



VERIFICATION REPORT

CLIMATE CHANGE GLOBAL SERVICES (CCGS)

INITIAL AND FIRST PERIODIC VERIFICATION OF THE “**WOOD WASTE TO ENERGY IN SEVEROONEZHSK, THE ARKHANGELSK REGION, THE RUSSIAN FEDERATION**”

MONITORING PERIOD:
1 AUGUST 2008 TO 31 DECEMBER 2009

BUREAU VERITAS CERTIFICATION

Bureau Veritas Certification
Holding SAS

REPORT No. RUSSIA/0055-2/2010, VERSION 1



Verification Report on JI project "Wood waste to energy in Severoonezhsk, the Arkhangelsk Region, the Russian Federation"

VERIFICATION REPORT

Date of first issue: 07/06/2010	Organizational unit: Bureau Veritas Certification Holding SAS
Client: CCGS LLC	Client ref.: Vladimir Dyachkov

Summary:
Bureau Veritas Certification has been commissioned by Climate Change Global Services (CCGS LLC) to carry out, under JI track 1 procedure, the Initial and 1st periodic verification of the JI small-scale project "Wood waste to energy in Severoonezhsk, the Arkhangelsk Region, the Russian Federation" (sectoral scopes: Energy industries (renewable/non-renewable sources) (1) and Waste handling and disposal (13)), based on UNFCCC criteria for the JI, as well as criteria given to ensure 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 covers the period from August 1st 2008 to December 31st 2009. The verification is based on the consolidated Monitoring Reports (MR): version 1.0 dated 27/04/2010 and version 2.0 dated 01/06/2010, the Monitoring Plan as set out in the determined PDD version 1.2 dated 09/02/2010, and supporting documents made available to Bureau Veritas Certification by the project participant.

The verification is carried out as a combined initial and 1st periodic verification. A risk-based approach has been followed to perform the verification. The first output of the verification process was the Draft Verification Report version 1 dated 18/05/2010. It contains the lists of Corrective Actions Requests and Forward Actions Requests (CAR and FAR), presented in Appendixes A, B, C. In the course of verification, 5 Corrective Action Requests (CAR) and 4 Forward Action Requests (FAR) were raised and successfully closed. 1 other reported FAR (FAR 05) is left pending until the next periodic monitoring.

As a result of the initial verification, the Bureau Veritas Certification confirms that all operations of the project are implemented as planned and described in the PDD, the installed equipment runs reliably and is calibrated appropriately, the monitoring system is in place and functional. The project has been generating emission reductions. However, the project did not receive the approval from the parties involved.

As the results of the periodic verification, the Bureau Veritas Certification confirms that the GHG emission reductions are calculated without material misstatement in conservative and appropriate manner. Bureau Veritas Certification herewith confirms that the project has achieved emission reductions in the above mentioned reporting period as of 7,210 tCO₂ in the year 2008 and 19,870 tCO₂ in the year 2009.

Report No.: RUSSIA/0055-2/2010	Subject Group: JI	
Project title: "Wood waste to energy in Severoonezhsk, the Arkhangelsk Region, the Russian Federation"		
Work carried out by: George Klenov – Lead Verifier 		
Work reviewed by: Leonid Yaskin – Internal Technical Reviewer 		
Date of this revision: 07/06/2010	Version. No.: 01	Number of pages: 53

Indexing terms: <i>Climate Change, JI, Emission Reductions, Verification, Kyoto Protocol</i>
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Abbreviations

AIE	Accredited Independent Entity
BVC	Bureau Veritas Certification
CAR	Corrective Action Request
CCGS	Climate Change Global Services
CL	Clarification Request
CO ₂	Carbon Dioxide
DR	Document Review
EIA	Environmental Impact Assessment
EMS	Environmental Management System
ERU	Emission Reduction Unit
FAR	Forward Action Request
FVP	First Verification Protocol
GHG	Green House Gas(es)
I	Interview
IETA	International Emissions Trading Association
IPCC	Intergovernmental Panel on Climate Change
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
MoV	Means of Verification
MP	Monitoring Plan
MR	Monitoring Report
OJSC	Open Joint Stock Company
PDD	Project Design Document
PP	Project Participant
tCO ₂ e	tonnes CO ₂ equivalent
UNFCCC	United Nations Framework Convention for Climate Change
INV / FPV	Initial Verification Protocol / First Periodic Verification Protocol



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1 INTRODUCTION

CCGS LLC has commissioned Bureau Veritas Certification to carry out the Initial and 1st periodic verification of the small-scale JI project “Wood waste to energy in Severoonezhsk, the Arkhangelsk Region, the Russian Federation” (hereafter called “the project”).

This report summarizes the findings of the verification of the project, performed based on UNFCCC criteria, as well as criteria given to ensure 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.

Initial and first periodic verification has been performed as one integrated activity. It consisted of a desk review of the project documents including PDD, monitoring plan, determination report, monitoring report and further documentation.

The verifiers have reviewed the GHG data collected for the period from August 1st 2008 to December 31st 2009.

1.1 Objective

The purpose of this verification is a combined Initial and 1st periodic verification.

The objective of the initial verification is to verify that the project is implemented as planned and described in the PDD, to confirm that the monitoring system is in place and fully functional, and to assure that the project will generate verifiable emission reductions.

The objective of the periodic verifications is the review and ex post determination by the AIE of the GHG emission reductions. It includes the verification of the data given in the monitoring report by checking the monitoring records and the emissions reduction calculation.

1.2 Scope

The verification of this project is based on the Project Design Document version 1.2 dated 09/02/2010, the Monitoring Reports (covers the period of August 1st 2008 – December 31st 2009) version 1.0 dated 27/04/2010 and version 2.0 dated 01/06/2010, the monitoring plan as set out in the PDD, supporting documents made available to Bureau Veritas Certification, as well as information obtained through the on-site interviews and on-site assessment. The documents and information are reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

Bureau Veritas Certification, based on the recommendations in the Validation and Verification Manual (IETA/PCF), has employed a risk-based approach in the verification, focusing on the

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identification and reporting of significant risks and on reliability of project monitoring and generation of Emission Reductions Units (ERU).

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

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

The project is aimed at wood waste utilization for heat supply of Severoonezhsk settlement, the Plesetsk District, the Arkhangelsk Region. The project is structured around construction of a biofuel boiler house with the installed capacity of 20 Gcal/h (23.26 MW). The main fuel of the boiler house is wood waste (chips, sawdust and long sawmill residues). Wood waste is supplied from the local sawmills. The standby fuel of the boiler house is diesel oil. The heat supplied from the boiler house is delivered to end-users via the existing district heating network that is connected to the boiler house by a new section of heat pipeline, around 513 meters long.

Prior to the project the settlement had been supplied with heat by a boiler house located in the territory of OJSC “Severoonezhsk Bauxite Mine” (OJSC “SBM”) quite some distance away (around 6.8 km) from Severoonezhsk heat consumers. The main fuel of the boiler house was residual fuel oil. Wood waste from the local sawmills was stockpiled at the dumps because there were no utilisation capacities available.

The boiler house has four hot water boilers of Global/G/M-500 model manufactured by an Italian company “Uniconfort” with the thermal capacity of 5 Gcal/h (5.8 MW) each.

As a result of the project:

- considerable quantity of wood waste from the local sawmills will be utilized;
- less wood waste will be disposed to the dumps;
- residual fuel oil consumption in the old boiler house owned by OJSC “SBM” will reduce;
- heat losses will be eliminated in the heat pipeline section from the old boiler house to the point where the new pipeline from the new boiler house connects with the district heating system;
- quality and reliability of heat supply of Severoonezhsk will improve;
- local employment rate will increase;
- negative environmental impact will be mitigated; and
- greenhouse gas (GHG) emissions will be cut down.

To this end in 2008 the company began cooperation with CCGS LLC, which acts as a consultant and a commercial agent of CJSC “Teplo-Invest”. CCGS LLC is not a project

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participant, but is responsible for the Joint Implementation Project and for implementation of the monitoring plan.

2 METHODOLOGY

The verification of the project consisted of the following activities:

- On-site assessment held on 13/05/2010 – 14/05/2010;
- Publication of the 1st Monitoring Report on the BV site;
- Desk review of the 1st Monitoring Report and supporting documents carried out on 28/04/2010 – 04/06/2010;
- On-site assessment in form of interview with the project participant;
- Preparation of the Draft Verification Protocols v.1 (Appendixes A, B, C);
- Following communications with the project participant by phone and mails;
- Resolution of requests for corrective and forward actions;
- Preparation of the final Verification Report v.1;
- Internal Technical Review of the Verification Report.

2.1 Verification Protocol

According to the Validation and Verification Manual (IETA/PCF) a verification protocol is used as part of the verification. The protocol represents, 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 the study is expected to meet; and
- 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 verification protocol (IETA/PCF) consists of five tables. The different columns in these tables are described in Figure 1. Table 1 relates to Initial Verification, the rest to Periodic Verification.

The completed verification protocol is enclosed in Appendixes A-C to this report.

In the present Verification Report the IETA/PCF tables were handled as follows:

IETA/PCF tables	Tables in the present Verification Report
Table 1	Refer to Table 1 of Appendix A which relates to the Initial Verification.
Table 2	Is replaced by Table 1 of Appendix B which relates here to the First Periodic Verification.
Tables 3 and 4	Are combined in Table 2 which relates to Periodic Verification.
Table 5	Is replaced by Table 1 of Appendix C.

