Bureau Veritas Certification Holding SAS

BUREAU VERITAS CERTIFICATION Reviewed Init Date: 24/08/2011

DETERMINATION REPORT INTERNATIONAL PAPER

DETERMINATION OF THE "INSTALLATION OF A MULTI-FUEL BOILER AT CJSC "INTERNTIONAL PAPER" (FORMER SVETOGORSK PPM) FOR WASTE BIOMASS UTILIZATION AND ENERGY GENERATION FOR OWN NEEDS, SVETOGORSK, RUSSIA"

REPORT NO. RUSSIA-DET/0100/2010

REVISION NO. 02

BUREAU VERITAS CERTIFICATION

"Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia"

Date of first issue:	Organizational unit:
23/08/2011	Bureau Veritas Certification Holding SAS
Client:	**Client ref.:**
CJSC "International Paper"	Mr. Sergey Karchevsky

Summary:

Bureau Veritas Certification has made the determination of the project "Installation of a multi-fuel boiler at CJSC "International Paper (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia" of company CJSC "International Paper", located in Leningradskaya oblast, Vyborg district, Svetogorsk, Zavodskaya st.,17 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 rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

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

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

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

Report No.:	Subject Group:
RUSSIA-det/0100/2010	JI
Project title: "Installation of a multi-fuel boiler at CJSC "International Paper (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia"	
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"Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia"

Abbreviations

AIE	Accredited Independent Entity
BVC	Bureau Veritas Certification
BWW	Bark and Wood Wastes
CAR	Corrective Action Request
CL	Clarification Request
CO2	Carbon Dioxide
CHPP	Combined Heat and Power Plant
CPP	Coal Preparation Plant
DDR	Draft Determination Report
DR	Document Review
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
ERU	Emission Reduction Unit
GHG	Greenhouse House Gas(es)
IE	Independent Entity
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
NG	Natural gas
NGO	Non Governmental Organization
PDD	Project Design Document
PP	Project Participant
PPM	Pulp and Paper Mill
RF	Russian Federation
tCO2e	Tonnes CO2 equivalent
UNFCCC	United Nations Framework Convention for Climate Change
WWS	Waste Water Sludge

"Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia"

Table of Contents *Page*

1 INTRODUCTION 4
1.1 Objective 4
1.2 Scope 4
1.3 Determination team 5

2 METHODOLOGY 5
2.1 Review of Documents 5
2.2 Follow-up Interviews 6
2.3 Resolution of Clarification and Corrective Action Requests 7

3 PROJECT DESCRIPTION 8

4 DETERMINATION CONCLUSIONS 11
4.1 Project approvals by Parties involved (19-20) 11
4.2 Authorization of project participants by Parties involved (21) 11
4.3 Baseline setting (22-26) 11
4.4 Additionality (27-31) 13
4.5 Project boundary (32-33) 14
4.6 Crediting period (34) 15
4.7 Monitoring plan (35-39) 15
4.8 Leakage (40-41) 18
4.9 Estimation of emission reductions or enhancements of net removals (42-47) 18
4.10 Environmental impacts (48) 19
4.11 Stakeholder consultation (49) 20
4.12 Determination regarding small scale projects (50-57) 20
4.13 Determination regarding land use, land-use change and forestry (LULUCF) projects (58-64) 20
4.14 Determination regarding programmes of activities (65-73) 20

5 SUMMARY AND REPORT OF HOW DUE ACCOUNT WAS TAKEN OF COMMENTS RECEIVED PURSUANT TO PARAGRAPH 32 OF THE JI GUIDELINES 20

6 DETERMINATION OPINION 20

7 REFERENCES 21

DETERMINATION PROTOCOL 23

"Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia"

1 INTRODUCTION

CJSC "International Paper" (hereafter called "International Paper") has commissioned Bureau Veritas Certification to determine JI project "Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia" (hereafter called "the project") located in the city of Svetogorsk, Leningrad region, Russian Federation.

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

1.1 Objective

The determination serves as project design verification and is a requirement of all projects. The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are determined in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Determination is a requirement for all JI projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emissions reductions 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, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

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

"Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia"

1.3 Determination team

The determination team consists of the following personnel:

Daniil Ukhanov

Bureau Veritas Certification Climate Change Lead Verifier

Svetlana Shabanova

Bureau Veritas Certification Climate Change Specialist

This determination report was reviewed by:

Leonid Yaskin
Bureau Veritas Certification, Internal reviewer

Anna Rudakova
Bureau Veritas Certification Climate Change Specialist

2 METHODOLOGY

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

In order to ensure transparency, a determination protocol was customized for the project, according to the version 01 of the Joint Implementation Determination and Verification Manual, issued by the Joint Implementation Supervisory Committee at its 19 meeting on 04/12/2009. The protocol shows, in a transparent manner, criteria (requirements), means of determination and the results from determining the identified criteria. The determination protocol serves the following purposes:

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

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

2.1 Review of Documents

The Project Design Document (PDD) submitted by International Paper and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for users of the joint

implementation project design document form Guidance on criteria for baseline setting and monitoring, Kyoto Protocol, DVM Clarifications on Determination Requirements to be checked by an Accredited Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, International Paper revised the original PDD v.03 dated 04/09/2010, its revised version 4.0 dated 18/02/2011 and the final version v.4.3 dated 18/08/2011.

The first deliverable of the document review was the Determination Protocol Version 01 dated 11/11/2010 which contained 44 CARs and 5 CLs. The second deliverable of the document review was the Determination Protocol Version 02 dated 11/03/2011 which contained 14 CARs and 3 CLs.

The determination findings presented in this Determination Report Version 01 and Appendix A relate to the project as described in the PDD versions 04 (revised) and version 4.3 (final) dated 18/08/11.

2.2 Follow-up Interviews

On 01/04/2011 Bureau Veritas Certification lead verifier D.Ukhanov performed a site-visit. Interviews with the project participant CJSC "International Paper" and the PDD developer CCGS LLC were conducted to confirm the selected information and to clarify some issues identified in the document review. Representatives of CJSC "International Paper" and the PDD Developer CCGS were interviewed (see References). The main topics of the interviews are summarized in Table 1.

"Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia"

Table 1 Interview topics

Interviewed organization	Interview topics
CJSC International Paper	➢ Reasoning for project implementation ➢ Project management organization ➢ Project history and Implementation schedule ➢ Baseline scenario ➢ Barriers and uncommon practice ➢ Project scenario ➢ Emission calculation ➢ Investment issues ➢ Commissioning and proven trials ➢ Capacity issues ➢ Environmental permissions ➢ Environmental Impact Assessment
CONSULTANT CCGS	➢ Baseline scenario ➢ Barriers and uncommon practice ➢ Project scenario ➢ Investment issues
Stakeholders	➢ N/A

2.3 Resolution of Clarification and Corrective Action Requests

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

Corrective Action Request (CAR) is issued, where:
(a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
(b) The JI requirements have not been met;
(c) There is a risk that emission reductions cannot be monitored or calculated.

The determination team may also issue Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable JI requirements have been met.

"Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia"

The determination team may also issue Forward Action Request (FAR), informing the project participants of an issue that needs to be reviewed during the verification.

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

3 PROJECT DESCRIPTION (quoted by PDD)

The project is aimed at utilization of high-moisture and low-calorific waste biomass – bark and wood wastes (BWW) and waste water sludge (WWS) – by its combustion in multi-fuel fluidized bed boiler to generate heat and electricity for internal needs of CJSC "International paper" (former Svetogorsk pulp and paper mill) and minimize waste landfilling.

Substitution of fossil fuel (natural gas) with renewable biomass and reduction of biomass dumping volumes lead to greenhouse gases (GHG) emission reductions.

The main products of CJSC "International Paper" are office and offset paper. The raw material of paper production is pulp which is produced at the same enterprise. Pulp cooking process uses pulp chips. Production of pulp chips at the Mill's wood preparation facilities yields large quantities of BWW, generally consisting of bark produced during pulp wood debarking.

WWS contains sludge from primary sedimentation tanks and surplus activated sludge from secondary sedimentation tanks at the biological waste water treatment plant, as well as pulp screenings supplied from the pulp cooking line.

BWW, and especially WWS, are difficult-to-burn fuels mainly due to their high moisture content which accounts for the low reactivity and low calorific value of fuel. By the time this project was launched (2000) biomass waste had not been used at the enterprise for energy generation purpose.

Prior to the project implementation BWW were disposed at the nearby dump, some part of it was sold to third parties. Part of WWS, prior to the project, was fired in a special incinerator without energy generation and with addition of fossil fuel for flame stabilization, some WWS was used for production of fiberboard, and the rest was disposed at the dump.

"Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia"

It should be noted that sale of wastes to third parties and their use in manufacturing of products yielded nothing but losses to Svetogorsk PPM. Besides, third-party buyers informed Svetogorsk PPM of prompt termination of BWW purchases from the Mill due to expansion of their own sawmilling capacities and due to the high cost of transportation. The WWS incinerator was almost 100% worn out and was due for decommissioning; installation of a new incinerator required significant investments; operation of the incinerator entailed high annual costs. Fiberboards were of low quality and in little demand.

Disposal of biomass waste at dumps is common practice for Russian pulp and paper industry and does not violate any Russian legislation. Since BWW and WWS utilization as fuel entails numerous difficulties, there are extensive dumping areas next to every pulp mill in Russia, including Svetogorsk PPM. The Mill had all required permits for disposal of BWW and WWS at dumps.

The required amount of heat for industrial purposes was produced by generating units of Svetogorsk PPM's energy complex consisting of CHPP-3 and CHPP-4. The fuel used is black liquor, natural gas and some amount of residual fuel oil. As a rule, the proportion of fossil fuel that is consumed to cover energy demand is significant at Russian PPMs. The steam produced by black liquor recovery boilers and gas-fired power boilers is fed to the steam turbines which partially meet the Mill's power demand. The lacking amount of electricity is purchased from the grid.

In view of the above, further continuation of the existing situation with BWW and WWS handling in all its aspects was not possible. The only acceptable waste handling alternative for the company, without the joint implementation mechanism, was their disposal at landfills.

Further use of the existing energy capacities could meet the heat requirements of Svetogorsk PPM. Technical condition of boilers at CHPP-3 and CHPP-4 could be preserved at the same level for a number of years by carrying out relatively inexpensive routine maintenance. The main fuel for production of the required amount of steam is natural gas.

The project proposes installation at CHPP-4 of a new multi-fuel (biomass) boiler running on bark and wood waste and other organic waste generated by Svetogorsk PPM. The boiler was manufactured and mounted by Kvaerner Pulping Oy. The boiler deploys the technology of bubbling fluidized bed combustion. This technology allows for fluctuations in supply of different solid types of biomass fuel of variable moisture and helps to

avoid the dependence on fossil fuels. The maximum possible steam output of the boiler when solid fuel is fired without addition of natural gas is 114 tonnes per hour, and when natural gas is used – 150 tonnes per hour. Fly ash is collected in an electrostatic precipitator.

Apart from the boiler itself it was necessary to build a biofuel preparation and feeding system. BWW are fed to the multi-fuel boiler from the Mill's wood preparation facilities by conveyors and pneumatically. Low-concentration WWS is pumped to a special dewatering plant. The mixture of BWW and dewatered (down to 70% moisture content) WWS is fed to the boiler by a conveyor.

The project enables utilization of 251 thousand tonnes of BWW and 106 thousand tonnes of WWS per year for heat and electricity generation. This means that dumping of BWW and WWS from the Mill's production site is almost completely avoided.

Reduction in natural gas consumption at Svetogorsk PPM by 67 million m3 per year.

Optimization of the Mill's energy generation scheme, enhancement of its reliability and efficiency.

Mitigation of negative environmental impact, including reduction in GHG emissions (CO2 and CH4) by 326 thousand tCO2e per year.

The first contract for supply of the multi-fuel boiler was signed with Kvaerner Pulping Oy on February 23, 2000, which is the starting date of the project. Construction and installation works under the project were completed in August 2001. After completion of start up and adjustment works, the boiler was put into operation in October 2001.

The capital investments in the project amounted to $28 million.

When deciding whether to implement the project, the management of Svetogorsk PPM from the very beginning considered the possibility of doing it as a carbon project in order to ensure acceptable return on investments. Even before the project was commenced (2000), this issue was discussed with the Autonomous Non-Commercial Organization "Environmental Investment Center". Since the Kyoto Protocol came into effect (2005) and up until now the issues pertaining to preparation of the project design document (PDD) were discussed with ICF International,

and since recently also with CCGS LLC (2010), which led to the development of this PDD.

4 DETERMINATION CONCLUSIONS

In the following sections, the conclusions of the determination are stated.

The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are described in the Determination Protocol in Appendix A.

The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 14 Corrective Action Requests and 3 Clarification Requests.

The number between brackets at the end of each section corresponds to the DVM paragraph.

4.1 Project approvals by Parties involved (19-20)

The project has no approvals by the Host Party, therefore CAR 02 remains pending.

A written project approval by Party B should be provided to the AIE and made available to the secretariat by the AIE when submitting the first verification report for publication in accordance with paragraph 38 of the JI guidelines. It has not been provided to AIE at the determination stage.

4.2 Authorization of project participants by Parties involved (21)

The participation for CJSC "International Paper" listed as project participant in the PDD is not authorized by the Host Party because the project approval by the Host Party was not received. Party B is not determined.

The authorization is deemed to be carried out through the issuance of the project approvals.

4.3 Baseline setting (22-26)

The PDD explicitly indicates that using a methodology for baseline setting and monitoring developed in accordance with appendix B of the JI guidelines (hereinafter referred to as JI specific approach) was the selected approach for identifying the baseline.

"Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia"

JI specific approach

The PDD provides a detailed theoretical description in a complete and transparent manner, as well as justification, that the baseline is established:

(a) By listing and describing the following plausible future scenarios (in three groups) on the basis of conservative assumptions and selecting the most plausible being Alternative H1, Alternative B4 and Alternative S4:

The following alternatives of heat (steam) production were identified:

H1. Continuation of the current situation;
H2. Flaring of drained methane;
H3. Heat production from coal;
H4. Purchase of heat from third-party suppliers;
H5. Project activity without joint implementation mechanism.

The following alternatives of BWW handling were identified:

B.1 Continuation of the current situation;
B.2 BWW sale to third parties;
B.3 Use of BWW in manufacture of products;
B.4 Dumping of BWW;
B.5 Project activity without joint implementation mechanism.

The following alternatives of WWS handling were identified:

S.1 Continuation of the current situation;
S.2 Use of WWS in manufacture of products;
S.3 Incineration of WWS without energy generation;
S.4 Dumping of WWS;
S.5 Project activity without joint implementation mechanism.

After screening H1, B4 and S4 alternatives were left as the most plausible, namely:

H1) Continuation of the current situation (production of heat by energy generating complex of Svetogorsk PPM);
B4) Dumping of BWW;
S4) Dumping of WWS.

(b) Taking into account relevant key factors that affect a baseline, such as sectoral reform policies and legislation, economic situation in pulp and paper mill sector in terms of BWW and WWS utilization, heat and electricity generation.

(c) By taking into account key factors that affect a baseline, such as sectoral reform policies and legislation, economic situation in pulp and paper mills sector in terms of BWW and WWS utilization, availability of capital, prices of wastes dumping.
(d) Generally in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors
(e) Taking into account of uncertainties and using conservative assumptions.
(f) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure.
(g) By drawing of the list of standard variables contained in appendix B to Guidance on criteria for baseline and monitoring.

All explanations, descriptions and analyses pertaining to the baseline in the PDD are made in accordance with the referenced JI specific approach and the baseline is identified appropriately.

Outstanding issues related to Baseline setting (22-26), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 03 - CAR 06, CL 01).

The issued CARs concern:
Conservativeness of fuel consumption value by multi-fuel boiler (CAR 03);
Annex B is not under format of PDD (CAR 04);
The transparency of references (CAR 05);
The table in B.1 lack of parameters necessary for baseline setting (CAR 06);
The issued CL concerns:
The type of landfill (CL 01).

4.4 Additionality (27-31)

JI specific approach

Traceable and transparent information showing that the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to reductions of anthropogenic emissions by sources of GHGs was provided In PDD Section B.2.

The PDD developer provides a justification of the applicability of the approach with a clear and transparent description, as per item 4.3 above. PDD developer described and scrutinized plausible alternative scenarios which have been provided in Section B.1(refer to item 4.3 above).

Justification of additionality has been done in several steps. As a preface to the additionality proofs a barrier analysis is carried out, the steps are as follows:

1) Description and analysis of the alternatives (refer to Section B.1);
2) Investment analysis (including sensitivity analysis);
3) Common practice analysis.

The key additionality proofs were the results of the investment analysis and common practice analysis. The investment analysis shows that the project (sum of Scenario H5,B5,S5) with capital investment 28 mln $ has IRR=12,94% lower than chosen benchmark (IRR=15%), hence it is not financially attractive. The sensitivity analysis of variations of key parameters (investment costs, natural gas price, consumption of waste biomass, price of GHG emission reduction) confirms the conclusion of the basic investment analysis.

The spreadsheet with the investment and sensitivity analyses was made available for the verifier, and Bureau Veritas Certification will submit it to JISC at the final determination as the supporting documentation.

The common practice analysis has reasonably shown that the proposed JI project does not represent a widely observed practice in the geographical area concerned.

