DETERMINATION REPORT

CJSC" AIR LIQUIDE SEVERSTAL"

DETERMINATION OF THE
"Construction of new Air Separation Plant by Air Liquide - Severstal, Russia"

BUREAU VERITAS CERTIFICATION

Bureau Veritas Certification
Holding SAS

REPORT NO. RUSSIA/0044-2/2010, V.2

Determination Report on JI project
'Construction of new Air Separation Plant by Air Liquide - Severstal, Russia"

Date of first issue:	Organizational unit:
01/03/2010	Bureau Veritas Certification Holding SAS
Client:	**Client ref.:**
CJSC" Air Liquide Severstal"	Mr A.Cottereau

Summary:

Bureau Veritas Certification was commissioned by CJSC "Air Liquide Severstal" (ALS) to make the determination of the project "Construction of new Air Separation Plant by Air Liquide - Severstal, Russia" on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI guidelines and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria. The owner of the project is CJSC" Air Liquide Severstal". GreenStream Network Plc being PDD developer coordinated the project and the determination process on behalf of the project owner.

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

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

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

Report No.:	Subject Group:
RUSSIA/0044-2/2010	JI

Project title:
"Construction of new Air Separation Plant by Air Liquide - Severstal, Russia"

Work carried out by:
Leonid Yaskin – Lead Verifier

Work verified by:
Ivan Sokolov - Internal Technical Reviewer

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Abbreviations

AIE	Accredited Independent Entity
BLS	Baseline Study
BVC	Bureau Veritas Certification
CAR	Corrective Action Request
CHP	Combine Heat and Power Plants
CJSC	Closed Joint Stock Company
CO_2	Carbon Dioxide
DDR	Draft Determination Report
DR	Document Review
EIA	Environmental Impact Assessment
ERU	Emission Reduction Unit
GHG	Greenhouse House Gas(es)
I	Interview
IETA	International Emissions Trading Association
IPCC	Intergovernmental Panel on Climate Change
IRCA	International Register of Certified Aiditors
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
JSC	Joint Stock Company
MoV	Means of Verification
MP	Monitoring Plan
NCSF	National Carbon Sequestration Foundation
PCF	Prototype Carbon Fund (World Bank Carbon Finance Unit)
PDD	Project Design Document
PP	Project Participant
RF	Russian Federation
SCF	Stiching Carbon Finance
tCO2e	Tonnes CO2 equivalent
TEZ	Russian abbreviation for Combined Heat and Power Plant
UNFCCC	United Nations Framework Convention for Climate Change

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1 INTRODUCTION

CJSC" Air Liquide Severstal" (hereafter called ALS) has commissioned Bureau Veritas Certification to determine its JI project "Construction of new Air Separation Plant by Air Liquide - Severstal, Russia" (hereafter called "the project") located in Cherepovets city, Vologda Region, Russian Federation. GreenStream Network Plc being PDD developer coordinated the project and the determination process on behalf of the project owner.

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

1.1 Objective

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

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

1.2 Scope

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

The determination is not meant to provide any consulting towards CJSC" Air Liquide Severstal" and GreenStream Network Plc. However, stated requests for corrective actions may have provided input for improvement of the project design.

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

Purpose of the Project:

The company CJSC Air Liquide Severstal (ALS) commissioned, in December 2007 a state-of-the-art cryogenic air separation plant on the premises of the Severstal steel production complex in Cherepovets in the Vologda Region of Russia. The plant's purpose is to produce technical gases, especially high pressure oxygen and nitrogen, and deliver them to the steel plant. The facility has a maximum design capacity of 90,000 Sm^3/hr of high pressure purified oxygen. It can also produce other gases, such as high-pressure nitrogen (30,000 Sm^3/hr), low-pressure nitrogen (30,000 Sm^3/hr) and argon (1,470 Sm^3/hr).

Project Company:

ALS is a Joint Venture between Air Liquide (75%) and OAO Severstal Steel Works (Severstal) (25%) with the special purpose to construct and operate the air separation plant.ALS is also entitled to sell carbon credits generated by its operation

Air Liquide supplies oxygen, nitrogen, hydrogen and many other gases to a diverse set of industries (steel, oil refining, chemicals, electronics, pulp and paper, metallurgy, food-processing, glass, aerospace and healthcare). The Company also provides a wide variety of services that range from managing all gas-related operations at customer sites and finding new energy solutions for manufacturers, to providing healthcare services for treating patients at home.

Severstal is Russia's largest steel company in terms of consolidated revenue and third largest in terms of domestic steel production. The company is operating as a vertically integrated full-production-cycle steel mill; it has secure sources of raw materials and is conveniently located on a juncture of railway and water transportation routes facilitating delivery to its domestic and export customers. In addition to its domestic operations, Severstal has acquired a major Italian steel company (Lucchini) and a major U.S. steel company (Rouge Steel).

Air Liquide has provided the air separation technology for the facility. Air Liquide also provides the management and technical staff for the JV team in order to transfer the necessary technology and provide support in its implementation. Severstal provides the land and supplies utilities, such as compressed air, steam and water. Severstal also provides its power distribution network to deliver electricity from the public grid to the ALS facility. Finally, Severstal purchases the vast majority of the gases produced by ALS under a 15-year gas supply contract.

Situation existing prior to the starting date of the project;

Before 2005 OAO Severstal Steel Works operated ten Russian-made low-pressure cryogenic air separation units on the premises of its steel production complex in Cherepovets. The units apply a low-pressure air separation process where the separated oxygen and nitrogen is compressed afterwards in dedicated product compressors.

Baseline Scenario:
In the absence of the project the most plausible scenario would have been the construction of additional Russian-made low-pressure cryogenic air separation units with a combined capacity of 90,000 Sm^3/hr. They would most likely have been installed on the premises (or in the immediate vicinity) of the steel production complex in Cherepovets. The facility would have used a low-pressure air separation process. It would have been provided with compressed air from a number of main air compressors, and the separated low-pressure oxygen and nitrogen would have been further compressed by product compressors.

Project Scenario
The air separation facility constructed and operated by ALS is a greenfield state-of-the-art facility that applies internal compression via a pumping cycle. As a result, the facility directly produces high-pressure oxygen and high-pressure nitrogen and does not need any further product compressors. The facility includes two main air compressors and a booster air compressor, but the JV also purchases compressed air as well as steam.

The ALS facility provides additional capacity to produce 90,000 Sm^3/hr of high-pressure oxygen plus some other gases, such as high-pressure nitrogen (30,000 Sm^3/hr) and argon. The facility is almost 30% more energy-efficient than the baseline alternative. Instead of compressing the separated gases with dedicated product compressors, the ALS facility liquefies the separated gases and uses pumps to increase the pressure of the liquid products before they are vaporized again and delivered as high-pressure gases to the customer. The energy efficiency gains are achieved because pumping liquids requires less power than compressing gases using standards Russian product compressors. The implementation of the project saves approximately 19 MW of electricity and some steam per year compared with the baseline. Estimated emission reductions are approx. 100,000 tonnes of CO_2e per year and more than 500,000 tonnes during the Kyoto period (2008-2012).

History of the Project
The ALS Joint Venture was registered on August 31, 2005. The loan agreement for the project with the European Bank for Reconstruction and Development (EBRD) was signed in December 2005. Trial production was launched in September 2007, the overall commissioning phase lasted from May 2007 to November 2007, and the project was fully completed in December 2007. The facility has been operating without any major technical problems since. The project's potential to generate CO_2 emission reductions was considered and estimated at an early stage of the decision-making process. The emission reduction potential was included in the EBRD Board Review Document as a monitoring benchmark for the investment loan. The host country letter of approval is expected after completion of the determination process.

1.4 Determination team

The determination team consists of the following personnel:

Leonid Yaskin
Bureau Veritas Certification – Team Leader, Lead Verifier

Ivan Sokolov
Bureau Veritas Certification – Internal Technical Reviewer

2. METHODOLOGY

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

The determination consisted of the following three phases:

i) desk review of the project design document and the baseline and monitoring plan;
ii) project site visit and interviews with project owner and PDD developer on 09/12/2009;
iii) resolution of outstanding issues with GreenStream Network Plc (ref. to Appendix A Table 5 with CAR's and CL's) and the issuance of the determination report and opinion.