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

Initial Verification Protocol Table 1 [If Applicable]			
Objective	Reference	Comments	Conclusion (CARs/FARs)
The requirements the project must meet	Gives reference to where the requirement is found.	Description of circumstances and further comments on the conclusion	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) of risk or non-compliance of the stated requirements. Forward Action Request (FAR) indicates essential risks for further periodic verifications.

Periodic Verification Protocol Table 2: Data Management System/Controls		
Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
The project operator's data management system/controls are assessed to identify reporting risks and to assess the data management system's/control's ability to mitigate reporting risks. The GHG data management system/controls are assessed against the expectations detailed in the table.	<p>A score is assigned as follows:</p> <ul style="list-style-type: none"> • Full - all best-practice expectations are implemented. • Partial - a proportion of the best practice expectations is implemented • Limited - this should be given if little or none of the system component is in place. 	Description of circumstances and further commendation to the conclusion. This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) of risk or non compliance with stated requirements. The corrective action requests are numbered and presented to the client in the verification report. The Initial Verification has additional Forward Action Requests (FAR). FAR indicates essential risks for further periodic verifications.

Periodic Verification Protocol Table 3: GHG calculation procedures and management control testing		
Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks
<p>Identify and list potential reporting risks based on an assessment of the emission factor calculation procedures, i.e.</p> <ul style="list-style-type: none"> • the calculation methods, • raw data collection and sources of supporting documentation, • reports/databases/information systems from which data is obtained. <p>Identify key source data. Examples of source data include metering records, process monitors, operational logs, laboratory/analytical data, accounting records, utility data and vendor data. Check appropriate calibration and maintenance of equipment, and assess the likely accuracy of data supplied.</p> <p>Focus on those risks that impact the accuracy, completeness and consistency of the reported data. Risks</p>	<p>Identify the key controls for each area with potential reporting risks. Assess the adequacy of the key controls and eventually test that the key controls are actually in operation.</p> <p>Internal controls include (not exhaustive):</p> <ul style="list-style-type: none"> • Understanding of responsibilities and roles • Reporting, reviewing and formal management approval of data; • Procedures for ensuring data completeness, conformance with reporting guidelines, maintenance of data trails etc. • Controls to ensure the arithmetical accuracy of the GHG data generated and accounting records e.g. internal audits, and checking/ review procedures; • Controls over the computer information systems; 	<p>Identify areas of residual risks, i.e. areas of potential reporting risks where there are no adequate management controls to mitigate potential reporting risks</p> <p>Areas where data accuracy, completeness and consistency could be improved are highlighted.</p>



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<p>are weakness in the GHG calculation systems and may include:</p> <ul style="list-style-type: none"> • manual transfer of data/manual calculations, • unclear origins of data, • accuracy due to technological limitations, • lack of appropriate data protection measures? For example, protected calculation cells in spreadsheets and/or password restrictions. 	<ul style="list-style-type: none"> • Review processes for identification and understanding of key process parameters and implementation of calibration maintenance regimes • Comparing and analysing the GHG data with previous periods, targets and benchmarks. <p>When testing the specific internal controls, the following questions are considered:</p> <ol style="list-style-type: none"> 1. Is the control designed properly to ensure that it would either prevent or detect and correct any significant misstatements? 2. To what extent have the internal controls been implemented according to their design; 3. To what extent have the internal controls (if existing) functioned properly (policies and procedures have been followed) throughout the period? 4. How does management assess the internal control as reliable? 	
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Periodic Verification Protocol Table 4: Detailed audit testing of residual risk areas and random testing		
Areas of residual risks	Additional verification testing performed	Conclusions and Areas Requiring Improvement (including Forward Action Requests)
<p>List the residual areas of risks (Table 2 where detailed audit testing is necessary. In addition, other material areas may be selected for detailed audit testing.</p>	<p>The additional verification testing performed is described. Testing may include:</p> <ol style="list-style-type: none"> 1. Sample cross checking of manual transfers of data 2. Recalculation 3. Spreadsheet ‘walk through’ to check links and equations 4. Inspection of calibration and maintenance records for key equipment <ul style="list-style-type: none"> • Check sampling analysis results • Discussions with process engineers who have detailed knowledge of process uncertainty/error bands. 	<p>Having investigated the residual risks, the conclusions should be noted here. Errors and uncertainties should be highlighted.</p> <p>Errors and uncertainty can be due to a number of reasons:</p> <ul style="list-style-type: none"> • Calculation errors. These may be due to inaccurate manual transposition, use of inappropriate emission factors or assumptions etc. • Lack of clarity in the monitoring plan. This could lead to inconsistent approaches to calculations or scope of reported data. • Technological limitations. There may be inherent uncertainties (error bands) associated with the methods used to measure emissions e.g. use of particular equipment such as meters. • Lack of source data. Data for some sources may not be cost effective or practical to collect. This may result in the use of default data which has been derived based on certain assumptions/conditions and which will therefore have varying applicability in different situations. <p>The second two categories are explored with the site personnel, based on their knowledge and experience of the processes. High risk process parameters or source</p>

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		data (i.e. those with a significant influence on the reported data, such as meters) are reviewed for these uncertainties.
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Periodic Verification Protocol Table 5: Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	Ref. to checklist question in tables 2/3	Summary of project owner response	Verification conclusion
If the conclusions from the Verification 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 2, 3 and 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 verifier should be summarized in this section.	This section should summarize the verifier's responses and final conclusions. The conclusions should also be included in Tables 2, 3 and 4, under “Final Conclusion”.

Figure 1 IETA/PCF Verification Protocol tables

2.2 Review of Documents

The 1st Monitoring Reports and supporting documentation submitted by the project participants as well as additional background documents related to the project design and baseline, i.e. country Law, Kyoto Protocol, JI implementation guidelines, Project Design Document were reviewed.

The verification findings presented in this report relate to the project as described in the PDD Version 1.2 dated 09/02/2010, 1st Monitoring Reports version 1.0 dated 27/04/2010 issued for the period August 1st 2008 - 31st December 2009.

2.3 Follow-up Interviews

In the frame of Initial Verification, the Bureau Veritas Certification verifier conducted a visit to the project site on 13-14/05/2010. On-site interviews with the project participant and inspection of the project and monitoring equipment were conducted to collect information needed for further verification of emission reduction. Representatives of OJSC “Mezhregionenergogaz”, OJSC “Arkhangelskteplogas” and CCGS LLC were interviewed (see References in Section 6).

The main topics of the interviews are summarized in Table 6.

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Table 6 Interview topics

Interviewed organization	Date	Interview topics
OJSC “Mezhregionenergogaz”; OJSC “Arkhangelskteplogas” CCGS LLC	13-14/05/2010	<ul style="list-style-type: none"> ➤ Monitoring plan ➤ Roles and responsibilities for data collection ➤ Training to monitoring procedures ➤ Data to be collected ➤ Measurement equipment (inspection, characteristics, status) ➤ QC and QA procedures ➤ Boiler House (visitation, parameters) ➤ boilers of Global/G/M-500 model manufactured by Italian company “Uniconfort” (visitation, parameters) ➤ Electricity supply ➤ Data logging ➤ Data archiving ➤ Environmental impact records ➤ Roles and responsibilities for data processing and reporting ➤ Requirements to competence ➤ Data management ➤ Use of calculation tools ➤ Emission calculations ➤ Monitoring report verification and validation ➤ QC and QA procedures ➤ IT management

2.4 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 calculation.

Findings established during the verification can either be seen as a non-fulfillment of criteria ensuring the proper implementation of the project or where a risk to deliver high quality ERUs is identified.

Corrective Action Requests (CAR) are issued, where:

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- i) there is a clear deviation concerning the implementation of the project as defined in 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.

Forward Action Requests (FAR) are issued, where:

- iv) the actual status requires a special focus on this item for the next consecutive verification, or
- v) an adjustment of the Methodological Procedure is recommended.

Clarification Request (CL) are issued, where:

- vi) additional information is needed to fully clarify an issue (no CL are raised in this report).

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

3 VERIFICATION FINDINGS

In the following sections, the findings of the verification are stated. The verification findings for each verification subject are presented as follows:

1) Where Bureau Veritas Certification had identified issues that represented a risk to the fulfillment of the project objectives, a Corrective Action Request or Forward Action Request have been issued. The Corrective Action Requests and Forward Action Requests are referred, where applicable, in the following sections and are further documented in the Initial Verification Protocol and the First Periodic Verification Protocol in Appendixes A and B. The verification of the project resulted in 5 Corrective Action Requests and 5 Forward Action Requests.

2) In the context of Forward Action Requests, risks have been identified, which may endanger the delivery of high quality ERUs in the future, i.e. by deviations from standard procedures as defined by the Monitoring Methodology. As a consequence, such aspects should receive a special focus during the next consecutive verification. A FAR may originate from lack of data sustaining claimed emission reductions. Forward Action Requests are understood as recommendation for future project monitoring; they are stated, where applicable, in the following sections and are further documented in the Initial Verification Protocol (Table 1 in Appendix A) and the First Periodic Verification Protocol (Tables 1 and 2 in Appendix B) . One Forward Action Request is left open till the next Periodic Verification.

3) The final verifier conclusions for verification subject are presented.

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Requests for actions and clarifications from the Initial and Periodic Verification are presented in Appendixes A, B, C. Since that verification is combined, hence findings of Periodic Verification can be appropriately used for answering questions of Initial Verification Protocol.