The verifier determined that additionality is demonstrated appropriately as a result of the analysis using the approach chosen.

Outstanding issues related to Additionality (27-31), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 07, 08, 15 and CL 02).
The issued CARs concern:
Risk value estimation (CAR 07);
Justification of parameters used in investment analysis (CAR 08);
The currency of investment analysis and benchmark (CAR 15).
The issued CL concerns:
The evaluation of property tax payments (CL 02).

4.5 Project boundary (32-33)

JI specific approach

The project boundary defined in the PDD, Section B.3, Figure B.3-1 and B.3-2 for project and baseline scenario accordingly, encompasses all

anthropogenic emissions by sources of greenhouse gases (GHGs) that are:

(i) Under the control of the project participants such as:
- Additional combustion of natural gas in power steam boilers;
- Emissions from anaerobic decomposition of BWW at dump;
- Emissions from anaerobic decomposition of WWS at dump;
- Emissions from transportation of BWW and WWS to the dumps, combustion of diesel fuel;
- Combustion of natural gas in multi-fuel boiler;
- Consumption of electricity by transportation facilities and preparation of BWW and WWS processes;

(ii) Reasonably attributable to the project such as:
- Production, processing, storage, delivery and distribution of natural gas, fugitive emissions.

(iii) Significant such as:
- All the sources mentioned above, except emissions from transportation of BWW and WWS to the dumps, combustion of diesel fuel and consumption of electricity by transportation facilities and preparation of BWW and WWS processes.

The delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD, Section B.3.

Based on the above assessment, the AIE hereby confirms that the identified boundary and the selected sources and gases are justified for the project activity.

4.6 Crediting period (34)

The PDD states the starting date of the project as the date on which the implementation or construction or real action of the project began, and the starting date is 23/02/2000, which is after the beginning of 2000.

The PDD states the expected operational lifetime of the project in years and months, which is 20 years or 240 months.

The PDD states the length of the crediting period in years and months, which is 5 years or 60 months, and its starting date as 01/01/2008, which is on the date the first emission reductions are generated by the project.

4.7 Monitoring plan (35-39)

"Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia"

The PDD, in its monitoring plan section, explicitly indicates that JI specific approach was selected.

JI specific approach

The monitoring plan describes all relevant factors and key characteristics that will be monitored, and the period in which they will be monitored, in particular also all decisive factors for the control and reporting of project performance, such as:

- Volume consumption of natural gas in multi-fuel boiler;
- Average net calorific value of natural gas;
- Mass consumption of BWW in multi-fuel boiler;
- Mass consumption of WWS in multi-fuel boiler;
- Heat production by multi-fuel boiler.

Remainder factors and key characteristics are listed in the PDD, Sections D.1.1.1 for the project and Section D.1.1.3 for the baseline.

The monitoring plan specifies the indicators, constants and variables that are reliable (i.e. provide consistent and accurate values), valid (i.e. be clearly connected with the effect to be measured), and that provide a transparent picture of the emission reductions to be monitored such those listed in the PDD, Sections D.1.1.1 and D.1.1.3.

The monitoring plan is developed subject to the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring" developed by the JISC.

All categories of data to be collected in order to monitor GHG emissions from the project and determine the baseline of GHG emissions (Option 1) are described in required details.

The monitoring plan explicitly and clearly distinguishes:

(i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination, such as:

- Default values of moisture content of BWW and WWS;
- Lignin fraction of C for BWW and WWS;
- Decomposition rate constant for BWW and WWS;
- Organic carbon content in BWW and WWS on dry basis;
- Conversion factor from kg carbon to landfill gas quantity;
- Generation factor;
- Percentage of the stockpile under aerobic conditions;

"Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia"

- Methane oxidation factor;
- Methane concentration in biogas;
- Density of methane;
- CO2 emission factor for natural gas.
- Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination (there are no such parameters).

(ii) Data and parameters that are monitored throughout the crediting period, such as those presented in Section D.1.1.1 for the project, Section D.1.1.3 for the baseline.

Step-by-step application of the used approach for monitoring is described in PDD Section D including monitoring procedures, formulae, parameters, data sources etc.

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording; please refer to PDD, Section D.1.1.1, Section D.1.1.3.

The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions and project emissions, as appropriate, such as formula in Section D.1.1.4 for baseline emissions (Formula D.1-4 – D.1-9), Section D.1.1.2 for project emissions (Formula D.1-1 – D.1-3).

The monitoring plan presents the quality assurance and control procedures for the monitoring process, all the QC/QA procedures are specified in PDD Section D.2

The procedures include, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available on request.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities. The operating and management structure for GHG monitoring is described in PDD Section D.3, Fig. D.4-2 and Table D.4-1. The responsibilities and the authority regarding the monitoring activities are provided in a tabular form within the Section D.3.

On the whole, the monitoring report reflects good monitoring practices appropriate to the project type.

The monitoring plan provides, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured but not including data that are calculated with equations.

The monitoring plan indicates that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project.

Outstanding issues related to Monitoring plan (35-39), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 09- CAR 11).

The issued CARs concern:
The format of PDD sections CAR 09;
The reference to the appropriate law CAR 10;
The maintenance with the monitored data CAR 11.

4.8 Leakage (40-41)

JI specific approach

The PDD appropriately describes an assessment of the potential leakage of the project and appropriately explains that the estimation of leakage is neglected from conservative reasons because the leakage in project scenario is less than in baseline scenario.(see Section B.1 and B.3)

4.9 Estimation of emission reductions or enhancements of net removals (42-47)

JI specific approach

The PDD indicates assessment of emissions in the baseline and project scenario as the approach chosen to estimate the emission reductions of the project.

The PDD provides the ex ante estimates of:

(a) Emissions for the project scenario (within the project boundary), which are 306,747 tons of CO2eq;
(b) Leakage are considered zero;
(c) Emissions for the baseline scenario (within the project boundary), which are 1,937,744 tons of CO2eq;
(d) Emission reductions adjusted by leakage (based on (a)-(c) above), which are 1,630,997 tons of CO2eq.

Reporting period: From 01/01/2008 to 31/12/2012.

The formulae used for calculating the estimates are referred in the PDD, Sections D.1.1.2, D.1.1.4, D.1.4.

For calculating the estimates referred to above, key factors defined in the monitoring plain influencing the project and baseline emissions were taken into account, as appropriate.

The estimation referred to above is based on conservative assumptions and the most plausible scenario in a transparent manner.

The estimates referred to above are consistent throughout the PDD.

The annual average of estimated emission reductions over the crediting period is calculated by dividing the total estimated emission reductions over the crediting period by the number of months of the crediting period, and multiplying by twelve.

The PDD Section E includes an illustrative ex ante emissions calculation.

Outstanding issue related to Estimation (42-47), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 12).

The issued CAR concern:
The justification of natural gas volumes (CAR 12).

4.10 Environmental impacts (48)

The PDD lists and attaches documentation on the analysis of the environmental impacts of the project (transboundary impacts are insignificant), in accordance with procedures as determined by the host Party, such as the Federal Law "On the Environmental protection #7-FZ".

The PDD provides conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party.

Outstanding issue related to Environmental impacts (48), PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 13-14 and CL 03).

The issued CARs concern:
The reduction of pollutant emissions (CAR 13);
The transboundary effects (CAR 14)

"Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia"

The issued CL concern:
The amount of sulphur dioxide emissions (CL 03)

4.11 Stakeholder consultation (49)

Stakeholder consultation was not undertaken as it is not required by the host party.

4.12 Determination regarding small scale projects (50-57)

Not applicable.

4.13 Determination regarding land use, land-use change and forestry (LULUCF) projects (58-64)

Not applicable.

4.14 Determination regarding programmes of activities (65-73)

Not applicable.

5 SUMMARY AND REPORT OF HOW DUE ACCOUNT WAS TAKEN OF COMMENTS RECEIVED PURSUANT TO PARAGRAPH 32 OF THE JI GUIDELINES

No comments, pursuant to paragraph 32 of the JI Guidelines, were received.

6 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the "Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia" Project in Russia. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

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

Project participant used the JI specific approach for demonstration of the additionality. In line with this approach, the PDD provides the investment analysis and common practice analysis, to determine that the project activity itself is not the baseline scenario.

Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfilment of the stated criteria.

The determination revealed two pending issues related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party. If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Version 4.3 dated 18/08/2011 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

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

7 REFERENCES

Category 1 Documents:
Documents provided by CJSC "International Paper" and CCGS that relate directly to the GHG components of the project.

/1/ "Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia", PDD Version 4.3 dated 18/08/2011.

/2/ Excel spreadsheet with calculation of emission reduction "SvetogorskPPM_model_en_ver 4.2".