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

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

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

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

The completed determination protocol is enclosed in Appendix A to this report. It consists of four tables. Table 3 for "Baseline and Monitoring Methodologies" is omitted because the project participants established their own baseline and monitoring approach that is in accordance with appendix B of the JI Guidelines and because the questions regarding the used approach are presented in Table 2.

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"Construction of new Air Separation Plant by Air Liquide - Severstal, Russia"

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

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

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

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

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

Figure 1 Determination protocol tables

2.1 Review of Documents

Air Liquide Severstal (ALS) provided Bureau Veritas Certification (BVC) on 10/11/2009 the Project Design Document (PDD) Version 1 dated 09/11/2009 together with supporting documentation including calculation of GHG emission and investment analysis.

The completeness check made by BVC revealed some deviations of the PDD from the JISC format. Therefore, ALS was requested to remake the PDD in conformity to JI PPD Form. BVC received the finally remade PDD Version 2 dated 26/11/2009. This version of PDD was made publicly available for public comments on UNFCCC JI site from 2 to 31 December 2009.

PDD Version 2 and supporting documentation as well as additional background documents related to the project design, baseline, and monitoring plan, such as Kyoto Protocol, host Country laws and regulations, JI guidelines, JISC Guidance on criteria for baseline setting and monitoring, and Guidelines for users of the JI PDD Form were reviewed.

The final deliverable of the document review was the Draft Determination Report (DDR) Version 4 dated 03/12/2009 with 13 CAR's and 1 CL.

PDD developer GreenStream issued iteratively five batches of responses to BVC requests which were eventually embedded in the amended PDD Version 7 dated 02/03/2010.

The determination findings presented in this Determination Report Version 1 and Appendix A relate to the project as described in the PDD Version 1 (initial) and Version 7 (final).

2.2 Follow-up Interviews

Bureau Veritas Certification verifier Leonid Yaskin conducted on 09/12/2009 a site visit to the project Cryogenic air separation plant on the premises of the Severstal steel production complex in Cherepovets in the Vologda Region and had interviews with ALS, GreenStream and Severstal Steel Works, which confirmed the selected information and clarified some issues identified in the document review. The interview topics are listed in Table 7.

Table 7 Interview topics

Date/ Site/ Interviewed organization	Interview topics
09/12/2009 Cherepovets city Sites: ALS plant Severstal plant Organisations: ALS GreenStream Severstal Steel Works	1. History of the project. 2. Starting date of the project (the date on which the implementation or construction or real action of the project has begun). 3. Substantiation of the operational lifetime of the project. 4. Substantiation that the project could not occur as the baseline scenario. 5. Distinctions of the project activity from similar activities. 6. Technical design document. 7. Verification of specific consumption coefficients for project and baseline scenario (the latter in Severstal Steel Works); 8. IRR of the project as per the feasibility study and technical design in comparison with investment analysis in PDD. Capital costs and breakdown of operational costs of the project. 9. Operational and management structure. Responsibilities, roles, authorities (for verification stage). 10. Expertise of Environmental Impact Assessment Documentation. 11. Permits for air emissions at the construction and exploitation phases. 12. Public hearings, if any. 13. Training programme for plant operators. 14. Visitation to the Plant. Inspection of monitoring equipment (for Verification stage). 15. Pending issues.

2.3 Resolution of Clarification and Corrective Action Requests

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

Corrective Actions Requests (CAR) are issued, where:

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

Clarification Requests (CL) are issued where:

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

DDR Version 4 summarising Bureau Veritas Certification's findings of the desk document review reported 13 CAR's and 1 CL. The amendments made by GreenStream to the PDD and summarised in PDD Version 6 dated 24/02/2010 satisfactorily addressed the verifier's requests. As a result, the Determination Report Version 1 was issued on 28/02/2010 and sent, together with the final PDD Version 6, to BVC Internal Technical Reviewer (ITR) for review. Following the positive conclusion of ITR, ALS provided PDD Version 7 dated 02/03/10 with minor additions to response on CAR 05. To reflect this, the present Determination Report Version 2 dated 03/03/2010 was issued.

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

3 DETERMINATION FINDINGS

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

i) the findings from the desk review of the original project design document and the findings from interviews during the site visit are summarized. A more detailed record of these findings can be found in the Appendix A Determination Protocol.
ii) where Bureau Veritas Certification had identified issues that needed clarification or that represented a risk to the fulfillment of the determination protocol criteria or the project objectives, a Clarification or Corrective Action Request, respectively, has been issued. The Clarification and Corrective Action Requests are stated in the in Appendix A Determination Protocol.
iii) where Clarification and Corrective Action Requests have been issued, the response by the project participants to resolve these requests is summarized in Appendix A Table 5.
iv) the conclusions of the determination are presented consecutively.

3.1 Project Design

The purpose of the project is to construct and operate the air separation plant developed by Air Liquide. The plant implements a cryogenic air separation process with an internal liquid pumping cycle for production of compressed technical gases, especially high pressure oxygen and nitrogen delivered to the Severstal Steel Works.

The project plant is the greenfield state-of-the-art facility which is almost 30% more energy-efficient than the common practice alternative. Instead of compressing the separated gases as in the baseline scenario, the ALS facility uses liquid pumps to increase the pressure of the liquid products before they are vaporized and delivered as high-pressure gases to the customer. The energy efficiency gains are achieved due to pumping liquids which requires less power than compressing gases using standards Russian product compressors. The implementation of the project saves approximately 19 MW of electricity and some steam per year as compared with the baseline.

The project plant was commissioned by CJSC Air Liquide-Severstal in December 2007. The facility has a maximum design capacity of 90,000 Sm3/hr of high pressure purified oxygen. It can also produce other gases, such as high-pressure nitrogen (30,000 Sm3/hr), low-pressure nitrogen (30,000 Sm3/hr) and argon (1,470 Sm3/hr). The project technology is unlikely to be substituted by other or more efficient technologies within the project period.

The project is expected to provide the reduction of GHG emissions by 514,726 tCO2e over the crediting period 2008-2012.

The identified areas of concern as to Project Design, PP's response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR 01). The project has no approvals by the Parties involved, therefore CAR 01 remains pending.

The identified area of concern as to Project Duration / Crediting Period, PP's response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR 09, CAR 10).

3.2 Baseline and Additionality

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

Three alternative scenarios were considered:

- Alternative 1. Project: The proposed project activity without being registered as a JI project;
- Alternative 2. Low-Pressure Air Separation: Construction of low-pressure cryogenic air separation plants on the premises (or in the immediate vicinity) of the Severstal Steel

Works. The plant would be provided with compressed air from air compressors and the separated low-pressure oxygen and nitrogen would be further compressed by product compressors. The low-pressure air separation technology was clearly the prevailing practice in Russia in 2005.

- Alternative 3. Liquid Oxygen: Utilization of off-site air separation capacity to produce liquid oxygen and liquid nitrogen. Transport them to the site where they are used in the production process.

After the assessment and screening of the Alternatives, only Alternative 2 was left as reasonable and feasible. Alternative 1 was excluded as financially not attractive based on the investment analysis made in PDD Section B.2. Alternative 3 was excluded as not plausible. As a result, it was concluded that only Alternative 2 is realistic and credible and therefore it was selected as the plausible scenario thus representing the baseline.

Technological data and parameters that define the baseline were determined during the visits to the sites of ALS plant and Severstal Steel Works plant. Data for grid emission factor were determined in the course of resolution of CAR 05.

A JI specific approach is chosen for justification of additionality. In accordance with Annex 1 of the JISC Guidance on criteria for baseline setting and monitoring (Version 02), additionality is proven by providing traceable and transparent information showing that (i) the baseline was identified on the basis of conservative assumptions, (ii) that the project scenario is not part of the identified baseline scenario and (iii) that the project will lead to reductions of anthropogenic emissions by sources of GHGs. In particular:

- (i) The conservativeness of the baseline is justified in Section B.1.
- (ii) In Section B.2, it is demonstrated that the project without JI registration is not a plausible baseline scenario since it does not meet the benchmark for profitability. This is shown by an investment analysis that conforms to the CDM Executive Board's Guidance on the Assessment of the Investment Analysis (Version 3). A supporting spreadsheet containing all assumptions and calculations was made available to the verifier. The results of the investment analysis are reinforced by a Barrier Analysis, which shows that the project plant is a first-of-a-kind facility in Russia. Common Practice analysis demonstrates that at the time of at the time of decision-making there were no similar project activities operational in Russia.
- (iii) In section E and the supporting documentation provided to the verifier, it is demonstrated that the project reduces GHG emissions by approx. 100,000 t CO_2e per year. Electricity is by far the most relevant energy input, as it is either directly consumed or indirectly embodied in the consumption of compressed air. At the targeted output rate of 72,000 Sm^3 / hr the ALS facility consumes approx. 48.7 MW of grid-based electricity. Under the baseline 67.4 MW would be consumed. The power savings of 18.7 MW are responsible for the bulk of the emission reductions generated by the project. A supporting spreadsheet containing all assumptions and the relevant data sources for the emission reduction calculation has been made available to the verifier.