3.1 Initial Verification Findings

3.1.1 Remaining issues, CAR's, FAR's, CL's from previous verification

CAR 01 (pending approval by Host Party) from Determination Report remained open.

Please refer to the verifier's Note Part b) in Determination Report, Appendix A, Table 1, item 1: “JISC Glossary of JI terms/Version 01 defines the following:

(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”.

So far there is no clarity as to how the above JISC requirement will be fulfilled under Track 1.

3.1.2 Project Implementation

The Boiler House constructed by the project is fully operational as was observed by the verifier at the site visit.

The project implementation started in December 2006.

The project involves construction of a biofuel boiler house with the installed capacity of 20 Gcal/h. The boiler house is designed for district heating of housing and public utilities sector and industrial facilities of the settlement.

Global/G/M-500 boilers are fitted with a furnace with a reciprocating grate for wood waste firing.

The main fuel of the boiler house is wood waste with moisture content between 30% and 50%. Biofuel is delivered to the boiler house from the local sawmills by the fuel supplier's motor transport. Long sawmill residues are chipped in situ before being fed for combustion. The standby fuel of the boiler house is diesel oil.

The heat supply system is open. The heat carrier is hot water. The heat from the boiler house collectors is supplied to end-users via the existing district heating network of the settlement that is connected to the boiler house by a new heat pipeline section, around 513 m long.

Construction and installation works under the project started in December 2006 (the actual starting date of the project).

On the 1st of August 2008 the boiler house was put into operation after completion of the major portion of construction and installation works. All works were completed in February 2009.

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The starting date of the crediting period did not change and remained 1st August 2008.

The Monitoring System is in place and operational. Monitoring of GHG emission reductions was carried out as per the Monitoring Plan, which is described and justified by the CCGS in 1st MR Sections A.7 and D.2.

Outstanding issues related to the Project Implementation, PP’s response and BV Certification’s conclusion are summarised in Appendix C Table 1 (refer to CAR 01 and CAR 02).

3.1.3 Internal and External Data

Internal and external data required for calculation of emission reductions are presented in 1st MR Section B.2 and Section D.2. The monitored values (measured, estimated, and calculated) are presented in 1st MR, Annexes 3-5.

The monitoring included measurements of the following parameters

- for project emission:
 - Volumetric diesel oil consumption in the new boiler house during the year
- for baseline emission:
 - Heat supply from the collectors of the new boiler house during the year
 - Average temperature in the supply pipeline running from the new boiler house to the point of connection with the existing district heating network over the month
 - Average temperature of the outside air over the month
 - Length of operation of the heat network during the month
 - Average temperature in the return pipeline running from the new boiler house to the point of connection with the existing district heating network over the month
 - Volumetric sawdust consumption in the new boiler house during the year
- for leakage emission
 - As shown in the PDD leakages can be neglected and assumed equal to zero.

The default ex ante data included: CO₂ emission factor for diesel oil and for residual fuel oil (refer to 2006 IPCC Guidelines for National Greenhouse Gas Inventories», reference [6] in MR) and others factors are justified in the PDD (overall 29 factors and constants).

The verifier checked the appropriateness of default external and internal data, the state of monitoring equipment, the calibration procedures, data control, and assessed the qualification of personnel.

Outstanding issue related to Internal and External Data, PP’s responses and BV Certification’s conclusions are summarised in Appendix C Table 1 (refer to CAR 03).

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3.1.4 Environmental Indicators

Monitoring of environmental impacts of PPM is carried out in accordance with environmental legislation requirements, as envisaged in the PDD Monitoring Plan.

The project helps to reduce the residual fuel oil consumption at old boiler house. It results in lower emissions of both greenhouse gases and pollutants produced from residual fuel oil combustion.

As a result of the project the residual fuel oil consumption reduces by an average of 2,265 tons in year 2008 and 6,189 tons - in year 2009.

Information on pollutant emission reductions is outlined in the 1st MR, version 2.0 (see Section C3).

Outstanding issues related to Environmental Indicators, PP's responses and BV Certification's conclusions are described in Appendix A Table 1 (refer CAR 04).

3.1.5 Management and Operational System

Section C.2 of the 1st MR provide sufficient information about the elements of the system related to assigning roles, responsibilities and authorities for implementation and maintenance of monitoring procedures including control of data. The verifier confirms the effectiveness of this management system. The personnel responsible for monitoring are trained in an appropriate manner. The system has a potential for further improvement as follows from the FARs issued.

Outstanding issues related to Management and Operation System, PP's responses and BV Certification's conclusions are summarised in Appendix C Table 1 (refer to CAR 05, FAR 02, FAR 03, FAR 05).

FAR 05 is left open till the next Monitoring Report.

3.2 Periodic Verification Findings

3.2.1 Completeness of Monitoring

The monitoring of the project is complete, effective and reliable and generally in accordance with monitoring plan contained in the determined PDD.

All relevant emission sources are covered by the monitoring plan and the boundaries of the project are defined correctly and transparently. All pertinent parameters were monitored and determined as prescribed. The collected data were stored during the whole monitoring period. The monitoring methodologies and sustaining records were sufficient to enable verification of emission reductions. During the verification process, no significant lacks of evidence were detected. The reporting procedures, which were described in the final MR and

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examined during the on-site visit, were found to reflect the ones defined by the monitoring plan.

3.2.2 Accuracy of Emission Reductions Calculation

Owing to the use of the justified approach, there was no need to make adjustments to the measured values in order to ensure conservative emission reduction calculation for the period August 2008 – December 2009. All used data was of a high quality to assure accurate calculation. The calibration results ensure the correct functionality of all the necessary equipment available in the OJSC “Arkhangelskteplogas”. The verifier received access to all relevant documentation needed to verify the emission reduction calculation. All used information was traceable and appropriately archived.

The verifier confirms that emission reduction calculations have been performed according to the monitoring plan and to the calculation methodology reported in the final version of the 1st MR in accordance with the PDD. The verifier checked the transfer of monitored data sets to spreadsheets used by PP, correctness of the formulae versus the PDD, programming of formulae and connections, as well as calculations of emission reductions. No inaccuracies in calculations were detected by the verifiers. Finally, our own calculations have shown the same results as given in the 1st Monitoring Report.

3.2.3 Quality of Evidence to Determine Emission Reductions

The evidences that were obtained by the verifier in order to provide confidence in the provided emission reduction calculation, such as

- 2008 and 2009 OJSC “Mezhregionenergogas” Branch in Severoonezhsk Guidelines on Monitoring Plan in place
- The OJSC “Mezhregionenergogas” Branch in Severoonezhsk and OJSC “Arkhangelskteplogas” internal orders on JI project implementation and GHG emission monitoring
- Duly maintained installation and operation of duly calibrated equipment
- The present-day metrological control
- Automatic data acquisition system
- Procedures for protection and back up of electronic and paper data
- QC and QA procedures
- Clear allocation of responsibilities and authorities
- Competence and commitments of personnel
- Use of excel spreadsheets
- Implementation of data traceability
- Check of transfer of formulas and algorithms into excel
- A detail review for adequacy of any excel spreadsheet
- Collation of spot manual calculations with excel results
- Verification of data handling by Chief Engineer

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- Check for consistency and adequacy of calculations and data in the 1st MR of the Local Division "Severo-Zapadnoe" of the OJSC“Mezhregionenergogas”
- Validation of the final MR by the Director of the Project Implementation Department of CCGS LLC
- Appropriate archiving system
- IPCC data
- Energy audit data

are observed as consistent and of high confidence. All used parameters were of sufficient and appropriate quality to assure an accurate monitoring.

3.2.4 Management System and Quality Assurance

To ensure quality of project operation and monitoring an efficient Management and Operation System is developed and maintained as discussed as a part of the Initial Verification in Section 3.1.5 above.

4 PROJECT SCORECARD

Risk Areas		Conclusions			Summary of findings and comments
		Baseline Emissions	Project Emissions	Calculated Emission Reductions	
Completeness	Source coverage/ boundary definition	✓	✓	✓	All relevant sources are covered by the monitoring plan and the boundaries of the project are defined correctly and transparently.
Accuracy	Physical Measurement and Analysis	✓	✓	✓	State-of-the-art technology is applied in an appropriate manner. Appropriate back-up solutions are provided.
	Data calculations	✓	✓	✓	Emission reductions are calculated correctly.
	Data management & reporting	✓	✓	✓	Data management and reporting were found to be satisfying. Potential for improvement is indicated by open FAR 05.
Consistency	Changes in the project	✓	✓	✓	Results are consistent with underlying raw data.

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5 VERIFICATION STATEMENT

Bureau Veritas Certification was commissioned by CCGS to carry out, under JI track 1 procedure, the initial and 1st periodic verification of the JI project “Wood waste to energy in Severoonezhsk, the Arkhangelsk Region, the Russian Federation” (sectoral scopes: Energy industries (renewable/non-renewable sources) (1) and Waste handling and disposal (13)), based on UNFCCC criteria for the JI, as well as criteria given to ensure 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 covers the period from August 1st 2008 to December 31st 2009.

The verification is carried out as a combined initial and 1st periodic verification. A risk-based approach has been followed to perform the verification. In the course of verification, 5 Corrective Action Requests and 4 Forward Action Requests were raised and successfully closed. One reported FAR is left pending until the next periodic monitoring.

The verification is based on the Monitoring Report (covers August 1st 2008 – December 31st 2009), the Monitoring Plan as set out in the determined PDD, version 1.2 dated 09/02/2010, and supporting documents made available to Bureau Veritas Certification by the CCGS and project participant.

