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Date: *11/04/2011*

VERIFICATION REPORT

CAMCO INTERNATIONAL LIMITED

VERIFICATION OF THE

Biomass utilization at JSC Segezha Pulp and Paper Mill (SPPM)

(01.01.2008 – 31.12.2010)

REPORT NO. RUSSIA-VER/0116/2011

REVISION NO. 02

BUREAU VERITAS CERTIFICATION

Report No: RUSSIA-ver/0116/2011 rev.02

VERIFICATION REPORT

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

Date of first issue: 06/04/2011	Organizational unit: Bureau Veritas Certification Holding SAS
Client: Camco International Limited	Client ref.: Mr. Arthur Houston

Summary:

Bureau Veritas Certification has made the initial, 1st periodic verification of the "Biomass utilization at JSC Segezha Pulp and Paper Mill (SPPM)" JI project of company Camco International Limited applying the JI specific approach regarding baseline setting and additionality demonstration and assessment, on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.

The verification scope is defined as a periodic independent review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions during defined verification period, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final verification report and opinion. The overall verification, from Contract Review to Verification Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

The first output of the verification process is a list of Corrective Actions Requests (CARs) and Clarification Requests (CLs) presented in Appendix A.

In summary, Bureau Veritas Certification confirms that the project is implemented as per determined changes. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions. The GHG emission reduction is calculated without material misstatements, and the ERUs issued totalize 222,666 tons of CO₂eq for the initial and 1st periodic monitoring period from January 1st 2008 to December 31st 2010.

Our opinion relates to the project's GHG emissions and resulting GHG emission reductions reported and related to the approved project baseline and monitoring, and its associated documents.

Report No.: RUSSIA-ver/0116/2011	Subject Group: JI
Project title: "Biomass utilization at JSC Segezha Pulp and Paper Mill (SPPM)"	
Work carried out by: Daniil Ukhanov – Lead Verifier	
Work reviewed by: Leonid Yaskin – Internal Technical Reviewer	
Work approved by: Flavio Gomes– Operational Manager	
Date of this revision: 11/04/2011	Rev. No.: 02
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1 INTRODUCTION

Camco International Limited has commissioned Bureau Veritas Certification to verify the emissions reductions of its JI project “Biomass utilization at JSC Segezha Pulp and Paper Mill (SPPM)”, (hereafter called “the project”).

This report summarizes the findings of the verification 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

Verification is the periodic independent review and ex post determination by the Accredited Independent Entity of the monitored reductions in GHG emissions during defined verification period.

The objective of verification can be divided in Initial Verification and Periodic Verification.

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

The verification is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project monitoring towards reductions in the GHG emissions.

1.3 Verification Team

The verification team consists of the following personnel:

Daniil Ukhanov

Bureau Veritas Certification Climate Change Lead Verifier

This verification report was reviewed by:

Leonid Yaskin

Bureau Veritas Certification, Internal Technical Reviewer



2 METHODOLOGY

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

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

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

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

2.1 Review of Documents

The Monitoring Report (MR) submitted by Camco International Limited and additional background documents related to the project design and baseline, i.e. country Law, Project Design Document (PDD), and Guidance on criteria for baseline setting and monitoring, Host party criteria, Kyoto Protocol to be checked by an Accredited Independent Entity were reviewed.

The verification findings presented in this report relate to the Monitoring Report Version 1.0 dated 07 February 2011 /1/ and the project as described in the determined PDD /2/.

2.2 Follow-up Interviews

Bureau Veritas Certification performed follow-up on site interviews with the Camco International Limited representative and with Segezha PPM representatives on 04/03/2011 to confirm both selected information received by the verifier as supporting documentation to the Monitoring Report, and to resolve issues identified in the document review. Please refer to the list of interviewees in References. The main topics of the interviews are summarized in Table 1.

**Table 1. Interview topics related to verification**

Interviewed organization	Date	Interview and/or inspected topics
JSC Segezha Pulp and Paper Mill	04/03/2011	<ul style="list-style-type: none"> ➤ Status of project equipment ➤ Revisions of Monitoring plan ➤ Collected data ➤ Passports and evidence of calibration of measuring equipment ➤ Data logs (samples) ➤ Data reports (samples) ➤ QC and QA procedures ➤ Emission calculations ➤ Monitoring report
CONSULTANT Camco International Limited	N/A	Ditto
(Local Stakeholder)	N/A	N/A

2.3 Resolution of Clarification, Corrective and Forward Action Requests

The objective of this phase of the verification is to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for Bureau Veritas Certification positive conclusion on the GHG emission reduction calculation.