/3/ Excel spreadsheet with investments calculation "economic Sveto EN ver 4.3"

Category 2 Documents:
Background documents related to the design and/or methodologies employed in the design or other reference documents.

/1/ Guidelines for Users of the Joint Implementation Project Design Document Form/Version 04, JISC.

"Installation of a multi-fuel boiler at CJSC "International Paper" (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia"

/2/ JISC Guidance on criteria for baseline setting and monitoring. Version 02.

/3/ Glossary of Joint Implementation terms. Version 02, JISC.

/4/ 2006 IPCC Guidelines on National Greenhouse Gas Inventories, Volume 2, Energy.

/5/ "Regulation of realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change". Approved by the RF Government Decree # 843 of 28/10/2009 "About measures on realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change".

/6/ Methane and Nitrous Oxide Emissions from Biomass Waste Stockpiles, PCFplus Research, World Bank, August 2002.

/7/ 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.

/8/ Approved consolidated baseline and monitoring methodology ACM0009 «Consolidated baseline and monitoring methodology for fuel switching from coal or petroleum fuel to natural gas» Version 03.2. CDM Executive Board.

/9/ Methodological tool to determine the baseline efficiency of thermal or electric energy generation systems. Version 01. CDM Executive Board.

/10/ Installation of Multi-Fuel Boiler. Detailed Design. CJSC "Giprobum", Saint-Petersburg, 2000.

/11/ Technical specification of the bubbling fluidized bed boiler, Kvaerner Pulping, 2000.

/12/ Methodological tool to determine project emissions from flaring gases containing methane. CDM Executive Board.

/13/ Letter concerning the positive conclusion of State ecological expertise for the project #101-2875 from 28.05.00.

/14/ 2002 Capital and Repair Budget Projected Results Financial Highlights & Summary of facility Effect.

/15/ 6 TP forms of the boiler house work for 2008, 2009, 2010.

/16/ Preliminary cash flow IP note.

Persons interviewed:

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

/1/ N. Bondarenko – Director Environmental Health and Safety, CJSC

"International Paper";

/2/ A. Golubev – Chief Engineer Energy, CJSC "International Paper";

/3/ A. Andreev – Manager #3 Recovery and Bark Boilers, CJSC "International Paper";

/4/ I. Trokhina – Chief accountant, CJSC "International Paper";

/5/ A. Vedernikov – Deputy Head of Ecology, CJSC "International Paper";

/6/ M. Ivanov – Manager of Wastes Storage, CJSC "International Paper";

/7/ A. Samorodov – Director, Project Development, CCGS LLC.

DETERMINATION PROTOCOL

Table 1

Check list for determination, according JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 01)

