5. Difference between E.4. and E.3. representing the emission reductions of the project			
E.5.1. Does the difference between E.4. and E.3. represent the emission reductions due to the project during a given period?	1,2	DR	The values of GHG emissio difference between E4 and I in PDD Table E.5-1.
E.6. Table providing values obtained when applying formulae above			
E.6.1. Is there a table providing values of total CO_2 abated?	1,2	DR	The presented Table E.6 pr and total values of pr leakages, baseline emissio reductions for the crediting p
F. Environmental Impacts			
F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party			
F.1.1. Has an analysis of the environmental impacts of the project been sufficiently described?	1,2, 2, 3, 4	DR	The detailed analysis of t impacts of the project has described based on the M reporting (refer to PDD Se

			F.1-1 – F.1-4).
F.1.2. Are there any host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	1,2, 2, 3, 4	DR	The project activity is p conclusion of the State Expertise approved by Rostekhnadzor Office in Region dated 09.06.2006 N
F.1.3. Are the requirements of the National Focal Point being met?	1,2, 11, 2, 3, 4	DR	The requirements of the Na to present the EIA should b submission of the project to Centre of National Focal Poi
F.1.4. Will the project create any adverse environmental effects?	1,2, 2, 3, 4	DR	The project leads to reduc emissions, pollutant discharg water bodies, solid wastes and chemicals consump emissions.
F.1.5. Are transboundary environmental impacts considered in the analysis?	1,2	DR	The project activity has n environmental impacts.
F.1.6. Have identified environmental impacts been addressed in the project design?	1,2	DR	Refer to PDD Section F.2 S F.1-1 – F.1-4).
***G.* Stakeholders' comments**			
G.1. Information on stakeholders' comments on the project, as appropriate			
G.1.1. Is there a list of stakeholders from whom comments on the project have been received?	1,2, 6	DR	The project support letter from: – Administration of the Ark dated 12.11.2002;

			– Municipal Administration dated 25.11.2002; – Main Office of the Rus Natural Resources in t Region, 05.01.2003. The public of the town wa the planned modernizatio evaporation system via the "Kotlassky Bumazhnik", No.
G.1.2. The nature of comments is provided?	1,2	DR	Please describe nature of comments and whether comments have been addre
G.1.3. Has due account been taken of any stakeholder comments received?	1,2	DR	Conclusion is pending a fo 13.

Table 4 Legal requirements

CHECKLIST QUESTION	Ref.	MoV*	COMMENT
***1.* Legal requirements**			
1.1. Is the project activity environmentally licensed by the competent authority?	1	DR, I	Please refer to F.1.2.
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?	1	DR, I	Please refer to 1.1 above.
1.3. Is the project in line with relevant legislation and plans in the host country?	1	DR, I	Yes, the project is in li legislation and plans in the

Table 5 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response
CAR 01 The project has no approval of the Host Party involved.	1 Table 1	N/A
CAR 02 This section exceeds one page. This is not in accordance with [2].	A.4.1.4	The corresponding section of the PDD corrected accordingly (See pp. 5-6).
CAR 03 Essentially, baseline GHG emissions were calculated with the use of yearly process parameters recalculated by averaged values for the first three quarters of 2007 (e.g. specific yield of black liquor, specific heat and electricity consumption by the evaporator plants). The values of these parameters were not adjusted for their uncertainty.	B.1.4	In baseline GHG emissions estimations, order to be more conservative, the estimat values of the key parameters for the 4th quar of 2007 were replaced with maximum minimum values over the first three quarte depending on which is more conservative each individual case: - Specific baseline yield of BL CPP in the quarter of 2007 is assumed equal to t maximum value in the first three quarters (1.2 t a.d.m./t). And for the period 2008-2012 it assumed constant in magnitude and equal the average value over 2006-2007 (1.202

