DETERMINATION REPORT

OJSC "RITEK"

DETERMINATION OF THE "UTILIZATION OF ASSOCIATED PETROLEUM GAS (APG) AT THE SREDNE-KHULYMSK OIL FIELD, WESTERN SIBERIA, RUSSIA"

BUREAU VERITAS CERTIFICATION

REPORT NO. RUSSIA/0024-2/2009, VERSION 01

BUREAU VERITAS CERTIFICATION

Report No: RUSSIA/0024-2/2009 Version 01

Determination Report on JI project "Utilization of associated petroleum gas (APG) at the Sredne-Khulymsk oil field, Western Siberia, Russia"

Date of first issue: 16/05/2009	Organizational unit: Bureau Veritas Certification Holding SAS
Client: OJSC "RITEK"	Client ref.: Mr. Galiya Khuzina

Summary:

Bureau Veritas Certification has made the determination of the project "Utilization of associated petroleum gas at the Sredne-Khulymsk oil field, Western Siberia, 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 determination is carried out under Track 1 as per Glossary of JI terms, in line with paragraph 23 of the JI guidelines.

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 Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A, Table 4. 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.: RUSSIA/0024-2/2009 Version1	Subject Group: JI
Project title: "Utilization of associated petroleum gas at the Sredne-Khulymsk oil field, Western Siberia, Russia"	
Work carried out by: Flavio Gomes – Team leader, Lead verifier Leonid Yaskin – Team member, verifier	
Work verified by: Ashok Mammen - BVC Technical Manager for Climate Change, Internal reviewer	

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Indexing terms:

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

Abbreviations

AIE	Accredited Independent Entity
APG	Associated petroleum Gas
BVC	Bureau Veritas Certification
C	Carbon
CAR	Corrective Action Request
CL	Clarification Request
CH4	Methane
CO2	Carbon Dioxide
CRF	Capital Recovery Factor
DDR	Draft Determination Report
DR	Document Review
EIA	Environmental Impact Assessment
ERU	Emission Reduction Unit
GHG	Green House Gas(es)
GGP	Gas Power Plant
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
I	Interview
IE	Independent Entity
IETA	International Emissions Trading Association
IPCC	Intergovernmental Panel on Climate Change
LHV	Low Heating Value
MoV	Means of Verification
OJSC	Open Joint Stock Company
PCF	Prototype Carbon Fund (World Bank Carbon Finance Unit)
PDD	Project Design Document
PP	Project Participant
RITEK	Russian Innovation Fuel and Energy Company
UNFCCC	United Nations Framework Convention for Climate Change

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1 INTRODUCTION

OJSC "RITEK" has commissioned Bureau Veritas Certification to determine its JI project "Utilization of associated petroleum gas (APG)at the Sredne-Khulymsk oil field, Western Siberia, Russia" (hereafter called "the project") located in the Yamalo-Nenetzky autonomous okrug (YaNAO), Tumen oblast.

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, the guidelines for the implementation of Article 6 of the Kyoto Protocol (Decision 16/CP.7) as agreed in the Marrakech Accords, in particular the verification procedure under the JI Supervisory Committee, 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 OJSC "RITEK". However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 GHG Project Description

The project includes utilization of associated petroleum gas (APG) on two modern power stations with the total installed capacity 15 MW located on Sredne-Khulymsk oil

field (owner- JSC "RITEK"), Nadym district of Yamal-Nenets Okrug, Tumen region, Russian Federation.

Ten Cummins QSV 91G generating units of 1.5 MW of nominal electrical capacity each are installed at the plant. Power plant is designed for APG utilization. Generated energy ensures operation of all complex of the basic and supporting equipment on the oil wells.

APG at the Sredne-Khulymsk oil field is obtained during the separation process at the booster pump station located next to the new power plant. The APG utilized within the project was previously flared. Within the Project, a part of the APG (approximately 19,4 million m^3 per year) is used by the power plant with the remaining APG flared as usual at the stacks of the booster pump station.

RITEK has started development of Sredne-Khulymsk oil fields in the end of 90th. Electric power for the oil production needs of the project owner was initially supplied by the so called powertrains PE-6M (mobile generating facilities consuming oil as a basic fuel) with emergency needs provided by diesel generators.

Within the Baseline Scenario, the growth of power consumption at the oilfield was supposed to be covered by additional powertrains – roughly 15 powertrains of 1 MW capacity each. This scenario constituted the cheapest solution, with total cost of 15 power trains not exceeding 2 mln. euro. In the absence of the project the power would have been generated by the oil-fired power trains whilst the APG would have been flared.