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
General description of the project				
Title of the project				
-	Is the title of the project presented?	The title of the project is “Installation of a multi-fuel boiler at CJSC “International Paper” (former Svetogorsk PPM) for waste biomass utilization and energy generation for own needs, Svetogorsk, Russia”.		OK
-	Is the sectoral scope to which the project pertains presented?	Sectoral scopes: 4. Manufacturing industries; 13. Waste handling and disposal.		OK
-	Is the current version number of the document presented?	PDD Version: 04.		OK
-	Is the date when the document was completed presented?	The date of PDD completion: February 18, 2011.		OK
Description of the project				
-	Is the purpose of the project included with a concise, summarizing explanation (max. 1-2 pages) of the: a) Situation existing prior to the starting date of the project; b) Baseline scenario; and c) Project scenario (expected outcome, including a technical description)?	Requirements a), b), c) to the description of the project are met including its purpose. PDD reads: “The project is aimed at utilization of high-moisture and low calorific waste biomass – bark and wood wastes (BWW) and waste water sludge (WWS) – by its combustion in multi-fuel fluidized bed boiler to generate heat and electricity for internal needs of CJSC “International paper” (former Svetogorsk pulp and paper mill) and minimize the waste handling.”		OK
-	Is the history of the project (incl. its JI component) briefly summarized?	The history of the project including its JI component is briefly summarised as follows: “When deciding whether to		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		implement the project, the management of Svetogorsk PPM from the very beginning considered the possibility of doing it as a carbon project in order to to ensure acceptable return on investments. Even before the project was commenced (2000), this issue was discussed with the Autonomous Non-Commercial Organization "Environmental Investment center"."		
Project participants				
-	Are project participants and Party(ies) involved in the project listed?	Project participants are listed in Section A.3. Party A – The Russian Federation with project participant CJSC "International paper", Party B is not determined.		OK
-	Is the data of the project participants presented in tabular format?	The data of the project participants is presented in tabular format.		OK
-	Is contact information provided in Annex 1 of the PDD?	Contact information is provided in Annex 1 of the PDD.		OK
-	Is it indicated, if it is the case, if the Party involved is a host Party?	The indicated host party is the Russian Federation.		OK
Technical description of the project				
Location of the project				
-	Host Party(ies)	The Russian Federation.		OK
-	Region/State/Province etc.	Leningrad region.		OK
-	City/Town/Community etc.	City of Svetogorsk.		OK
-	Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	Detail of the physical location of the project was provided. **CAR 01.** Please provide the source of information allowing the unique identification of the project. Please provide the source of coordinates presented in PDD. Are these coordinates of the plant or of the city Svetogorsk?	CAR 01	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Technologies to be employed, or measures, operations or actions to be implemented by the project				
-	Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation schedule described?	The project envisages installation of a new multi-fuel boiler and associated infrastructure for biomass transportation and preparation and fly ash handling. The boiler is fired with wastes produced by the mill (BWW and WWS) and with natural gas as backup fuel. The boiler is installed in the building adjacent to CHPP-4. Installation of the new boiler allowed to remove from operation the PTVM-30 hot-water boiler at CHPP-4 and one E-75-39-440 steam power boiler at CHPP-3.		OK
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				
-	Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	PDD states that GHG emission reductions as a result of the project at Svetogorsk PPM are achieved due to reduction of fossil fuel (natural gas) consumption and due to prevention of methane emissions into the atmosphere from anaerobic decomposition of BWW and WWS at dumps.		OK
-	Is it provided the estimation of emission reductions over the crediting period?	The estimation of emission reductions over the crediting period (5 years) is provided: 1,630,997 tonnes of CO2 equivalent.		OK
-	Is it provided the estimated annual reduction for the chosen credit period in tCO2e?	The estimated annual emission reduction for the chosen credit period is 326,199 tonnes of CO2 equivalent.		OK
-	Are the data from questions above presented in tabular format?	The data from the questions above is presented in tabular format. Please refer to Section A.4.3.1.		OK
Estimated amount of emission reductions over the crediting period				
-	Is the length of the crediting period Indicated?	The length of the crediting period is 5 years. Please refer to the section A.4.3.1.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
-	Are estimates of total as well as annual and average annual emission reductions in tonnes of CO2 equivalent provided?	The estimates of total and annual emission reductions were provided in section A.4.3.1 in tonnes of CO2 equivalent.		OK
Project approvals by Parties				
19	Have the DFPs of all Parties listed as "Parties involved" in the PDD provided written project approvals?	**CAR 02.** The project has no approval of the host Party.	CAR 02	OK
19	Does the PDD identify at least the host Party as a "Party involved"?	The host Party involved is the Russian Federation.		OK
19	Has the DFP of the host Party issued a written project approval?	No, pending a response to CAR 02.		OK
20	Are all the written project approvals by Parties involved unconditional?	Yes, the written project approvals are unconditional.		OK
Authorization of project participants by Parties involved				
21	Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through: − A written project approval by a Party involved, explicitly indicating the name of the legal entity? or − Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity?	The authorization of CJSC "International Paper" is deemed to be received together with the project approval by the host Party. Conclusion is pending a response to CAR 02.		OK
Baseline setting				
22	Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline? − JI specific approach	It is explicitly indicated that the JI specific approach was applied for identifying the baseline.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	− Approved CDM methodology approach			
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	A detailed theoretical description of the baseline is provided in Section B.1 in complete and transparent manner.		OK
23	Does the PDD provide justification that the baseline is established: (a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one? (b) Taking into account relevant national and/or sectoral policies and circumstance? − Are key factors that affect a baseline taken into account? (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors? (d) Taking into account of uncertainties and using conservative assumptions? (e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure? (f) By drawing on the list of standard variables contained in appendix B to "Guidance on criteria for baseline setting and monitoring", as appropriate?	The baseline is established basically: (a) By listing and describing future scenarios available for the project owner CJSC "International Paper" and selecting the most likely one. Three groups of alternative scenarios were listed and described as follows: Alternative H1. Continuation of the current situation; Alternative H2. Heat production from heavy fuel oil; Alternative H3. Heat production from coal; Alternative H4. Purchase of heat from third-party suppliers; Alternative H5. Project activity without joint implementation mechanism. Alternative B1. Continuation of the current situation; Alternative B2. BWW sale to third parties; Alternative B3. Use of BWW in manufacture of products; Alternative B4. Dumping of BWW; Alternative B5. Project activity without joint implementation mechanism. Alternative S1. Continuation of the current situation; Alternative S2. Use of WWS in manufacture of products; Alternative S3. Incineration of WWS without energy generation; Alternative S4. Dumping of WWS; Alternative S5. Project activity without joint implementation mechanism.	CL 01 SV 01 CAR 03 CAR 04 CAR 05 CAR 06	OK OK OK OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Based on alternatives analysis with taking into account the key factors: sectoral reform policies and legislation, economic situation in pulp and paper mill sector in terms of BWW and WWS utilization, heat and electricity generation, a conclusion is made that alternatives H1, which envisages heat production from natural gas, B4 and S4, which envisage dumping of BWW and WWS are the most likely baseline scenarios. (b) By taking into account key factors that affect a baseline, such as sectoral reform policies and legislation, economic situation in pulp and paper mills sector in terms of BWW and WWS utilization, availability of capital, prices of wastes dumping. (c) Generally in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors (d) Taking into account of uncertainties and using conservative assumptions. (e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure. (f) By drawing of the list of standard variables contained in appendix B to Guidance on criteria for baseline and monitoring. **CL 01.** Please clarify is the Svetogorsk PPM landfill where BWW and WWS are dumped managed or unmanaged in accordance with definition provided by IPCC 2006?		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CAR 03. Taking into account maximum annual values for $FC^{m}_{BWW,x}$ and $FC^{m}_{WWS,x}$ (projections for the years 2011 and 2012) recorded over the last three years 2008-2010 of operation of the multi-fuel boiler for the baseline is not conservative. Considering of the minimum annual value of natural gas consumption for the project emission calculations for 2011-2012 is not conservative. **CAR 04.** Annex 2 (baseline information) shall contain a summary of the key elements in tabular form. Please take note: lists of key elements in Section B.1 and in Annex 2 should not differ. **CAR 05.** Please indicate the more transparent references (including the page and/or table number) to the source: "Methane and Nitrous Oxide Emissions from Biomass Waste Stockpiles, PCFplus research, World Bank, August 2002" indicated in the tables of Section B.1. **CAR 06.** The tables in section B.1 should include parameters: "heat production due to additional combustion of natural gas in power boilers" and "additional consumption of natural gas in power boilers" as they are necessary for the baseline establishing.		
24	If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above?	N/A		N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	N/A		N/A
Approved CDM methodology approach only_Paragraphs 26(a) – 26(d)_Not applicable				
Additionality				
JI specific approach only				
28	Does the PDD indicate which of the following approaches for demonstrating additionality is used? (a) Provision of traceable and transparent information showing the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to emission reductions or enhancements of removals; (b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality; (c) Application of the most recent version of the "Tool for the demonstration and assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board".	It is explicitly indicated that the approach described in paragraph 2 (a) of the Annex I to the Guidance on criteria for baseline setting and monitoring version 02 for demonstrating additionality was chosen: a) Provision of traceable and transparent information showing that the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to reductions of anthropogenic emissions by sources or enhancement of net anthropogenic removals by sinks of GHGs.		OK
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	The approach is based on an explanation that the project activity would not have occurred anyway due to low financial indicators (IRR, NPV) and that this project is not a common practice.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
29 (b)	Are additionality proofs provided?	To demonstrate the additionality of the project two steps were implemented: - Investment analysis; - Common practice analysis. The investment analysis was based on calculation of NPV and IRR for the Project, taking into account investment costs, operation costs, depreciation and other parameters referring to expenses, as well as revenues from ERUs sale. Discount rate (14.5%) was calculated in accordance with Fisher's formula with addition of allowance risk estimated in accordance with methodology recommended in the resolution of the Russian Government #1470 of 22 November 1997 "on approval of the procedure for tender-based provision of state guarantees out of the funds of the Russian Federation development budget and on approval of the statute on investment project efficiency assessment to be applied when the centralized investment resources of the Russain federation development budget are allocated on a tender basis". The common practice analysis has reasonably shown that the project activity is not the common practice in Russian pulp and paper industry. **CAR 07.** Please justify the conservativeness of applied allowance for risk value (6%) used for discount rate calculation. Take note: the recommended methodology doesn't provide the 6% value for allowance for risk. **CAR 08.** For the determination of the investment analysis presented in Section B.2:	CAR 07 CAR 08 CL 02	OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		(b) Please justify with reference to the source of information, the input data used in investment analysis (dollar exchange rate, profit tax, property tax, price of natural gas, price of electricity, payments for waste disposal at dumps, prices of early reductions and ERUs). (c) Please provide the calculations of sensitivity analysis. **CAR 15.** Definition of benchmark was made consider refinance rate of Central Bank of the RF, expected inflation rate and allowance for risk in rubles, however investment analysis was made in US dollars. Hence, comparison of investment analysis results and chosen benchmark is irrelevant. **CL 02.** Please clarify, is there any need to consider the property tax payments in profit tax payments calculation as made in spreadsheet "economics Sveto EN"?		
29 (c)	Is the additionality demonstrated appropriately as a result?	With the unresolved CAR 07 – CAR 08 and CL 02 the additionality of the project is not demonstrated.		OK
30	If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method?	N/A		N/A
Approved CDM methodology approach only_ Paragraphs 31(a) – 31(e)_Not applicable				
Project boundary (applicable except for JI LULUCF projects				
JI specific approach only				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
32 (a)	Does the project boundary defined in the PDD encompass all anthropogenic emissions by sources of GHGs that are: (i) Under the control of the project participants? (ii) Reasonably attributable to the project? (iii) Significant?	The project boundary defined in the PDD encompasses the anthropogenic emissions by sources of GHGs in the baseline scenario (refer to Section B.3): that are CO2 from power steam boilers, additional (as compared to the project) combustion of natural gas, CH4 from dump, prevented (due to the project) emissions from anaerobic decomposition of BWW and WWS, CO2 emissions from transportation of BWW and WWS to the dumps, combustion of diesel fuel were reasonably excluded for simplification. Sources of project emissions: CO2 from multi-fuel boiler combustion of natural gas, CO2 emissions from new BWW and WWS preparation and transportation facilities, consumption of electricity were reasonably excluded for simplification. Sources of leakage were also assessed and reasonably were not taken into consideration.		OK
32 (b)	Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above?	Project boundary is defined on the basis of case-by-case assessment of different emission sources in the baseline scenario.		OK
32 (c)	Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart as appropriate?	The delineation of the project boundaries are presented on Fig. B.3-1. and Fig. B.3-2.		OK
32 (d)	Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified?	All the included gases and sources are explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified in Section B.1 and in the Table B.3-1.		OK
Approved CDM methodology approach only_Paragraph 33_ Not applicable				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Crediting period				
34 (a)	Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began?	The starting date of the project is indicated as: 23.02.2000. This date corresponds to the signing of the first contract with Kvaerner Pulping Oy for delivery of biomass steam boiler.		OK
34 (a)	Is the starting date after the beginning of 2000?	Yes, it is.		OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	The expected operational lifetime of the project is 20 years, 240 months.		OK
34 (c)	Does the PDD state the length of the crediting period in years and months?	The length of crediting period is defined as 5 years (60 months) from 01.01.2008 to 31.12.2012.		OK
34 (c)	Is the starting date of the crediting period on or after the date of the first emission reductions or enhancements of net removals generated by the project?	Starting date of crediting period is after the date when the first emission reductions are generated by the project.		OK
34 (d)	Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project?	The start of crediting period is 01/01/2008 and its length is 5 years or 60 months.		OK
34 (d)	If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval? Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012?	N/A		N/A
Monitoring plan				
35	Does the PDD explicitly indicate which of the following approaches is used? − JI specific approach	PDD explicitly indicates that for description and justification of the monitoring plan a JI specific approach was used.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	− Approved CDM methodology approach			
JI specific approach only				
36 (a)	Does the monitoring plan describe: − All relevant factors and key characteristics that will be monitored? − The period in which they will be monitored? − All decisive factors for the control and reporting of project performance?	The monitoring plan describes: - the relevant factors that will be monitored: (1) Volume consumption of natural gas in multi-fuel boiler; (2) Average net calorific value of natural gas; (3) Mass consumption of BWW in multi-fuel boiler; (4) Mass consumption of WWS in multi-fuel boiler; (5) Heat production by multi-fuel boiler. - the periods in which they will be monitored: quarterly at least (average net calorific value of natural gas), continuously (Volume consumption of natural gas in multi-fuel boiler, Mass consumption of BWW in multi-fuel boiler, Mass consumption of WWS in multi-fuel boiler, Heat production by multi-fuel boiler); - all decisive factors for the control and reporting of project performance: ecological reporting, quality control (QC) and quality assurance (QA) procedures; the operational and management structure that will be applied in implementing the monitoring plan.		OK
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored?	Conclusion is pending a response to CAR 05.		OK
36 (b)	If default values are used: − Are accuracy and reasonableness carefully balanced in their selection? − Do the default values originate from	Default values of moisture content of BWW and WWS, lignin fraction of C for BWW and WWS, decomposition rate constant for BWW and WWS, organic carbon content in BWW and WWS on dry basis, conversion factor from kg		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	recognized sources? − Are the default values supported by statistical analyses providing reasonable confidence levels? − Are the default values presented in a transparent manner?	carbon to landfill gas quantity, generation factor, percentage of the stockpile under aerobic conditions, methane oxidation factor, methane concentration in biogas, density of methane, CO2 emission factor for natural gas were taken from Technical specification of the bubbling fluidized bed boiler, Kvaerner Pulping, 2000, Methane and Nitrous Oxide Emissions from Biomass Waste Stockpiles, PCFplus Research, World Bank, August 2002, 2006 IPCC Guidelines for National Greenhouse Gas Inventories. Conclusion is pending a response to CAR 05.		
36 (b) (i)	For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified?	There are no such values.		OK
36 (b) (ii)	For other values, − Does the monitoring plan clearly indicate the precise references from which these values are taken? − Is the conservativeness of the values provided justified?	Refer to 36 (b).		OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	Yes, it does. Please refer to Section D.2.		OK
36 (b) (iv)	Are International System Unit (SI units) used?	International System Units (SI units) are used.		OK
36 (b) (v)	Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals but are obtained through monitoring?	Refer to PDD Section D.1.1.1 and Section D.1.1.3.		OK
36 (b) (v)	Is the use of parameters, coefficients,	Yes, they are consistent.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	variables, etc. consistent between the baseline and monitoring plan?			
36 (c)	Does the monitoring plan draw on the list of standard variables contained in appendix B of "Guidance on criteria for baseline setting and monitoring"?	Yes.		OK
36 (d)	Does the monitoring plan explicitly and clearly distinguish: (i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination? (ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination? (iii) Data and parameters that are monitored throughout the crediting period?	Description of the monitoring plan in Section D.1 explicitly and clearly distinguishes: (i) Refer to 36 (b). (ii) N/A. (iii) Refer to 36 (a): parameters marked (1) - (5).		OK
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	The monitoring plan describes the methods employed for data monitoring (flow meters, ampermeters and heat production meters) and data collection frequency (continuously – volume consumption of natural gas in multi-fuel boiler, mass consumption of BWW and WWS in multi-fuel boiler, heat production by multi-fuel boiler, quarterly – average net calorific value of natural gas). Recording of data is stored in paper and electronically.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
36 (f)	Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/removals or direct monitoring of emission reductions from the project, leakage, as appropriate?	Formulae are indicated and numbered in Sections D.1.1.2, and D.1.1.4.		OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	Yes, it is.		OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Please refer to 36 (f).		OK
36 (f) (iii)	Are all equations numbered?	Yes, they are numbered.		OK
36 (f) (iv)	Are all variables, with units indicated defined?	Conclusion is pending a response to CAR 06.		OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	N/A		N/A
36 (f) (v)	To the extent possible, are methods to quantitatively account for uncertainty in key parameters included?	N/A		N/A
36 (f) (vi)	Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured?	N/A		N/A
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	N/A		N/A
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	The official NII Atmosphere methodology and 2006 IPCC Guidelines are used. Please refer to 36 (f) (vii) below.		OK
36 (f) (vii)	Are references provided as necessary?	**CAR 09.** Please exclude the new section REFERENCES	CAR 09	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		from the CONTENTS of PDD. Any new sections should be added only as an additional Annex (PDD form should not be changed).		
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	Yes, they are explained in transparent manner.		OK
36 (f) (vii)	Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed?	N/A		N/A
36 (f) (vii)	Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided?	The uncertainty level of measured parameters is provided; please refer to D.2. It is in the range at 95% confidence level.		OK
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project? Does the monitoring plan provide a reference as to where a detailed description of the standard can be found?	**CAR 10.** Reference to the pertinent applicable national law "On uniformity of measurements" N 102-ФЗ dated 26/06/2008 is not made.	CAR 10	OK
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	N/A		N/A
36 (i)	Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy	QC/QA procedures are specified in PDD Section D.2. They include basic information about the calibration procedures for gas meter, ampermeter, flow meters for WWS, heat production meter.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	are kept and made available upon request?			
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	The operational and management structure that the project participant(s) will implement in order to monitor emission reduction generated by the project is described in PDD Section D.3. Responsibilities and the authority regarding the monitoring activities are indicated.		OK
36 (k)	Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type? If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?	Monitoring techniques are in line with current operation routines.		OK
36 (l)	Does the monitoring plan provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations?	The monitoring plan provides, in tabular form, a complete compilation of the data that need to be collected.		OK
36 (m)	Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project?	**CAR 11.** Please indicate in the monitoring plan that the data monitored and required for verification will be kept for two years after the last transfer of ERUs.	CAR 11	OK
37	If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above?	N/A		N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Approved CDM methodology approach only_Paragraphs 38(a) – 38(d)_Not applicable				
Applicable to both JI specific approach and approved CDM methodology approach				
39	If the monitoring plan indicates overlapping monitoring periods during the crediting period: (a) Is the underlying project composed of clearly identifiable components for which emission reductions or enhancements of removals can be calculated independently? (b) Can monitoring be performed independently for each of these components (i.e. the data/parameters monitored for one component are not dependent on/effect data/parameters to be monitored for another component)? (c) Does the monitoring plan ensure that monitoring is performed for all components and that in these cases all the requirements of the JI guidelines and further guidance by the JISC regarding monitoring are met? (d) Does the monitoring plan explicitly provide for overlapping monitoring periods of clearly defined project components, justify its need and state how the conditions mentioned in (a)-(c) are met?	N/A		N/A
Leakage				
JI specific approach only				
40 (a)	Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected?	All the sources of leakage were reasonably neglected.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	Yes. Please refer to Section B.1 and B.3		OK
Approved CDM methodology approach only_Paragraph 41_Not applicable				
Estimation of emission reductions or enhancements of net removals				
42	Does the PDD indicate which of the following approaches it chooses? (a) Assessment of emissions or net removals in the baseline scenario and in the project scenario (b) Direct assessment of emission reductions	PDD assess emissions in the baseline scenario and in the project scenario. Hence, approach (a) is chosen.		OK
43	If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	PDD provides ex ante estimates of: (a) Emissions for the project scenario (within the project boundary): 306,747 tCO2e; (b) Leakage are considered to be zero; (c) Emissions for the baseline scenario: 1,937,744 tCO2e; (d) Emission reductions adjusted by leakage: 1,630,997 tCO2e; **CAR 12.** Please justify with reference to the source of information, the natural gas volumes used in the spreadsheet "SvetogorskPPM_model_ru". Please take note: conversion from thousands of m^3 into tones of coal equivalent should be transparent.	CAR 12	OK
44	If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emission reductions or enhancements of net removals (within the project boundary)? (b) Leakage, as applicable? (c) Emission reductions or enhancements of	N/A		N/A

