DETERMINATION REPORT

CAMCO CARBON RUSSIA LIMITED

DETERMINATION OF THE
"Biomass utilization at JSC Segezha Pulp and Paper Mill (SPPM)"

BUREAU VERITAS CERTIFICATION

REPORT NO. RUSSIA/0063-2/2011, V.4

Final Determination Report on JI project
"Biomass utilization at JSC Segezha Pulp and Paper Mill (SPPM)"

Date of first issue:	Organizational unit:
06/07/2010	Bureau Veritas Certification Holding SAS
Client:	Client ref.:
Camco Carbon Russia Limited	Mr. Arthur Houston

Summary:

Bureau Veritas Certification was commissioned by Camco Carbon Russia Limited to make the determination of the project "Biomass utilization at JSC Segezha Pulp and Paper Mill (SPPM)" on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI guidelines and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria. The owner of the project is JSC "Segezha Pulp and Paper Mill". Camco Carbon Russia Limited being PDD developer coordinated the project and the determination process on behalf of the project owner.

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

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

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

Report No.:	Subject Group:
RUSSIA/0063-2/2011	JI

Project title:
"Biomass utilization at JSC Segezha Pulp and Paper Mill (SPPM)"

Work carried out by:

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Grigory Berdin – Lead Verifier

Work verified by:

Ivan Sokolov - Internal Technical Reviewer

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Indexing terms:

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

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Abbreviations

AIE	Accredited Independent Entity
BLS	Baseline Study
BVC	Bureau Veritas Certification
BWW	Bark and Wood Waste
CAR	Corrective Action Request
CO_2	Carbon Dioxide
DDR	Draft Determination Report
DR	Document Review
EIA	Environmental Impact Assessment
ERU	Emission Reduction Unit
GHG	Greenhouse House Gas(es)
I	Interview
IETA	International Emissions Trading Association
IPCC	Intergovernmental Panel on Climate Change
IRCA	International Register of Certified Auditors
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MoV	Means of Verification
JSC	Joint Stock Company
MP	Monitoring Plan
NCSF	National Carbon Sequestration Foundation
OJSC	Open Joint Stock Company
NPV	Net Present Value
PCF	Prototype Carbon Fund (World Bank Carbon Finance Unit)
PDD	Project Design Document
PP	Project Participant
RF	Russian Federation
SCF	Stiching Carbon Finance
SPPM	Segezha Pulp and Paper Mill
tCO2e	Tonnes CO2 equivalent
UNFCCC	United Nations Framework Convention for Climate Change

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1 INTRODUCTION

Camco Carbon Russia Limited has commissioned Bureau Veritas Certification to determine its JI project "Biomass utilization at JSC Segezha Pulp and Paper Mill (SPPM)" (hereafter called "the project") located in Segezha town, Republic of Karelia, Russian Federation. Camco Carbon Russia Limited being PDD developer coordinated the project and the determination process on behalf of the project owner.

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

1.1 Objective

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

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

1.2 Scope

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

The determination is not meant to provide any consulting towards Camco Carbon Russia Limited and JSC "Segezha Pulp and Paper Mill". However, stated requests for corrective actions may have provided input for improvement of the project design.

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

Purpose of the Project:

The project is aimed at increasing combustion efficiency of bark and wood wastes (BWW) used as fuel for steam production to cover in-house needs of the Mill and reduction of fossil fuel (fuel oil) consumption at the enterprise as a whole.

The project is implemented on the territory of OJSC "Segezha Pulp and Paper Mill", Karelia, Russian Federation. The project envisages the following measures:

- Reconstruction of the steam boiler No.7 of BKZ-75-39 GMA type running on fuel oil into a fluidized bed boiler of EEE-BKZ-100-3.9-440MDF type, which would enable combustion of BWW;
- Construction of a fuel feed facility and a BWW storage facility.

Project Company:

OJSC "Segezha PPM" is the largest manufacturer of paper bags in Russia. The paper of M-70, M-80, etc. grades, used for manufacturing of paper bags, is produced at the Mill.

The enterprise is located in the town of Segezha in the vicinity of Saint-Petersburg – Murmansk motor and rail roads and Belomor-Baltyisky cannel system. The enterprise has a developed network of motor roads, access railways, loading berths, handling equipment for timber cargo and fuel oil, as well as equipment for finished goods shipment during navigation period at Belomor-Baltyisky cannel. The Mill is located in the region with rich raw material resources.

"Segezha PPM" was commissioned in 1939. In 1992 the Mill was reorganized into OJSC "Segezhabumprom". In 1999 it was reorganized into OJSC "Segezha Pulp and Paper Mill".

The main lines of the mill's activity:

- Production of chemical wood pulp used a semi-product for kraft paper by sulfate process;
- Production of kraft paper for manufacturing of paper bags, packaging and other kinds of paper;
- Output of by-products – wood-chemical products: raw turpentine, raw tall oil, tall colophony, distillated tall oil;
- Production and supply of heat to outside consumers.

Today the Mill is capable of producing up to 414 000 tonnes of sulfate pulp, 330 000 tonnes of kraft paper and kraft liner.

The Mill employs around 3 400 people

Situation existing prior to the starting date of the project:

The first attempt to reconstruct boiler No.7 was started as far back as 2002. However it was unsuccessful. During start-up and adjustment works the attempts to make the boiler achieve stable operation failed. The enterprise was compelled to continue utilization of BWW in the old and inefficient boilers.

Baseline Scenario:

The most realistic baseline scenario is continuation of the existing practice at the enterprise, so the BWW would be combusted in old boilers 1-5 existing at the enterprise and heat would be generated by these boilers and 2 others operating using fuel oil. The scenario does not require significant investments and is not associated with any risks.

Project Scenario:

The new attempt to reconstruct boiler No.7 costs at least equal to the first one and also was associated with certain risks. Although the experience of operating a fluidized bed boiler was negative, the SPPM management, none the less, chose to complete reconstruction of boiler No.7. This decision was made in view of the possibility to cover some costs and offset project risks by selling GHG emission reduction units (ERUs) within the framework of the Kyoto Protocol mechanism.

The proposed project envisages a set of measures to complete reconstruction of Boiler No.7 (EEE-BKZ-100-3.9-440MDF) using technology of fluidized bed combustion of BWW without fuel oil for flame stabilization.

At that, the bulk of BWW, which is currently utilized in Boilers No.1-5 together with fuel oil, will be fired in Boiler No.7. Boilers No. 1-5 are planned to be transferred to the reserve.
After the project implementation Boiler No. 7 will not be able to take on the whole load covered by Boilers No. 1-5 due to its lower steam capacity. Therefore the lacking heat energy will be generated in Boilers No. 8-10 which are underutilized at present and work mainly during the heating period. This redistribution of load will also lead to reduction of fuel oil combustion at CHPP-1 as heat energy is generated more efficiently in Boilers No. 8-10 than in Boilers No. 1-5.

If the enterprise finds additional amount of BWW unable to be burnt in Boiler No. 7 this BWW will be burnt in Boilers No. 1-5 where lacking heat energy will be generated while Boilers No. 8-10 will continue operating in the same mode.

History of the Project:

First reconstruction of the Boiler No.7 was started in June 2002 and completed in December 2003.

At the same time the discussion took place in order to realize the project in the framework of the Kyoto protocol. Negotiations for participation in ERUPT tender took place and PIN was developed (21.11.2003).

Until 2005 the boiler was not started-up.

On 7th of August 2006 the meeting took part where decision was taken to make the Project as JI.

On 7th of September 2006 at the Board of Directors the decision was taken to finalize reconstruction of the boiler No.7.

In 19.09.2006 a tender took place where company «FOSTER WHEELER ENERGIA OY» won a contract for the Boiler No.7 reconstruction.

The completion stage of reconstruction starts October 2006.

Reconstruction is completed November 2007.

In order to secure status of the project as realized under the mechanism of the Article 6 of the Kyoto protocol OJSC "Segezha Pulp and Paper Mill" had concluded a contract with Camco International Ltd. on 12.12.2007 for PDD development and determination.

25 March 2010 the PDD was re-submitted for determination according to the Track 1 procedure to Bureau Veritas Certification.

1.4 Determination team

The determination team consists of the following personnel:

Leonid Yaskin
Bureau Veritas Certification – Team Leader, Lead Verifier

Grigory Berdin
Bureau Veritas Certification – Lead Verifier

Ivan Sokolov
Bureau Veritas Certification – Internal Technical Reviewer

2 METHODOLOGY

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

The determination consisted of the following three phases:

i) desk review of the project design document and the baseline and monitoring plan;
ii) conference call and interviews with project owner and PDD developer on 21/05/2010;
iii) resolution of outstanding issues with Camco Carbon Russia Limited (ref. to Appendix A Table 5 with CAR's and CL's) and the issuance of the determination report and opinion.

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

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

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

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

The completed determination protocol is enclosed in Appendix A to this report. It consists of four tables. Table 3 for "Baseline and Monitoring Methodologies" is omitted because the

project participants established their own baseline and monitoring approach that is in accordance with appendix B of the JI Guidelines and because the questions regarding the used approach are presented in Table 2.

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

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

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

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

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

Figure 1 Determination protocol tables

2.1 Review of Documents

Camco Carbon Russia Limited provided Bureau Veritas Certification (BVC) on 29/03/2010 the Project Design Document (PDD) Version 1.0 dated 09/03/2010 together with supporting documentation including calculation of GHG emission and investment analysis.