If the Verification Team, in assessing the monitoring report and supporting documents, identifies issues that need to be corrected, clarified or improved with regard to the monitoring requirements, it should raise these issues and inform the project participants of these issues in the form of:

- (a) Corrective action request (CAR), requesting the project participants to correct a mistake that is not in accordance with the monitoring plan;
- (b) Clarification request (CL), requesting the project participants to provide additional information for the AIE to assess compliance with the monitoring plan (were not raised in this assignment);

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



3 VERIFICATION CONCLUSIONS

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

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

The Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Verification Protocol in Appendix A. The verification of the Project resulted in 8 Corrective Action Requests and in 2 Clarification Requests.

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

3.1 Project approval by Parties involved (90-91)

The project has written approval by the Host Party /3/ and by the Party B /4/. All these written approval has been provided to AIE until issuing this report. (Refer to CAR 01 in Appendix A)

The abovementioned written approvals are unconditional.

3.2 Project implementation (92-93)

The implementation status of the project is as described in Appendix A paragraph 92, and the starting date of operation is 01/01/2008.

Equipment of the project has been installed at the end of 2007. Since the beginning of 2008 the new boiler started its testing operation. It started to utilize bark and wood wastes (BWW) and produce steam for technological needs. Hence, the project started generation of emission reductions on 01/01/2008, as confirmed by measuring data in accordance with monitoring plan.

Steam boiler #7 with fluidized bed was commissioned according to the Certificate of acceptance of a reconstructed facility #1 from 14.05.2008; Fuel feed and a BWW storage facility was commissioned according to the Certificate of acceptance in operation #2 from 30.05.2008. (Refer to CAR 02 in Appendix A)

3.3 Compliance of the monitoring plan with the monitoring methodology (94-98)

The monitoring occurred with reasonable revisions of the monitoring plan included in the PDD regarding which the determination has been deemed final because the project has received approval by Parties involved.

The JI specific approach regarding monitoring that was applied in PDD was reasonably revised (refer to Section 3.1.5 of MR). The set of data collected to monitor emission reduction as well as the equations for calculation of emission reduction did not change.

For calculating the emission reductions, key factors, as those listed in 23 (b) (i)-(vi) DVM, influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account (refer to Appendix A para 95 (a)).

Other key factors which influence project emissions were taken into account such as total mass of fuel oil and pitch combusted in the boiler house, mass of fuel oil and pitch combusted in boiler #7, mass of fuel oil and pitch combusted in boilers #8-10, net calorific value of fuel oil, heat production by boiler #7, heat production by boilers #8-10, overall mass quantity of pitch combusted in the boiler house, efficiency of fuel oil combustion in boilers 1-5, efficiency of BWB combustion in boilers 1-5, efficiency of fuel oil combustion in boiler 7, efficiency of BWB combustion in boiler 7, efficiency of fuel oil combustion in boiler 8-10 (refer to MR Table 3.1) and 2006 IPCC emission factor for fuel oil combustion.

Data sources used for calculating emission reductions, as provided in Appendix A para 95 (b), are clearly identified, reliable and transparent.

The calculation of emission reductions is based on the most plausible scenario in a transparent manner as described in Appendix A paragraph 95 (d).

There were no outstanding issues related to compliance of the monitoring plan with the monitoring methodology.

3.4 Revision of monitoring plan (99-100)

The project participants provided an appropriate justification for the proposed revision, which concerns: the monitoring frequency of heat production by boiler#7, overall mass quantity of pitch combusted in the boiler house; the list of measuring tools for fuel oil consumption monitoring; the source of data of pitch net calorific value for 2008; the source of data of efficiency of the boilers. (Please refer to MR Section 3.1.5)

AIE positively determined the proposed revisions since, in line with Guidance on criteria for baseline setting and monitoring Version 02 para 40, these revisions improve accuracy and applicability of information collected, compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans.

Outstanding issue related to Revision of monitoring plan (99), PP's response and the AIE conclusion are summarized in Appendix A Table 2 (refer to CAR 03).

3.5 Data management (101)

The data and their sources, provided in monitoring report, are clearly identified, reliable and transparent.

