



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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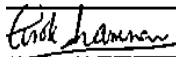
Summary:

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.: RUSSIA/0023-1/2009	Subject Group: JI	
Project title: "Evaporation System modernization at OJSC "Ilim Group" Branch in Koryazhma"		
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:

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

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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 Pollution 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.



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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



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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.

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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.

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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.



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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 subdivided. 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 subdivided. 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.



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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	<ul style="list-style-type: none"> ➤ 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	<ul style="list-style-type: none"> ➤ 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

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- 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 CO₂e/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.



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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.



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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



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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 Vycheгда 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 Vycheгда 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 Rostekhnadzor 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).

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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

Handwritten signature of Flavio Gomes in black ink.

Leonid Yaskin – Team member, verifier

Handwritten signature of Leonid Yaskin in blue ink.

George Klenov – Team member, verifier

Handwritten signature of George Klenov in black ink.

Ashok Mammen – Internal Technical Reviewer

Handwritten signature of Ashok Mammen in black ink.



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 Rostekhnadzor 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.



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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, №6/08κ.
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" Branch in Koryazhma, Senior technologist of energotechnological heat-and power station PL "Power"
2	Aleksey A. Bersenevskiy, OJSC "Ilim Group" Branch in Koryazhma, Chief of energotechnological heat-and power station PL "Power"
3	Nikolay G. Isaev, OJSC "Ilim Group" Branch in Koryazhma, Consultant on technical reconstruction - economist
4	Vyacheslav A. Panin, OJSC "Ilim Group" Branch in Koryazhma, Head of EHP station
5	Mikhail M. Vorontsov, OJSC "Ilim Group" Branch in Koryazhma, Head of evaporator plant
6	Vasiliy P. Ponomarev, OJSC "Ilim Group" Branch in Koryazhma, Head of SAS-1 pulp cooking workshop
7	Alexander V. Samorodov, CCGS, Director
8	Dmitry Potashev, CCGS, specialist, PDD-writer



7 DISCLAIMER

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 applies 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”.