The completeness check made by BVC revealed some deviations of the PDD from the JISC format. Therefore, Camco Carbon Russia Limited was requested to remake the PDD in conformity to JI PPD Form. BVC received the finally remade PDD Version 2.0 dated 29/03/2010. This version of PDD was made publicly available for public comments on Bureau Veritas Certification site from 01 April 2010 till 30 April 2010.

PDD Version 2.0 and supporting documentation as well as additional background documents related to the project design, baseline, and monitoring plan, such as Kyoto Protocol, host Country laws and regulations, JI guidelines, JISC Guidance on criteria for baseline setting and monitoring, and Guidelines for users of the JI PDD Form were reviewed.

The final deliverable of the document review was the Draft Determination Report (DDR) Version 1 dated 13/04/2010 with 21 CAR's and 1 CL's.

PDD developer Camco Carbon Russia Limited issued iteratively five batches of responses to BVC requests which were eventually embedded in the amended PDD Version 4.0 dated 02/07/2010. ITR raised few minor issues which were successfully corrected in the amended PDD Version 4.1.

Draft Determination Report Version 3 was issued 19/07/2010 with CAR 1 not closed.

Approval of the project by the Russian Government was issued in the Order of the Ministry for Economic Development N709 dated 30 December 2010.

PDD developer Camco Carbon Russia issued PDD Version 5.0 dated 24/02/2011 with the updated Section A.5 in which the information about the received project approval was reported.

Having received PDD Version 5.0, BVC issued the present Determination Report Version 4 in which CAR 01 was closed.

The determination findings presented in this Final Determination Report Version 4 and Appendix A relate to the project as described in the PDD Version 1.0 (initial) and Version 5.0 (final).

2.2 Follow-up Interviews

Bureau Veritas Certification Lead verifier Grigory Berdin conducted on 13/05/2010 a conference call which took place at Camco Carbon Russia Limited office in Moscow and had interviews with Camco Carbon Russia Limited and SPPM, which confirmed the selected information and clarified some issues identified in the document review. The interview topics are listed in Table 7.

Table 7 Interview topics

Date/ Site/ Inter-viewed organization	Interview topics
21/05/2010 Moscow city Sites: Camco Carbon Russia Limited Organisations: Camco Carbon Russia Limited JSC Segezha Pulp and Paper Mill	1. History of the project. 2. Starting date of the project (the date on which the implementation or construction or real action of the project has begun). 3. Substantiation of the operational lifetime of the project. 4. Substantiation that the project could not occur as the baseline scenario. 5. Distinctions of the project activity from similar activities. 6. Technical design document. 7. Verification of specific fuels consumption coefficients for project and baseline scenario; 8. IRR and NPV of the project as per the feasibility study and technical design in comparison with investment analysis in PDD. Capital costs and breakdown of operational costs of the project. 9. Operational and management structure. Responsibilities, roles, authorities (for verification stage). 10. Expertise of Environmental Impact Assessment Documentation. 11. Permits for air emissions at the construction and exploitation phases. 12. Public hearings, if any. 13. Training programme for the mill operators. 14. Pending issues.

2.3 Resolution of Clarification and Corrective Action Requests

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

Corrective Actions Requests (CAR) are issued, where:

i) there is a clear deviation concerning the implementation of the project as defined the PDD;
ii) requirements set by the Methodological Procedure or qualifications in a verification opinion have not been met; or
iii) there is a risk that the project would not be able to deliver high quality ERUs.

Clarification Requests (CL) are issued where:

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

DDR Version 1 summarising Bureau Veritas Certification's findings of the desk document review reported 21 CAR's and 1 CL's. The amendments made by Camco Carbon Russia Limited to the PDD and summarised in PDD Version 4.0 dated 02/07/2010 satisfactorily addressed the verifier's requests. As a result, the Determination Report Version 1 was is-

sued on 06/07/2010 and sent, together with the final PDD Version 4.0, to BVC Internal Technical Reviewer (ITR) for review. ITR raised few minor issues regarding PDD and Determination Report. Camco Carbon Russia Limited released PDD Version 4.1 dated 16/07/2010 with all issues corrected and ITR was successfully closed. As a result, the Determination Report Version 2 was issued on 19/07/2010.

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

3 DETERMINATION FINDINGS

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

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

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

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

iv) the conclusions of the determination are presented consecutively.

3.1 Project Design

The purpose of the project is indicated as combustion efficiency increasing of bark and wood wastes (BWW) used as fuel for steam production to cover in-house needs of the Mill and reduction of fossil fuel (fuel oil) consumption at the enterprise as a whole.
The project envisages the reconstruction of the steam boiler No.7 of BKZ-75-39 GMA type running on fuel oil into a fluidized bed boiler of EEE-BKZ-100-3.9-440MDF type, which would enable combustion of BWW and construction of a fuel feed facility and a BWW storage facility.

Fuel oil consumption is reducing due to higher efficiency of BWW combustion in new boiler No.7 compared to the previous practice of BWW combustion in boilers No.1-5. Boiler No.7 does not require fuel oil for co-combustion with BWW. Only small amount of fuel oil is required for lighting, approximately 500 t. of fuel oil per year.

The project is the greenfield state-of-the-art facility which positively influences the environment.

Reduction of GHG emissions as a result of the project realization will occur due to:

- Increased efficiency of BWW combustion in boiler No.7 compared to old boilers No.1-5;
- Reduction of the fossil fuel consumption at the mill on the whole.

The second stage of boiler No.7 reconstruction started in the first quarter 2006. The boiler was commissioned in 4th quarter of 2007. The implementation of the project allows to reduce fuel oil consumption approximately on 18 ths. tonnes per year. The project technology is unlikely to be substituted by other or more efficient technologies within the project period.

The project is expected to provide the reduction of GHG emissions by 284,370 tCO2e over the crediting period 2008-2012.

The identified areas of concern as to Project Design, PP's response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR 01 – CAR 05 and CL 01).

The project has received the approval by the host Party, therefore CAR 01 is closed.

No areas of concern were identified as to Project Duration / Crediting Period.

3.2 Baseline and Additionality

A JI specific approach regarding baseline setting and additionality demonstration and assessment has been developed in accordance with JISC Guidance on criteria for baseline setting and monitoring (Version 02). In accordance with paragraph 24 of this Guidance, the baseline is identified by listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one.

Four alternative scenarios were considered for boiler No.7 reconstruction:

- Alternative 1. Continuation of the existing situation (BWW utilization in boilers No.1-5);
- Alternative 2. Construction of a wood fuel feed facility and a bark and wood waste storage without completion of boiler No.7 reconstruction;
- Alternative 3. Continuation of the present situation (without construction of boiler No.7) with heat produced by boilers No.8-10 running on fuel oil;
- Alternative 4. Project activity as not JI.

As a result, it was concluded that Alternative 1 is realistic and credible and therefore it was selected as the plausible scenario thus representing the baseline.

Technological data and parameters that define the baseline were determined during the conference call with project participants.

Additionality of the emission reductions achieved due to the project implementation is demonstrated using approach (a) as defined in paragraph 2 of the Annex I to the "Guidance on criteria for baseline setting and monitoring:

"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 enhancements of net anthropogenic removals by sinks of GHGs". In order to do so the alternatives analysis, Investment analysis, Barrier analysis (including sensitivity analysis) and Common practice analysis are used.

To assess the project's additionality all 4 steps were implemented accordingly. In Section B.2, it is demonstrated that the project without JI registration is not a plausible baseline scenario since it is not financially attractive (NPV of the project is negative). A supporting spreadsheet containing all assumptions and calculations was made available to the verifier. The results of the investment analysis are reinforced by a Barrier Analysis. Common Practice analysis demonstrates that fluidized bed boilers used for BWW combustion are not widely spread at enterprises of the Russian Federation.

The identified areas of concern as to Baseline and Additionality, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 06 – CAR 15).

3.3 Monitoring Plan

A JI specific approach regarding monitoring has been developed in accordance with the JISC Guidance on criteria for baseline setting and monitoring (Version 02).

Option 2 – Direct monitoring of emission reductions from the project was chosen. The monitoring plan establishes an approach to calculate reduction of fuel oil consumption at the mill on the whole.

The project activity helps to avoid greenhouse gas emissions from the fuel oil combustion due to decreasing of it consumption. Only CO_2 emissions from fuel oil combustion are considered in the monitoring plan.

All categories of data to be collected in order to monitor GHG emission reductions from the project are described in required details.

All parameters needed to monitor CO_2 emissions are identified and included in the monitoring plan. The monitoring approach explicitly and clearly distinguishes:

a) 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 regarding the PDD; and

b) Data and parameters that are monitored throughout the crediting period.

GHG emissions due to BWW transportation to Segezha PPM from external suppliers are excluded because they considered negligibly small. GHG emissions due to fuel oil extraction, processing and transportation are not taken into account which represents a conservative approach since fuel oil consumption is higher in the baseline scenario than in the project scenario.

Operational and management structure that SPPM implements to monitor emission reductions are clearly described in the PDD. Monitoring related quality control and quality assurance procedures are outlined subject to checking at the verification phase.

The identified areas of concern as to Monitoring Plan, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 16 - CAR 20).

3.4 Calculation of GHG Emissions

Formulae used for calculation of GHG emissions are presented in PDD Section B, Section D and Section E. Input data for calculations and the calculations per se are presented on the comprehensive spreadsheet, which was made available to the verifier. The final calculations are observed as accurate. The results are summarized in Section E.

The calculated amount of project emission reduction over the crediting period 2008 - 2012 is 284,370 tCO2e. The annual average emission reduction is 56,874 tCO2e.

No areas of concern were identified as to 3.4Calculation of GHG Emissions.