As a result of the initial verification, the Bureau Veritas Certification confirms that all operations of the project are implemented as planned and described in the PDD, the installed equipment runs reliably and is calibrated appropriately, the monitoring system is in place and functional. The project is generating emission reductions. However, the project did not receive the approvals from the Parties involved,

As the results of the 1st periodic verification, the Bureau Veritas Certification confirms that the GHG emission reductions are calculated without material misstatement in conservative and appropriate manner.

Bureau Veritas Certification herewith confirms that the project has achieved emission reductions as of 7,210 tCO₂e in 2008 and 19,870 tCO₂e in 2009.

Bureau Veritas Certification
07/06/2010



George Klenov - Lead Verifier



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REFERENCES

Reviewed documents (including documents obtained at the site visit on 13-14/05/2009)

1	Monitoring Report on emission of green house gases for JI project “Wood waste to energy in Severoonezhsk, the Arkhangelsk Region, the Russian Federation”, Monitoring period 01.01.2008 – 31.12.2009, v.1.0, CCGS, Arkhangelsk, dated 27/04/2010.
2	Monitoring Report on emission of green house gases for JI project “Wood waste to energy in Severoonezhsk, the Arkhangelsk Region, the Russian Federation”, Monitoring period 01.01.2008 – 31.12.2009, v.2.0, CCGS, Arkhangelsk, dated 01/06/2010.
3	Annex 1 to Monitoring Report “Calculation of methane emissions from anaerobic decomposition of BWW at the dump”.
4	Annex 2 to Monitoring Report “Regulations on quality check and control of GHG emission reduction project design documents (PDD) and monitoring reports at CCGS LLC”.
5	Annex 3 to Monitoring Report “Input Data for 2008 and 2009”.
6	Annex 4 to Monitoring Report “Heat Losses through insulated surface of supply and return pipelines”.
7	Annex 5 to Monitoring Report “Calculation Model (Excel-file)”.
8	PDD “Wood waste to energy in Severoonezhsk, the Arkhangelsk Region, the Russian Federation”, Version 1.0, dated 28/08/2009.
9	BVC Determination Report on the JI Project “Wood waste to energy in Severoonezhsk, the Arkhangelsk Region, the Russian Federation”, v.0.1, dated 15.02.2010.
10	“Person(s) responsible for the monitoring of GHG emission reductions”, Order No. 01/05 of 05/04/2010, OJSC “Mezhregionenergogas” Branch in Arkhangelsk.
11	“Person(s) responsible for the monitoring of GHG emission reductions”, Order No. 21/n of 08/09/2008, OJSC “Arkhangelskteplogas”.
12	Protocol of trainee assessment No. 38 dd. 20/06/2008, Rostekhnadzor.
13	Protocol of trainee assessment No. 83 dd. 20/11/2009, Rostekhnadzor.
14	Permits for Exploitation No. 01-07-T/012 53 dated 15/07/2008 and No. 01-07-T/013 dated 15/07/2008 granted by Territorial Direction of Rostekhnadzor.

Persons interviewed on 13-14/05/2010:

1	Michail Gudkov – Director, “Severo-Zapadnoe” Local Division of OJSC “Mezhregionenergogas”.
2	Andrey Kokoyanin – General Director, OJSC “Arkhangelskteplogas”
3	Igor Neprintsev – Chief Engineer, OJSC “Arkhangelskteplogas”
4	Victor Dyrkach – Lead Power Engineer, OJSC “Arkhangelskteplogas”
5	Alexey Mogutov – project manager, OJSC «Mezhregionenergogaz»



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6	Vladimir Dyachkov – Director of the Project Implementation Department of CCGS LLC
7	Evgeniy Zhuravskiy – specialist of the Project Implementation Department of CCGS LLC

6 DISCLAIMER

This report contains the results of the determination of whether the ensuing reductions of anthropogenic emissions by sources reported by the project participant meet the relevant requirements of Article 6 of the Kyoto Protocol and the JI guidelines. The used procedure does not fall under the Verification Procedure under the JISC, as defined in the JI guidelines. Instead, paragraph 23 of the JI guidelines applies to the verification with a reservation that the project approvals by the host Party involved are pending. Based on this verification, Bureau Veritas Certification Holding SAS issues, under the contractual arrangements with CCGS LLC, an expert opinion on the emission reductions as per 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”.



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APPENDIX A: COMPANY JI PROJECT INITIAL VERIFICATION PROTOCOL

Table 1 Initial Verification Protocol

Objective	Reference	Comments	Conclusion (CARs/FARs)
1. Opening Session			
1.1. Introduction to audits	N/A	<p>The intention and the target of the audit were illustrated to the participants of the audit. Participants at the audit were the following persons:</p> <p>Verifier: George Klenov - Lead Verifier, Bureau Veritas Certification Rus.</p> <p>Interviewed persons:</p> <p>CCGS LLC</p> <ul style="list-style-type: none"> – Vladimir Dyachkov – Director of the Project Implementation Department; – Evgeniy Zhuravskiy – specialist of the Project Implementation Department; <p>OJSC «Mezhregionenergogaz» Branch in Severoonezhsk</p> <ul style="list-style-type: none"> – Michail Gudkov – Director, "Severo-Zapadnoe" Local Division – Alexey Mogutov – project manager; <p>OJSC “Arkhangelskteplogas”</p> <ul style="list-style-type: none"> – Andrey Kokoyanin – General Director; – Igor Neprintsev – Chief Engineer; – Victor Dyrkach – Lead Power Engineer. 	OK



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Objective	Reference	Comments	Conclusion (CARs/FARs)
1.2. Clarification of access to data archives, records, plans, drawings etc.	N/A	The verifier received the open access to all relevant plans, data, records, drawings and equipment.	OK
1.3. Contractors for equipment and installation works <i>Who has installed the equipment? Who was contracted for planning etc.?</i>	/1,2,8/	The project was structured around construction of a biofuel boiler house with the installed capacity of 20 Gcal/h (23.26 MW). The main fuel of the boiler house is wood waste (chips, sawdust and long sawmill residues). Project has been implemented as defined in the PDD. However, the request has to be considered as follows. CAR 01. Please describe the contractors for equipment and installation works.	CAR 01
1.4. Actual status of installation works <i>Project installation should be finished at time of initial verification in so far as the project should be ready to generate emission reductions afterwards.</i>	/1,2,8/	Actual status of installation works is in compliance with the project activities (see PDD). Construction and installation works under the project started in December 2006 (the actual starting date of the project) and were completed in January 2009. On the 1 st of August 2008 the boiler house was put into operation after completion of the major portion of construction and installation works. CAR 02. There is no in the 1 st MR the description of the project activity implementation and references to the evidence of the work completion.	CAR 02
2. Open issues indicated in verification report			
2.1. Missing steps to final approval <i>Especially in projects which are not yet registered at JISC, there</i>	/9/	The project did not receive the host Party's approval.	CAR 01 in [9]



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Objective	Reference	Comments	Conclusion (CARs/FARs)
<i>might be some outstanding issues which should have been indicated by the verification report</i>			
3. Implementation of the project <i>This part is covering the essential checks during the on-site inspection at the project's site, which is indispensably for an initial verification</i>			
3.1. Physical components <i>Check the installation of all required facilities and equipment as described by the PDD.</i>	/1,2,8/	The installation was checked on site, all facilities correspond with PDD.	OK
3.2. Project boundaries <i>Check whether the project boundaries are still in compliance with the ones indicated by the PDD.</i>	/1,2,8/	Yes, the project boundaries are as defined in the PDD.	OK
3.3. Emission reduction achieved <i>Compare the value of emission</i>	/1,2,8/	Estimated amount of emission reductions are 7 936 tCO ₂ e in 2008 and 27 964 tCO ₂ e in 2009 whereas the amounts achieved are 7 210 tCO ₂ e and 19 870 tCO ₂ e. This issue is reasonably cleared in the 1 st MR.	OK



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Objective	Reference	Comments	Conclusion (CARs/FARs)
<i>reduction achieved with that estimated in PDD and explain the difference if any</i>			
3.4. Monitoring and metering systems <i>Check whether the required metering systems have been installed. The meters have to comply with appropriate quality standards applicable for the used technology.</i>	/1,2,8/	The new metering system is installed and it was inspected on site. It is in compliance with national law and power industry regulations. The installations have the measuring devices such as temperature sensors and flow meters as well as pressure and heat meters to monitor parameters related to project. The procedures for the measuring devices control have been documented.	OK
3.5. Data uncertainty <i>How will data uncertainty be determined for later calculations of emission reductions? Is this in compliance with monitoring and metering equipment?</i>	/1,2,8/	All measuring devices correspond to the regulatory requirements on accuracy of measuring equipment and measurement deviations that is calculated and certified. This ensures the level of uncertainty of the data required by technology.	OK
3.6. Calibration and quality assurance <i>Check how monitoring and metering systems are subject to calibration and quality assurance routines</i> <i>a) with installation</i> <i>b) during future operation</i>	/1, 2, 8,10,11/	<p>The measurements are carried out by measuring equipment calibrated in accordance with the Federal Law №102 “On Uniformity of Measurements”.</p> <p>Responsibility for maintenance of metering equipment is established, documented and communicated.</p> <p>Calibration records of the measuring devices have been verified at site. All the measuring devices have been found calibrated.</p> <p>The measuring devices will be calibrated next time after completion the calibration period of 48 months. If necessary the removed measuring</p>	FAR 01