The identified areas of concern as to Baseline and Additionality, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 02, CAR 03, CAR 04, CAR 05, CAR 06, CAR 07, CAR 08).

3.3 Monitoring Plan

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

All categories of data to be collected in order to monitor GHG emission reductions from the project (Option 1) are described in required details.

The project activity leads to greenhouse gas emissions from the following emission sources:
- indirect consumption of grid-based electricity for the production of compressed air that is consumed by the ALS facility;
- consumption of grid-based electricity for the ALS facility;
- indirect fuel combustion for the production of steam that is consumed by the ALS facility.

In the absence of the project (baseline scenario), low-pressure air separation facilities and dedicated oxygen and nitrogen compressors would have been used. The project activity helps to avoid greenhouse gas emissions from the following baseline emission sources:
- indirect consumption of grid-based electricity for the production of compressed air that is consumed by the low-pressure air separation facility;
- consumption of grid-based electricity by the low-pressure air separation facilities;
- indirect fuel combustion for the production of steam that is consumed by the low-pressure air separation facilities;
- consumption of grid-based electricity by the oxygen compressors;
- consumption of grid-based electricity by the nitrogen compressors.

All emission sources identified above have been included in the monitoring plan. The monitoring approach explicitly and clearly distinguishes:

a) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination regarding the PDD; and

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

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

The identified areas of concern as to Baseline and Additionality, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 11, CAR 12).

3.4 Calculation of GHG Emissions

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

The calculated amount of project emission reduction over the crediting period 2008 - 2012 is 514,726 tCO2e. The annual average emission reduction is 102,945 tCO2e.

The identified area of concern as to Calculation of GHG Emissions, PP's response and BV Certification's conclusion are described in Appendix A Table 5 (refer to CAR 13).

3.5 Environmental Impacts

In compliance with the Russian Federation legislation and the Construction Norms and Rules, ALS has obtained the required environmental and sanitary-epidemiological permits from the regulatory agencies of the Vologda Region and the City of Cherepovets including. The project environmental documents are in compliance with the state environmental and sanitary-epidemiological standards. The State Ecological Examination of the project did not identify any non-compliance issues with regards to the Russian Federation legislation and normative documents relating to the environmental protection. The project complies with all environmental laws, and emissions are well within legal limits.

No areas of concern as to Environmental Impacts were identified.

3.6 Comments by Local Stakeholders

No comments of concern were received from local stakeholders.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

In accordance with the Section E "Verification procedure under the Article 6 Supervisory Committee" of the JI guidelines, Bureau Veritas Certification published the PDD Version 1 on UNFCCC JI site on 01/12/2009 and invited comments within 31/12/2009 by Parties, stakeholders and UNFCCC accredited observers. No comments have been received.

5 DETERMINATION OPINION

Bureau Veritas Certification has been engaged by CJSC" Air Liquide Severstal" to perform a determination of the JI project "Construction of new Air Separation Plant by Air Liquide - Severstal, Russia" owned by CJSC" Air Liquide Severstal". The determination was performed on the basis of UNFCCC criteria for JI projects, in particular the verification procedures under the JI Supervisory Committee, as well as host country criteria and the criteria given to provide for consistent project operations, monitoring and reporting.

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"Construction of new Air Separation Plant by Air Liquide - Severstal, Russia"

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

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

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

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

The determination revealed two pending issues related to the current determination stage of the project: the issue of the written approval of the project and the authorization of the project participant by the host Party (Russian Federation). If the written approval and the authorization by the host Party are awarded, it is our opinion that the project as described in the Project Design Document, Version 7 dated 1 March 2010 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

Bureau Veritas Certification thus recommends this project for the formal approval by the RF Ministry for Economic Development as the JI project in accordance with the RF Government Decree # 843 dated 28/10/2009 and the Order of the RF Ministry for Economic Development # 485 dated 23/11/2009.

Bureau Veritas Certification Holding SAS
01 March 2010

Leonid Yaskin - Lead Verifier

Bureau Veritas Certification Holding SAS

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Reviewed
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Date: 04/03/2010

6 REFERENCES

Reviewed document or type of Information available before the site visit

1	PDD ""Construction of new Air Separation Plant by Air Liquide – Severstal, Russia". Version 1, dated 09/11/2009. The documents submitted on 10/11/2009 together with PDD: - Physical Completion Notice - JV Charter - Minutes of ALS Board Meeting July 23, 2009 - Gas Supply Contract - ALS State Registration - EBRD Board Review Memorandum - Certificates of State Registration of the Property (plot 679, 680) - Cadastral Plans (plot 679, 680) - Detailed Process Flow Diagram - Cryogenmash Investor Prospectus - Certificates of Calibration for gas and compressed air flow meters - Environmental Impact Assessment - Expert Conclusion on Sanitary-Epidemiological Issues - Environmental Section of Working Project Design Document - Declaration on Industrial Safety - Registration of Industrial Safety Declaration - Minutes of the Meeting on Public Consultation - ALS PDD V4_Supporting Spreadsheet #1 Emission Reduction Calculation 5DEC2009 - ALS Supporting Spreadsheet #2 Investment Analysis 2NOV2009 - ALS Supporting Spreadsheet #3 List of Supporting Documents 9NOV2009
2	Guidelines for Users of the Joint Implementation Project Design Document Form/Version 04, JISC.
3	Guidance on criteria for baseline setting and monitoring/ Version 02, JISC
4	Operational Guidelines for Project Design Documents of Joint Implementation Projects, Volume 1: General Guidelines, Version 2.3, Ministry of Economic Affairs of the Netherlands, 2004.
5	Tool for the demonstration and assessment of additionality, Version 05.2. CDM – Executive Board.
6	RF Urban Development Code N 190-ФЗ (Federal Law).
7	"Regulation of realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change". Approved by the RF Government Decree # 843 of 28/10/2009 "About measures on realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change".

Reviewed document or type of Information obtained at the site visit

8	Severstal Steel Works historic operational data for Air Separation Plant.
9	ALS plant operational data for 2008.

Persons interviewed:

1	Alain Cottereau - AirLiquide Russia, Director, Large Industry
2	Alexei Shuvalov, AirLiquide Severstal CJSC General Director
3	Jurgen Wiesmann - GreenStream Network plc, Consultant
4	Elena Depova - GreenStream Network plc, Consultant

APPENDIX A: COMPANY JI PROJECT DETERMINATION PROTOCOL

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

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
1. The project shall have the approval of the Parties involved.	Kyoto Protocol Article 6.1 (a)	CAR 01. The project has no approval of the Host Party. Verifiers' Note: JISC Glossary of JI terms/Version 01 defines the following: a) At least the written project approval(s) by the host Party(ies) should be provided to the AIE and made available to the secretariat by the AIE when submitting the determination report regarding the PDD for publication in accordance with paragraph 34 of the JI guidelines; (b) At least one written project approval by a Party involved in the JI project, other than the host Party(ies), should be pro-	Table 2, Section A.5.