Tthe project owner opted for other ways of APG utilization that were analyzed and assessed within 2003-2004. Partly the refusal from the baseline scenario can be attributed to the innovation profile of the project owner - JSC RITEK within its mother Group LUKOIL. RITEK has been chosen as a testing ground for advanced technological and environmental solutions within the Group, that presupposed additional costs that were spent often regardless of the profitability considerations.

The key phases of the history of the project included:
- Corporate decision on the exploring alternative solutions for APG utilization including those involving the Kyoto market mechanisms, taken on the meeting of the RITEK Technical Board on 25.09.2003
- Commissioning of the related feasibility study by the project owner to the NIPIGasPererabotka research institute (Krasnodar, Russian Federation), contract concluded on 29.09.2003. The preliminary report of this study was issued in December 2003, the final report was ready by May 2004. The project alternatives examined by the Institute combined solution of the problem of APG utilization and electricity generation. The option chosen by the project owner presumed construction of GPP.
- Commissioning of the full-cycle work on the first block of the power station in Sredne-Khulymsk to JSC Zvezda-Energetika (Saint Petersburg, Russian Federation), contract

concluded on 22.06.2004. The job was to be executed on turnkey basis and presumed design, manufacturing of equipment, construction, assembly and launching into operation of the first block of the power station (GPP-1), based on the Cummins reciprocating engines.

- First block (GPP-1) officially launched into operation on 29.10.2005
- Commissioning of the full-cycle work on the second block of the power station in Sredne-Khulymsk to JSC Zvezda-Energetika (Saint Petersburg, Russian Federation), contract concluded on 25.12.2006. The job was executed on the turnkey basis for the second block of the power station (GPP-2), based on the Cummins reciprocating engines.
- Second block (GPP-2) officially launched into operation on 28.12.2007

The project will contribute to sustainable development of the host country by promoting the utilization of wasted APG, which is a valuable energy resource and will reduce CO_2 and CH_4 emissions by two ways:

- Utilization of the APG in the efficient power generating facilities - gas engines, instead of its flaring;
- Substitution of crude-oil combustion in power generation by APG with a lower CO_2 emission factor.

Estimated total reductions of GHG emissions will be 105223 tonnes of CO2- equivalent (tCO2e) per year and respectively 526114 tCO2e within 2008-2012 crediting period.

JSC «RITEK» is the project owner (investor) and power station operator. According to the license agreement JSC "RITEK" is the owner of associated petroleum gas. JSC «RITEK» is responsible for Joint Implementation Project and for implementation of the monitoring plan.

1.4 Determination team

The determination team consists of the following personnel:

Flavio Gomes
Bureau Veritas Certification - Team Leader, Lead verifier

Leonid Yaskin
Bureau Veritas Certification – Team member, verifier

Ashok Mammen
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) on-site assessment (April 14th 2009);
iii) resolution of outstanding issues (ref. to Annex A Table 5 with CAR's and CL's) and the issuance of the final determination report and opinion.

In order to ensure transparency, a determination protocol was customized for the project, based on 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 4 tables: Table 3 Baseline and Monitoring Methodologies is skipped since an own methodology is used and the questions regarding the used methodology are present in Table 2.

Determination Protocol Table 1: Mandatory Requirements			
Requirement	**Reference**	**Conclusion**	**Cross reference**
The requirements the project must meet.	Gives reference to the legislation or agreement where the reuirement 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**	**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

Following the signature of the contract, OJSC "RITEK" has submitted to Bureau Veritas Certification on 6 April 2009 the Project Design Document (PDD) Version 2.0 dated September 12, 2008. The PDD and additional background documents related to the project design, baseline, and monitoring plan, i.e. Kyoto Protocol, Host Country Laws, Guidelines for Users of the Joint Implementation Project Design Document Form, JISC Guidance on Criteria for Baseline Setting and Monitoring, Combined tool to identify the baseline scenario and demonstrate additionality (Version 02.2) and others were reviewed.

A visit to the project site was held on 14 April 2009. The familiarisation with the equipment of the project revealed that the project has no system installed for utilisation of gas engine exhaust gas heat, which was described in PDD as the project element essentially contributing to the GHG emission reduction. The baseline, monitoring plan and estimation of GHG emissions took this exhaust heat into account. So, the PDD Version 2.0 appeared inadequate to the already implemented project. The project

participant made a decision to issue a new version of the PDD. The document review process had to be suspended.