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Objective	Reference	Comments	Conclusion (CARs/FARs)
		instrument is replaced with a gauged back up instrument. Operation of the equipment without measuring devices is not allowed. FAR 01. All measuring devices have to be included in the structured periodic calibration plans.	
3.7. Data acquisition and data processing systems <i>Check the eligibility of used systems.</i>	/1--7/	Please refer to 3.4 above. The data required for calculation of GHG emission reductions have been collected and recorded in accordance with the schemes of monitoring points. The readings of the instruments used for monitoring of GHG emission reductions are recorded and transmitted to the Director of “Severo-Zapadnoe” Local Division, who in his turn transfers it to the Director of the Project implementation Department of CCGS LLC. The data shall be kept in the New Boiler House’s archive in electronic and paper form for at least two years after the end of the crediting period or after the last issue of ERUs.	OK
3.8. Reporting procedures <i>Check how reports with relevance for the later determination of emission reductions will be generated</i>	/1,2/	Detailed reporting procedures are described in the 1 st MR. The Monitoring Plan defines the responsibilities to consolidate the data required for emission reduction calculations. Calculations are transparent and restricted to entering annually the production data into a predefined Excel spreadsheet. At CCGS LLC the procedure for verification of the monitoring reports are laid down in “The provisions for quality control procedure in relation to preparation of project design documents and monitoring reports for greenhouse gas emission reduction projects” (see annex 2 to 1 st MR). CAR 03. The reference to Annex 2 is not valid.	CAR 03
3.9. Documented instructions	/1,2/	The personal in charge of monitoring and reporting tasks are the managers and lead specialists of OJSC «Mezhregionenergogaz» Branch in	OK



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Objective	Reference	Comments	Conclusion (CARs/FARs)
<p><i>Check whether the personnel performing tasks with sensitivity for the monitoring of emission reductions have access and knowledge of documented instructions, forming a part of the project's management system.</i></p>		<p>Severoonezhsk. Refer to list of Persons interviewed.</p>	
<p>3.10. Qualification and training <i>Check whether the personnel performing tasks with sensitivity for the monitoring of emission reductions has the appropriate competences, capabilities and qualifications to ensure the required data quality.</i></p>	/1,2,12,13/	<p>The personnel of the boiler house underwent necessary training in certified educational institutions. All maintenance personnel have the required qualification and valid permits to operate the main equipment of the boiler house. The person responsible for the personnel training is the Director of the boiler house.</p> <p>At least once per year CCGS LLC together with the management of OJSC “Mezhregionenergogas” branch in Severoonezhsk shall arrange and hold training sessions for the boiler house personnel regarding collection of data required for the GHG emissions monitoring under the project.</p> <p>Check-out of the equipment required for primary monitoring data collection and personnel training was carried out on 09/04/2009, 07/07/2009, 21/01/2010.</p>	OK
<p>3.11. Responsibilities <i>Check whether all tasks required to gather data and prepare a monitoring report with the necessary quality have</i></p>	/1,2,10,11/	<p>The management of CJSC “Teplo-Invest” is fully responsible for the project implementation and overall control.</p> <p>The management of OJSC “Mezhregionenergogas” is responsible for normal operation of the boiler house equipment, pollutant emissions estimation and for collection of all data required for calculation of GHG emission reductions.</p>	OK



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Objective	Reference	Comments	Conclusion (CARs/FARs)
<i>been allocated to responsible employees.</i>		<p>The responsibility for all organisational issues related to monitoring lies with the Project Manager. The responsibility for collection, check-out and transfer of primary data for monitoring lies with the Director of "Severo-Zapadnoe" Local Division Gudkov A.E.</p> <p>The responsibility of these persons is specified in Order No 36-09-B of 21.08.2009.</p> <p>The management of CCGS LLC is responsible for arranging and holding training sessions for the Mill's personnel regarding collection of data required for the GHG emissions monitoring under the project and preparation of the monitoring report (director of Project Implementation Department); checkout of the accuracy of the primary data and GHG emission reduction calculations (Director of the Project Preparation Department).</p>	
<p>3.12. Troubleshooting procedures <i>Check whether there are possibilities of redundant data monitoring in case of having problems with the used monitoring equipment. Such procedures may reduce risks for the buyers of emission reductions (e.g. the Client)</i></p>	/1,2,4/	Procedures exists to react in the case incorrect data appear or equipment failure. These procedures include the troubleshooting tips.	OK
<p>4. Internal Data <i>Identifying the internal GHG data sources and ways in which</i></p>			



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Objective	Reference	Comments	Conclusion (CARs/FARs)
<p><i>the data have been collected, calculated, processed, aggregated and stored should be part of initial verification to assess accuracy and reliability of the internal GHG data.</i></p>			
<p>4.1. Type and sources of internal data <i>Acquire information on type and source of internal GHG data, which is used in calculations of emission reductions. E.g..” continuous direct measurements”, “site-specific correlations”, “periodic direct measurements”, “use of models” and/or “use of default emissions factors”.</i></p>	/1-7/	Internal data to be monitored throughout the crediting period (seven parameters) are represented in the 1 st MR Tables B.2.1.	OK
<p>4.2. Data collection <i>How is data collected and processed? What are the means of quantifying emissions from the different data sources?</i></p>	/1-7/	<p>The processing of the data is performed according to the Monitoring Plan and described in 1st MR Section C.2.</p> <p>The procedure for collection and recording of data required for calculation of GHG emission reductions is described in 1st MR Section C.2.1.</p> <p>The information collected at the enterprise is transferred to the Director of "Severo-Zapadnoe" Local Division of the OJSC «Mezhregionenergogaz», who in his turn transfers it to the Director of the Project Implementation</p>	OK



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Objective	Reference	Comments	Conclusion (CARs/FARs)
		<p>Department of CCGS LLC. All information is transferred by e-mail.</p> <p>CCGS specialist (Director of the Project Implementation Department of CCGS LLC, or, on his instructions, other Specialist of the Project Implementation Department who was not directly involved in preparation of this project monitoring report) shall calculate GHG emission reductions using the provided data and director of project implementation department shall draw up a monitoring report at the end of each reporting year (in accordance with procedure, see 1st MR Annex 2).</p>	
<p>4.3. Quality assurance <i>Does internal data collection underlie sufficient quality assurance routines?</i></p>	/1,2,4/	<p>The internal control of data by second independent persons is on sufficient level as specified in the 1st MR Section C.1 “Quality control and quality assurance procedures undertaken for data monitored”.</p>	OK
<p>4.4. Significance and reporting risks <i>Assess the significance and reporting risks related to the different internal data sources. Potential reporting risks may be related to the calculation methods, accuracy of data sources and data collection and/or the information systems from which data is obtained. The significance of and risks associated with the data source indicate the level of verification</i></p>	/1,2/	<p>All records are maintained and stored in the paper and electronic forms. Therefore the risks of misstatement are low.</p> <p>FAR 02. Please explain how supporting information on the data limitation and problems have been included in the data trail.</p>	FAR 02

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Objective	Reference	Comments	Conclusion (CARs/FARs)
<i>effort required at a later stage.</i>			
5. External Data <i>Especially for data of baseline emissions there might be the necessity to include external data sources. The access to such data and a proof of data quality should be part of initial verification. If it is deemed to be necessary, an entity delivering such data should be audited.</i>			
5.1. Type and sources of external data <i>Acquire information on type and source of external data, which is used in calculations of emission reductions.</i>	/1-7/	<p>The main external data used are constant parameters (in total twenty five). All such parameters are obtained from duly referenced technical sources (see PDD as well as 1st MR Ref. [R1, R4], [R6-R10] and calculation spreadsheets “Monitoring Model 2008-2009” that contain the values of external parameters). For instance, one of main from them is CO₂ emission factor for diesel and residual fuel oil combustion. Its values were taken from “2006 IPCC Guidelines for National Greenhouse Gas Inventories”, Volume 2, Energy.</p>	OK
5.2. Access to external data <i>How is data transferred? How can reproducibility of data set be ensured?</i>	N/A	Not applicable.	OK
5.3. Quality assurance <i>Does external data underlie any</i>	N/A	Not applicable.	OK



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Objective	Reference	Comments	Conclusion (CARs/FARs)
<i>quality assurance routines?</i>			
5.4. Data uncertainty <i>Is it possible to assess the data uncertainty of external data? Are such routines included in reporting procedures?</i>	N/A	Not applicable.	OK
5.5. Emergency procedures <i>Are there any procedures, which will be applicable if there is no access to relevant external data?</i>	N/A	Not applicable.	OK
6. Environmental and Social Indicators <i>A Monitoring Plan may comprise environmental and/or social indicators, which could be necessary to monitor for the success of the project activity.</i>			
6.1. Implementation of measures <i>A project activity may demand for the installation of measures (e.g. filtering systems or compensation areas), which are</i>	/2,14/	Construction of the new boiler house makes it possible to reduce harm influence on environment. As a result of the project the residual fuel oil consumption at old boiler house in year 2008 reduced by an average of 2 265 tons in 2008 and 6 189 tons in 2009. The calculation shows (see 1 st MR Table C.3.1) that the reduction of pollutant	CAR 04