The implementation of data collection procedures is in accordance with the monitoring plan, including the quality control and quality assurance procedures. The structure of monitoring is described in MR section 3.1.3.2.

The function of the monitoring equipment, including its calibration status, is in order. The internal quality system of JSC Segezha Pulp and Paper Mill (SPPM) is functioning in accordance with the national standards and regulations. Information on verification and calibration equipment necessary for monitoring is presented in MR Table 3.3.

The evidence and records used for the monitoring are maintained in a traceable manner.

The data collection and management system for the project is in accordance with the monitoring plan. SPPM is responsible for initial data that presented to the project developer. The input data for monitoring is provided by the Technical department, Environmental department and CHPP-1 according to the SPPM order #6 dd. 17.11.2011 "On the monitoring of the project "Biomass utilization at JSC SPPM". (refer to CAR 04-CAR 08, CL 01- CL 02)

3.6 Verification regarding programmes of activities (102-110)

Not applicable.

4 VERIFICATION OPINION

Bureau Veritas Certification has performed the initial and 1st periodic verification of the "Biomass utilization at JSC Segezha Pulp and Paper Mill (SPPM)" JI Project, which applies the JI specific approach. The verification was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

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

The management of Camco International Limited is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring Plan indicated in the final PDD version 4.1. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project, is the responsibility of the management of the project.

Bureau Veritas Certification verified the Project Monitoring Report version 1.3 dated 28 March 2011 for the reporting period as indicated below. Bureau Veritas Certification confirms that the project is implemented as per determined changes. Installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately. The monitoring system is in place and the project is generating GHG emission reductions.

Bureau Veritas Certification can confirm that the GHG emission reduction is accurately calculated and is free of material errors, omissions, or misstatements. Our opinion relates to the project's GHG emissions and resulting GHG emissions reductions reported and related to the approved project baseline and monitoring, and its associated documents. Based on the information we have seen and evaluated, we confirm, with a reasonable level of assurance, the following statement:

Reporting period: from 01/01/2008 to 31/12/2010

Emission reduction 222,666 tCO₂e.

5 REFERENCES

Category 1 Documents:

Documents provided by type the name of the company that relates directly to the GHG components of the project.

- /1/ Monitoring report: JI_MR_Segezha_eng_v1.0.pdf.
Dated 07/02/2011. Monitoring period 01.01.2008 – 31.12.2010.
Supporting documentation (spreadsheet): 20110214
Segezha_MM_2008-2010;



/2/ PDD: JI_PDD_Segezha_v4.1.
Dated 16/07/2010.

Category 2 Documents:

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

Documents obtained in the course of initial and 1st verification

- /3/ MED Order #709 dd 30.12.2010;
- /4/ Segezha Letter of approval by the UK;
- /5/ Technical report CHPP-1 2008;
- /6/ Technical report CHPP-1 2009;
- /7/ Technical report CHPP-1 2010;
- /8/ Report on the pitch shipment, December 2010;
- /9/ Passports of the fuel meters;
- /10/ Verification register;
- /11/ Passport of the reserve flow meter;
- /12/ SPPM Order #6 dd 17.01.2011;
- /13/ Calculation of the boiler efficiency (example);
- /14/ Certificate of commissioning of fluidized bed boiler E-100-3,9-440MDF #7;
- /15/ Certificate of commissioning of fuel feed and a BWW storage facility;
- /16/ Report from CHPP-1 of SPPM on fuel distribution for 2008.

Persons interviewed

- /1/ V. Bobrov – SPPM, Chief Engineer;
- /2/ I. Repin – SPPM, Head of Technical Development Department;
- /3/ N. Gladenyuk – SPPM, Leading expert on environmental and legal aspects of technological development;
- /4/ N. Babanova - SPPM, Senior Technical Engineer;
- /5/ F. Saikhutdinov – SPPM, Head of CHPP-1;
- /6/ S. Gladenyuk - SPPM, Senior adjustment Engineer of Energy Department;
- /7/ A. Boriskin - SPPM, Head of Boilerhouse;
- /8/ L. Surina - SPPM, Senior Engineer of AMS;



- /9/ L. Mikhailova - SPPM, Chief Metrology Engineer;
- /10/ O. Ryumin – Camco International Limited, JI/CDM Specialist.