An updated PDD Version 3.0 was submitted to BVC on 24 April 2009. This PDD together with additional background documents was reviewed. The deliverables of the document review was the Draft Determination Report (the Determination Protocol Version 1 with CAR's and CL's).

The determination findings presented in this Determination Report Version 01 relate to the project as described in the PDD Version 3.0 dated 24 April 2009 and PDD Version 3.3 dated 12 May 2009, the latter included PDD Developer responses to CARs and CL's .

2.2 Follow-up Interviews

Bureau Veritas Certification verifier Leonid Yaskin conducted a visit to the project site on 14 April 2009. On-site interviews with the project participant were conducted to confirm the selected information and to resolve issues identified in the document review. Representatives of OJSC "RITEK" and the Oil & Gas Production Direction "RITEKNadymneft" were interviewed (see References in Section 6). The main topics of the interviews are summarized in Table 1.

Following the submission of the Draft Determination Report Version 01 to the project participant, at his request, the meetings of the PP and the PDD developer «Mejdunarodnaya Gruppa «Sigma» LLC with the BVC verifier Leonid Yaskin were held on 6 and 13 May 2009 (please see References in Section 6). The main topics of the interviews are summarized in Table 1.

Table 1. Interview topics

1. Interviewed organization	2. Date	3. Interview topics
OJSC "RITEK"	14 April 2009	➢ History of the project ➢ Implementation schedule ➢ Investment issues ➢ Baseline scenario parameters ➢ Project scenario parameters ➢ Project management organisation ➢ Legal and other requirements (re CH4 emission reduction) ➢ Environmental Impact Assessment

"RITEKNadymneft"	14 April 2009	➢ APG separation equipment (visitation) ➢ APF flaring ➢ Exhaust gas heat utilization (as per PDD Version 2.0) ➢ Power trains (visitation, parameters) ➢ Gas engines (visitation parameters) ➢ Monitoring equipment(inspection, characteristics) ➢ Electric and heat energy supply ➢ Readiness to monitoring
«Mejdunarodnaya Gruppa «Sigma» LLC	6 May 2009	CARs and CLs concerning, in particular: ➢ PDD contents and format ➢ Baseline definition and study ➢ Project scenario definition ➢ Additionality substantiation ➢ Monitoring plan ➢ Use of NII Atmosphere Methodology
OJSC "RITEK" «Mejdunarodnaya Gruppa «Sigma» LLC	13 May 2009	➢ PP responses to CARs and CLs

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

Clarification Requests (CL) are issued where

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

The Draft Determination Report Version 01 summarising Bureau Veritas Certification's findings was submitted to OJSC "RITEK" on 29 April 2009. The findings identified have been 14 Corrective Action Requests and 1 Clarification Request. Based on the findings

of the DDR Version 1 and the interviews held on 6 and 13 May 2009 with the BVC verifier, the PDD developer made necessity amendments to the PDD Version 3.0 and eventually the PDD Version 3.3 dated 12 May 2009 was issued and submitted to Bureau Veritas Certification. The amendments and corrections made to the PDD and the additional information and clarifications provided by the PDD developer satisfactorily addressed BV Certifications' concerns and, as a result, the Determination Report Version 01 was issued on 16/05/2009. On the same day the Determination Report Version 01 and PD Version 3.3 were sent to Bureau Veritas Certification Internal Technical Reviewer (ITR) for review.

To guarantee the transparency of the determination process, the CAR's and CL's raised in the Determination Report Version 01 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 project provides reduction of GHG emissions by the use of the state-of-art technology of electric energy production by APG fired gas engines as compared with the baseline scenario, which envisages the use of the crude oil fired powertrains, which was mastered by the project participant at other oil fields.

Ten Cummins QSV 91G gas engines of 1.5 MW nominal electrical capacity each are installed at the plant and produce electric energy for the oil field needs. The gas engine consume APG which would otherwise be flared.

The project activity provide the following benefits:

- prevention of crude oil combustion in the powertrains resulting in reduction of GHG emissions;

- saving of the marketable product (crude oil);
- reduction of atmosphere pollution by CH4 emissions from APG flaring;

It is estimated that the project will save 39455 tonnes per year of reference fuel (with LHV of 29,3 MJ/kg) and prevent emission of 105223 tCO2e annually in 2008-2012.

Identified areas of concern as to Project Design, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 02, CAR 03).

The project has no approval by the Host Party involved, therefore CAR 01 remains pending. The project participant will be authorized by the Host Party involved through the project approval process.

3.2 Baseline and Additionality

Following Clause 20 (b) of JISC "Guidance for baseline setting and monitoring", the project participants established their own baseline methodology that is in accordance with appendix B of the JI guidelines.