3.5 Environmental Impacts

The project is approved by State Environmental Expertise Committee of the Natural Resources and Environment Protection Office of the Ministry of Natural Resources in the Republic of Karelia by the Order #588 of 27.11.03. Repeated expertise for the second stage of reconstruction is not necessary as per information from the GlavGosExpertize of RF (letter #101/01 of 25.01.2007).

The project related environmental documents are in compliance with the state environmental and sanitary-epidemiological standards. The State Ecological Examination of the project did not identify any non-compliance issues with regards to the Russian Federation legislation and normative documents relating to the environmental protection. The project complies with all environmental laws, and emissions are well within legal limits.

The identified area of concern as to Monitoring Plan, PP's response and BV Certification's conclusion is described in Appendix A Table 5 (refer to CAR 21).

3.6 Comments by Local Stakeholders

No comments of concern were received from local stakeholders.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

In accordance with the Section E "Verification procedure under the Article 6 Supervisory Committee" of the JI guidelines, Bureau Veritas Certification published the PDD Version 2.0 on it's site on 01/04/2010 and invited comments within 30/04/2010 by Parties and stakeholders. No comments have been received.

5 DETERMINATION OPINION

Bureau Veritas Certification has been engaged by Camco Carbon Russia Limited to perform a determination of the JI project "Biomass utilization at JSC Segezha Pulp and Paper Mill (SPPM)" owned by OJSC "Segezha Pulp and Paper Mill". The determination was performed on the basis of UNFCCC criteria for JI projects, in particular the verification procedures under the JI Supervisory Committee, as well as host country criteria and the criteria given to provide for consistent project operations, monitoring and reporting.

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

The determination consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) project site visit and follow-up interviews with the project participant and PDD developer; iii) the issuance of the determination report and opinion.

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

The investment, barriers and common practice analyses demonstrate that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that it is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

It is our opinion that the project as described in the Project Design Document, Version 5.0 dated 24 February 2011 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

The project was approved by the Order of the Ministry for Economic Development N709 dated 30 December 2010 in accordance with the RF Government Decree # 843 dated 28/10/2009 and the Order of the RF Ministry for Economic Development # 485 dated 23/11/2009.

Bureau Veritas Certification Holding SAS
25 February 2011

Leonid Yaskin - Team Leader, Lead Verifier

Grigory Berdin – Team Member, Lead Verifier

6 REFERENCES

Reviewed document or type of Information available before the site visit

1.	PDD "Biomass utilisation at JSC Segezha Pulp and Paper Mill (SPPM)". Version 2.0, dated 29 March 2010.
2.	Project approval by the Order of the Ministry for Economic Development N709 dated 30 December 2010 i
3.	Guidelines for Users of the Joint Implementation Project Design Document Form. Version 04, JISC.
4.	JI Guidelines. Annex to decision 9/CMP.1.
5.	JISC Guidance on criteria for baseline setting and monitoring. Version 02.
6.	Excel spreadsheet with emission reductions calculating and investment analysis.
7.	Guidelines on the assessment of investment analysis. Version 3. CDM EB.
8.	2006 IPCC Guidelines for National Greenhouse Gas Inventories. Volume 2, Energy (http://www.ipcc-nggip.iges.or.jp/public/2006gl/vol2.htm).

Reviewed document or type of Information obtained at the site visit

1.	Business Plan
2.	Project design
3.	Protocol of JI consideration.
4.	Passports of Boilers 1-5 with notes on permissions to operate
5.	Book assets and Depreciation letter
6.	Parameters charts for boilers 1,2,3,5
7.	Environmental expertise approval and other environmental documentation and permissions.
8.	Letter that additional environmental expertise is not needed
9.	Duty instructions and protocols of attestation.
10.	Technical passports of boilers and measurement devices.
11.	Act on the boiler No.7 commissioning
12.	SPPM operational data for 2009.
13.	SPPM historical operational data.
14.	Input data for the investment analysis.

Persons interviewed:

1.	Nadezhda V.Gladenyuk – SPPM, Project manager

2.	Sergey Gladenyuk – SPPM, Deputy chief power engineering specialist
3.	Ilia Sysoykov – CJSC "Investlesprom" leading financial specialist
4.	Khamaza Maxim – Camco Carbon Russia Limited, Operations Manager
5.	Olga Khlebinskaya – Camco Carbon Russia Limited, JI/CDM Specialist

APPENDIX A: COMPANY JI PROJECT DETERMINATION PROTOCOL

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

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
1. The project shall have the approval of the Parties involved.	Kyoto Protocol Article 6.1 (a)	**CAR 01**. The project has no approval of the host Party. CAR is closed since the project was approved by the Order of the Ministry for Economic Development N709 dated 30 December 2010. Verifiers' Note: JISC Glossary of JI terms/Version 01 defines the following: a) At least the written project approval(s) by the host Party(ies) should be provided to the AIE and made available to the secretariat by the AIE when submitting the determination re-	Table 2 Section A.5.

		port regarding the PDD for publication in accordance with paragraph 34 of the JI guidelines; (b) At least one written project approval by a Party involved in the JI project, other than the host Party(ies), should be provided to the AIE and made available to the secretariat by the AIE when submitting the first verification report for publication in accordance with paragraph 38 of the JI guidelines, at the latest.	
2. Emission reductions, or an enhancement of removal by sinks, shall be additional to any that would otherwise occur.	Kyoto Protocol Article 6.1 (b)	OK	Table 2 Section B.2.1
3. The sponsor Party shall not acquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7.	Kyoto Protocol Article 6.1 (c)	OK	N/A
4. The acquisition of emission reduction units shall be supplemental to domestic actions for the purpose of meeting commitments under Article 3.	Kyoto Protocol Article 6.1 (d)	OK	N/A
5. Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects.	Marrakech Accords,	OK	The Russian national focal point is the Ministry of Economic Devel-

	JI Modalities, §20		opment. The Russian national guidelines and procedures are established by the "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". The national focal point of United Kingdom of Great Britain and Northern Ireland is Global Carbon Markets Department of Energy and Climate Change. National guidelines and procedures for approv-

			ing JI projects: UK guidance on project approval and authorization to participate in Joint Implementation (JI), Defra November 2005.
6. The host Party shall be a Party to the Kyoto Protocol.	Marrakech Accords, JI Modalities, §21(a)/24	OK	Russia has ratified the Kyoto Protocol by Federal Law N 128-ФЗ dd. 04/11/04
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts.	Marrakech Accords, JI Modalities, §21(b)/24	OK	The Russian Federation's assigned amount has been calculated and recorded In the 5th National Communication dated 12/02/10.
8. The host Party shall have in place a national registry in accordance with Article 7, paragraph 4.	Marrakech Accords, JI Modalities, §21(d)/24	OK	Russian Federation has established the GHG Registry by the RF Government Decree N 215-p dated 20/02/06.
9. Project participants shall submit to the independent entity a project design document that contains all information needed for the determination.	Marrakech Accords, JI Modalities, §31	OK	Camco International Limited has submitted the PDD Version 1.0 dated 9 March 2010

			to Bureau Veritas Certification, which contains all information needed for determination.
10. The project design document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments.	Marrakech Accords, JI Modalities, §32	OK	PDD Version 2.0 dated 29 March 2010 was made publicly available for comments on Bureau Veritas Certification RUS website from 01 April 2010 till 30 April 2010.
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, in accordance with procedures as determined by the host Party shall be submitted, and, if those impacts are considered significant by the project participants or the host Party, an environmental impact assessment in accordance with procedures as required by the host Party shall be carried out.	Marrakech Accords, JI Modalities, §33(d)	OK	Table 2, Section F
12. The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B
13. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	Marrakech Accords, JI Modalities, Ap-	OK	Table 2, Section B

	pendix B		
14. The baseline methodology shall exclude to earn ERUs for decreases in activity levels outside the project activity or due to force majeure.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B
15. The project shall have an appropriate monitoring plan.	Marrakech Accords, JI Modalities, §33(c)	OK	Table 2, Section D
16. A project participant is a legal entity authorized by a Party involved to participate in the JI project.	"Glossary of Joint Implementation Terms", Version 02.	The Russian project participant is authorised by the Host Party through the issuance of the approval for the project.	Table 2, Section A

Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A. General Description of the project					
A.1. Title of the project					
A.1.1. Is the title of the project presented?	1,2	DR	The title of the project is: "Biomass utilisation at JSC Segezha Pulp and Paper Mill (SPPM)". The Sectoral Scope is identified in the PDD as: (1) Energy industries (renewable/non-renewable sources).		OK
A.1.2. Is the current version number of the document presented?	1,2	DR	PDD Version 2.0 was reviewed.		OK
A.1.3. Is the date when the document was completed presented?	1,2	DR	PDD Version 2.0 is dated 29/03/2010.		OK
A.2. Description of the project					
A.2.1. Is the purpose of the project included?	1,2	DR	The purpose of the project is reconstruction of the steam boiler No.7 of BKZ-75-39 GMA type running on fuel oil into a fluidized bed boiler of EEE-BKZ-100-3.9-440MDF type, which would enable combustion of bark and wood wastes (BWW). The project also envisages construc-tion of a fuel feed facility and a BWW storage	CAR 02	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			facility. The project is aimed at increasing of combustion efficiency of bark and wood wastes used as fuel for steam production to cover in-house needs of the Mill and reduction of fossil fuel (fuel oil) consumption at the enterprise as a whole. The project is implemented on the territory of Segezha Pulp and Paper Mill. **CAR 02.** Section A.2 does not provide a concise, summarizing explanation of the baseline scenario and history of the JI component of the project as per [2]. Please provide evidence that the project was considered as JI before taking the investment decision.		
A.2.2. Is it explained how the proposed project reduces greenhouse gas emissions?	1,2	DR	It is explained in PDD Section A.2 and Section A.4.3.		OK
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?	1,2	DR	Party A is the Russian Federation. Legal entity of Party A is OJSC "Segezha Pulp and Paper Mill". Party B is the United Kingdom of Great Britain and Northern Ireland. Legal entity of Party B is "Camco Carbon Russia Limited".		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Verifiers observe that "UK guidance on project approval and authorization to participate in Joint Implementation (JI)" reads: "We currently approve applications made by, and authorize participation of, companies resident in or with a branch in the United Kingdom. We are exploring whether it may be possible to issue a letter of approval to non-UK based entities".		
A.3.2. The data of the project participants is presented in tabular format?	1,2	DR	The data of the project participants is presented in the tabular format as required by [2].		OK
A.3.3. Is contact information provided in Annex 1 of the PDD?	1,2	DR	The contact information is provided in PDD Annex 1.		OK
A.3.4. Is it indicated, if it is the case, if the Party involved is a host Party?	1,2	DR	Russian Federation is indicated as a host Party.		OK
A.4. Technical description of the project					
A.4.1. Location of the project activity					
A.4.1.1. Host Party(ies)	1,2	DR	The Russian Federation is indicated as the host Party in the PDD Section A.4.1.1.		OK
A.4.1.2. Region/State/Province	1,2	DR	The Republic of Karelia.		OK
A.4.1.3. City/Town/Community etc.	1,2	DR	The town of Segezha.		OK
A.4.1.4. Detail of the physical location, including information allowing the unique identification	1,2	DR	PDD Section A.4.1.4 defines in detail the physical location, including information allowing		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
of the project. (This section should not exceed one page).			the unique identification of the project sites. The town of Segezha is the administrative centre of Segezha District, the Republic of Karelia. The town is located on the Segezha River and on the western bank of Lake Vygozero. Segezha is 700 km from Saint-Petersburg. The population is 33 600 people. Segezha Pulp and Paper Mill is a large enterprise and the main employer in the town of Segezha. Its coordinates: latitude 63°44', longitude 34°19'. Verifiers checked the coordinates and confirm their adequacy.		
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					
A.4.2.1. Does the project design engineering reflect current good practices?	1,2	DR	The project design engineering reflects current good practices in using biomass for high-efficiency heat generation. **CAR 03.** The implementation schedule is not presented in Section A.4.3 as per [2]. **CAR 04.** The relevant technical data on new Boiler No.7 (EEE-BKZ-100-3.9-440MDF) is not presented in PDD Section A.4.2.	CAR 03 CAR 04	OK OK
A.4.2.2. Does the project use state of the art tech-	1,2	DR	The project uses state-of-the-art technology for		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
nology or would the technology result in a significantly better performance than any commonly used technologies in the host country?			combustion of BWW. Boiler No.7 (EEE-BKZ-100-3.9-440MDF) uses technology of fluidized bed combustion of BWW and provides a high efficiency heat generation without fuel oil for flame stabilization.		
A.4.2.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1,2	DR	The project technology is unlikely to be substituted by other or more efficient technologies within the project period.		OK
A.4.2.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	1,2	DR	**CL 01.** Please clarify if the project requires extensive initial training and maintenance efforts in order to work as presumed during the project period.	CL 01	OK
A.4.2.5. Does the project make provisions for meeting training and maintenance needs?	1,2	DR	Conclusion is pending a response to CL 01.	Pending	OK
A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances					
A.4.3.1. Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	1,2	DR	It is explained in PDD Section A.4.3 that the reduction of anthropogenic GHG emission will occur due to increased efficiency of BWW combustion and reduction of fossil fuel (fuel oil)		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			consumption in the SPPM's fuel and energy balance. The verifiers observe this explanation as correct.		
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?	1,2	DR	**CAR 05.** The emission reductions indicated in Section A.4.3 (321,165) are not in compliance with those in Sections A.4.3.1 and E.6 (324,411).	CAR 05	OK
A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	1,2	DR	Estimated annual emission reductions amount 64,882 tCO_2e (refer to PDD Section A.4.3.1).		OK
A.4.3.4. Are the data from questions A.4.3.2 to A.4.3.3 above presented in tabular format?	1,2	DR	The data are presented in the tabular format as required by [2]. Refer to PDD Section A.4.3.1.		OK
A.5. Project approval by the Parties involved					
A.5.1. Are written project approvals by the Parties involved attached?	1,2	DR	Written project approvals by the Parties involved are not received. Refer to CAR 01 in Table 1.	Pending	OK
B. Baseline					
B.1. Description and justification of the baseline chosen					
B.1.1. Is the chosen baseline described?	1,2, 3,4	DR	It is explicitly indicated that the baseline is set with the use of JI specific approach and in accordance with the Decision 9/CMP.1 and JISC Guidance on criteria for baseline setting and monitoring. Version 02.	CAR 06 CAR 07 CAR 08	OK OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			CAR 06. Please correct the name of the "Guidance for Baseline Setting and Monitoring" according to [4]. 4 Alternatives were identified and assessed to establish the baseline, namely: - Alternative 1: Continuation of the existing situation; - Alternative 2: Construction of a wood fuel feed facility and a bark and wood waste storage without completion of boiler No.7 reconstruction; - Alternative 3: Continuation of the present situation (without construction of boiler N7) with heat produced by boilers No.8-10 running on fuel oil; - Alternative 4: Project activity as not JI. **CAR 07.** Two alternatives were identified as plausible baseline scenarios: - Alternative 1 and Alternative 4. It was concluded that Alternative 4 is not financially attractive and thereby Alternative 1 was automatically chosen as the baseline scenario. This approach does not take into account that Alternative 1 could be also not financially attractive, probably, even more than		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Alternative 4 because combustion of fuel oil is the very expensive option to generate heat energy. The key information and data used to establish the baseline (variables, parameters, data sources etc.) are provided in the prescribed tabular form in PDD Section B.1 as per [2]. **CAR 08.** Annex 2 (baseline information) does not contain a summary of the key elements in tabular form as well as additional supporting documentation/information. The chosen baseline is formulated as follows: "Continuation of the existing situation". Under the baseline scenario the Segezha Pulp and Paper Mill would have continued to use its heat generating existing capacities (Boilers #1-5) to utilize the entire volume of BWW generated in the process of paper manufacturing. It is assumed that amount of BWW utilized under the Baseline scenario is the same as in the Project scenario (circa 160, 000 t. annually). The heat generated by BWW fired Boiler #7 under the project activity would be generated in the Baseline scenario on fossil fuel fired boilers # 1 – 5.		
B.1.2. Is it justified the choice of the applicable baseline for the project category?	1,2,4	DR	The choice of the applicable baseline is justified in PDD Section B.1.	Pending	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			Conclusion is pending a response to CAR 07.		
B.1.3. Is it described how the methodology is applied in the context of the project?	1,2	DR	Inapplicable since a JI specific approach is used.		OK
B.1.4. Are the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)?	1,2	DR	Basic assumptions are: - Proportion between oil and overall oil and BWW consumption in boilers #1-5 is maintained constant 0.885 for all years (eq. B.1-15); subject to confirmation during monitoring. - Total amount of BWW combusted in the baseline and project is the same (eq. B.1-23); - Total amount of pitch combusted in the baseline and project is the same (eq. B.1-28); - Total amount of heat production in water boilers # 3,4 in the baseline and project is the same (eq. D.1-16); - Overall heat production in CHPP-1 in the baseline and project is the same (Eq. D.1-19); - Efficiency of fuel oil combustion in boilers # 1-5 is set at 85%. **CAR 09.** The assumption that technical condition of the boilers 1-5 allows them "to maintain their operation for a number of years" is not jus-	CAR 09 CAR 10 CAR 11 CAR 12	OK OK OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			tified. **CAR 10.** Please justify the conservatism of calculation of BWW combustion efficiency by equation (B.1.6) with the use of fuel oil combustion efficiency 85% and the measured data from Table B.1-2. Please justify setting efficiency of fuel oil combustion at 85%. This value is not conservative as erroneously stated in PDD since its variation by 1 point results in the change of BWW combustion by 3 points. **CAR 11.** Formula B.1-15 is incorrect since 0.885 is the proportion of heat generated by fuel oil (numerator) and fuel oil + BWW (denominator) and not the proportion of fuels in caloric equivalents as indicated by terms FC (in GJ) in the formula. Please also include calculation of the 0.885 parameter in PDD Section B.1. The indicated value 89,3% is irrelevant to the text and should be removed. **CAR 12.** Please justify: - the applied NCV values for pitch and BWW; - the combustion efficiency of pitch taken at 85% as for fuel oil "because of their similar caloric values" (quoted by PDD).		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
B.1.5. Is all literature and sources clearly referenced?	1,2	DR	Relevant literature and sources are generally referenced through the text of PDD.		OK
B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project					
B.2.1. Is the proposed project activity additional?	1,2, 4,5	DR	It is explicitly indicated that additionality of the project was assessed using approach (a) as defined in paragraph 2 of the Annex I to the JISC Guidance on criteria for baseline setting and monitoring. To prove the project additionality, investment analysis (including the sensitivity analysis), barrier analysis and common practice analysis have been conducted. Excel spreadsheet with investment analysis was reviewed by verifiers and found correct. Capital investments in the project amount 12.96 mln. Euro. Net Present Value (NPV) is considered as the benchmark. The presented Investment Analysis shows that project is not financially attractive because NPV of the project is negative. For more details please refer to Annex 2 of PDD. Four alternatives to the project were identified	CAR 13 CAR 14	OK OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			and analyzed in PDD Section B.1. Alternatives 1 and 4 were identified as credible. **CAR 13.** Please justify or provide sources for the following input data for the investment analysis: - discount rate (12%); - fuel oil price(192.44 Euro per tonne); - cost of reconstructions, of initial stage, and of the second stage; - the time period included in the investment analysis is shorter than the technical lifetime of the project (25 years). According to the "Guidelines on the assessment of investment analysis" version 3 – *"Both project IRR and equity IRR calculations shall as a preference reflect the period of expected operation of the underlying project activity (technical lifetime), or - if a shorter period is chosen - include the fair value of the project activity assets at the end of the assessment period";* - book value of the asset; - the annual depreciation rate (10%). Sensitivity analysis of two parameters (invest-		