Appendix A: company PROJECT VERIFICATION Protocol

Table 1

Check list for verification, according to the JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 01)

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
Project approvals by Parties involved				
90	Has the DFPs of at least one Party involved, other than the host Party, issued a written project approval when submitting the first verification report to the secretariat for publication in accordance with paragraph 38 of the JI guidelines, at the latest?	Monitoring Report Version 1.0 dated 07/02/2011 /1/ (thereafter referred MR) for the JI project "Biomass utilization at JSC Segezha Pulp and Paper Mill (SPPM)" doesn't contain information about issuance of project approvals by any parties. CAR 01. Please indicate in the MR the information concerning the issuance of LoAs from the involved parties (including the other than the host Party). Please take note: in case they are exist these Letters of Approval should be provided to AIE.	CAR 01	OK
91	Are all the written project approvals by Parties involved unconditional?	Conclusion is pending a response to CAR 01.		OK
Project implementation				
92	Has the project been implemented in accordance with the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	<u>Note:</u> This is a Track 1 project for which determination is not made publicly available on UNGCCC JI website and PDD does not acquire a status "deemed final". Equipment of the project should have been commissioned in November 2007 according to PDD /2/ which was positively determined by BVC /3/. Actually steam boiler #7 was commissioned in May 2008. PDD reads that monitoring of the project began from May 2008 (Section 1.2 Monitoring period of MR states: "1 May 2008 0:00 to 31 December 2010 24:00"). The project was implemented at the site of SPPM and is aimed at increasing combustion efficiency of bark and wood wastes (BWW) used as fuel for the steam production to cover own needs of mill and reduction of fossil fuel (fuel oil) consumption at the enterprise as a whole. It envisages: reconstruction of the steam boiler #7 of	CAR 02	OK



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

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		<p>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 BWV; construction of fuel feed facility and a BWV storage facility.</p> <p>SV 01. Provide to AIE Certificate of acceptance of a reconstructed facility #1 dd 14.05.2008 (for Steam boiler #7) and Certificate of acceptance in operation #2 dd 30.05.2008 (for fuel feed and a BWV storage facility).</p> <p>CAR 02. The starting date of the monitoring period 01/05/2008 (0:00 am) indicated in the MR differs from the starting date of the crediting period 01/01/2008 indicated in PDD. Moreover, in accordance with certificates of acceptance the dates of the project start are 14.05 for the boiler and 30.05 for fuel feed and BWV storage facility. Hence, the starting date of monitoring period should be 30.05.2008. Please take note: the revision of starting date of the project should be explicitly indicated in appropriate section of MR.</p>		
93	What is the status of operation of the project during the monitoring period?	Judging by the available data the BWV boiler is in operation.		OK
Compliance with monitoring plan				
94	Did the monitoring occur in accordance with the monitoring plan included in the PDD regarding which the determination has been deemed final and is so listed on the UNFCCC JI website?	<p>The Monitoring System is in place and operational. Monitoring of GHG emission reductions occurred basically in accordance with the determined Monitoring Plan included in PDD.</p> <p>Conclusion is pending a response to CAR 03 and CAR 04.</p>		OK
95 (a)	For calculating the emission reductions or enhancements of net removals, were key factors, e.g. those listed in 23 (b) (i)-(vii) above, influencing the baseline emissions or net removals and the activity level of the project and the emissions or removals as well as risks associated with the project	<p>For calculating the emission reductions, the key factors listed in 23 (b) (i)-(vi) DVM, influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project were taken into account as follows (refer to PDD Sections A.4.3 and B.1):</p> <p>(i) Relevant national policies and sectoral circumstances as</p>		OK

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

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	taken into account, as appropriate?	<p>regards construction of biomass boilers, technical condition of the old boilers, basically allowed to continue their operation at the same level for a number of years;</p> <p>(ii) No significant increase of heat production is planned in short-term, which would have required commissioning of additional generating facilities;</p> <p>(iii) The low rate of return was proven to be the financial hindrance to the use of available investments worth 13 mln. Euro;</p> <p>(iv) There is no local producer of such technology in the region. Therefore it was necessary to undertake with FOSTER WHEELER ENERGIA OY Company.</p> <p>(v) Fuel oil is available for available to SPPM and its price was 194.44 Euro/ton. BWB is generated in the process of paper manufacturing on the SPPM.</p>		
95 (b)	Are data sources used for calculating emission reductions or enhancements of net removals clearly identified, reliable and transparent?	<p>All the data sources used for calculating emission reductions are clearly identified, reliable and transparent. They are listed and classified in the MR Section 3.1.2.</p> <p>These include:</p> <ul style="list-style-type: none"> - direct measurements of total mass of fuel oil and pitch combusted in the boiler house, mass of fuel oil and pitch combusted in boiler #7, mass of fuel oil and pitch combusted boilers #8-10, heat production by boiler #7, heat production by boilers #8-10, overall mass quantity of pitch combusted in the boiler house; - estimation of Net Caloric Value of fuel oil and pitch by supplier's certificates, efficiencies of combustion of fuel oil and BWB in different boilers by parameters charts of the boilers; - calculation of efficiency of fuel oil combustion in boiler 8-10; - IPCC data for fuel oil emission factor. <p>Calculation of emission reduction was carried out on the excel spreadsheet /4/. The results are summarised in the MR Section E.</p>		OK