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response
		a.d.m./t). In accordance with these corrections recalculated the quantity of BL CPP fed evaporator plant of CHP-2 under the basel scenario (See corrections in the PDD, pp. 20). - Values of specific heat and electric consumption for CHP-2 and CHP-3 for the quarter of 2007 were determined as minimu values in the first three quarters of 2007 (S PDD, pp. 24, 26). And for the period 2008-20 - constant in magnitude and equal to average values of respective parameters o 2006-2007. In accordance with these corrections recalculated the quantity of heat and electric consumed for liquor evaporation by evapora plants of CHP-2 and CHP-3 under the basel scenario (See corrections on pp. 24, 29). Moreover, corresponding corrections we made on pp. 3, 13, 35, 45, 63, 64, 70, 80-82.
CAR 04	B.1.4	Key data used to establish the basel scenario were added in the prescribed tabu

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response
The key information and data used to establish the baseline are not provided in the prescribed tabular form [Ref. 2, page 12].		form in Section B.1 of the PDD (See pp. 46-48
CAR 05 The investment analysis and sensitivity analysis which were undertaken to evaluate Alternatives 2-3 are not transparent since input data for operational costs and revenues/losses are not provided. This does not enable the verifier to determine if the project is additional. According to Ref.[6] Cl.2(e), "information used to determine whether reductions in anthropogenic emissions by sources are additional…shall not be considered as proprietary or confidential".	B.2.1	Information and data on the investment analy of alternatives were attached in Annexes 2 2.7 of the PDD. In Section B.2 t corresponding reference to the Annexes made (See pp. 50, 94-96).
CAR 06 The specific yield of red liquor in the project $\alpha_{RL,PJ}$ is assumed to be equal to respective baseline value $\alpha_{RL,BL}$ (see PDD, p.19) $\alpha_{RL,BL}=\alpha_{RL,PJ}$ = 0.166, what is in contradiction with the data of PDD Tables B.1-6 and B.1-7, where $\alpha_{RL,PJ}$ =0.170. This	B.2.3	Table B.1-6 contains actual data for 2006-20 ($\alpha_{RL,PJ}$ =0.170 – average value for 2007). Sin the project does not have any impact upon t specific yield of red liquor, the specific yield this stream is assumed in our calculations to equal to the project value (i.e. to the avera value over the three quarters of 2008 - α_R =0.166).

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response
has to be corrected.		Additional explanations were introduced into t PDD to make it clearer (See p.18, and also da for 2006-2007 were added into Table B.1-3).
CAR 07 Please provide date of baseline setting (DD/MM/YYYY).	B.4.1	The corresponding Section of the PDD w corrected accordingly (See p. 54).
CAR 08 It is not indicated that CCGS Ltd. is not the project participant listed in Annex 1 of PDD.	B.4.3	The indication that CCGS Ltd. is not the proj participant listed in Annex 1 of PDD is added the respective section of the PDD (See p. 56)
CAR 09 The starting date of a JI project is the date on which the implementation or construction or real action of the project begins [3]. Availability of the loan does not fall under this definition.	C.1.1	The starting date of the project is January 2005 – the date of the contract signed w "Andritz" for supply of evaporator pla equipment. The PDD is corrected accordin (See p. 3, 57).
CAR 10 It is not indicated that CCGS Ltd. is not the project participant listed in Annex 1 of PDD.	D.4.2	The indication that CCGS Ltd. is not the proj participant listed in Annex 1 of PDD is added the respective section of the PDD (See p. 79)
CAR 11 The calculated values of the sum of the	E.3.1	The corresponding Section of the PDD w corrected accordingly (See Table E.3-1. p. 81

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response
project GHG emissions and leakages are presented in PDD Table E.3-1. The title of the right column is incorrect.		
CAR 12 For estimations, temperatures of water and condensates were assumed approximately equal to their reported average temperatures in the first three quarters of 2008. The quarterly values are not presented (as for other process parameters) what does not allow assessing the uncertainty of this data.	E.4.3	To reduce the uncertainty in estimations replaced assumed temperatures with valu corresponding to design data ([R2], See t PDD): 45 °C - warm water temperature (t same value remains); 55 °C - relatively cle condensate temperature; 67 °C - treat condensate temperature. The PDD was corrected accordingly (See p 38, 39).
CAR 13 Please describe nature of the stakeholders comments and whether and how the comments have been addressed.	G.1.2	Municipal Administration of Koryazhm Administration of the Arkhangelsk Region a Main Office of the Russian Ministry of Natu Resources in the Arkhangelsk Region voic support of the project implementation, pointi out that it is aimed to improve the environme on site of the enterprise, in the town Koryazhma and in the Arkhangelsk Region the whole, and they think that it is real achieve the environmental targets set forth the project. Changes didn't need to introduced to the project following t