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Objective	Reference	Comments	Conclusion (CARs/FARs)
<i>exceeding the local legal requirements. A check of the implementation or realization of such measures should be part of the initial verification.</i>		emissions amounted to 90.3 tonnes in 2008 and 246.7 tonnes in 2009. Social impact of the project is not identified. However, the request has to be considered as follows. CAR 04. Please give the estimation of the direct impact of new boiler house on environment.	
6.2. Monitoring equipment <i>Check where necessary whether the required metering systems have been installed. The meters have to comply with appropriate quality standards applicable for the used technology.</i>	/1,2/	n/a	OK
6.3. Quality assurance procedures <i>What quality assurance procedures will be applied for such data?</i>	/1,2/	n/a	OK
6.4. External data <i>Check the quality, reproducibility and uncertainty of external data.</i>	/1,2/	n/a	OK
7. Management and Operational System			



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Objective	Reference	Comments	Conclusion (CARs/FARs)
<i>In order to ensure a successful operation of a Client project and the credibility and verifiability of the ERs achieved, the project must have a well-defined management and operational system.</i>			
7.1. Documentation <i>The system should be documented by manuals and instructions for all procedures and routines with relevance to the quality of emission reductions. The accessibility of such documentations to persons working on the project has to be secured.</i>	/1,2,4/	The company management and operational system for GHG emission monitoring and reporting is described in the 1 st MR Sections C.1 and C.2. The procedures provide the scope of application, definition of primary data, requirements to and responsibilities for data collection, recording, storage, protection, transfer, consolidation, processing, reporting. The procedures were prepared by the personal concerned that is well informed and qualified for performing the monitoring and reporting tasks.	OK
7.2. Qualification and training <i>The system should describe the requirements on qualification and the need of training programs for all persons working on the emission reduction project. Performed training programs and certificates should be archived</i>	/1, 2, 4,12,13/	Please refer to 3.10 and 7.1 above.	OK



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Objective	Reference	Comments	Conclusion (CARs/FARs)
<i>by the system.</i>			
7.3. Allocation of responsibilities <i>The allocation of responsibilities should be documented in written manner.</i>	/1,2,10,11/	General and specific monitoring and reporting tasks and responsibilities of relevant functions on OJSC «Mezhregionenergogaz» level are specified by the 1 st MR. Please also refer to 3.11 and 7.1 above.	OK
7.4. Emergency procedures <i>The system should contain procedures, which provide emergency concepts in case of unexpected problems with data access and/or data quality.</i>	1,2,4	The emergency procedures with respect to operation controls and control of records are available in the documentation (HSE Instructions and Job Descriptions).	OK
7.5. Data archiving <i>The system should provide routines for the archiving of all data, which is required for verifying the project's performance in the context of consecutive verifications.</i>	/1,2,4/	Requirements for data archiving are defined in the 1 st MR. Data are archived in the physical and electronic forms and then stored electronically.	OK
7.6. Monitoring report <i>The system includes procedures for the calculation of emission reductions and the preparation of the monitoring report.</i>	/1,2,4,7/	Procedures for the calculation of emission reductions and the preparation of the monitoring report are defined in the 1 st MR (see Annex 2).	OK



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Objective	Reference	Comments	Conclusion (CARs/FARs)
<p>7.7. Internal audits and management review <i>The system includes internal control procedures, which allow the identification and solution of problems at an early stage.</i></p>	/1,2,4/	<p>At OJSC «Mezhregionenergogaz» and "Severo-Zapadnoe" Local Division of OJSC «Mezhregionenergogaz» responsibility of the person for the internal control is set forth in Order No. 36-09-C of 21/08/2009 (see 1st MR).</p> <p>At CCGS LLC, the procedure for verification of the monitoring reports are laid down in “The provisions for quality control procedure in relation to preparation of project design documents and monitoring reports for greenhouse gas emission reduction projects” (see 1st MR annex 2).</p> <p>However, the request has to be considered as follows.</p> <p>FAR 03. The internal procedures, which allow the identification and solution of problems at an early stage, have to be established in the management system of OJSC “Mezhregionenergogas”.</p>	FAR 03



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APPENDIX B: COMPANY PERIODIC VERIFICATION PROTOCOL

Table 1 Data management system/controls (01/01/2008 – 31/12/2009)

Expectations for GHG data management system/controls	Scores	Verifiers Comments (including <i>Forward Action Requests</i>)
A. Defined organizational structure, responsibilities and competencies		
<p>A.1. Position and roles Position and role of each person in the GHG data management process is clearly defined and implemented, from raw data generation to submission of the final data. Accountability of senior management must also be demonstrated.</p>	Full	<p>Roles and responsibilities of relevant functions (for personnel of OJSC “Mezhregionenergogas” including branch in Severoonezhsk and CCGS LLC) in the GHG data management process are defined and described in the 1st Monitoring Report (1st MR) Sections C.1 and C.2.</p> <p>The 1st Monitoring Report Version 1.0 dated 27/04/2010 for the monitoring period from 01/01/2008 to 31/12/2009 includes the distribution of primary data collection and storage responsibilities as it is shown in the Section C.2.2 and at Fig. C.2.1.</p> <p>All works related to primary data collection and storage are carried out as a part of the Boiler House’s ordinary activities and would have been carried out in any event, irrespective of the GHG emission reduction monitoring activities.</p> <p>The roles and responsibilities of top management are also described in the 1st MR, Table C.2.2.</p>
<p>A.2. Responsibilities Specific monitoring and reporting tasks and responsibilities are included in job descriptions or special instructions for employees.</p>	Full	<p>General and specific monitoring and reporting tasks and responsibilities of relevant functions on OJSC “Mezhregionenergogas” including branch in Severoonezhsk level are specified by the 1st MR.</p> <p>CCGS LLC specialists are defined as persons responsible for calculation of the emission reduction and issuing the 1st MR. Also they shall to arrange and hold a training sessions for the Mill’s personnel regarding collection of the data required for the GHG emissions monitoring under the project.</p>
<p>A.3. Competencies needed</p>	Full	<p>The competencies for each step of the GHG monitoring process have been checked.</p>



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<p>Competencies needed for each aspect of the GHG determination process are analyzed. Personnel competencies are assessed and training programme implemented as required.</p>		<p>All personnel have undergone certification in accordance with the requirements of Rostekhnadzor.</p> <p>At least once per year CCGS LLC together with the management of OJSC “Mezhregionenergogas” Branch in Severoonezhsk shall arrange and hold training sessions for the personnel regarding collection of data required for the GHG emissions monitoring under the project.</p> <p>The Director of Project Implementation Department of CCGS LLC shall draw up the monitoring report and support in GHG emission reduction verification.</p>
<p>B. Conformance with monitoring methodology</p>		
<p>B.1. Reporting procedures Reporting procedures should reflect the monitoring methodology content. Where deviations from the monitoring plan occur, the impact of this on the data is estimated and the reasons justified.</p>	<p>Full</p>	<p>There were not noticeable deviations of reporting procedures from the PDD monitoring plan.</p>
<p>B.2. Necessary Changes Necessary changes to the monitoring methodology are identified and changes are integrated in local procedures as necessary.</p>	<p>Full</p>	<p>The monitoring methodology had been retained and re-described in the 1st MR without any changing.</p>
<p>C. Application of GHG determination methods</p>		
<p>C.1. Methods used There are documented description of the methods used to determine GHG emissions and justification for the</p>	<p>Full</p>	<p>The used monitoring methodology formalized in terms of the electronic tool was properly documented in 1st MR and closely followed. The tool was made available to the verifier at the determination stage, so it was easy to check the calculations reported in 1st MR.</p>

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chosen methods. If applicable, procedures for capturing emissions from non-routine or exceptional events are in place and implemented.		
C.2. Information/process flow An information/process flow diagram, describing the entire process from raw data to reported totals is developed.	Full	1 st MR contains the monitoring procedures (see Table C.2.1) and data transfer scheme (Fig.C.2.1), describing the entire process from raw data to reported totals.
C.3. Data transfer Where data is transferred between or within systems/spreadsheets, the method of transfer (automatic/manual) is highlighted – automatic links/updates are implemented where possible. All assumptions and the references to original data sources are documented. Manual transfer has occurred.	Full	Original request for primary GHG emission reductions monitoring data is made by the Director of the Project Implementation Department of CCGS LLC to the office of OJSC «Mezhregionenergogaz» in Archangelsk to the Director of "Severo-Zapadnoe" Local Division, who in his turn gives instructions to the enterprise to collect the requested data. The responsibility of persons who responsible for collection, control and transfer of monitoring data is set forth in Order No.36-09-C of 21.08.2009. The information collected at the enterprise is transferred to the Director of "Severo-Zapadnoe" Local Division, who in his turn transfers it to the Director of the Project Implementation Department of CCGS LLC. All information is transferred by e-mail.
C.4. Data trails Requirements for documented data trails are defined and implemented and all documentation are physically available.	Full	Requirements for documented data trials are implemented in general as defined in PDD. All data dispatches can be traced by date, department, and name of a person.
D. Identification and maintenance of key process parameters		
D.1. Identification of key parameters	Full	The key physical parameters are identified.