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			ments and fuel oil price) was implemented. Verifiers find this approach as correct. **CAR 14.** Although it is stated in the paragraph "sensitivity analysis" (p.27) that "10% upward and downward change" was applied, only ±5% variation analysis was implemented. Please take note that ±10% approach reflects the good practice of sensitivity analysis and is recommended by [6]. The project faces operational and financial barriers. It is explained that additional revenue from emission reduction sale helps to alleviate financial and operational barriers. The common practice analysis reasonably shows that the project activity is not a common practice. With the unresolved CAR 13 and CAR 14, the verifiers cannot conclude that additionality of the project activity is demonstrated.		
B.2.2. Is the baseline scenario described?	1,2	DR	The baseline scenario is described in sufficient detail in PDD Sections B.1 and B.2.		OK
B.2.3. Is the project scenario described?	1,2	DR	The project scenario is described in sufficient detail in PDD Sections A.4.3 and B.1.		OK
B.2.4. Is an analysis showing why the emissions in the	1,2	DR	The assessment and demonstration of addi-		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
baseline scenario would likely exceed the emissions in the project scenario included?			tionality explicitly shows why the emissions in the baseline scenario will exceed the emissions in the project scenario.		
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?	1,2	DR	Conclusion is pending a response to CAR 13, and CAR 14.	Pending	OK
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?	1,2	DR	There are no particular national policies and circumstances which could influence the baseline scenario of the proposed project activity.		OK
B.3. Description of how the definition of the project boundary is applied to the project activity					
B.3.1. Are the project's spatial (geographical) boundaries clearly defined?			The project's spatial (geographical) boundaries are clearly defined in PDD Section B.3. Verifiers observe that leakages from fuel oil extraction and transportation are not assessed. As amount of the consumed fuel oil is higher in the baseline scenario, the leakages from fuel oil extraction ant transportations are obviously higher in the baseline scenario. Exclusion of these leakages is conservative. Although the statement "CH4 and N2O emissions are negligibly small" is not justified, verifiers observe that these emissions are the same in the baseline and in project scenarios and can be excluded from emission reductions calculation (the amount of combusted BWW is the		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			same in project and baseline scenario).		
B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline					
B.4.1. Is the date of the baseline setting presented (in DD/MM/YYYY)?	1,2	DR	The date of the baseline setting is presented in DD/MM/YYYY format.		OK
B.4.2. Is the contact information provided?	1,2	DR	Contact information: "Camco Carbon Russia Limited". e-mail: project.participant.ru@camcoglobal.com		OK
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	**CAR 15.** It is indicated that Camco Carbon Russia Limited is not a project participant listed in Annex 1. But Camco Carbon Russia Limited is listed in Annex 1.	CAR 15	OK
C. Duration of the project and crediting period					
C.1. Starting date of the project					
C.1.1. Is the project's starting date clearly defined?	1,2	DR	The starting date of the project is 28/11/2006.		OK
C.2. Expected operational lifetime of the project					
C.2.1. Is the project's operational lifetime clearly defined in years and months?	1,2	DR	The project's operational lifetime is 25 years/300 months.		OK
C.3. Length of the crediting period					
C.3.1. Is the length of the crediting period specified in	1,2	DR	It is specified as 5 years (60 months) starting		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
years and months?			on 01/01/2008.		
D. Monitoring Plan					
D.1. Description of monitoring plan chosen					
D.1.1. Is the monitoring plan defined?	1,2, 4,6	DR	**CAR 16.** It is not explicitly indicated which of the approaches regarding monitoring, defined in [4] is chosen. Please provide a detailed theoretical description in a complete transparent manner as well as a justification referring to [4]. The following issue should be checked during the site visit. Project emissions are calculated on the basis of consumed fuel oil. Baseline emissions for boilers 1-5 are calculated on the basis of consumed BWW (for the boilers 1-5). There is a possibility that Segezha PPM before the end of the crediting period will use peat instead of fuel oil for heat generation in CHPP 1 (news from the site of Segezha PPM http://www.scbk.ru/portal/content/view/152/1/ In that case project emissions will significantly decrease but the baseline emissions for boilers 1-5 will remain the same.	CAR 16	OK
D.1.2. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.	1,2	DR	Option 1 is chosen.		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.	1,2	DR	Data to be collected in order to monitor emissions from the project is presented in PDD Section D.1.1.1. Collected data is as follows: - amount of fuel oil combusted in boilers #1-5, boiler #7, boilers #8-10 and water boilers #3-4 (measured); - NCV of fuel oil (estimated). All this data is collected in the frame of the existing information acquisition and recording system.		OK
D.1.4. Description of the formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2	DR	Formulae for the estimation of CO2 emissions from fuel oil combustion are presented in PDD Section D.1.1.2. The formulae are observed as correct.		OK
D.1.5. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived.	1,2	DR	Data to be collected in order to monitor baseline emissions is presented in PDD Section D.1.1.3. Collected data is as follows: - Heat production by boilers #1-5, boiler #7, boilers #8-10 and water boilers #3-4 (measured); - amount of combusted BWW in the project		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			scenario (measured); - amount of combusted pitch in the project scenario (measured); - NCV of BWW (estimated). - NCV of pitch (estimated).		
D.1.6. Description of the formulae used to estimate baseline emissions (for each gas, source etc, emissions in units of CO2 equivalent).	1,2	DR	The formulae are presented in PDD Section D.1.1.4. **CAR 17.** Formula D.1-11 is incorrect since it replicates the incorrect formula (B.1-15). **CAR 18.** Estimation of fuel oil amount (GJ) for water boilers (D.1-15 – D.1-16) by generated heat (measured) and boiler efficiency (set at 90%) is superfluous since it is directly measured (ID4 in Table D.1.1.1).	CAR 17 CAR 18	OK OK
D.1.7. Option 2 – Direct monitoring of emissions reductions from the project (values should be consistent with those in section E)	1,2	DR	Not applicable.		OK
D.1.8. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived.	1,2	DR	Not applicable.		OK
D.1.9. Description of the formulae used to calculate emission reductions from the project (for each gas, source etc; emissions/emission reductions in units	1,2	DR	Not applicable.		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
of CO2 equivalent).					
D.1.10. If applicable, please describe the data and information that will be collected in order to monitor leakage effects of the project.	1,2	DR	Not applicable.		OK
D.1.11. Description of the formulae used to estimate leakage (for each gas, source etc,; emissions in units of CO2 equivalent).	1,2	DR	Not applicable.		OK
D.1.12. Description of the formulae used to estimate emission reductions for the project (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2	DR	The formula is given in section D.1.4: $ER_y = BE_y - PE_y$		OK
D.1.13. Is information on the collection and archiving of information on the environmental impacts of the project provided?	1,2	DR	It is stated that Segezha PPD has the environmental department which is responsible for monitoring of environmental aspects of the project.		OK
D.1.14. Is reference to the relevant host Party regulation(s) provided?	1,2	DR	**CAR 19.** References to the relevant host Party regulation are not provided in Section D.1.5 as per [2].	CAR 19	OK
D.1.15. If not applicable, is it stated so?	1,2	DR	Conclusion is pending a response to CAR 18.	Pending	OK
D.2. Qualitative control (QC) and quality assurance (QA) procedures undertaken for data monitored					
D.2.1. Are there quality control and quality assurance procedures to be used in the monitoring of the measured data established?	1,2	DR	Quality control and quality assurance procedures are observed as appropriate. Refer to PDD Section D.2.		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
D.3. Please describe of the operational and management structure that the project operator will apply in implementing the monitoring plan					
D.3.1. Is it described briefly the operational and management structure that the project participants(s) will implement in order to monitor emission reduction and any leakage effects generated by the project.	1,2	DR	A brief description of the project management responsibility is provided.		OK
D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
D.4.1. Is the contact information provided?	1,2	DR	Contact information: "Camco Carbon Russia Limited". e-mail: project.participant.ru@camcoglobal.com		OK
D.4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	**CAR 20.** It is indicated that Camco Carbon Russia Limited is not a project participant listed in Annex 1. But Camco Carbon Russia Limited is listed in Annex 1.	CAR 20	OK
E. **Estimation of greenhouse gases emission reductions**					
E.1. Estimated project emissions					
E.1.1. Are described the formulae used to estimate anthropogenic emissions by source of GHGs due to the project?	1,2	DR	The formulae to calculate project emissions are presented and described in PDD Section B.1.		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
E.1.2. Is there a description of calculation of GHG project emissions in accordance with the Formula specified in for the applicable project category?	1,2	DR	The description of calculation of GHG project emissions is presented in PDD Sections B.1 and E.1. The excel spreadsheet, with calculations of GHG project emissions, provided to verifiers was checked and found correct. Verifiers observe that calculations are done in a other way than it is described in the PDD Section D. Nonetheless the final results are correct.		OK
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	1,2	DR	There is no explicit indication that conservative assumptions were made.		OK
E.2. Estimated leakage					
E.2.1. Are described the Formulae used to estimate leakage due to the project activity where required?	1,2	DR	Not applicable.		OK
E.2.2. Is there a description of calculation of leakage in accordance with the Formula specified in for the applicable project category?	1,2	DR	Not applicable.		OK
E.2.3. Have conservative assumptions been used to calculate leakage?	1,2	DR	Not applicable.		OK
E.3. The sum of E.1 and E.2.					
E.3.1. Does the sum of E.1. and E.2. represent the project activity emissions?	1,2	DR	As no leakage is taken, E1+E2=E1.		OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
E.4. Estimated baseline emissions					
E.4.1. Are described the Formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline using the baseline methodology for the applicable project category?	1,2	DR	The Formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline are presented in PDD Sections B.1 and E.1. The excel spreadsheet, with calculations of GHG project emissions, provided to verifiers was checked and found correct. Verifiers observe that calculations are done in a other way than it is described in the PDD Section D. Nonetheless the final results are correct.		OK
E.4.2. Is there a description of calculation of GHG baseline emissions in accordance with the formula specified for the applicable project category?	1,2	DR	Yes, it does. Refer to PDD Section E.4.		OK
E.4.3. Have conservative assumptions been used to calculate baseline GHG emissions?	1,2	DR	There is no explicit indication that conservative assumptions were made.		OK
E.5. Difference between E.4. and E.3. representing the emission reductions of the project					
E.5.1. Does the difference between E.4. and E.3. represent the emission reductions due to the project during a given period?	1,2	DR	Yes, it does. Refer to PDD Section E.5.		OK
E.6. Table providing values obtained when applying Formulae above					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
E.6.1. Is there a table providing values of total CO_2 abated?	1,2	DR	PDD Section E.6 provides the total values of project emissions, leakage, baseline emissions, and emission reductions.		OK
***F.* Environmental Impacts**					
F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party					
F.1.1. Has an analysis of the environmental impacts of the project been sufficiently described?	1,2	DR	Analysis of the environmental impacts of the project is presented in PDD Section F1. It is stated in PDD Section F.1 that the project is approved by State Environmental Expertise Committee of the Natural Resources and Environment Protection Office of the Ministry of Natural Resources in the Republic of Karelia. **CAR 21.** Please provide the list of documentation as per [2].	CAR 21	OK
F.1.2. Are there any host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	1,2	DR	The status of EIA status will be studied during the project site visit.	Pending	OK
F.1.3. Are the requirements of the National Focal Point being met?	1,2	DR	The National Focal Point (MED) issued an Order dated 23/11/2009 # 485 requires the inclusion in the submitted project documentation	Pending	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			(not PDD) a short description of the EIA carried out in accordance with the established order. The status of EIA status will be studied during the project site visit.		
F.1.4. Will the project create any adverse environmental effects?	1,2	DR	The project will reduce the following adverse environmental effects on atmospheric air in comparison with the baseline scenario: - sulphur oxides; - nitric oxides; - carbon oxide; - suspended matter.		OK
F.1.5. Are transboundary environmental impacts considered in the analysis?	1,2	DR	As per paragraph 2.9 of the Order of the State Committee dated 16/05/2000 #372 "On approval of EIA in RF" transboundary environmental impacts should be assessed, if applicable. This issue will be studied by verifiers during the site-visit.	Pending	OK
F.1.6. Have identified environmental impacts been addressed in the project design?	1,2	DR	Status of EIA will be studied during the project site visit.	Pending	OK
F.2. If environmental impacts are considered significant by the project participants or the host Party, provision of conclusions and all references to supporting documentation of an environmental impact assessment under-					