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response
		comments received from these entities. The PDD was corrected accordingly (See 86).
CAR 14 Volume output measurements of relatively clean condensate and treated condensate, determined by the control display at the "Andritz" evaporation plant at 15-00 o'clock on 06 May 2009 was equal to 347 m^3/h for the plant evaporating capacity of about 400 t/h. In accordance with "Andritz" flowsheet dd.26.05.2005 # 343010151 this volume condensate output will be 570 m^3/h for the project plant evaporating capacity of 600 t/h. This data is in contradiction with the estimations given in the table B.1-18 (see rows 3 and 4) which do not exceed 68 m^3/h in the case of continued operation.	B.1.4	The meters for relatively clean (condensate and treated (condensate A) condensates fed reuse were installed at the Mill in the early 20 on CCGS's request. Therefore for the purpo of estimating the project GHG emissi reductions, the condensate volume data 2008 in the PDD were corrected for t estimated quantity of evaporated moisture the new evaporator plant: Three liquor streams are fed to And evaporator plant (red liquor, BL CPP and SBPP). All the moisture evaporated at the pl becomes a condensate and its entire volume further fed for reuse (except for consumption washing of evaporation units, however for t purpose of estimation, such calculation will sufficiently accurate). To calculate the total quantity of condensa generation the following calculations we made:

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response
		- on the basis of the available weekly data liquor dryness at the inlet and at the outlet of t evaporation plant in 2008 we calculated h much moisture is evaporated from 1 ton of liquor residue for each stream (on a wee basis). According to [R9] (PDD, p.323) t figure is determined by the following formula: $$W_{sp} = \frac{100 - b_b}{b_b} - \frac{100 - b_f}{b_f},$$ where b_b is the initial dryness of the liqu stream, %; b_f is the final dryness of the liquor stream, % - the minimum weekly values of W_{sp} were fou for each of the three streams for each mon and for the sake of conservatism were assum as estimated values; - in order to find the total quantity of evaporat moisture for each of the streams the minimum values of W_{sp} were multiplied by t respective monthly volumes of liquors fed to t

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response
		evaporator plant (t a.d.m.); - by summing up the monthly data, we obtain quarterly data for evaporated moisture for ea of the streams, t; - quarterly values of the total condensa generation volume were obtained by summi up quarterly data for each streams. - according to the flow sheet of the evapora plant prepared by "Andritz", the ratio of t generated condensates A and B is 69% a 31% of the total condensate volun respectively (with the plant's evaporati capacity of 600 t/h, condensate A generati rate is 394.56 t/h; and condensate B generati rate is 177.12 t/h). On the basis of this ratio t quarterly breakdown of the total quantity generated condensate by condensate typ was made. The corrected volume data were added to t respective section of the PDD (See p. 3 Besides corrections were made on pp.13, 3 44, 80, 81)
CL 01	B.2.3	See the PDD p. 8: "However the insufficie

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response
The pulp cooking volumes are assumed equal in the baseline and project scenarios. However the quantity of black liquor are higher (by 2%) in the project scenario (ref. to PDD Table B.1-7). Please clarify this issue.		actual output of "Ramen" plants remained bottleneck. Therefore there was a problem w evaporation of standard volumes of liqu containing waters from sulfate pulp washi which resulted in high losses of black liqu solids." P. 16: "The analysis of the actual data fr Table B.1-3 shows a significant increase specific yield of BL CPP in the 3rd quarter. T is explained by the fact that by the beginning the 3rd quarter of 2008 a new evaporator pl and the associated equipment were up a running in stable operation mode (in the first t quarters of 2008 some increase can be a seen in BL CPP yield compared to 2007 but i not that sizable), so it became possible increase the rate of liquor separation dur pulp washing, and this also reduced liqu losses in SAS-1."
CL 02 Please clarify why the project caloric value of red liquor is higher than the baseline value (by 12%).	B.2.3	Net calorific value of red liquor increased due reduction of its moisture content before feed for combustion. See the PDD p. 31: "Before the project all r liquor flowed to "UkrNIIHimMash" evapora