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		vided to the AIE and made available to the secretariat by the AIE when submitting the first verification report for publication in accordance with paragraph 38 of the JI guidelines, at the latest.	
2. Emission reductions, or an enhancement of removal by sinks, shall be additional to any that would otherwise occur.	Kyoto Protocol Article 6.1 (b)	OK	Table 2, Section B.2
3. The sponsor Party shall not acquire emission reduction units if it is not in compliance with its obligations under Articles 5 & 7.	Kyoto Protocol Article 6.1 (c)	OK	N/A
4. The acquisition of emission reduction units shall be supplemental to domestic actions for the purpose of meeting commitments under Article 3.	Kyoto Protocol Article 6.1 (d)	OK	N/A
5. Parties participating in JI shall designate national focal points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects.	Marrakech Accords, JI Modalities, §20	OK	The Russian national focal point is the Ministry of Economic Development. The Russian national guidelines and procedures are established by the "Regulation of realization of Article 6 of Kyoto Protocol to United Nation

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
			Framework Convention on Climate Change". Approved by the RF Government Decree # 843 of 28/10/2009 "About measures on realization of Article 6 of Kyoto Protocol to United Nation Framework Convention on Climate Change".
6. The host Party shall be a Party to the Kyoto Protocol.	Marrakech Accords, JI Modalities, §21(a)/24	OK	Russia has ratified the Kyoto Protocol by Federal Law N 128-ФЗ dated 04/11/04.
7. The host Party's assigned amount shall have been calculated and recorded in accordance with the modalities for the accounting of assigned amounts.	Marrakech Accords, JI Modalities, §21(b)/24	OK	The Russian Federation's assigned amount has been calculated and recorded In the 4th National Communication dated 12/10/06.
8. The host Party shall have in place a national registry in accordance with Article 7, paragraph 4.	Marrakech Accords, JI Modalities,	OK	Russian Federation has established the GHG Registry by the

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
	§21(d)/24		RF Government Decree N 215-p dated 20/02/06.
9. Project participants shall submit to the independent entity a project design document that contains all information needed for the determination.	Marrakech Accords, JI Modalities, §31	OK	Air Liquide- Severstal has submitted on 10/11/2009 the PDD Version 1 dared 09/11/2009 to Bureau Veritas Certification, which contains all information needed for determination.
10. The project design document shall be made publicly available and Parties, stakeholders and UNFCCC accredited observers shall be invited to, within 30 days, provide comments.	Marrakech Accords, JI Modalities, §32	OK	PDD Version 2 dated 26/11/2009 was made publicly available for comments on Bureau Veritas Rus site from 02 December 2009 till 31 December 2009.
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, in accordance with procedures as determined by the host Party shall be submitted, and, if those impacts are considered significant by the project participants or the host Party, an environmental impact assessment in accordance with procedures as required by the host Party shall be car-	Marrakech Accords, JI Modalities, §33(d)	OK	Table 2, Section F

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
ried out.			
12. The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B.2
13. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B.2
14. The baseline methodology shall exclude to earn ERUs for decreases in activity levels outside the project activity or due to force majeure.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B.2
15. The project shall have an appropriate monitoring plan.	Marrakech Accords, JI Modalities, §33(c)	OK	Table 2, Section D
16. A project participant may be: (a) A Party involved in the JI project; or (b) A legal entity authorized by a Party involved to participate in the JI project.	JISC "Modalities of communication of Project Participants with the JISC" Version 01, Clause A.3	The Russian project participant will be authorised by the Host Party through the issuance of the approval for the project. Conclusion is pending a follow-up on CAR 01. Refer to Verifiers' Note in 1 above.	Table 2, Section A

Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A. General Description of the project					
A.1 Title of the project					
A.1.1. Is the title of the project presented?	1,2	DR	The title of the project is: "Construction of new Air Separation Plant by Air Liquide – Severstal, Russia". The indicated Sectoral Scope is (5) Chemical industry.		OK
A.1.2. Is the current version number of the document presented?	1,2	DR	The PDD Version 2.		OK
A.1.3. Is the date when the document was completed presented?	1,2	DR	PDD Version 1 dated 26/11/2009.		OK

A.2. Description of the project					
A.2.1. Is the purpose of the project included?	1,2	DR	Purpose of the project is defined in PDD Section A.2 as follows. The company CJSC Air Liquide-Severstal (ALS) commissioned, in December 2007, a state-of-the-art cryogenic air separation plant on the premises of the Severstal steel production complex in Cherepovets in the Vologda Region of Russia. The plant's purpose is to produce technical gases, especially high pressure oxygen and nitrogen, and deliver them to the steel plant. The facility has a maximum design capacity of 90,000 Sm3/hr of high pressure purified oxygen. It can also produce other gases, such as high-pressure nitrogen (30,000 Sm3/hr), low-pressure nitrogen (30,000 Sm3/hr) and argon (1,470 Sm3/hr). As required in [2], a summarizing explanation is included as of: - situation existing prior to the starting date of the project, - the baseline scenario, - the project scenario, and - the history of the project.		OK
A.2.2. Is it explained how the proposed project reduces greenhouse gas emissions?	1,2	DR	The air separation facility constructed and operated by ALS is a greenfield state-of-the-art facility that applies internal compression via a pumping cycle. The facility is almost 30% more energy-efficient than the baseline		OK

			alternative. Instead of compressing the separated gases with dedicated product compressors, as in the baseline scenario, the ALS facility liquefies the separated gases and uses liquid pumps to increase the pressure of the liquid products before they are vaporized again and delivered as high-pressure gases to the customer. The energy efficiency gains are achieved because pumping liquids requires less power than compressing gases using standards Russian product compressors. The implementation of the project saves approximately 19 MW of electricity and some steam per year compared with the baseline.		
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?	1,2	DR	Party A is the Russian Federation. Project participant from Party A is CJSC Air Liquide Severstal. Party B are presented by Netherlands, Spain, Switzerland. Corresponding project participant is Stiching Carbon Finance (SCF).		OK
A.3.2. The data of the project participants are presented in tabular format?	1,2	DR	The data is presented in the tabular format as per [2].		OK
A.3.3. Is contact information provided in Annex 1 of the PDD?	1,2	DR	The contact information about the project participant is provided in PDD Annex 1.		OK
A.3.4. Is it indicated, if it is the case, if the Party involved is a host Party?	1,2	DR	It is indicated that the Russian Federation is the host Party.		OK
A.4. Technical description of the project					

A.4.1. Location of the project activity					
A.4.1.1. Host Party(ies)	1,2	DR	The Russian Federation is indicated as the host Party in PDD Section A.4.1.1.		OK
A.4.1.2. Region/State/Province etc.	1,2	DR	Vologda region.		OK
A.4.1.3. City/Town/Community etc.	1,2	DR	The city of Cherepovets.		OK
A.4.1.4. Detail of the physical location, including information allowing the unique identification of the project. (This section should not exceed one page)	1,2	DR	The ALS plant has the GPS coordinates 59°07'39" North and 37°50'55" East. It is located at street. Ustyuzhenskaya, 97 in the City of Cherepovets in the Vologda Region of the Russian Federation.		OK
A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project					
A.4.2.1. Does the project design engineering reflect current good practices?	1,2	DR	The air separation facility constructed and operated by ALS is a greenfield state-of-the-art facility that applies internal compression via a pumping cycle. As a result, the facility directly produces high-pressure oxygen and high-pressure nitrogen and does not need any further product compressors. The facility includes two main air compressors and a booster air compressor, but the JV also purchases compressed air as well as steam. The implementation schedule [2] is provided by the information about the commissioning phase and the completion date in PDD Section A.2.		OK
A.4.2.2. Does the project use state of the art technology or	1,2	DR	The project is the state-of-the-art. It results in		OK

	would the technology result in a significantly better performance than any commonly used technologies in the host country?			a significantly better performance than any commonly used technologies in Russia.		
A.4.2.3.	Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1,2	DR	The project technology is unlikely to be substituted by other or more efficient technologies within the project period.		OK
A.4.2.4.	Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	1,2	DR	It is important that the facility, the Production Manager underwent an extensive training at Air Liquide facilities in Europe. Other operators were trained by Air Liquide start-up specialists during the commissioning phase and an experienced AL Plant Manager was appointed to supervise ALS technical operations. The ALS facility requires significant amounts of regular maintenance. For general maintenance ALS uses a number of subcontractors. Their list is provided in PDD Section B.2.		
A.4.2.5.	Does the project make provisions for meeting training and maintenance needs?	1,2	DR	Refer to A.4.2.4		OK
A.4.3.	Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances					
A.4.3.1.	Is it stated how anthropogenic GHG emission reductions are to be achieved? (This section should	1,2	DR	It is stated		

not exceed one page)			alternative due to three factors as follows : - The introduction of a high-pressure pumping cycle technology which replaces the compression of the separated oxygen and nitrogen. Instead of producing gaseous products (oxygen, nitrogen, argon) at low pressure and then compressing them with the dedicated Russian-made product compressors, the ALS facility creates pressure by pumping cryogenic liquid products before vaporization and delivery to the customer. The energy efficiency gains are achieved because pumping liquids requires much less power than compressing gases using low efficiency compressors technology. - An improved extraction ratio of oxygen from compressed air - The installation of more energy efficient air compressors that reduce the volume of compressed air that needs to be purchased. The use of the energy efficient solutions provides for the reduction of GHG emissions.		
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?	1,2	DR	The estimated GHG emission reduction is 500,401 tCO_2e over the crediting period 2008-2012. Refer to PDD Section A.4.3.1. Verifier's Note: The final recalculated GHG emission reduction is 514,726 tCO_2e over the crediting period 2008-2012. Refer to PDD Version 7 dated 02/03/10. Conclusion is pending a response to CAR 13.	Pending	OK