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	net removals adjusted by leakage?			
45	For both approaches in 42 (a) Are the estimates in 43 or 44 given: (i) On a periodic basis? (ii) At least from the beginning until the end of the crediting period? (iii) On a source-by-source/sink-by-sink basis? (iv) For each GHG? (v) In tones of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? (b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate? (d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent? (e) Are emission factors (including default emission factors) if used for calculating the estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and	(a) Estimates in 43 are given on the periodic basis, from the beginning until the end of the crediting period, in tones of CO2 equivalent. (b) The formulae used in PDD are consistent throughout PDD (for the formulae refer to Section D). (c) Key factors influencing the baseline emissions and the activity level of the project and the emissions are taken into account, as appropriate. (d) Data sources used for calculating the estimates are basically clearly identified, reliable and transparent. Refer to CAR 12. (e) Emission factors for (including default emission factors) selected by carefully balancing accuracy. (f) Estimation in 43 is based on the most plausible scenarios in a transparent manner. (g) Estimates in 43 are consistent throughout the PDD. Refer to CAR 03. (h) The annual average of estimated emission reductions calculated virtually by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period and multiplying by twelve. Conclusion is pending a response to CAR 12 and CAR 03.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	appropriately justified of the choice? (f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner? (g) Are the estimates in 43 or 44 consistent throughout the PDD? (h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?			
46	If the calculation of the baseline emissions or net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation?	Illustrative ex-ante estimation of baseline emissions is presented on the spreadsheet made available to AIE.		OK
Approved CDM methodology approach only_Paragraphs 47(a) – 47(b)_Not applicable				
Environmental impacts				
48 (a)	Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party?	According to the State Committee for Ecology and Natural Resources of the Russian Federation Decree dated 15.04.2000 #372 "On compliance with regulations regarding the planned economics (and other) actions and their ecological impact", developers must include environmental issues into the project design documentation. Environmental impact assessment (EIA) of the project activity has received positive conclusion from the State Environmental Committee for Saint-Petersburg and Leningradskaya oblast #861 from 26 September 2000.	CAR 13 CAR 14 CL 03	OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CAR 13. The sentence: "As it is seen, pollutant emissions from fuel combustion after implementation of the project reduced." is incorrect. Please take note: in the table F.1-1 emissions of sulphur dioxide, suspended particles increased. **CAR 14.** Please provide information concerning the transboundary impacts for the project. **CL 03.** Please clarify why the amount of sulphur dioxide emissions before installation of MFB is 45.7802 g/s and 1203.9279 t/year, however amount of emissions after installation of MFB is bigger (52.0798 g/s), but the total amount is less (288.6979 t/year). **Please provide the State Expertise Conclusion to AIE.**		
48 (b)	If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party?	Russian legislation does not use the term "significant environmental impacts". The company is permitted to operate on the basis on permission of air emission issued by the state authority Rostekhnadzor.		OK
Stakeholder consultation				
49	If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide: (a) A list of stakeholders from whom comments on the projects have been received, if any? (b) The nature of the comments? (c) A description on whether and how the	Stakeholder consultation is not required by the Russian legislation. Hence public hearings were not organized and no pertinent comments were received during the preparation of EIA.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	comments have been addressed?			
Determination regarding small-scale projects (additional elements for assessment)_Paragraphs 50 - 57_Not applicable				
Determination regarding land use, land-use change and forestry projects _Paragraphs 58 – 64(d)_Not applicable				
Determination regarding programmes of activities_Paragraphs 66 – 73_Not applicable				