“Biomass utilization at JSC Segezha Pulp and Paper Mill (SPPM)”

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
95 (c)	Are emission factors, including default emission factors, if used for calculating the emission reductions or enhancements of net removals, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?	Emissions factor for fuel oil combustion in boilers was taken from IPCC 2006 V.2 Ch.2 (corrected chapter as of April 2007).		OK
95 (d)	Is the calculation of emission reductions or enhancements of net removals based on conservative assumptions and the most plausible scenario in a transparent manner?	The conservative assumptions and the most plausible scenario were taken into account in the calculation of emission reductions as it was determined in PDD (please refer to DR/3/). Calculations are carried out on the excel spreadsheet /4/ in a transparent manner.		OK
Applicable to JI SSC projects only_Paragraph 96_Not applicable				
Applicable to bundled JI SSC projects only_Paragraphs 97(a) – 98_Not applicable				
Revision of monitoring plan				
Applicable only if monitoring plan is revised by project participant				
99 (a)	Did the project participants provide an appropriate justification for the proposed revision?	<p>The only revision of the determined Monitoring Plan which is explicitly indicated in the MR Section 3.1.5 is the use of $NCV_{pitch,y}$ values from the certificate of laboratory in the year 2009 for both 2009 and 2008 years. It is indicated that the use of 2009 $NCV_{pitch,y}$ improves accuracy of calculation. AIE observes the revision reasonable and conservative as using of higher value of pitch NCV reduce emission reductions.</p> <p>Conclusion is pending a response to CAR 02.</p> <p>CAR 03. Please indicate the revisions in MR: (a) the parameter “recording frequency” for ID 1,2,3,6 the term “continuously” was changed by “daily” (refer to the Table 3.4); (b) the parameter “recording frequency” for ID 7 the term “monthly” was changed by “upon accumulated”; Take note: all the revisions should be justified.</p>	CAR 03	OK
99 (b)	Does the proposed revision improve the accuracy	Conclusion is pending a response to CAR 02, CAR 03, CAR 04.		OK



DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	and/or applicability of information collected compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishment of monitoring plans?			
Data management				
101 (a)	Is the implementation of data collection procedures in accordance with the monitoring plan, including the quality control and quality assurance procedures?	<p>The implementation of data collection procedures is in accordance with the determined monitoring plan and is an integral part of the operational routine at the SPPM including quality control and quality assurance procedures.</p> <p>CAR 04. In PDD it is indicated that for ID 1,2,3 were used 9 fuel meters (the same list is presented on page 8 of MR) however in the table 3.3 of MR were indicated only 7 flow meters (the titles of meters were also changed). Please justify the revision of measuring tools and indicate the revision in Section 3.1.5 of MR.</p> <p>CL 01. Please clarify whether the data of flow meters are cross-checked with the data of level gauges of fuel-oil storage tank as it is indicated in Section 3.1.3 of MR.</p> <p>SV 02. To verify the QC and QA procedures and responsibilities.</p>	CAR 04 CL 01	OK OK
101 (b)	Is the function of the monitoring equipment, including its calibration status, is in order?	<p>CAR 05. The Table 3.3 of MR reads that efficiency of fuel oil combustion in boiler 8-10 is defined by portable gas analyzer MRU Delta65 021238 however PDD states that this is calculated parameter. Please provide consistency.</p> <p>CL 02. Please clarify how efficiency of fuel oil combustion in boilers 1-5, efficiency of BWW combustion in boilers 1-5, efficiency of fuel oil combustion in boiler 7, efficiency of BWW combustion in boiler 7 are defining by portable gas analyzer MRU Delta65 021238. Please take note: PDD states that source of data for these parameters are parameters charts of the boilers.</p> <p>CAR 06. Please justify the reliability of data provided by:</p>	CAR 05 CL 02 CAR 06	OK OK OK



DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		<p>(a) differential manometer-flowmeter Metran 43F-DD serial number 82519 for the period 20.06.08 – 09.09.08;</p> <p>(b) differential manometer-flowmeter Sapfir 22DD serial number 15259 for the period 31.01.09 – 13.02.09 and 13.02.10 – 27.02.10;</p> <p>(c) differential manometer-flowmeter Sapfir 22DD serial number 77297 for the period 17.10.09 – 21.10.09;</p> <p>(d) differential manometer-flowmeter Sapfir 22DD serial number 520108 for the period 21.02.09 – 25.02.09;</p> <p>As for these periods of time the check date was expired.</p> <p>SV 03. To verify the functioning of monitoring equipment and calibration status of tools presented in the Table 3.3 of MR and to receive parameter charts of boiler.</p>		
101 (c)	Are the evidence and records used for the monitoring maintained in a traceable manner?	<p>SV 04. To receive and verify primary data on values presented in Annex 1 for 2008, 2009 and 2010 of MR except parameter 13 as it is calculated.</p> <p>CAR 07. Please correct the title of parameter 13 in the tables of Annex 1.</p>	CAR 07	OK
101 (d)	Is the data collection and management system for the project in accordance with the monitoring plan?	<p>CAR 08. Please explicitly indicate in MR whether the operational and management structure that the project participants apply in implementing the monitoring plan is in accordance with the determined Monitoring Plan of PDD.</p> <p>SV 05. To receive evidence that responsibilities for implementation of the monitoring plan are established, documented and communicated.</p>	CAR 08	OK
Verification regarding programs of activities (additional elements for assessment) Paragraphs 102 – 105_Not applicable				
Applicable to sample-based approach only Paragraphs 106 – 110_Not applicable				

**Table 2 Resolution of Corrective Action and Clarification Requests**

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project participant response	Verification team conclusion
<p>CAR 01. Please indicate in the MR the information concerning the issuance of LoAs from the involved parties (including the other than the host Party). Please take note: in case they are exist these Letters of Approval should be provided to AIE.</p>	90	<p><u>Response 1 dated 22.03.11</u> Letter of Approval for the project 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. See MR, Section 1.3. The LoA is provided to AIE. See file "1.MED Order #709 dd 30.12.2010"</p> <p><u>Response 2 dated 27.03.11</u> Letter of Approval of the other Party for the project is issued 22 March 2011 by the Secretary of State for Energy and Climate Change acting as the United Kingdom's Focal Point The LoA is provided to AIE. See file "14. Segezha UK LoA"</p>	<p><u>Conclusion on Response 1</u> CAR is not closed as the project doesn't have LoA from DFP of the other than the host Party (United Kingdom of Great Britain and Northern Ireland as indicated in PDD).</p> <p><u>Conclusion on Response 2</u> CAR is closed based on due corrections made to MR.</p>



<p>CAR 02. The starting date of the monitoring period 01/05/2008 (0:00 am) indicated in the MR differs from the starting date of the crediting period 01/01/2008 indicated in PDD. Moreover, in accordance with certificates of acceptance the dates of the project start are 14.05 for the boiler and 30.05 for fuel feed and BWW storage facility. Hence, the starting date of monitoring period should be 30.05.2008. Please take note: the revision of starting date of the project should be explicitly indicated in appropriate section of MR.</p>	92	<p><u>Response 1 dated 22.03.11</u></p> <p>The starting date of the monitoring period is changed to 01.01.2008 (0:00 AM) in line with PDD.</p> <p>Equipment was accepted according the certificates in May 2008. However since December of 2007 steam boiler #7 and fuel feed and a BWW storage facility worked in the testing mode. During this period all generated steam was supplied to the plant internal consumers. Productive supply of steam by boiler #7 is recorded in the CHPP-1 Technical Reports for January-May 2008.</p> <p>See files: "2. CHPP-1 Technical Report CHPP-1 2008"</p> <p>"3. CHPP-1 Technical Report CHPP-1 2009"</p> <p>"4. CHPP-1 Technical Report CHPP-1 2009 2nd part"</p> <p>"5. CHPP-1 Technical Report CHPP-1 20010"</p>	<p><u>Conclusion on Response 1</u></p> <p>The correction of starting date in MR in line with PDD is accepted by AIE on the basis of presented CHPP-1 technical reports for 2008-2010 that shows the output from steam boiler #7.</p> <p>CAR is closed based on due corrections made to MR.</p>
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“Biomass utilization at JSC Segezha Pulp and Paper Mill (SPPM)”