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<p>The key physical process parameters that are critical for the determination of emission factors are identified.</p>		
<p>D.2. Calibration/maintenance Appropriate calibration/maintenance requirements are determined.</p>	Full	<p>The calibration documents and electric energy metering devices have been checked and found in conformity to calibration and verification requirements.</p>
<p>E. GHG calculations</p>		
<p>E.1. Use of estimates and default data Where estimates or default data are used, these are verified and periodically evaluated to ensure their ongoing appropriateness and accuracy, particularly following changes to circumstances, equipment etc. The verification and periodic evaluation of this is documented.</p>	Full	<p>Estimated amount of emission reductions are 7 936 tCO₂e in 2008 and 27 964 tCO₂e in 2009 whereas the amounts achieved are 7 210 tCO₂e and 19 870 tCO₂e. This issue is reasonably cleared in the 1st MR.</p>
<p>E.2. Guidance on checks and reviews Guidance is provided on when, where and how checks and reviews are to be carried out, and what evidence needs to be documented. This includes spot checks by a second person not performing the calculations over manual data transfers, changes in assumptions and the overall reliability of the calculation processes.</p>	Full	<p>CCGS specialist calculates GHG emission reductions using the provided data and draw up a monitoring report at the end of each reporting year. The additional cross-check is made by the Director of the Project Preparation Department of CCGS LLC in accordance with the CCGS LLC quality control procedure “The provisions for quality control procedure in relation to preparation of project design documents and monitoring reports for greenhouse gas emission reduction projects” (see Annex 2).</p>



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<p>E.3. Internal verification Internal verifications include the GHG data management systems to ensure consistent application of calculation methods.</p>	<p>Partial</p>	<p>On the basis of the received data the Department of Project Implementation of CCGS LLC prepares a GHG emission reduction monitoring report and submits it for additional cross-check to the Project Development Department of CCGS LLC. As soon as all comments made by the Project Development Department are incorporated or resolved the monitoring report is submitted for verification to the enterprise where the project is implemented.</p> <p>CAR 05. The evidence that internal verifications include the GHG data management systems to ensure consistent application of calculation methods has not been submitted.</p>
<p>E.4. Internal verification Data reported from internal departments should be verified visibly (by signature or electronically) by an employee who is able to assess the accuracy and completeness of the data. Supporting information on the data limitations, problems should also be included in the data trail.</p>	<p>Full</p>	<p>After the report is verified and amended as necessary, the Director of the Project Implementation Department of CCGS LLC informs the Director of "Severo-Zapadnoe" Local Division in Archangelsk about preliminary monitoring results and, if there are no comments on his part, the General Director of CCGS LLC takes the final decision to submit the monitoring report for verification to an independent expert organization.</p>
<p>E.5. Data protection measures Data protection measures for databases/spreadsheets should be in place (access restrictions and editor rights).</p>	<p>Partial</p>	<p>As it is stated in the 1st MR all data will be stored in the Mill's archive in electronic and paper form for at least 2 years after the end of the crediting period or the last issue of ERUs.</p> <p>FAR 04. There is no objective evidence that electronic databases and calculation spreadsheets are protected.</p>
<p>E.6. IT systems IT systems used for GHG monitoring and reporting should be tested and documented.</p>	<p>Full</p>	<p>Data collection and results reporting are based on standard Microsoft Windows tools. The supporting IT systems are maintained on the basis OJSC "Arkhangelskteplogas" and "Severo-Zapadnoe" Local Division of OJSC "Mezhregionenergogas" in Archangelsk procedures.</p>

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Table 2 GHG calculation procedures and management control testing / Detailed audit and random testing of residual risk areas

Identification of potential reporting risk	Identification, assessment and testing of management controls	Areas of residual risks	Additional verification testing performed	Conclusions and Areas Requiring Improvements (including Forward Action Requests)
<p><i>The following potential risks were identified and divided and structured according to possible areas of occurrence.</i></p>	<p><i>The following measures were implemented in order to minimize the corresponding risks.</i></p>	<p><i>Despite the measures implemented in order to reduce the occurrence probability the following residual risks remain and have to be addressed in the course of verification</i></p>	<p><i>Additional verification testing performed is described. Testing may include: sample cross checking of manual transfers of data; recalculation; spreadsheet ‘walk throughs’ to check links and equations; inspection of calibration and maintenance records for key equipment; check sampling analysis results; discussions with process engineers who have detailed knowledge of process uncertainty and error bands.</i></p>	<p><i>Having investigated the residual risks, the conclusions should be noted here. Errors and uncertainties are highlighted.</i></p>
<p>I Raw data generation</p>				



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<ul style="list-style-type: none"> •Installation of new monitoring equipment •Dysfunction of installed equipment •Maloperation by operational personnel •Downtimes of equipment •Replacement of equipment 	<ul style="list-style-type: none"> •All installed measuring devices are to high level pulp and paper industry standard •All installed electric energy measuring devices are to high power industry standard •Overall responsibility is assigned to the metrologist function •Only skilled and trained personnel is allowed to operate the relevant equipment and take metering records •Regular visual inspections of equipment •Immediate replacement of dysfunctional equipment •Stand-by equipment is available •Special laboratory makes some important measurements •Internal audit of 	<ul style="list-style-type: none"> •Inadequate replacement of metering equipment •Change of personnel •Undetected measurement errors 	<ul style="list-style-type: none"> •On-site assessment •Evaluation of changes occurred throughout the reporting year •Checking of personnel replacement •Plausibility checks •Inspection of calibration and maintenance records for key equipment •Inspection of metering records 	<p>All interviewed staff showed competence based on training and experience. Human mistakes in measurements are unlikely. No significant uncertainties or errors regarding the raw data generation were observed in the course of verification.</p>
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	technological discipline			
II Raw data collection				
<ul style="list-style-type: none"> • Metering records • Process monitors • Operational logs • Calibration and maintenance data • Laboratory analysis • Manuals and other vendor data • Accounting records • Accuracy of data supplied 	<ul style="list-style-type: none"> • Exclusively installation and operation of duly calibrated equipment • Proper maintenance of document and procedure control • Implementation of data traceability checking • A responsibilities for the raw data collection are established in the MR • Proper verification of data by an appointed person (foreman) • Appropriate archiving system defined by the MR • Regular inspections from OJSC “Mezhregionenergogas” 	<ul style="list-style-type: none"> • Human mistakes in measurements • Unintended use of old data that has been revised • Incomplete records and documentation • Ex-post corrections of accounting records • Big amounts of information • Human mistakes in data processing • Manual data collection mistakes can only be minimized 	<ul style="list-style-type: none"> • On-site interviews with the personnel in charge • Inspection of meters calibration and maintenance records • The seals and passports for the key monitoring equipment were inspected • On-site evaluation of the monitoring routines and practices • On-site review of records and documents • Cross-checking of accounting records • Plausibility checks to verify the information from different sources <p>Discussions with process engineers who have detailed knowledge of process uncertainty & error ranges</p>	<p>All interviewed staff showed competence based on training and experience.</p> <p>Human mistakes in measurements are unlikely.</p> <p>No significant uncertainties or errors regarding the raw data collection were observed in the course of verification.</p>
III Data aggregation				



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<ul style="list-style-type: none"> •IT systems •Spread sheet programming •Manual data transmission •Data protection •Responsibilities •Problems caused by updating, upgrading or change of applied software 	<ul style="list-style-type: none"> •Clear allocation of responsibilities •Training to MP procedures •Use of internally verified software model •Limited access to IT systems •Corporate procedures for protection and back up of electronic and paper data •Verification of data handling by the experienced technologist and power engineer 	<ul style="list-style-type: none"> •Manual data transfer mistakes can only be minimized •Unintended change of spread sheet programming of data calculation or data base entries 	<ul style="list-style-type: none"> •On-site discussions with the personnel in charge •Sample cross checking of the information of the data base and the meter reading log •All data which was used in the calculation sheets was explicitly checked for consistency and adequacy •The default data for reduction of residual fuel oil combustion and heat losses was checked 	<p>All interviewed staff showed competence based on training and experience. No significant uncertainties or errors regarding the data aggregation were observed in the course of verification.</p>
IV Calculation parameters				
<ul style="list-style-type: none"> •Data sources •Uncertainties 	<ul style="list-style-type: none"> •All parameters and data to be used are defined in the verified monitoring plan 	<ul style="list-style-type: none"> •Danger of overestimating of baseline emissions due to fuel consumption •Danger of misestimating of emissions reductions due to instability and/or uncertainty of the reduction of residual 	<ul style="list-style-type: none"> •Danger of misestimating emissions reductions due to instability and/or uncertainty of the CO₂ emission factor for residual fuel oil combustion can only be minimized. •The requests are issued during verification to 	<p>No significant uncertainties or errors regarding the calculation parameters were observed in the course of verification.</p>



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		fuel oil combustion as a result of the project implementation <ul style="list-style-type: none"> •Danger of misestimating of the calculation CO₂ emission due to use of backup diesel oil 	mitigate the risks. Refer to CAR 05, FAR 04 in Table 1. <ul style="list-style-type: none"> •Conservative estimations of emission reductions are ensured 	
V Calculation methods				
<ul style="list-style-type: none"> •Calculation approach •Applied formulae •Implemented IT Systems •Data storage •Consistency in following the monitoring plan •Control of electronic data 	<ul style="list-style-type: none"> •Verified methodology and electronic tool for calculation of emission reduction •Use of standard software •Implementation of data traceability •Check of transfer of formulas and algorithms into excel •A detail review of each excel spreadsheet •Collation of spot manual calculations with excel results •Appropriate IT and archiving system •An experienced leading 	<ul style="list-style-type: none"> •The use of the electronic calculation tool requires further assessment •Manual data transfer mistakes can only be minimized •The danger of miscalculation can only be minimized •Uncontrolled copies of spreadsheets can be mixed with the controlled ones 	<ul style="list-style-type: none"> •Conservative estimations of emission reductions are ensured •Uncertainties due to unstable of the factor for conversion of bulk cubic meters of sawdust to tones of dry matter can only be minimized. •On-site discussions with the user of the electronic tool •On-site assessment of control of calculation spreadsheets •Off-site check of all equation and algorithms used in spreadsheets •Random-wise manual and electronic 	No significant uncertainties or errors regarding the calculation methods were observed in the course of verification