To prove the project additionality, the routine provisions of the CDM "Combined tool to identify the baseline scenario and demonstrate additionality" [4] were implicitly followed.

After screening of seven identified alternatives, two alternative scenarios were selected, namely APG flaring with electricity production by powertrains and the project activity without registration under JI. Both scenarios do not contradict with the mandatory legislation and regulations. No particular barriers (except financial) prevent the implementation of each scenario.

Both the baseline scenario and project scenario do not generate revenues and, in this respect, are both not financially feasible. The comparison analysis of annualized costs has demonstrated that, out of the two scenarios, the proposed project activity is not most financially and economically attractive. This is because the specific capital investment cost of powertrains is several times lower than that of gas engines (135 versus 1000 euro per kW installed). Accordingly, the use of powertrains was taken as the baseline.

The project activity is not a common practice since the rare existing activities using similar gas engines in similar field conditions were competitive with the locally available alternatives: electric power supply from the grid or the use of diesel generators (refer to CAR 08).

In PDD Version 3.0, developer improperly used the NII Atmosphere Methodology [3] for the estimation of CO2 and CH4 emission from APG flaring and incorrectly estimated the CO2 emissions from gas engines (refer to CAR 05, CAR 06). The due amendments to the PDD were made.

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 03, CAR 04, CAR 05, CAR 06, CAR 07, CAR 08, CAR 09).

Identified areas of concern as to Project Duration / Crediting Period, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 10, CAR 11, CAR 12).

3.3 Monitoring Plan

Monitoring of greenhouse gases emission is based on the own methodology which is in line with the provisions of JISC Guidance in criteria for baseline setting and monitoring.

The parameters to be measured for estimation of GHG emissions reductions are presented in a combined table as per [2]. These are electric energy generation by gas engines, and volume and volumetric composition of APG. Based on the APG composition, its density and carbon content are calculated.

The GHG emissions in the project scenario are defined as the product of APG volume, density, carbon content and ratio of CO2 and C molecular weights.

The GHG emissions from APG flaring in the baseline scenario are defined as the sum of CO2 and CH4 emissions from, respectively, complete and incomplete APG combustion. These were calculated by the recognized NII Atmosphere Methodology [3]. GHG emissions from crude oil combustion in powertrains are defined by IPCC 2006 with the use of the crude oil heat of combustion.

An operational and management structure that the project participant implements in order to monitor emission reduction is clearly described in the PDD. The site visit confirmed the availability and operationability of this structure.

Identified areas of concern as to Monitoring Plan, PP's responses and BV Certification's conclusions are described in Appendix A Table 5 (refer to CAR 13, CAR 14, CL 01).

3.4 Calculation of GHG Emissions

The initial data for calculation of emission reduction and the calculated values are presented in Section E. The calculation method was corrected as a response on CAR 05, CAR 06 (refer to 3.2 above). The verifiers checked the corrected calculations and found them accurate. The calculated value of project emission reduction over the crediting period 2008 – 2012 is 526114 tCO2e. Annual average emission reduction is 105223 tCO2e/year.

3.5 Environmental Impacts

The environmental impact of the project was assessed to be less than under the baseline scenario (re CH4 emissions). The Permits for air emission are issued by the local environmental authority Rostekhnadzor.

3.6 Comments by Local Stakeholders

No comments were received so far.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

Similar to the Verification procedure under the Article 6 Supervisory Committee, Bureau Veritas Certification published the PDD Version 2.0 on BVC site www.bureau-veritas.ru on 06/04/2009 and invited comments within 05/05/2009 by Parties, stakeholders and non-governmental organizations.

No comments from third parties have been received.

5 DETERMINATION OPINION

Bureau Veritas Certification has been engaged by OJSC "RITEK" to perform a determination of the JI project "Utilization of associated petroleum gas (APG) at the Sredne-Khulymsk oil field, Western Siberia, Russia». The determination was performed on the basis of UNFCCC criteria for JI projects, in particular the verification procedure under the JI Supervisory Committee, as well as host country criteria and the criteria given to provide for consistent project operations, monitoring and reporting.

The determination was carried out under Track 1 as per Glossary of JI terms, in line with paragraph 23 of the JI guidelines.

The determination consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; 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 and Clarification 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.

An analysis of the investment and related barriers demonstrates 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. As the project is implemented and maintained as designed, it is most 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 authorisation of the project participant by the host Party (Russian Federation). If the written approval and the authorisation by the host Party is awarded, it is our opinion that the project as described in the Project Design Document, version 3.3 dated 14/05/2009 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 Russian Federation as the JI project in accordance with the RF Government Decree N 332 dated 28/05/2007.