A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO2e?	1,2	DR	The estimated annual emission reduction is 100,080 tCO_2e. Refer to PDD Section A.4.3.1. Verifier's Note: The final recalculated annual GHG emission reduction is 102,945. Refer to PDD Version 7 dated 02/03/10. Conclusion is pending a response to CAR 13.	Pending	OK
A.4.3.4. Are the data from questions A.4.3.2 and A.4.3.3 above presented in tabular format?	1,2	DR	The data is presented in the tabular format. Refer to the Table in PDD Section A.4.3.1.		OK
A.5. Project approval by the Parties involved					
A.5.1. Are written project approvals by the Parties involved attached?	1,2	DR	Conclusion is pending a response to CAR 01.	Pending	
B. **Baseline** **B.1. Description and justification of the baseline chosen**					
B.1.1. Is the chosen baseline described?	1,2	DR	It is declared in PDD Section B.1 that in the absence of the project the most plausible scenario would have been the construction of additional Russian-made low-pressure cryogenic air separation units with a combined capacity of 90,000 Sm3/hr. The facilities would have been similar to the unit installed in 2004 on the Cherepovets site. They would most likely have been installed on the premises (or in the immediate vicinity) of the steel production complex in Cherepovets. The facility would have used a low-pressure air separation process. It would have been pro-	CAR 02 CAR 03	OK OK

			vided with compressed air from a number of main air compressors, and the separated low-pressure oxygen and nitrogen would have been further compressed by product compressors. **CAR 02.** As a JI specific approach is evidently used, a detailed theoretical description of the baseline in a complete and transparent manner as well as a justification in accordance with paragraph 23 through 29 of the "Guidance on criteria for baseline setting and monitoring" [3] is not provided. The key information and data used to establish the baseline (variables, parameters, data sources etc.) are not provided in the prescribed tabular form. Annex 2 (baseline information) contains a summary of the key elements in tabular form. **CAR 03.** The potential leakage of the project is not assessed nor is explained which of sources of leakage are to be calculated and which can be neglected [2].		
B.1.2. Is it justified the choice of the applicable baseline for the project category?	1,2,3	DR	**CAR 04.** It is not explicitly indicated which of the approaches regarding baseline setting, defined in the JISC's "Guidance on criteria for baseline setting and monitoring", is chosen. The baseline is not selected out of alternative plausible future scenarios as the most plausible scenario.	CAR 04	OK
B.1.3. Is it described how the methodology is applied	1,2	DR	Not applicable since CDM methodology is not		OK

in the context of the project?			applied.		
B.1.4. Are the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)?	1,2,4	DR	Basic assumptions of the baseline approach are presented in terms of two parameters in the tabular form in PDD Section D.1 (emission factor for steam production and grid emission factor) and do not encompass the full scope of assumptions (refer to CAR 02). **CAR 05.** Please justify the conservatism of using the Russia grid emission factor from the Operational Guidelines [4] for the conditions of Vologda region, which belongs to Regional Energy System "Center". Please make transparent the calculation of emission factor for steam production.	CAR 05	OK
B.1.5. Is all literature and sources clearly referenced?	1,2, 3	DR	Relevant literature and sources are referenced through the text of PDD. **CAR 06.** Quotations on page 12 from Kyoto Protocol Article 6 and Annex 1 to the JISC "Guidance on criteria for baseline setting and monitoring" [3] are inaccurate. Version of the Guidance is not indicated.	CAR 06	OK
B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project					
B.2.1. Is the proposed project activity additional?	1,2, 5	DR	It explicitly stated in Section B.1 *(rather than Section B.2 as per [2])* that the additionality is demonstrated trough steps 1-4 of the current Tool for the demonstration and assessment of additionality, Version 05.2 [5].	CAR 07	OK

			As Step 1, three alternatives to the project activity were identified out of which, after screening, two were left: the proposed project activity without JI registration and the low-pressure air separation (having been identified as the baseline in Section B.1). Both alternatives are consistent with mandatory law and regulations. As Step 2, a benchmark analysis of the project was conducted, in line with Guidance 15 in Annex to the addtionality Tool [5]. The spreadsheet with the analysis was made available to the verifiers. The analysis shows that the project IRR benchmark is lower than the threshold set according to official Methodological Recommendations. Sensitivity analysis confirms the conclusion that the proposed project activity is unlikely to be financially attractive (without the revenue from ERU sales). **CAR 07.** Present the investment analysis in a transparent manner and provide all the input data, so that a reader can reproduce the analysis and obtain the same results (refer to [5], Sub-step 2c, para 8). Provide evidence that input values used in the investment analysis (e.g. electricity cost, inflation) were valid and applicable at the time of the investment decision taken by the project participant. The verifiers compared the results of the in-		

			vestment analysis with those in the Working Project Design Document, Section Effectiveness of Investments. These are observed as commensurate. As Step 3a, barriers were identified that would prevent the implementation of the project activity. At the time when the investment decision was made there were no air separation plants in Russia of similar size (three times as much as compared with existing facilities). Besides, there were no facilities, which would use a high-pressure air separation technology with the internal pumping cycle. The fulfillment of special requirements to competence of plant operators and the need of regular maintenance of the uncommon equipment establish substantial technological barriers to smooth project implementation. A barrier due to prevailing practice as the proposed project activity is the "first of its kind" could have been added to the barrier analysis. As Step 3b, it is indicated that the identified barriers do not prevent the continuation of the prevailing practice of low-pressure air separation technology (baseline). The barriers analysis adds to the result of the investment analysis that the project is unlikely to be attractive on its own. The availability of carbon credit revenue helps to offset this technological risk.		

			As Step 4, a common practice analysis substantiated that by installing Air Liquide's state-of-the-art technology the JV went clearly beyond prevailing practice in Russia		
B.2.2. Is the baseline scenario described?	1,2	DR	The baseline scenario is described in PDD Section B.1. Conclusion is pending a response to CAR 02.	Pending	OK
B.2.3. Is the project scenario described?	1,2	DR	The project scenario is described in PDD Sections A.2, A.4.2. A.4.3 and Annex 3. Conclusion is pending a response to CAR 13 in PDD Section E	Pending	OK
B.2.4. Is an analysis showing why the emissions in the baseline scenario would likely exceed the emissions in the project scenario included?	1,2	DR	A general analysis is included in Section A.4.3.		OK
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?	1,2	DR	According to PDD Section B.2, the project activity itself is not a likely baseline scenario due to significant barriers. Conclusion is pending a response to CAR 04	Pending	OK
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?	1,2	DR	**CL 01.** Please clarify if national policies and circumstances relevant to energy efficiency are relevant to the baseline of the proposed project activity.	CL 01	OK
B.3. Description of how the definition of the project boundary is applied to the project activity					
B.3.1. Are the project's spatial (geographical) boundaries clearly defined?	1,2,3	DR	The baseline boundary is in line with the provisions of paragraph 11 of the JISC Guidance on criteria for baseline setting and monitoring		OK

			[3]. Refer to Figure 3 Baseline Boundary, Figure 4 Project Boundary and Table with GHG sources in PDD Section B3.		
B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline					
B.4.1. Is the date of the baseline setting presented (in DD/MM/YYYY)?	1,2	DR	The date of the baseline setting is November 9, 2009. **CAR 08.** Please present the date of the baseline setting in DD/MM/YYYY.	CAR 08	OK
B.4.2. Is the contact information provided?	1,2	DR	GreenStream Network Plc Kluuvikatu 3 FI-00100 Helsinki FINLAND Tel: +358 20 743 7800 Fax: 358 20 743 7810 www.greenstream.net		OK
B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	It is indicated that GreenStream Network is not a project participant.		OK
C. Duration of the project and crediting period **C.1. Starting date of the project**					
C.1.1. Is the project's starting date clearly defined?	1,2	DR	**CAR 09.** The project's starting date is not defined [2].	CAR 09	OK
C.2. Expected operational lifetime of the project					
C.2.1. Is the project's operational lifetime clearly defined in years and months?	1,2	DR	The operational lifetime of the project is clearly defined as 15 years or 180 months.		OK