<p>CAR 03. Please indicate the revisions in MR:</p> <p>(a) the parameter “recording frequency” for ID 1,2,3,6 the term “continuously” was changed by “daily” (refer to the Table 3.4);</p> <p>(b) the parameter “recording frequency” for ID 7 the term “monthly” was changed by “upon accumulated”;</p> <p>Take note: all the revisions should be justified.</p>	99 (a)	<p><u>Response 1 dated 22.03.11</u></p> <p>In fact, mass of fuel oil and pitch combusted in the boilers (ID 1,2,3) and heat production by boilers (ID 5,6) record continuously by automatic system PIRS.</p> <p>Also mass of pitch combusted in the boiler house (ID 7) weighs for each shipment upon accumulated. There are 5-10 shipments of pitch per month supplied in CHPP-1.</p> <p>Please, see file “6. Report on the pitch shipments, December 2010” as an example.</p> <p>Therefore recording frequency for parameter ID 7 is changed against original monitoring plan of determined PDD v 4.1. The frequency of measurement for these parameters increases and information accuracy improves.</p> <p>Appropriate changes are made in Tables 3.1, 3.4. and also in section 3.1.5 “Revision of the monitoring plan”</p>	<p><u>Conclusion on Response 1</u></p> <p>CAR is closed based on due corrections made to MR. AIE observes changes made to MR concerning recording frequency of ID 7 reasonable.</p>
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“Biomass utilization at JSC Segezha Pulp and Paper Mill (SPPM)”

<p>CAR 04. In PDD it is indicated that for ID 1,2,3 were used 9 fuel meters (the same list is presented on page 8 of MR) however in the table 3.3 of MR were indicated only 7 flow meters (the titles of meters were also changed). Please justify the revision of measuring tools and indicate the revision in Section 3.1.5 of MR.</p>	101 (a)	<p><u>Response 1 dated 22.03.11</u> Separate fuel meters for the steam boilers ##1,2,3,5 are included in the scope of measuring tools instead single fuel meter for measuring of the total amount of fuel. This is in line with routine procedure used in CHPP-1 for calculation of the combusted fuel amount in shop. Therefore 11 fuel meters are used in the monitoring (taking into account that two ultrasonic fuel meters of steam boiler #7 were replaced by Coriolis acceleration ones during monitoring period). Appropriate changes are made in Section 3.1.3, Table 3.3. and also in section 3.1.5 “Revision of the monitoring plan”. See files “7. Passports of the fuel meters” “8. Verification register”</p> <p><u>Response 2 dated 27.03.11</u> The installation time for Ultrasonic Flowmeter URSV-110 “Vzlet MR” #601230 is corrected to “21.06.2006” in line with data from “8. Verification register” and “7.Passports of the fuel meters”.</p>	<p><u>Conclusion on Response 1</u> Response is accepted in main but the CAR will be closed when: The installation time for Ultrasonic Flowmeter URSV-110 “Vzlet MR” #601230 indicated in Table 3.3 “21.07” is not clear. Please take note: the date of first indication of the tool in “8. Verification register” is 2006. <u>Conclusion on Response 2</u> CAR is closed based on due corrections made to MR.</p>
<p>CAR 05. The Table 3.3 of MR reads that efficiency of fuel oil combustion in boiler 8-10 is defined by portable gas analyzer MRU Delta65 021238 however PDD states that this is calculated parameter. Please provide consistency.</p>	101 (b)	<p><u>Response 1 dated 22.03.11</u> According to the PDD fuel oil combustion efficiency in boiler 8-10 is defined as calculated parameter. Appropriate changes are made in the monitoring report. Efficiency of fuel oil combustion in boiler 8-10 (parameter 13) is deleted from the Annex 1 tables.</p>	<p><u>Conclusion on Response 1</u> CAR is closed based on due corrections made to MR.</p>