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response
		plant where it was evaporated to concentrati of 50-55% and then was fired in the liqu recovery boilers. After the proj implementation all red liquor is now fed to t new evaporator plant of CHP-2, and then it further evaporated in concentrators to achie concentration of 63-65%. Such modificatio made it possible to increase the net calor value of liquor and therefore to increase he production by the liquor recovery boilers…" For the sake of clarity it was explained in t PDD that the calorific values are referred to t liquor's dry matter, besides "adm" index w added to the designation of the calorific valu (see pp.31-33, 35, 48, 60, 65, 66).
CL 03 The relative heat consumption for the utilizing boiler's auxiliary needs in formula (B.1-77) is assumed constant over the years and equal k_B = 0.05 though the heat consumption for auxiliary needs of the Mill's power plants according to [R5] (see PDD, p.41) amounts to around 12%. In verifiers' opinion, the relative value of the auxiliary needs equally apply to	B.2.3	The larger proportion of heat consumed auxiliary needs of ETHPS is attributed technological needs of LRB. According to textbook for higher educational institutio [T.I.Nepenin. Pulp Technology. M.: Timb Industry, 1990], heat consumption for heati up liquor and sulfate mixture and for heating air in the air heater before LRB can be as mu as 15% of the produced heat energy.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response
any heat output and therefore the explanation given in PDD "12% includes a large proportion of constant consumption which does not depend on additional heat output by the boilers" seems to be questionable. Please clarify this issue.		Bark-fired boilers have lower heat consumpti for auxiliary needs; therefore the over consumption for ETHPS is in the order of 12 But the larger proportion of it is attributed constant technological demand which essentially not related to additional stea production by the new fire-tube gas-fired boile The value of relative heat consumption auxiliary needs of the fire-tube boiler accordance with the reference book on sma size boiler units [K.F.Roddatis – Energoatomizdat, 1989], could have be assumed equal to 0.02. But for conservat reasons the value of k_B was assumed at t level of 0.05. Explanations are added to the respect section of the PDD (See pp. 39, 86).
CL 04 The relative value of relative electricity consumption for auxiliary needs of CHPP-1 in the formula (B.1-83) is assumed constant over the years and equal to e_{CHPP-1} = 0.05 though the electricity consumption for	B.2.3	[R5] gives the value of electricity consumpti for auxiliary needs of CHPP-1, which include large proportion of constant demand, wh does not depend on additional electric generation (or undergeneration as is the ca due to the project). It is obvious that t

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response
auxiliary needs of the Mill's power plants according to [R5] amounts to around 13%. In verifiers' opinion, the relative value of the auxiliary needs equally apply to any electricity output and therefore the explanation given in PDD "a minor value is assumed for additional electricity generation because of a significant proportion of constant consumption of electricity for CHPP-1's auxiliary needs" seems to be questionable. Please clarify this issue.		variable demand proportion of the electric consumption for auxiliary needs is significan lower than overall electricity consumption auxiliary needs of CHPP-1. Due to the project implementation electric supply from CHPP-1 is reduced. The value relative electricity consumption for auxilia needs of CHPP-1 (e_{CHPP-1}) influences the va of electricity supply from CHPP-1: the higher t electricity consumption for auxiliary needs - t lower the electricity supply (and the lower t negative impact of the project), and th leakages reduce. Therefore the value of e_{CHP} for conservative reasons was fixed at the le of 0.05 as recommended [Sokolov "He Networks", MEI, 2001, page 33]. Otherwise we assume that e_{CHPP-1} =0.13) GHG emissi reductions due to reduction of leakages wo increase by 57.7 thousand tCO_2 over 5 years. (Explanations are added to the respect section of the PDD p. 41, 42).
CL 05	E.1.2	For the purpose of GHG emission reductio