C.3. Length of the crediting period					
C.3.1. Is the length of the crediting period specified in years and months?	1,2	DR	It is specified as 2008-2012. **CAR 10.** Please specify the length of the crediting period is years and months and indicate the starting date of the crediting period [2].	CAR 10	OK
***D.* Monitoring Plan** **D.1. Description of monitoring plan chosen**					
D.1.1. Is the monitoring plan defined?	1,2	DR	In this project, a JI specific approach regarding monitoring is used. Option 1 – Monitoring of the emissions in the project scenario and baseline scenario – is chosen. Data to be collected is defined in PDD Sections D.1.1.1 and D.1.1.3. Annex 2 and Annex 3 provide detailed descriptions of all key elements of the monitoring plan.		OK
D.1.2. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario.	1,2	DR	Please refer to D.1.1.		OK
D.1.3. Data to be collected in order to monitor emissions from the project, and how these data will be archived.	1,2,	DR	Data to be collected in order to monitor emissions from the project are defined in PDD Section D.1.1.1. The parameters to be measured are: P1 - monthly electricity consumption; P3 - monthly consumption of compressed air; P5 – monthly steam consumptions.		OK

			The values of the parameters P1, P3, P5 for 2008 are given in Annex 3. The parameters to be estimated are: P2 – specific electricity consumption for compressed air; P6 – carbon emission factor for steam generated by natural gas consumption; P7 – carbon emission factor for grid-based electricity. Data are archived electronically and on paper.		
D.1.4. Description of the Formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO_2 equivalent).	1,2	DR	Formulae for estimation of project emissions from each source (electricity consumption by the plant, electricity consumption for consumed compressed air, natural gas consumption for steam production) are presented in PDD Section D.1.1.2. The formulae are numbered.		OK
D.1.5. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived.	1,2	DR	Data to be collected in order to monitor baseline of GHG emissions are defined in PDD Section D.1.1.3. The parameters to be measured are: B1 - monthly delivery of high-pressure oxygen from ALS cold box; B2 - monthly delivery of high pressure oxygen from ALS liquid oxygen storage tank; consumption of compressed air; B4 – monthly delivery of high-pressure nitrogen from ALS plant. The values of the parameters B1, B2, B4 for		OK

			2008 are given in Annex 3. The parameters to be estimated are: B5 – specific steam consumption by the reference plant; B6 – specific compressed air consumption by the reference plant; B7 – specific electricity consumption for compressed air; B8 - specific electricity consumption of the reference plant; B9 - specific electricity consumption by oxygen compressors; B10 - specific electricity consumption by nitrogen compressors; B11 - carbon emission factor for steam generated by natural gas consumption; B12 - carbon emission factor for grid-based electricity. The values of the parameters B5-B12 are given in Annex 2. Values of B5-B10 are based on 2005-2007 averaged historical data for the reference facility Data are archived electronically and on paper.		
D.1.6. Description of the Formulae used to estimate baseline emissions (for each gas, source etc, emissions in units of CO_2 equivalent).	1,2	DR	Formulae for estimation of project emissions from each source (electricity consumption by the plant, electricity consumption for consumed compressed air, natural gas consumption for steam production, electricity consumption by oxygen and nitrogen com-		OK

			pressors) are presented in PDD Section D.1.1.4. The formulae are numbered.		
D.1.7. Option 2 – Direct monitoring of emissions reductions from the project (values should be consistent with those in section E)	1,2	DR	Not applicable.		OK
D.1.8. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived.	1,2	DR	Not applicable.		OK
D.1.9. Description of the Formulae used to calculate emission reductions from the project (for each gas, source etc; emissions/emission reductions in units of CO_2 equivalent).	1,2	DR	Not applicable.		OK
D.1.10. If applicable, please describe the data and information that will be collected in order to monitor leakage effects of the project.	1,2	DR	Conclusion is pending a response to CAR 03.	Pending	OK
D.1.11.Description of the Formulae used to estimate leakage (for each gas, source etc,; emissions in units of CO_2 equivalent).	1,2	DR	Refer to D.1.10	Pending	OK
D.1.12. Description of the Formulae used to estimate emission reductions for the project (for each gas, source etc.; emissions in units of CO_2 equivalent).	1,2	DR	This is the straightforward Formula (D.3) ER = BE – PE – LE. Refer to PDD Section D.1.4.		OK
D.1.13. Is information on the collection and archiving of information on the environmental impacts of the project provided?	1,2	DR	**CAR 11.** Please provide information on the collection and archiving of information on the environmental impacts of the project.	CAR 11	OK
D.1.14. Is reference to the relevant host Party regulation(s) provided?	1,2	DR	**CAR 12.** Reference to relevant Russian regulations is not provided.	CAR 12	OK
D.1.15. If not applicable, is it stated so?	1,2	DR	Conclusion is pending a response to CAR 04.	Pending	OK

D.2. Qualitative control (QC) and quality assurance (QA) procedures undertaken for data monitored					
D.2.1. Are there quality control and quality assurance procedures to be used in the monitoring of the measured data established?	1,2	DR	Refer to PDD Section D.2		OK
D.3. Please describe of the operational and management structure that the project operator will apply in implementing the monitoring plan					
D.3.1. Is it described briefly the operational and management structure that the project participants(s) will implement in order to monitor emission reduction and any leakage effects generated by the project	1,2	DR	The operational and management structure that the project participants(s) will implement in order to monitor emission reduction is described in sufficient detail. Refer to PDD Section D.3		OK

D.4. Name of person(s)/entity(ies) establishing the monitoring plan					
D.4.1. Is the contact information provided?	1,2	DR	GreenStream Network Plc Kluuvikatu 3 FI-00100 Helsinki FINLAND Tel: +358 20 743 7800 Fax: 358 20 743 7810 www.greenstream.net		OK
D.4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	It is indicated that GreenStream Network is not a project participant.		OK
***E.* Estimation of greenhouse gases emission reductions**					
E.1. Estimated project emissions					
E.1.1. Are described the formulae used to estimate anthropogenic emissions by source of GHGs due to the project?	1,2	DR	These are Formulae (I) – (V) presented in PDD Section D.1.1.2. The Formulae were checked and found correct.		OK
E.1.2. Is there a description of calculation of GHG project emissions in accordance with the Formula specified in for the applicable project category?	1,2	DR	The estimated project emissions (from each source and total) are presented in PDD Section E.1 Tables E.1.1 – E.1.3. The calculations were checked by the spreadsheet provided by the PDD developer. **CAR 13**. Calculations are carried out at grid emission factor 0.5424 tCO_2/MWh which does not conform to the data provided in the tabular form in Section B.1.	CAR 13	OK
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	1,2	DR	No conservative assumptions were made.		OK

E.2. Estimated leakage					
E.2.1. Are described the Formulae used to estimate leakage due to the project activity where required?	1,2	DR	No leakage was identified.		OK
E.2.2. Is there a description of calculation of leakage in accordance with the Formula specified in for the applicable project category?	1,2	DR	Not applicable		OK
E.2.3. Have conservative assumptions been used to calculate leakage?	1,2	DR	Not applicable.		OK
E.3. The sum of E.1 and E.2.					
E.3.1. Does the sum of E.1. and E.2. represent the project activity emissions?	1,2	DR	As no leakage is expected, E1+E2=E1.		OK
E.4. Estimated baseline emissions					
E.4.1. Are described the Formulae used to estimate the anthropogenic emissions by source of GHGs in the baseline using the baseline methodology for the applicable project category?	1,2	DR	These are Formulae (I) – (VIII) presented in PDD Section D.1.1.4. The Formulae were checked and found correct.		OK
E.4.2. Is there a description of calculation of GHG baseline emissions in accordance with the Formula specified for the applicable project category?	1,2	DR	The estimated baseline emissions (from each source) are presented in PDD Section E.4. The calculations were checked by the spreadsheet provided by the PDD developer. Conclusion is pending a response to CAR 13.	Pending	OK
E.4.3. Have conservative assumptions been used to calculate baseline GHG emissions?	1,2	DR	The estimated grid emission factor provides conservative baseline setting.		OK