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
taken in accordance with the procedures as required by the host Party					
F.2.1. Has an analysis of the environmental impacts of the project been sufficiently described?	1,2	DR	The analysis of the environmental impacts of the project is sufficiently described in PDD Sections F.1 and F.2		OK
***G.* Stakeholders' comments**					
G.1. Information on stakeholders' comments on the project, as appropriate					
G.1.1. Is there a list of stakeholders from whom comments on the project have been received?	1,2	DR	No comments have been received so far.		OK
G.1.2. The nature of comments is provided?	1,2	DR	Refer to G.1.1.		OK
G.1.3. Has due account been taken of any stakeholder comments received?	1,2	DR	Refer to G.1.1.		OK

Table 4 Legal requirements

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Legal requirements					
1.1. Is the project activity environmentally licensed by the competent authority?	1	DR, I	Status of EIA will be studied during the project site visit.	Pending	OK
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?	1	DR, I	Please refer to 1.1 above.	Pending	OK
1.3. Is the project in line with relevant legislation and plans in the host country?	1	DR, I	Yes, the project is in line with relevant legislation and plans in the host country.		OK

Table 5 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
CAR 01 The project has no approval of the host Party.	1 Table 1	Response 1 of 07/05/2010 As it is stated in the PDD Section A.5. "According to the Russian legislation, the letter of approval will be issued by the Russian Government based on an expert statement issued by the AIE. Once the Approval is received, both the PDD and the determination report will be updated and the determination will become final." Letters of approval from both Parties will be provided later. Response 2 of 24/02/2011 According to Russian legislation, the letter of approval is now issued by the Russian Government on the basis of an expert statement issued by the AIE after the project has been determined against the JI criteria and requirements have been set forth on both international and domestic levels.	Conclusion The CAR is closed based on the evidence that the LoA was issued.

		Draft Determination Report is issued by Bureau Veritas Certification Holding SAS on 19 July 2010. Expert Opinion is issued by Bureau Veritas Certification Holding SAS on 19 July 2010. Approval by the Russian Government is issued in the decree N709 dated 30 December 2010. The project is listed under number 14 in the list of approved projects.	
CAR 02 Section A.2 does not provide a concise, summarizing explanation of the baseline scenario and history of the JI component of the project as per [2]. Please provide evidence that the project was considered as JI before taking the investment decision.	A.2.1	<u>Response 1 of 07/05/2010</u> Summarizing information of the baseline scenario is added in the Section A.2. History of the project including its JI component is added. Please see file protocol.pdf also.	<u>Conclusion on Response 1</u> The concise, summarizing explanation of the baseline scenario and history of the JI component of the project as per [2] was added in Section A.2 of the PDD. The protocol of JI consideration before taking the investment decision was provided to the verifiers. This CAR is closed based on the adequate corrections made to the PDD and evidences provided.
CAR 03 The implementation schedule is not presented in Section A.4.3 as per [2].	A.4.2.1	<u>Response 1 of 07/05/2010</u> Implementation schedule as it was planned in the Business plan is added into the PDD in Section A.4.2. as required per [2].	<u>Conclusion on Response 1</u> The appropriate implementation schedule was provided in Section A.4.3. This CAR is closed based on the

			adequate amendments made to the PDD.
CAR 04 The relevant technical data on new Boiler No.7 (EEE-BKZ-100-3.9-440MDF) is not presented in PDD Section A.4.2.	A.4.2.1	Response 1 of 07/05/2010 Major technical parameters of the boiler No.7 are included in Section A.4.2 of the PDD (Table A.4-5).	Conclusion on Response 1 Table A.4-5 with major technical parameters of the boiler No.7 was provided in Section A.4.2. This CAR is closed based on the adequate amendments made to the PDD.
CAR 05 The emission reductions appointed in Section A.4.3 (321,165) is not in compliance with those in Sections A.4.3.1 and E.6 (324,411).	A.4.3.2	Response 1 of 07/05/2010 Necessary corrections are made in the PDD.	Conclusion on Response 1 This CAR is closed based on the adequate corrections made to the PDD.
CAR 06 Please correct the name of "Guidance for Baseline Setting and Monitoring" according to [4].	B.1.1	Response 1 of 07/05/2010 The title was corrected in the PDD.	Conclusion on Response 1 This CAR is closed based on the adequate corrections made to the PDD.
CAR 07 Two alternatives were identified as plausible baseline scenarios: - Alternative 1 and Alternative 4. It was concluded that Alternative 4 is not financially attractive and thereby Alternative 1 automatically was chosen as the baseline scenario. This approach does not take into account that Alternative 1 could be also	B.1.1	Response 1 of 07/05/2010 The selection of Alternative 1 as a baseline scenario is based on the following: Alternative 1 is business as usual scenario and do not require any significant investments in order to ensure its operation. Segezha PPM is operating old units and carries all necessary ex-	Conclusion on Response 1 Explanation given is accepted. This CAR is closed based on the explanation given.

not financially attractive, probably, even more than Alternative 4 because combustion of fuel oil is the very expensive option to generate heat energy.		penses now and could continue it in the future. On the other hand implementation of Alternative 4 requires investments and it is very hard to find spare cash to invest in the project in relatively short period of time. Common practice in Russia is using the old equipment instead of installation of new units until the old ones are completely broken. Considering good operational conditions of the boilers, there was no need to the project owner to invest money in already good working process. This clarification is added into PDD, Section B.1.	
CAR 08 Annex 2 (baseline information) does not contain a summary of the key elements in tabular form as well as additional supporting documentation/information.	B.1.1	<u>Response 1 of 07/05/2010</u> Annex 2 is amended.	<u>Conclusion on Response 1</u> The appropriate summary of the key elements in tabular form was added in Annex 2. This CAR is closed based on the adequate amendments made to the PDD.
CAR 09 The assumption that technical condition of the boilers 1-5 allows them "to maintain their operation for a number of years" is not justified.	B.1.4	<u>Response 1 of 07/05/2010</u> This can be confirmed by permissions to operate them. That is given in corresponding passports (see attached files boiler-1.pdf, boiler-2.pdf, boiler-3.pdf, boiler-5.pdf). Boiler No. 4 was dismissed from registration (boiler-4.pdf).	<u>Conclusion on Response 1</u> Explanation given is accepted. Evidences are accepted only for boilers 1, 2 and 5. Please provide appropriate evidences that boilers 3 and 4 are in sound conditions and can be oper-