Table 2 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project participant response	Determination team conclusion
CAR 01. Please provide the source of information allowing the unique identification of the project. Please provide the source of coordinates presented in PDD. Are these coordinates of the plant or of the city Svetogorsk?	A.4.1.4	Response 1 from 16/08/2011 Fig. A.4-2 in the PDD now shows the location of the multi-fuel boiler and its coordinates are indicated in the text. The source of information: Google Earth, version 6.0.1.2032.	Conclusion on Response 1 CAR is closed based on due corrections made to PDD.
CAR 02. The project has no approval of the host Party.	A.5	Response 1 from 16/08/2011 N/A	Conclusion on Response 1 CAR is not closed.

CAR 03. Taking into account maximum annual values for $FC^{m}_{BWW,x}$ and $FC^{m}_{WWS,x}$ (projections for the years 2011 and 2012) recorded over the last three years 2008-2010 of operation of the multi-fuel boiler for the baseline is not conservative. Considering of the minimum annual value of natural gas consumption for the project emission calculations for 2011-2012 is not conservative.	23	Response 1 from 16/08/2011 For the years 2011-2012 the project operation mode of the boiler could have been assumed to be similar to the 4th mode listed in Table A.4-1 of the PDD (6% WWS, 94% BWW, 114.1 t steam/h, no combustion of natural gas). However in this case GHG emission reductions would have grown from 1 630 997 tCO_2e to 1 664 753 tCO_2e. This calculation model was furnished to the auditor. Therefore the values assumed in the PDD are quite conservative and, in addition, these are not set and fixed values but they will be updated and corrected in the course of monitoring.	Conclusion on Response 1 Response is accepted by AIE. Reasonable justifications were presented by project developer during the site visit. CAR is closed based on due justifications made to PDD.
CAR 04. Annex 2 (baseline information) shall contain a summary of the key elements in tabular form. Please take note: lists of key elements in Section B.1 and in Annex 2 should not differ.	23	Response 1 from 16/08/2011 Corrections were made in Annex 2 of the PDD. A spreadsheet with main calculation of emission reductions which shows all lacking parameters and input data as well was added to the PDD. Together Annex 2-1 and Annex 2-2 contain all key elements specified in Section B.1.	Conclusion on Response 1 CAR is closed based on due corrections made to PDD.
CAR 05. Please indicate the more transparent references (including the page and/or table number) to the source: "Methane and Nitrous Oxide Emissions from Biomass Waste Stockpiles, PCFplus research, World Bank, August 2002" indicated in the tables of Section B.1.	23	Response 1 from 16/08/2011 More transparent references were made in the Tables of Section B.1 PDD.	Conclusion on Response 1 CAR is closed based on due corrections made to PDD.

CAR 06. The tables in section B.1 should include parameters: "heat production due to additional combustion of natural gas in power boilers" and "additional consumption of natural gas in power boilers" as they are necessary for the baseline establishing.	23	Response 1 from 16/08/2011 These parameters were put into separate Tables in Section B.1, see pp. 30-31 of the PDD.	Conclusion on Response 1 CAR is closed based on due corrections made to PDD.
CAR 07. Please justify the conservativeness of applied allowance for risk value (6%) used for discount rate calculation. Take note: the recommended methodology doesn't provide the 6% value for allowance for risk.	29 (b)	Response 1 from 16/08/2011 Now the calculations use the discount rate characteristic of the investment projects implemented at CJSC "International paper" (15%). The respective documents which confirm this corporate discount rate value were furnished to the auditor. Necessary corrections were introduced to the investment analysis, see pp. 32, 33, 60. The updated calculation model of the investment analysis was provided to the auditor. Response 2 from 18/08/2011 The symbol "NPV @ 15%" implies that NPV (net present value) is calculated under discount rate of 15%. NPV itself is calculated in USD here. It is common symbol applied in the company's project financial summaries.	Conclusion on Response 1 The project developer has changed the approach of benchmark definition. Now he applies the value of discount rate established in the company for investment projects. The provided document "Норма дисконта" doesn't contain information on discount rate. It has row with the information "NPV @ 15% $ (1358)". Therefore, the document doesn't explicitly indicate the value of discount. Please justify the applied value of discount rate. Conclusion on Response 2 CAR is closed based on due clarifications made.

CAR 08. For the determination of the investment analysis presented in Section B.2: (a) Please justify with reference to the source of information, the input data used in investment analysis (dollar exchange rate, profit tax, property tax, price of natural gas, price of electricity, payments for waste disposal at dumps, prices of early reductions and ERUs). (b) Please provide the calculations of sensitivity analysis.	29 (b)	Response 1 from 16/08/2011 (a) The sources of information are as follows: • dollar exchange rate – http://www.finmarket.ru/z/vlk/cbrfhist.asp?tool=840&bd=1&bm=1&by=2000&ed=30&em=6&ey=2000; • profit tax – Article 284 of the Tax Code of the Russian Federation; • property tax – Article 380 of the Tax Code of the Russian Federation; • price of natural gas – we assumed the expected price of gas based on the analysis of gas prices for the company from January 1996 to February 2000. The corresponding document was provided to the auditor. Actual price of gas reached the level of 50 USD/thousand m^3 in 2005: http://www.gks.ru/free_doc/new_site/prices/prom/Cena-TER.xls; • price of electricity – average purchase price in Russia in 1999 r.: http://www.gks.ru/free_doc/new_site/prices/prom/Cena-TER.xls; • payments for waste disposal at dumps – Volume 6, p. 81 of the detailed design "Installation of Multi-Fuel Boiler"; • prices of early reductions and ERUs – in early 2000 there were only indicative potential carbon prices. For instance, the	Conclusion on Response 1 (a) The justifications concerning the sources of information are accepted by the AIE, except two figures such as: • profit tax (35%). The reference to Article 284 of the Tax Code is irrelevant as before 01.01.2002 taxation was regulated by RF Law "About profit tax for the companies and organizations" from 27.12.1991 N 2116-1. The value of profit tax was not fixed. Its calculation was regulated by Order of Tax Ministry from 15.06.2000 N BG-3-02/231 that approved the instruction of Tax Ministry from 15.06.2000 N62 "About calculation and payment of profit tax from companies and organizations". Please take note: since 01.01.2002 profit tax value is 24%. • Property tax (2%). The reference to Article 380 of the Tax Code is irrelevant as until 01.01.2004 the value of property tax was regulated by RF Law "About tax on organization's property" N 2030-1 from 13.12.1991. The value of property tax depends on fixed

		presentation about global carbon markets prepared by Alternative Energy Development, Inc. in January 2000 (http://wbcarbonfinance.org/docs/carbonmarkets.ppt) gives a range of purchase prices of emission reductions due to projects implemented in different countries of the world. The indicated prices vary from several cents to 30 USD per tonne of CO_2e. Considering the high level of uncertainty, but also taking into account generally positive market attitude and possible increase in prices on approaching the first crediting period under the Kyoto protocol, the price of ERU was assumed equal to the average value of the said range, which is 15 USD per tonne of CO_2e, and the average price of early emission reductions was assumed to be five times lower than the ERU price. (b) The calculation of sensitivity was provided to the auditor. Response 2 from 18/08/2011 The investment analysis has been corrected (see "economics Sveto EN ver 4.3.xls"). The rate of profit tax has been changed to 40% according to preliminary calculations of possible cash flow for the project "Solid fuel & waste material boiler" carried out by International Paper in 2000 (see "prelim cash	assets, non-material assets, etc. Please provide justifications of the used values for profit tax and property tax. (b) The sheet "Sensitivity" contains only resulting tables of sensitivity analysis. Please make sensitivity calculations more transparent. CAR is not closed. Conclusion on Response 2 CAR is closed based on due corrections made to PDD.

		flow IP.doc”). As for rate of property tax it was excluded from calculation that is conservative from the viewpoint of additionality. The sheet “Sensitivity” has been made more transparent. Necessary corrections have been made at pp. 32, 33, 59 of the PDD.	