<p>CAR 06. Please justify the reliability of data provided by:</p> <p>(a) differential manometer-flowmeter Metran 43F-DD serial number 82519 for the period 20.06.08 – 09.09.08;</p> <p>(b) differential manometer-flowmeter Sapfir 22DD serial number 15259 for the period 31.01.09 – 13.02.09 and 13.02.10 – 27.02.10;</p> <p>(c) differential manometer-flowmeter Sapfir 22DD serial number 77297 for the period 17.10.09 – 21.10.09;</p> <p>(d) differential manometer-flowmeter Sapfir 22DD serial number 520108 for the period 21.02.09 – 25.02.09;</p> <p>As for these periods of time the check date was expired.</p>	101 (b)	<p><u>Response 1 dated 22.03.11</u></p> <p>Differential manometer-flowmeter Metran 43F-DD serial number 42637 was used as reserve device for measuring of heat production by Boiler No.7 in the periods of 20.06.08 – 09.09.08 and 09.09.09 – 02.12.09.</p> <p>See file “9. Passport of the reserve flowmeter”</p> <p>Differential manometer-flowmeter Sapfir should not be verified but calibrated. According to the national rules calibration is realized by the internal metrological service of SPPM. Metrological service also assigns time of calibration which can deviate from date pointed in the passport of device (up to two months).</p>	<p><u>Conclusion on Response 1</u></p> <p>CAR is closed based on due corrections made to MR.</p>
<p>CAR 07. Please correct the title of parameter 13 in the tables of Annex 1.</p>	101 (c)	<p><u>Response 1 dated 22.03.11</u></p> <p>Parameter 13 is excluded from the tables of Annex 1.</p> <p>Please see response to CAR 05</p>	<p><u>Conclusion on Response 1</u></p> <p>CAR is closed based on due corrections made to MR.</p>



<p>CAR 08. Please explicitly indicate in MR whether the operational and management structure that the project participants apply in implementing the monitoring plan is in accordance with the determined Monitoring Plan of PDD.</p>	<p>101 (c)</p>	<p><u>Response 1 dated 22.03.11</u> Operational and management structure applied by SPPM corresponds to determined Monitoring Plan of the PDD. The input data for monitoring is provided by the Technical department, Environmental department and CHPP-1 according to the SPPM order #6 dd. 17.01.2011 "On the monitoring of the project "Biomass utilization at JSC SPPM". See file "10. SPPM Order#6 dd 17.01.2011". In case of any doubt regarding the accuracy of the input data, those are checked and revised by the specialists of SPPM. The preliminary version of the monitoring report is submitted to the management of SPPM for review. In case any mistakes are identified, specialists of Camco Carbon Russia Limited correct the report accordingly. In line with requirements of Russian Technical Inspection steam boiler operators pass courses "Rules for arrangement and safe operation of boilers, vessels, steam and hot-water pipelines", take an examination and gain clearance to work with boilers. Knowledge assessment of operators is provided annually. Additional training for SPPM specialists was provided by FOSTER WHEELER ENERGIA OY within the framework of the contract of the steam boiler #7 equipment delivery # 246/51321438/CH132 dd 01/11/2006.</p>	<p><u>Conclusion on Response 1</u> CAR is closed based on due corrections made to MR.</p>
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CL 01. Please clarify whether the data of flow meters are cross-checked with the data of level gauges of fuel-oil storage tank as it is indicated in Section 3.1.3 of MR.	101 (a)	<u>Response 1 dated 22.03.11</u> Total mass of fuel oil and pitch combusted in the boiler house are cross-checked with the data of level gauges of fuel-oil storage tank at the end of each month during inventory.	<u>Conclusion on Response 1</u> CL is closed based on appropriate clarification received during the site-visit.
CL 02. Please clarify how efficiency of fuel oil combustion in boilers 1-5, efficiency of BWW combustion in boilers 1-5, efficiency of fuel oil combustion in boiler 7, efficiency of BWW combustion in boiler 7 are defining by portable gas analyzer MRU Delta65 021238. Please take note: PDD states that source of data for these parameters are parameters charts of the boilers.	101 (b)	<u>Response 1 dated 22.03.11</u> Efficiency of the boilers is calculated by the special procedure based on the results of boiler exhausted gas analysis. See file: "11. Calculation of the boiler efficiency (example)" Usage of the boilers charts does not make it possible to estimate boilers efficiency annually as prescribed in determined monitoring plan. The exhausted gas analysis carries out once a year. This corresponds to recording frequency in the PDD and improves of information accuracy.	<u>Conclusion on Response 1</u> CL is closed based on appropriate clarification made.