E.5. Difference between E.4. and E.3. representing the emission reductions of the project					
E.5.1. Does the difference between E.4. and E.3. represent the emission reductions due to the project during a given period?	1,2	DR	Yes, it does. Refer to Formula (E.5.1) ER = BE – PE in PDD Section E.5.		OK
E.6. Table providing values obtained when applying Formulae above					
E.6.1. Is there a table providing values of total CO_2 abated?	1,2	DR	PDD Section E.6 Table E.6 provides the total values of project emissions, leakage, baseline emissions, and emission reductions. Conclusion is pending a response to CAR 13.	Pending	OK
***F.* Environmental Impacts**					
F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party					
F.1.1. Has an analysis of the environmental impacts of the project been sufficiently described?	1,2	DR	The environmental issues associated with the project and relevant mitigation measures were addressed in the Environmental Impact Assessment of the project which was prepared by ZAO "Petroteknip", OOO "City Ecological Examination Centre", St. Petersburg in 2006 (in verifiers' possession).. A list of relevant documents is provided in Section F.1.		OK
F.1.2. Are there any host Party requirements for an Environmental Impact Assessment (EIA), and if	1,2,6	DR I	In compliance with the Russian Federation legislation and the Construction Norms and Rules,		OK

yes, is an EIA approved?			ALS has obtained the required environmental and sanitary-epidemiological permits from the regulatory agencies of the Vologda Region and the City of Cherepovets including. The project environmental documents are in compliance with the state environmental and sanitary-epidemiological standards. The State Ecological Examination of the project did not identify any non-compliance issues with regards to the Russian Federation legislation and normative documents relating to the environmental protection. The project complies with all environmental laws, and emissions are well within legal limits.		
F.1.3. Are the requirements of the National Focal Point being met?	1,2	DR	The National Focal Point (MED) issued an Order dated 23/11/2009 # 485 requires the inclusion in the submitted project documentation (not PDD) a short description of the EIA carried out in accordance with the established order. Verifiers observe that given EIA is available this requirement will be met.		OK
F.1.4. Will the project create any adverse environmental effects?	1,2	DR I	Refer to F.1.2		OK
F.1.5. Are transboundary environmental impacts considered in the analysis?	1,2	DR	Not applicable for the project as per paragraph 2.9 of the Order of the State Committee dated 16/05/2000 #372 "On approval of EIA in RF".		OK
F.1.6. Have identified environmental impacts been addressed in the project design?	1,2	DR	Yes as evidenced by the issued EIA and environmental and sanitary-epidemiological permits.		OK

G. Stakeholders' comments G.1. Information on stakeholders' comments on the project, as appropriate					
G.1.1. Is there a list of stakeholders from whom comments on the project have been received?	1,2	DR I	No objections to the project implementation were received.		OK
G.1.2. The nature of comments is provided?	1,2	DR I	Not applicable.		OK
G.1.3. Has due account been taken of any stakeholder comments received?	1,2	DR I	Not applicable		OK

Table 4 Legal requirements

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Legal requirements					
1.1. Is the project activity environmentally licensed by the competent authority?	1,2	DR I	Refer to F.1.2		OK
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?	1,2	DR I	Refer to F.1.2		OK
1.3. Is the project in line with relevant legislation and plans in the host country?	1,2	DR	Yes, the project is in line with relevant legislation and plans in the host country.		OK

Table 5 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
CAR 01. The project has no approval of the Host Party.	1 Table1	Response 1 The Host Country Letter of Approval will be requested once a determination report is available, in accordance with the Russian JI procedures. This information has been inserted into the text in section A.5. <u>Response 3 dated 18/12/2009</u> The reference to the determination report has been changed to draft determination report in section A.5 of the PDD.	Please change a determination report to a draft (or preliminary) determination report. The determination report as such will be issued when the Host Party approval is granted. <u>Conclusion on Response 3</u> The amendment to the DDR is accepted.
CAR 02. As a JI specific approach is evidently used, a detailed theoretical description of the baseline in a complete and transparent manner as well as a justification in accordance with paragraph 23 through 29 of the "Guidance on criteria for baseline setting and monitoring" is not provided. The key information and data used to establish the baseline (variables, parameters, data sources etc.) are nor provided in the prescribed tabular form.	B.1.1	<u>Response 1 dated 01/12/09</u> The tabular form in Section B.1 has been corrected. Another six tables have been added to describe all key baseline parameters. <u>Response 2 dated 07/12/2009</u> The revised tables in section B.1 of the PDD now contain historic 2005-2007 data for the parameters B5, B6, B7 and B9 along with a justification of why the averaged values are conservative. No historical data has been added for parameter B10 because it is calculated based on the parameter B9. The table for the parameter B10 contains a justification why the calculation is	<u>Conclusion on response 1</u> Response is not accepted. Please provide in the tabular form historic 2005-2007 data for parameters B5, B6, B7, B9, B10 and justify conservatism of using averaged values. Re B8: Please provide the name of manufacturer and confirm the availability of the technical specification. RE B10: Please explain the rele-

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		valid. Re B8: The name of the manufacturer Cryogenmash has been added in the table for parameter B8. The technical specification is available for review during the site visit. Re B10: The IPCC Table 2.2 is not relevant for the calculation of parameter B10. The reference was a typo and has been removed. Re B11: The table has been revised and now contains further justification for the carbon emission factor for steam.	vance of IPCC Table 2.2 date to calculation of parameter B10. Re B11: Please provide justification for the emission factor for steam production. Conclusion on response 2 Response is accepted. CAR is closed based on appropriate amendments made to the PDD.
CAR 03. The potential leakage of the project is not assessed nor is explained which of sources of leakage are to be calculated and which can be neglected [2].	B.1.1	Response 2 dated 07/12/2009 Potential leakage has been assessed for the air separation industry, for the steel industry and for the electric power industry. The proposed project does not cause any leakage. The assessment has been inserted as section D.1.3. of the PDD.	Conclusion on response 2 Response is accepted. CAR is closed based on appropriate amendments made to the PDD.
CAR 04. It is not explicitly indicated which of the approaches regarding baseline setting,	B.1.2	Response 1 dated 01/12/09	Conclusion on response 1

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
defined in the JISC's "Guidance on criteria for baseline setting and monitoring", is chosen. The baseline is not selected out of alternative plausible future scenarios as the most plausible scenario.		The revised section B.1 explicitly indicates that a project-specific approach has been used. Three alternative baseline scenarios have been identified, including the project scenario. The chosen baseline has been selected as the most plausible scenario after the two other scenarios have been eliminated as economically unattractive.	Response is accepted. CAR is closed based on appropriate amendments made to the PDD.
CAR 05. Please justify the conservatism of using the Russia grid emission factor from the Operational Guidelines [4] for the conditions of Vologda region, which belongs to Regional Energy System "Center". Please make transparent the calculation of emission factor for steam production.	B.1.4	Response 5: A comprehensive study has been added in Annex 2 in order to derive and justify the carbon emission factor for the consumption of grid-based electricity for the Regional Energy System "Center". The emission reduction calculation and the parameter description in Section B.1 has been changed accordingly. Response 6: A section justifying the conservativeness of including the CHP plants has been added to Annex 2 of the PDD, page 71,72.	The values of grid emission factor estimated in this study are based on operational data for the pool of (i) power plants working in condensing mode and (ii) combined heat and power plants (TEZ) working in heat supply mode. The latter are attached to their heat consumers and as such cannot cover extra electricity demands. TEZ have lower emission factors than condensing power plants. Hence, the actual grid emission factor is higher than that estimated in the study what evidences the conservatism of baseline. Conclusion on response 6 Response is accepted. CAR is closed based on appropriate