CAR 09. Please exclude the new section REFERENCES from the CONTENTS of PDD. Any new sections should be added only as an additional Annex (PDD form should not be changed).	36 (f) (vii)	Response 1 from 16/08/2011 Corresponding changes were made in the PDD. See Annex 4.	Conclusion on Response 1 CAR is closed based on due corrections made to PDD.
CAR 10. Reference to the pertinent applicable national law "On uniformity of measurements" N 102-ФЗ dated 26/06/2008 is not made.	36 (g)	Response 1 from 16/08/2011 Reference to Federal Law N 102-ФЗ was added to the PDD, see page 37.	Conclusion on Response 1 CAR is closed based on due corrections made to PDD.
CAR 11. Please indicate in the monitoring plan that the data monitored and required for verification will be kept for two years after the last transfer of ERUs.	36 (m)	Response 1 from 16/08/2011 Corrections were made, see Table D.4-1 of the PDD.	Conclusion on Response 1 CAR is closed based on due corrections made to PDD.
CAR 12. Please justify with reference to the source of information, the natural gas volumes used in the spreadsheet "SvetogorskPPM_model_ru". Please take note: conversion from thousands of m^3 into tones of coal equivalent should be transparent.	43	Response 1 from 16/08/2011 Actual data on operation of the multi-fuel boiler in 2003-2010 were obtained from the Mill's Energy Department. The reference was added to the model. The model was provided to the auditor. See also Annex 2-1 of the PDD. Conversion of cubic meters to tonnes of standard fuel is made by the Mill's Energy Department with allowance for calorific value of gas (according to the data of fuel suppliers' certificates). Response 2 from 18/08/2011 According to reports of CJSC "International Paper" on statistical form 6-TP for the last three years (see "2008.pdf", "2009.pdf",	Conclusion on Response 1 The value of natural gas consumption converted from thousands of m^3 into tones of coal equivalent is not transparent. Conversion from quantity of natural gas consumption from thous. of m^3 to tones of coal equivalent for 2008 is as follows: 1) 32236 thous. of m^3 * 0.716 tones/thous. of m^3 = 23080.976 tones of NG; 2) 23080.976 tones * 0.048 TJ/tones = 1107.887 TJ 3) 1107.887 TJ/0.02931 TJ/tones =

		"2010.tif") average annual NCV for used natural gas was 7992, 8016 and 8008 kcal/m3 for 2008, 2009 and 2010 respectively. As for natural gas used in the new multi-fuel boiler the average annual NCV was equal to 36865/32236*7000=8005, 38800/33874*7000=8018 and 37158/32472*7000=8010 kcal/m3 for 2008, 2009 and 2010 respectively. Some discrepancy in NCV between the whole plant and one boiler is no more than 0,2% and can be explained by different proportions of natural gas usage in the plant and the boiler from month to month taking into account that NCV varies from month to month too.	37798.94 tones of coal equivalent. This value is higher than the provided in the model that is not conservative. The same is for other years. CAR is not closed. <u>Conclusion on Response 2</u> CAR is closed based on due justifications received.
CAR 13. The sentence: "As it is seen, pollutant emissions from fuel combustion after implementation of the project reduced." is incorrect. Please take note: in the table F.1-1 emissions of sulphur dioxide, suspended particles increased.	48 (a)	<u>Response 1 from 16/08/2011</u> Corresponding changes were made in the PDD. See page 52.	<u>Conclusion on Response 1</u> CAR is closed based on due corrections made to PDD.
CAR 14. Please provide information concerning the transboundary impacts for the project.	48 (a)	<u>Response 1 from 16/08/2011</u> Concerning transboundary effect of the project the following can be said. The border with Finland lies 1.8 km from CHPP-4 of Svetogorsk PPM. The distance from Svetogorsk to the nearest Finnish town of Imatra is 7 km. The sanitary protection zone boundary is 850 m from the plant, and the calculations of maximum ground level concentrations of pollutants show that the	<u>Conclusion on Response 1</u> CAR is closed based on due corrections made to PDD.

		pollutant emission sources will not have any significant impact on the ground level pollution in residential zone. Basing on this it can be concluded that the project does not have any transboundary effect. This paragraph was added to the PDD, see pp. 52-53 of the PDD.	
CAR 15. Definition of benchmark was made consider refinance rate of Central Bank of the RF, expected inflation rate and allowance for risk in rubles, however investment analysis was made in US dollars. Hence, comparison of investment analysis results and chosen benchmark is irrelevant.	29 (b)	<u>Response 1 from 16/08/2011</u> All settlements in CJSC "International paper" are made in USD. Discount rate of 15% is assumed by the company for its investment projects. The confirming documents were submitted to the auditor. The investment analysis in the PDD was corrected accordingly. See also response to CAR 07. <u>Response 2 from 18/08/2011</u> Please see the 2d response to CAR 07.	<u>Conclusion on Response 1</u> The project developer has changed the approach of benchmark definition. Now he applies the value of discount rate established in the company for investment projects. The provided document "Норма дисконта" doesn't contain information on discount rate. It has row with the information "NPV @ 15% $ (1358)". Therefore, the document doesn't explicitly indicate the value of discount. Please justify the applied value of discount rate. <u>Conclusion on Response 2</u> CAR is closed based on due corrections made to PDD.
CL 01. Please clarify is the Svetogorsk PPM landfill where BWW and WWS are dumped managed or unmanaged in accordance with definition provided by	23	<u>Response 1 from 16/08/2011</u> In accordance with 2006 IPCC Guidelines for	<u>Conclusion on Response 1</u> CL is closed based on due

IPCC 2006?		National Greenhouse Gas Inventories, Volume 5, Chapter 3, Table 3.1, the dump of Svetogorsk PPM is a controlled dump because wastes are disposed at a controlled site protected from ignition and where mechanical compacting and leveling of wastes is ensured.	justifications made.
CL 02. Please clarify, is there any need to consider the property tax payments in profit tax payments calculation as made in spreadsheet "economics Sveto EN"?	29 (b)	Response 1 from 16/08/2011 The property tax amounts are considered in expenses in determining the corporate profits tax base (item 1 Article 264 of the Russian Federation Tax Code). Response 2 from 18/08/2011 Please see the 2d response to CAR 08.	Conclusion on Response 1 The provided reference doesn't have sense as before 01.01.2002 the profit tax wasn't regulated by the Russian Federation Tax Code. (See conclusion on response 1 to CAR 08). CL is not closed. Conclusion on Response 2 CAR is closed based on due corrections made to PDD.
CL 03. Please clarify why the amount of sulphur dioxide emissions before installation of MFB is 45.7802 g/s and 1203.9279 t/year, however amount of emissions after installation of MFB is bigger (52.0798 g/s), but the total amount is less (288.6979 t/year).	48 (a)	Response 1 from 16/08/2011 According to the "Methodological guidelines for calculation, standardization and monitoring of pollutant emissions to the atmosphere", SRI Atmosphera, St.-P., 2005 (http://www.infosait.ru/norma_doc/46/46202/index.htm#i144503) one-time value of emission rate (g/s) is a maximum on-time value, and the gross emission value (t/year) is calculated based on average emission rate and overall duration of operation (in hours) of the	Conclusion on Response 1 CL is closed based on due clarifications made.

		emission source. Furthermore, one-time emission rate value (g/s), specified in the Table, represents a value equal to the sum of emissions from different sources of the entire company. According to Table 4, Volume 6 of the detailed design “Installation of Multi-Fuel Boiler” after installation of the multifuel boiler, emission in g/s changed insignificantly and gross emission dropped because the time of operation of emission sources changed.	