		Response 2 of 04/06/2010 Boiler No. 4 was dismissed due to Boiler No. 7 was reconstructed. Last inspection was in November 2006 with permission to operate according to the passport parameters. Since Boiler No.7 is reconstructed and there is no need in so many boilers, the Boiler No.4 was removed from operation and dismissed from registration (see file 15_Boiler 4 passport with inspection.pdf). Boiler No.3 has undergone an expertise and have a positive conclusion of Rostechnadzor (see file 16_Boiler 3 expertise.pdf) that means it has a permission to operate.	ated for a number of years. This CAR will be closed after evidences are provided. Conclusion on Response 2 Evidences and explanations provided are accepted. This CAR is closed based on evidences provided to verifiers.
CAR 10 Please justify the conservatism of calculation of BWW combustion efficiency by equation (B.1.6) with the use of fuel oil combustion efficiency 85% and the measured data from Table B.1-2. Please justify setting efficiency of fuel oil combustion at 85%. This value is not conservative as erroneously stated in PDD since its variation by 1 point results in the change of BWW combustion by 3 points.	B.1.4	Response 1 of 07/05/2010 Average combustion efficiency in boilers 1-5 is 80% (see attached files chart-1.pdf, chart-2.pdf, chart-3.pdf, chart-5.pdf and note_efficiency.pdf) Combustion efficiency of BWW is recalculated and the calculation is added into the Annex 2.	Conclusion on Response 1 The recalculated BWW combustion efficiency value is accepted by verifiers based on evidences and technical data provided. Verifiers observe that the applied efficiency value is conservative. This CAR is closed based on the adequate corrections made to the PDD and technical data studied by verifiers.
CAR 11 Formula B.1-15 is incorrect since 0.885 is the	B.1.4	Response 1 of 07/05/2010 ~~Formula B.1-15 is correct. Explanation to the~~	Conclusion on Response 1 Calculation of the proportion of heat

proportion of heat generated by fuel oil (numerator) and fuel oil + BWW (denominator) and not the proportion of fuels in caloric equivalents as indicated by terms FC (in GJ) in the formula. Please also include calculation of the 0.885 parameter in PDD Section B.1. The indicated value 89,3% is irrelevant to the text and should be removed.		~~formula was corrected in the text of PDD.~~ ~~0.885 (0.831 after re-calculation) is the proportion of fuels in caloric equivalents.~~ Actually, pitch fuel oil at Segezha PPM is admixed into fuel oil and supplied together with fuel oil into the boilers. So the proportion is to be (fuel oil+pitch)/BWW. Calculation of this parameter is included in PDD Annex 2. Value 89,3% is corrected. <u>Response 2 of 04/06/2010</u> Proportion used for the formula B.1-14 is recalculated (see Annex 2 and excel spreadsheet) and now the value 79.0 represents the proportion of fuels in calorific equivalent. Corresponding changes are made in the calculation model <u>Response 3 of 22/06/2010</u> Calculations on page 52 is corrected according to the data in excel spreadsheet (79% is correct number). Heat from pitch combustion is included into the proportion since in order to burn BWW mixture of fuel oil and pitch is used. This mixture pro-	generated by fuel oil (numerator) and fuel oil + BWW (denominator) was included in PDD. Formula B.1-14 (former B.1-15) was not corrected. This CAR will be closed after due correction. <u>Conclusion on Response 2</u> The heat from pitch combustion is wrongly included in the calculations whether it is stated on p.17 that "…difference in heat generation wil be compensated on account of fuel oil only". Please also reduce descriptions concerning this question to one (e.g. on p.19 and 54 different coefficients for one parameters are mentioned – 78% and 79%). This CAR will be closed after due correction. <u>Conclusion on Response 3</u> The statement that ". In the estimation all the heat is accounted for fuel oil only for simplification…" is

		duces heat necessary to support BWW burning. Therefore pitch is included. ~~In the estimation all the heat is accounted for fuel oil only for simplification, but monitoring will consider pitch.~~ Response 4 of 01/07/2010 The corrections are made on pp. 16, 19 and 52	incorrect; the estimation takes into account pitch (as per excel calculations). Please correct the description on p. 16, 19 and 52. This CAR will be closed after due correction. Conclusion on Response 4 This CAR is closed based on the adequate corrections made to the PDD.
CAR 12 Please justify: - the applied NCV values for pitch and BWW; - the combustion efficiency of pitch taken at 85% as for fuel oil "because of their similar caloric values" (quoted by PDD).	B.1.4	Response 1 of 07/05/2010 NCV of BWW is calculated on the basis of data provided by PO (see Segezha_PPM excel model sheet "Boiler data"). Calculation can be cross-checked e.g. with data of 6-tp form for 2006 (see attached file 6-tp): NCV of 1659 kcal/kg or 1659*4.187= 6946 kJ/kg NCV of Pitch is calculated from the data in 6-tp forms (see attached file forms_6-tp.pdf). These data are used for preliminary estimation and parameter (NCV_{BWW}) will be monitored, this number will be adjusted.	Conclusion on Response 1 This CAR is closed based on evidences studied by verifiers.
CAR 13 Please justify or provide sources for the fol-	B.2.1	Response 1 of 07/05/2010 - Discount rate applied to the project analysis is	Conclusion on Response 1 The explanations given are ac-

lowing input data for the investment analysis: - discount rate (12%); - fuel oil price(192.44 Euro per tonne); - cost of reconstructions, of initial stage, and of the second stage; - the time period included in the investment analysis is shorter than the technical lifetime of the project (25 years). According to the "Guidelines on the assessment of investment analysis" version 3 – *"Both project IRR and equity IRR calculations shall as a preference reflect the period of expected operation of the underlying project activity (technical lifetime), or - if a shorter period is chosen - include the fair value of the project activity assets at the end of the assessment period";* - book value of the asset; - the annual depreciation rate (10%).		12% as per internal investment regulations (see file Segezha PPM_DR.pdf sent on 15.04.2010) - fuel oil price, cost of reconstructions, of initial stage, and of the second stage are assumed as per Business plan (see file Business plan.pdf that was sent on 15.04.10). - Fair value of the assets by the end of the time period selected for the investment analysis will become 0, nevertheless necessary correction was made in the Excel model (cell T26 of InvCalc). - book value of the asset is assumed as per information from the Project owner (see file Bookassets_depreciation.pdf attached here) - According to the Tax Code of the Russian Federation and Government decree on classification of the fixed assets, reconstructed boiler №7 is referred to the Sixth Group of classification with 10 years depreciation period that makes depreciation rate equal to 10% per year. <u>Response 2 of 04/06/2010</u> Copy of the investment regulations (29_investment regulations.pdf) with clarification letter (28_Letter with clarification on discount rate.pdf) are attached. Fair value of the assets is added to the invest-	cepted except the explanation regarding the fair value of the assets. Verifiers cross-checked listed in CAR 13 input data with financial documents of the project developer and Russian financial practices from open sources. Verifiers also confirm that boiler №7 pertains to the Sixth Group of classification with 10 years depreciation period according to the Statement Decree #1 from 01.01.2002. The calculation of the fair value of the assets is not accepted since the value should include both the book value of the asset and the reasonable expectation of the potential profit or loss on the realization of the assets. Please also provide mentioned in the Segezha PPM_DR.pdf regulations on invest projects development with cost more than 10 mln. EUR. This CAR will be closed after due correction.

		ment analysis. Letter of the Project owner on the potential profit and loss on the realization of the assets is attached (30_letter on fair value of the assets.pdf) Sensitivity analysis is amended as well. Response 3 of 22/06/2010 Discount rate applied is equal to appropriate refinancing rate of the Russian Central Bank but it is not a refinancing rate in its nature. The number us used as a reference. According to the procedures applied at the moment of the project development investment analysis shall be performed in constant prices (31_letter on constant prices.pdf). This requirement is documented in regulation (see attached file 32_annex1 and order on investment regulations amendment.pdf). Response 4 of 30/06/2010 The letter with information on project where IRR Benchmark 12% was used by company in investment analyses with constant prices is provided (see attached file 33_letter confirming 12% benchmark.pdf)	Conclusion on Response 2 According to the data provided the discounting rate applied in the investment analysis is taken equal to the appropriate refinancing rate of the Russian Central Bank. The applied discount rate pertains to an investment model with inflation since the refinancing rate of the Russian Central Bank includes inflation. The presented investment analysis is done in constant prices. Please provide consistency. CAR will be closed after due correction. Conclusion on Response 3 Please provide evidences that the IRR Benchmark 12% was already used by company or similar companies in investment analyses with constant prices. CAR will be closed after evidences are provided. Conclusion on Response 4 The evidences provided are ac-

			cepted. This CAR is closed based on evidences provided.
CAR 14 Although it is stated in the paragraph "sensitivity analysis" (p.27) that "10% upward and downward change" was applied, only ±5% variation analysis was implemented. Please take note that ±10% approach reflects the good practice of sensitivity analysis and is recommended by [6].	B.2.1	Response 1 of 07/05/2010 The sensitivity analysis is amended in the PDD. Variable parameters: - investments into the second reconstruction variation is ±10% - fuel oil price variation is ±10%	Conclusion on Response 1 The sensitivity analysis was recalculated using ±10% approach. This CAR is closed based on the adequate corrections made to the PDD and excel calculations.
CAR 15 It is indicated that Camco Carbon Russia Limited is not a project participant listed in Annex 1. But Camco Carbon Russia Limited is listed in Annex 1.	B.4.3	Response 1 of 07/05/2010 The PDD is amended. Camco Carbon Russia Limited is a project participant listed in Annex 1.	Conclusion on Response 1 This CAR is closed based on the adequate corrections made to the PDD.
CAR 16 It is not explicitly indicated which of the approaches regarding monitoring, defined in [4] is chosen. Please provide a detailed theoretical description in a complete transparent manner as well as a justification referring to [4].	D.1.1	Response 1 of 07/05/2010 The Monitoring plan is amended. Monitoring plan has been corrected in order to remove unnecessary data.	Conclusion on Response 1 It was explicitly indicated that JI specific approach is used to establish the monitoring plan. The detailed theoretical description was added in Section D.1.1.1. This CAR is closed based on the adequate corrections made to the PDD.