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
			amendments made to the PDD. Response is accepted. CAR is closed based on appropriate amendments made to the PDD.
CAR 06. Quotations on page 12 from Kyoto Protocol Article 6 and Annex 1 to the JISC "Guidance on criteria for baseline setting and monitoring" are inaccurate. Version of the Guidance is not indicated.	B.1.5	Response 1 dated 01/12/09 The quotations in Section B.1 of the PDD have been corrected and referenced to the original documents. It has been indicated that version 2 of the Guidance was used. The references to IPCC have been replaced with references to the specific documents, tables and websites.	Conclusion on response 1 Response is accepted. CAR is closed based on appropriate amendments made to the PDD.
CAR 07. Present the investment analysis in a transparent manner and provide all the input data, so that a reader can reproduce the analysis and obtain the same results (refer to [4], Sub-step 2c, para 8). Provide evidence that input values used in the investment analysis (e.g. electricity cost, inflation) were valid and applicable at the time of the investment decision taken by the project participant.	B.2.1	Response 1 dated 01/12/09 In accordance with the Tool for the demonstration and assessment of additionality (Version 05.2). Sub-step 2c, paragraph 8 a separate annex has been provided which describes and justifies the investment analysis, in a way that the analysis could be reproduced by a reader. A revised Section B.2 Substep 2c of the PDD describes the investment analysis and the key assumptions. Response 3 dated 18/12/2009	Conclusion on response 1 Response is not accepted. A separate Annex to PDD is in fact not provided. Some input data from Gas Supply contract are not disclosed. This will not enable a reader to reproduce the results. For clarity, please confer "Clarification regarding public availability of documents under the verification

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		Section B.1 and B.2 of the PDD have been changed. The demonstration of additionality is now being done following a JI-specific approach without reference to the Tool for the demonstration and assessment of additionality (Version 05.2). The conservativeness of the baseline is justified in Section B.1. In Section B.2. it is demonstrated that the project without being registered as a JI project is not a plausible baseline scenario. This is shown with an investment analysis that conforms with the CDM Executive Board's Guidance on the Assessment of the Investment Analysis (version 3). The results of the investment analysis are reinforced by a barrier analysis and a common practice analysis. The full investment analysis is provided to the AIE as a Supporting Spreadsheet "ALS Supporting Spreadsheet #2 Investment Analysis 14DEC2009.xls." A further supporting document with all assumptions and input data, including the input data from the Gas Supply Contract, has been provided: "Supporting Document #1_Investment Analysis 14DEC2009.doc". ALS understands that if the project proceeds	procedure under the JISC" (version 03) paragraph 2(e). Conclusion on response 3 Response is not accepted. According to "Guidelines for the users of JI PDD Form" (Version 04), if a JI specific approach is used, **it should be explicitly indicated** (in PDD Section B.2) which of the approaches to demonstrate additionality, defined in paragraph 2 of the annex I to the "Guidance on criteria for baseline setting and monitoring" is chosen, and provide a justification of its applicability, with a clear and transparent description, as well as references, as appropriate. This was not done. PDD Section B.2 **does not provide proofs** that the project will lead to reductions of anthropogenic emissions by sources of GHGs. For more clarity, it is quoted from PDD Section B.1:"Therefore, ac-

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		under JI Track II the above two supporting documents will be submitted to UNFCCC as non-confidential supporting documents at the time when the determination report and the host country letter of approval are published at the UNFCCC JI website. <u>Response 4 dated 08/02/2010</u> The beginning of Section B.2 of the PDD has been rewritten. It is now explicitly indicated that additionality of the project is demonstrated by following approach (a) in paragraph 2 of the Annex I to the "Guidance on Criteria for Baseline Setting and Monitoring (Version 2)." : The approach is described in Section B.2 and the three key issues are justified for the project: * the baseline was chosen on the basis of conservative assumptions * the project is not a plausible baseline scenario without being registered as a JI project. * the project leads to reductions of anthropogenic emissions by sources of GHG	cording to Annex 1 of the JISC Guidance on Criteria for Baseline Setting and Monitoring (Version 2) "additionality can be proved by providing traceable and transparent information showing that the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and **that the project will lead to reductions of anthropogenic emissions by sources** or enhancements of net anthropogenic removals by sinks of GHGs." <u>Conclusion on response 4</u> Response is accepted but conclusion is pending a response to CAR 05 in connection with the statement in Section B.2 that *"Emission factors for steam and electricity consumption have been justified in Section B.1."* So far emission factor for electricity consumption is not justified. Refer to CAR 05.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
			Conclusion based on response 5 to CAR 05 With CAR 05 closed, no pending issues left for CAR 07. CAR is closed based on appropriate amendments made to the PDD.
CAR 08. Please present the date of the baseline setting in DD/MM/YYYY.	B.4.1	Response 1 dated 01/12/09 The date of baseline setting in Section B.4 of the PDD has been changed to the DD/MM/YYYY format.	Conclusion on response 1 Response is accepted. CAR is closed.
CAR 09. The project's starting date is not defined [2].	C.1.1	Response 1 dated 01/12/09 Physical construction on-site started on December 6, 2005. This information has been added to Section C.1 of the PDD.	Conclusion on response 1 Response is accepted. CAR is closed.
CAR 10. Please specify the length of the crediting period is years and months and indicate the starting date of the crediting period [2].	C.3.1	Response 1 dated 01/12/09 The length of the crediting period is five years or 60 months. It starts on January 1, 2008 and lasts until December 31, 2012. This information has been added to Section C.3 of the PDD.	Conclusion on response 1 Response is accepted. CAR is closed
CAR 11. Please provide information on the collection and archiving of information on	D.1.13	Response 2 dated 07/12/2009 Information on the collection and archiving of	Conclusion on response 2 Response is accepted. CAR is

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
the environmental impacts of the project.		information on the environmental impacts of the project has been added to Section D.1.5 of the PDD.	closed.
CAR 12. Reference to relevant Russian regulations is not provided.	D.1.14	Response 2 dated 07/12/2009 The relevant Russian regulations, according to which ALS is collecting and archiving information on the environmental impacts of the proposed project, have been identified in the revised Section D.1.5 of the PDD.	Conclusion on response 2 Response is accepted. CAR is closed.
CAR 13. Calculations are carried out at grid emission factor 0.5424 tCO_2/MWh which does not conform to the data provided in the tabular form in Section B.1.	E.1.2	Response 2 dated 07/12/2009 The emission reduction calculations in the PDD and in the Supporting Spreadsheet #1 have been revised. They are in accordance with the data provided in the tabular form in Section B.1.	Conclusion on response 2 Response is accepted. CAR is closed provided that the Netherlands Operational Guidelines data are conservatively appropriate to the project (refer to CAR 05).
CL 01. Please clarify if national policies and circumstances relevant to energy efficiency are relevant to the baseline of the proposed project activity.	B.2.6	Response 1 dated 01/12/09 Russian law and national policies are not relevant to the choice of baseline. There are no laws, policies or other circumstances in Russia that require a certain air separation technology to be applied. There are also no laws, policies or other circumstances in Russia that require air separation plants, air compressors or product compressors to achieve a certain level of energy	Conclusion on response 1 Response is accepted. CAR is closed.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 3	Summary of project owner response	Determination team conclusion
		efficiency. This information has been added to Section B.1 of the PDD.	

Appendix B: Verification Team's CV's

Mr. Leonid Yaskin, PhD (thermal engineering)
Lead Verifier.
Bureau Veritas Certification Rus General Director, Climate Change Local Manager, Lead Auditor, IRCA Lead Tutor, Lead Verifier

He has over 30 years of experience in heat and power R&D, engineering, and management, environmental science and investment analysis of projects. He worked in Krrzhizhanovsky Power Engineering Institute, All-Russian Teploelectroproject Institute, JSC Energoperspectiva. He worked for 8 years on behalf of European Commission as a monitor of Technical Assistance Projects. He is a Lead auditor of Bureau Veritas Certification for Quality Management Systems (IRCA registered), Environmental Management System (IRCA registered), Occupational Health and Safety Management System (IRCA registered). He performed over 250 audits since 2002. Also he is a Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and a Lead Tutor of the IRCA registered OHSAS 18001 Lead Auditor Training Course. He is an Assuror of Social Reports. He has undergone intensive training on Clean Development Mechanism /Joint Implementation and was/is involved in the determination of over 45 JI projects.

Ivan G. Sokolov, Dr. Sci. (biology, microbiology)

Climate Change Lead Verifier, Internal Technical Reviewer, Bureau Veritas Certification Holding SAS Local Climate Change Product Manager for Ukraine.

He has over 25 years of experience in Research Institute in the field of biochemistry, biotechnology, and microbiology. He is a Lead auditor of Bureau Veritas Certification for Environment Management System (IRCA registered), Quality Management System (IRCA registered), Occupational Health and Safety Management System, and Food Safety Management System. He performed over 140 audits since 1999. Also he is Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and Lead Tutor of the IRCA registered ISO 9000 QMS Lead Auditor Training Course. He has undergone intensive training on Clean Development Mechanism /Joint Implementation and he is involved in the determination/verification of 26 JI projects.