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response
Please clarify how was the consumption of natural gas in the utilizing boiler and in the flare in 4th quarter 2008 was defined and what is the influence of the uncertainty of the yearly value 111 639 GJ on the GHG emission reduction values.		estimation, the performance parameters of t utilizing boiler and flare for the period 200 2012 were assumed constant and equal to th respective values in 2008. In order to reduce the uncertainty estimations: - data on production and supply of heat by t utilizing boiler in the 4th quarter of 2008 we replaced by minimum values of respect parameters in the first three quarters of 20 (See correction on p. 39, 43). - data on natural gas consumption by t utilizing boiler and flare in the 4th quarter 2008 were replaced by the maximum values respective parameters in the first there quarte of 2008 (See corrections on p. 42, 43).
CL 06 Please clarify if the turbines of the different types operate equal time through the year and if not what is the influence of the non-equality effect on the GHG emission reduction values.	E.2.3	The worst, in terms of energy efficiency, are t turbines with the lowest initial steam paramet and the highest steam parameters of stea extraction. It is such least efficient turbines th the enterprise will try to unload in the first pla as the opportunity arises. At CHPP-1 of KPP such turbine is PT-60-90/13 turbine. If assumed the most real scenario (i.e. reducti

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response
		of the number of running hours of this turbin then the GHG emission reductions would gr by 74 thousand tCO_2 over five years. Howe when estimating GHG emissions we us averaged, in terms of installed capac characteristics of all PT type turbines (assuming uniform reduction of the number running hours of all turbines), which is moderately conservative solution. Explanations are added to the respect section of the PDD (See p. 91).

Appendix B: Verifiers CV's

Mr. Flavio Gomes:
Lead Verifier
Bureau Veritas Certification Holding SAS – Global Manager for Climate Change

Flavio Gomes is a Chemical and Safety Engineer graduated from «UNICAMP – Universidade Estadual de Campinas», with a MSc title in Civil Engineer (Sanitation). He spent four years at RIPASA Pulp and Paper as Environmental Process Engineer. He is, since 2006 the Global Manager for Climate Change. Previously and since 1997, he was senior consultant for Bureau Veritas Consulting in fields of Environment, Health, Safety, Social Accountability and Sustainability audit and management systems. He also acted as Clean Development Mechanism verifier, and Social/Environmental Report auditor, in the name of Bureau Veritas Certification. Flavio is pursuing his PhD on Energy Management at the Imperial College – London.

Leonid Yaskin, PhD (thermal engineering)
Verifier.
Bureau Veritas Certification Rus General Director- Lead Auditor, Lead Tutor, Verifier

He has over 30 years of experience in heat and power R&D, engineering, and management, environmental science and investment analysis of projects. He worked in Krrzhizhanovsky Power Engineering Institute, All-Russian Teploelectroproject Institute, JSC Energoperspectiva. He worked for 8 years on behalf of European Commission as a monitor of Technical Assistance Projects. He is a Lead auditor of Bureau Veritas Certification for Quality Management Systems (IRCA registered), Environmental Management System (IRCA registered), Occupational Health and Safety Management System (IRCA registered). He performed over 250 audits since 2002. Also he is a Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and a Lead Tutor of the IRCA registered OHSAS 18001 Lead Auditor Training Course. He is an Assuror of Social Reports. He has undergone intensive training on Clean Development Mechanism /Joint Implementation and was/is involved in the determination of 11 JI projects.

George Klenov, Professor, Doctor of Science (engineer electromechanic, phisicist)
Verifier.
Bureau Veritas Certification Rus - Lead Auditor, Lead Tutor, Verifier

He has over 30 years of experience in Low Frequency Electromagnetic Fields of ocean, atmosphere and ships R&D, engineering, and management, environmental science. He worked in Krylov's Research Centre, Saint-Petersburg. At the same time he worked for 15 years as professor of physics at the Marine Technical University. He has published two books, more then one hundred papers in the different scientific journals. Now he is a Lead auditor of Bureau Veritas Certification for Quality Management Systems, Environmental Management System, Occupational Health and Safety Management System. He performed over 400 audits since 1998. Also he is a Lead Tutor of the IRCA registered ISO 9001 QMS Lead Auditor Training Course. He is an Assuror of Social Reports. He has undergone intensive training on Clean Development Mechanism /Joint Implementation in September 2008, Istanbul and March 2009, Moscow.

Ashok Mammen - PhD (Oils & Lubricants).
Internal Technical Reviewer
Bureau Veritas Certification – ITR, Lead verifier, Lead auditor

He has 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.