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	specialist is appointed for processing of operational data and calculation of emission reductions		recalculations	
VI Monitoring reporting				
<ul style="list-style-type: none"> •Data transfer to/by the author of the monitoring report •Issuance of the monitoring report •Verification and validation of the monitoring report 	<ul style="list-style-type: none"> •An experienced leading specialist is appointed for preparation of the 1st MR. •Monitoring reporting was verified and validated by Director of the Project Development Department of CCGS LLC after checking by Director of "Severo-Zapadnoe" Local Division in Arkhangelsk • Use of predefined tables in the monitoring report so that interfaces are minimized •Report is checked for adequacy •Signs of control are in evidence 	<ul style="list-style-type: none"> •The danger of the manual data transfer can only be minimized 	<ul style="list-style-type: none"> •Cross checking of the information of the monitoring report and the original data was made available at the project visit. 	No significant uncertainties or errors regarding the monitoring reporting were observed in the course of verification.
VII Management system				



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<ul style="list-style-type: none"> •Inadequacy of management system 	<ul style="list-style-type: none"> •EMS documented procedures are in place including those for training, control of documentation, and monitoring •Personnel shows competence and commitments 	<ul style="list-style-type: none"> •Lack of structured internal audits and reviews of JI project operation may lead to inadequate track of certain critical issues on project performance and GHG emission data 	<ul style="list-style-type: none"> •CCGS LLC and OJSC “Mezhregionenergogas” established a JI Working Group, which carries out periodic on-site assessment of the project operation. 	<p>FAR 05: Records of the on-site assessment reports should be annexed to monitoring reports to assure project performance. No significant uncertainties or errors regarding the management system were observed in the course of verification.</p>
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APPENDIX C: RESOLUTION OF CORRECTIVE AND FORWARD ACTION REQUESTS

Initial Verification Protocol (INV) and First Periodic Verification Protocols (FPV)

Table 1: Resolution of Corrective Action and Forward Action (01/01/2008 – 31/12/2009)

Corrective Action, Forward Action and clarification Requests by verification team	Ref. to checklist question in tables 1 and 2	Summary of project owner response	Verification team conclusion
<p>CAR 01. Please describe the contractors for equipment and installation works.</p>	<p>IVR 1.3</p>	<p>The general design of the boiler house was carried out by Scientific Production Firm “ROSS MTK” Ltd. Producers of boiler equipment - "Uniconfort" (Italy). The supplier of boiler equipment - “TechStroiLider” Ltd. Assembling of bearing and filler structures of the building of the boiler house and primary landing – “Green helmet” Ltd. Assembling of boiler and auxiliary equipment, commissioning – “Eton Energetik” Ltd. Assembling and commissioning of calculation point – OJSC “Engineering Center Skada”. This is laid down in the MR v.2.0.</p>	<p>Conclusion on Response</p> <p>This CAR is closed based on the adequate correction made to the 1st MR.</p>



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<p>CAR 02. There is no description in the 1st MR of the project activity implementation and references to the evidence of the work completion.</p>	<p>IVR 1.4</p>	<p>Start of project activity - December 2006. Putting into operation for carrying out of starting-up and adjustment works – July, 2008, Official putting into operation – February, 2009. This is laid down in the MR v.2.0.</p>	<p><u>Conclusion on Response</u> This CAR is closed based on the adequate correction made to the 1st MR.</p>
<p>CAR 03. The reference to Annex 2 is not valid.</p>	<p>IVR 3.8</p>	<p>References to Annex 2 are aligned in the MR v.2.0.</p>	<p><u>Conclusion on Response</u> This CAR is closed based on the adequate correction made to the 1st MR.</p>
<p>CAR 04. Please give the estimation of the direct impact of new boiler house on environment.</p>	<p>IVR 6.1</p>	<p>The estimation of the direct impact of new boiler house on environment is represented in the MR v.2.0.</p>	<p><u>Conclusion on Response</u> This CAR is closed based on the proper explanations and adequate correction made to the 1st MR.</p>
<p>CAR 05. The evidence that internal verifications include the GHG data management systems to ensure consistent application of calculation methods has not been submitted.</p>	<p>FPV E.3</p>	<p>Internal verification of Monitoring report according to Order № 01/05 of 05.04.2010 was performed by Chief engineer of Separate subdivision “North-Western” of OJSC “Mezhregionenergogas” A. Shurygin (Positive opinion, reference number № 32/3 of 25.05.2010).</p>	<p><u>Conclusion on Response</u> This CAR is closed based on the adequate correction made to the 1st MR.</p>

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<p>FAR 01. All measuring devices have to be included in the structured periodic calibration plans.</p>	<p>IVR 3.6</p>	<p>Plan of calibration of all measuring devices utilized for monitoring of GHG emission reductions was developed. The plan was approved by the head of the enterprise and accepted for execution.</p>	<p><u>Conclusion on Response</u> This FAR is closed based on the proper addition made to the 1st MR.</p>
<p>FAR 02. Please explain how supporting information on the data limitation and problems have been included in the data trail.</p>	<p>IVR 4.4</p>	<p>Shall any instrument fail, the respective parameters are to be monitored with a help of a duplicate instrument or, if such is not available, the failed instrument is to be replaced with a gaged back-up instrument. If the failed instrument cannot be replaced while the equipment is running, then the parameters shall be monitored for not more than 15 days in one year based on calculation of an average value of this instrument's readings taken over the three days prior to the failure. This monitoring procedure is developed based on paragraph 9.8 of "The Rules for Heat and Heat Carrier Metering", which must be applied at the boiler house.</p> <p>If the equipment is operated without instrument-based monitoring of any parameter for more than 15 days, then the calculations shall be made using the most conservative (in terms of GHG emission reductions) value from the start of the project monitoring.</p>	<p><u>Conclusion on Response</u> This FAR is closed based on the proper addition made to the 1st MR.</p>



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		<p>All incidents that take place at the enterprise shall be recorded by the department of the chief energy engineer in the prescribed order. Information on major incidents shall be recorded in the monitoring report.</p> <p>This is laid down in Section C2.1 of the Monitoring Report.</p>	
<p>FAR 03. The internal procedures, which allow the identification and solution of problems at an early stage, have to be established in the management system of OJSC “Mezhregionenergogas”.</p>	<p>IVR 7.7</p>	<p>At present taking monitoring experience in 2008, 2009 into account procedures listed in the document “Monitoring procedures of GHG emission reductions under the JI project “Wood Waste to Energy in Severoonezhsk” approved by the Director of Separate subdivision “North-Western” of OJSC “Mezhregionenergogas” on 15.09.2009 are improved.</p> <p>The updated document will be include internal audit procedures which will allow the identification and solution of problems at an early stage.</p> <p>The new version of the document will be approved and accepted for execution at the enterprise in 2010.</p>	<p><u>Conclusion</u> on <u>Response</u></p> <p>This FAR is closed based on the proper addition made to the 1st MR.</p>
<p>FAR 04. There is no objective evidence that electronic databases and calculation spreadsheets are protected.</p>	<p>FPV E.5</p>	<p>Procedures on protection of electronic databases are clarified in the document “Monitoring procedures of GHG emission reductions under the JI project “Wood Waste to Energy in Severoonezhsk” approved by the Director of Separate</p>	



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		<p>subdivision “North-Western” of OJSC “Mezhregionenergogas” on 15.09.2009.</p> <p>Electronic databases and calculation spreadsheets are kept in the computer of Chief power engineer of the boiler house. To provide the protection of this data it is copied to a hard disk each week and besides it is sent by e-mail to the office of OJSC “Mezhregionenergogas” in Arkhangelsk and CCGS LLC in Arkhangelsk each month where this data is also kept in computer database.</p> <p>Further additional check of protection of electronic databases will be performed within the frame of internal verifications. See the answer to FAR 03.</p>	
<p>FAR 05: Records of the on-site assessment reports should be annexed to monitoring reports to assure project performance.</p>	<p>FPV Table 2, VII</p>	<p>This will be taken into account in the next monitoring reports.</p>	<p>It is accepted. FAR is pending.</p>

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APPENDIX D: VERIFICATION TEAM CV

George Klenov, Professor, Doctor of Science (engineer electromechanic, phisicist)

Lead Verifier

Bureau Veritas Certification Rus - Lead Auditor, Lead Tutor, Lead Verifier

He has over 30 years of experience in Low Frequency Electromagnetic Fields of ocean, atmosphere and ships R&D, engineering, and management, environmental science. He worked in Krylov's Research Centre, Saint-Petersburg. At the same time he worked for 15 years as professor of physics at the Marine Technical University. He has published two books, more then one hundred papers in the different scientific journals. Now he is a Lead auditor of Bureau Veritas Certification for Quality Management Systems, Environmental Management System, Occupational Health and Safety Management System. He performed over 400 audits since 1998. Also he is a Lead Tutor of the IRCA registered ISO 9001 QMS Lead Auditor Training Course. He is an Assuror of Social Reports. He has undergone intensive training on Clean Development Mechanism /Joint Implementation in September 2008, Istanbul and March 2009, Moscow and was/is involved in the determination of over 10 JI projects.

Leonid Yaskin, PhD (thermal engineering)

Internal Technical Reviewer

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 Krzhizhanovsky 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 has 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 Joint Implementation and was/is involved in the determination of over 60 JI projects.