CAR 17 Formula D.1-11 is incorrect since it replicates the incorrect formula (B.1-15).	D.1.6	Response 1 of 07/05/2010 The PDD is amended (see CAR 11 also) Response 2 of 04/06/2010 The monitoring plan is corrected. Please see Section D of the PDD. Response 3 of 22/06/2010 The following changes were made in the monitoring plan: - parameter P1 is used to calculate proportion of pitch in fuel oil (see formulae D.1-11); - parameter P5 was removed from the monitoring plan; - parameters P8, P9 are used in calculations (see formulae D.1-9); - parameters P10 and P11 are used in calculations (see formulae D.1-14); - formulae to calculate $FC_{oil,7,PJ,y}$ is added (D.1-8); - formulae to calculate $FC_{pitch,7,PJ,y}$ is added (D.1-9);	Conclusion on Response 1 Formula D.1-10 (former D.1-11) was not corrected. Section D.1.1.4 after amendments does not include formulae to calculate fuel oil consumption from boilers 1-5 and 8-10. Please also refer to the CAR 11. CAR will be closed after due correction. Conclusion on Response 2 The revised monitoring plan contains following flaws: - parameters P1, P5, P8, P9, P10 and P11 are not used in emission reductions calculation; - Section D.1.2.2 does not contain formulae to calculate $FC_{oil,7,PJ,y}$; - Section D.1.2.2 does not contain formulae to calculate $FC_{pitch,7,PJ,y}$; - Section D.1.2.2 does not contain formulae to calculate $HG_{BL,y}$;

		- formulae to calculate $HG_{BL,y}$ is added (D.1-14); - pitch consumption is not taken into account for $\Delta FC_{oil,y}$ calculation is due to the fact that in the framework of boiler house amount of pitch is the same both under the baseline and project. ERs are achieved due to fuel oil consumption reduction only. This reduction is calculated accordingly. Pitch is analyzed in order to calculate correctly fuel oil and BWW consumption. <u>Response 4 of 01/07/2010</u> - formula D.1-11 is corrected - formula D.1-14 (D.1-16) is corrected - formula D.1-15 (D.1-17) is corrected - formula D.1-4 is corrected in order to reflect amount of pitch combusted in the boilers 1-5 under the baseline. The approach to use $\varpi_{pitch,PJ,y}$ is conservative because $\varpi_{pitch,PJ,y}$ is higher than under the baseline (since amount of fuel oil burned is higher under the baseline than under the project) and estimated fuel oil consumption under the baseline is a little lower than would be in reality. <u>Response 5 of 02/07/2010</u>	- pitch consumption is not taken into account for $\Delta FC_{oil,y}$ calculation. <u>Conclusion on Response 3</u> Appropriate formulae were added to calculate $FC_{oil,7,PJ,y}$; $FC_{pitch,7,PJ,y}$ and $HG_{BL,y}$. The monitoring plan was revised. After the revision it contains following flaws: - formula D.1-11 is incorrect because the denominator does not contain the mass of oil+pitch mixture combusted in boilers 8-10; - formula D.1-14 is incorrect because it does not take into account heat from pitch combustion; - formula D.1-15 is incorrect because it does not take into account pitch which also influences efficiency of the boilers 8-10. <u>Conclusion on Response 4</u> Formulae D.1-11, D.1-14 and D.1-15 were corrected accordingly. The

		The correction was made.	amendment of formula D.1-4 is accepted. Although the formulae D.1-16 (former D.1.-14) was corrected the description for $FC_{oil+pitch,1-5,BL,y}$ was not corrected. CAR will be closed after due correction. <u>Conclusion on Response 5</u> This CAR is closed based on the adequate corrections made to the PDD.
CAR 18 Estimation of fuel oil amount (GJ) for water boilers (D.1-15 – D.1-16) by generated heat (measured) and boiler efficiency (set at 90%) is superfluous since it is directly measured (ID4 in Table D.1.1.1).	D.1.6	<u>Response 1 of 07/05/2010</u> Monitoring plan has been changed. The formulas are removed.	<u>Conclusion on Response 1</u> CAR is withdrawn since the monitoring plan was amended.
CAR 19 References to the relevant host Party regulation are not provided in Section D.1.5 as per [2].	D.1.14	<u>Response 1 of 07/05/2010</u> References to the host Party regulations are added in the PDD Section D.1.5.	<u>Conclusion on Response 1</u> Appropriate references were added in Section D.1.5. Collection and archiving of information on the environmental impacts of the project will be implemented using official statistical forms (2-tp). Environmental

			impacts on the atmosphere, water and for wastes will be monitored. This CAR is closed based on the adequate corrections made to the PDD.
CAR 20 It is indicated that Camco Carbon Russia Limited is not a project participant listed in Annex 1. But Camco Carbon Russia Limited is listed in Annex 1.	D.4.2	Response 1 of 07/05/2010 The PDD is amended. Camco Carbon Russia Limited is a project participant listed in Annex 1.	Conclusion on Response 1 This CAR is closed based on the adequate corrections made to the PDD.
CAR 21 Please provide the list of documentation as per [2].	F.1.1	Response 1 of 07/05/2010 List of papers is added to the PDD Section F.1.1. Project documentation of 2003 for the first reconstruction got a conclusion of the environmental expertise (Environmental_expertise.pdf). According the letter from the Glavgosexpertiza a repeated expertise is not necessary (see letter_on_expertise.pdf).	Conclusion on Response 1 The list of documentation was added in PDD Section F.1. The information added was checked against original documents. This CAR is closed based on the adequate corrections made to the PDD and documents reviewed by verifiers.
CL 01 Please clarify if the project requires extensive initial training and maintenance efforts in order to work as presumed during the project period.	A.4.2.4	Response 1 of 07/05/2010 Personnel of the company were trained for operation and maintenance of the equipment in accordance with the agreement by the equipment supplier (see file training.pdf).	Conclusion on Response 1 The clarification and documentation provided is accepted. Please include information regard-

		Maintenance of the equipment will be provided by the own resources or with attraction of specialized companies. Response 2 of 07/06/2010 The information is included into the PDD, Section A.4.2 Response 3 of 22/06/2010 The part specified was moved.	ing training in PDD Section A.4.2. CL will be closed after due correction Conclusion on Response 2 The information was not included in Section A.4.2 (it was included in Section A.2). CL will be closed after due correction. Conclusion on Response 3 This CL is closed based on the adequate corrections made to the PDD.

Appendix B: Determination Team's CV's

Mr. Leonid Yaskin, PhD (thermal engineering)
Lead Verifier.

Bureau Veritas Certification Rus General Director, Climate Change Local Manager, Lead Auditor, IRCA Lead Tutor, Lead Verifier

He has over 30 years of experience in heat and power R&D, engineering, and management, environmental science and investment analysis of projects. He worked in Krrzhizhanovsky Power Engineering Institute, All-Russian Teploelectroproject Institute, JSC Energoperspectiva. He worked for 8 years on behalf of European Commission as a monitor of Technical Assistance Projects. He is a Lead auditor of Bureau Veritas Certification for Quality Management Systems (IRCA registered), Environmental Management System (IRCA registered), Occupational Health and Safety Management System (IRCA registered). He performed over 250 audits since 2002. Also he is a Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and a Lead Tutor of the IRCA registered OHSAS 18001 Lead Auditor Training Course. He is an Assuror of Social Reports. He has undergone intensive training on Clean Development Mechanism /Joint Implementation and was/is involved in the determination of over 60 JI projects.

Grigory Berdin. (accounting, analysis, inspection and audit)
Lead Verifier

Bureau Veritas Certification Rus - Verifier.

He has over 4 years of experience in implementing of JI & CDM projects. He was developer of more than 10 PDDs in different sectors. He was responsible for supervision of technical implementation for more than 30 JI projects on regional natural gas leakage reduction at distribution pipelines and for 5 JI projects of other types.

He has undergone intensive training on Clean Development Mechanism /Joint Implementation and he was/is involved in the determination of 15 JI projects.

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)
Internal Technical Reviewer, Climate Change Lead Verifier, Bureau Veritas Certification Holding SAS Local Climate Change Product Manager for Ukraine

Acting CEO Bureau Veritas Black Sea District

He has over 25 years of experience in Research Institute in the field of biochemistry, biotechnology, and microbiology. He is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered), Quality Management System (IRCA registered), Occupational Health and Safety Management System, and Food Safety Management System. He performed over 140 audits since 1999. Also he is Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and Lead Tutor of the IRCA registered ISO 9000 QMS Lead Auditor Training Course. He is Lead Tutor of the Clean Development Mechanism /Joint Implementation Lead Verifier Training Course and he was involved in the determination/verification over 60 JI/CDM projects.