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.

Flavio Gomes – Team leader, Lead verifier

Bureau Veritas Certification Holding SAS

Leonid Yaskin – Team member, verifier

Ashok Mammen – Technical Internal Reviewer

BUREAU VERITAS CERTIFICATION Reviewed Init Date: 27/05/2009

6 REFERENCES

Reviewed document or Type of Information referred to in Appendix A

1	PDD "Utilization of Associated petroleum gas (APG) at the Sredne-Khulymsk oil field, Western Siberia, Russia", Version 03, dated 24/04/2009.
2	Guidelines for Users of the Joint Implementation Project Design Document Form/Version 03, JISC.
3	"Methodology of calculation of emissions of hazardous substances into the atmosphere due to the flaring of the associated petroleum gas at flaring stacks". NII Atmosphere, Saint Petersburg, 1997.
4	Combined tool to identify the baseline scenario and demonstrate additionality, Version 02.2, CDM methodological Tool.
5	"Tool to calculate project or leakage CO2 emissions from fossil fuel combustion", Version 02, dated 02/08/2008. CDM Methodological tool.
6	Glossary of JI terms/Version 01, JISC.
7	On approval of methodological instructions for examination of project documentation. Order by the Ministry of Economic Development and Trade of the RF, dated 20 December 2007, N 444.
8	RF Government Decree No. 332, dated 28 May 2007, Procedure For Approval And Verification of Status of Projects Carried Out In Accordance With Article 6 Of The Kyoto Protocol to The United Nations Framework Convention On Climate Change.

Document or Type of Information obtained at the site visit
References in Appendix A are underlined

1	Report of RITEKNadymneft for 2008. "Electric energy and heat production".
2	Normative of fuel rate in powertrains. RITEKNadymneft, 30/12/2008.
3	Normative of APG rate in GGP. RITEKNadymneft, 29/12/2008.
4	APG composition and properties as on 14 April 2009.
5	Passports for gas meters IRVIS-RS-4, DRG-MZ.
6	License for the right to use the subsoil of Sredne-Khulymsk oil field Granted to JSC "RITEK". Expiry date is 2024.
7	Permits for Air Emissions # 53 dated 14/06/2007 and # 242 dated 24/11/2008 granted to RITEKNadymneft by Territorial Direction of Rostekhnadzor.

Persons interviewed:

1	Galiya Khuzina – OJSC "RITEK" Head of Department
2	Valery Semenychev – OJSC "RITEK" Deputy Chief Engineer
3	Kseniya Mikoyan - OJSC "RITEK" leading specialist

4	Sergey Shashkin – Deputy General Director of JSC "RITEK", Head of RITEKNadymneft.
5	Vyacheslav Kornilov – Chief Engineer of RITEKNadymneft.
6	Ivan Vitko – Chief Energetic of RITEKNadymneft.
7	Dmitry Markarov – Chief Metrologist of RITEKNadymneft.
8	Michail Kurgansky – Head of RITEKNadymneft Oil Preparation and Transportation Service.
9	Igor Dorokhin – Head of oil field site.
10	Viktor Shpak - GPP "Cummins" Master.
11	Sergey Roginko - LLC «Mejdunarodnaya Gruppa «Sigma» CE
12	Denis Monakhov - LLC «Mejdunarodnaya Gruppa «Sigma» Expert

7 DISCLAMER

This report contains the results of the determination of whether the project under consideration meets the relevant requirements of Article 6 of the Kyoto Protocol and the JI guidelines. The used determination procedure does not fall under the verification procedure under the JISC, as defined in the JI guidelines, paragraphs 30–45. Instead, paragraph 23 of the JI guidelines applies to the determination based on which Bureau Veritas Certification Holding SAS issues, in the frame of the contract with JSC "RITEK", an expert opinion on the project as per the RF Government Decree No. 332, dated 28 May 2007, "Procedure for approval and verification of status of projects carried out in accordance with Article 6 of the Kyoto Protocol to the United Nations Framework Convention on Climate Change".

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 approvals of the Parties involved. 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	Table 2 Section A.5.

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
		guidelines; (b) At least one written project approval by a Party involved in the JI project, other than the host Party(ies), should be provided to the AIE and made available to the secretariat by the AIE when submitting the first verification report for publication in accordance with paragraph 38 of the JI guidelines, at the latest.	
2. Emission reductions, or an enhancement of removal by sinks, shall be additional to any that would otherwise occur.	Kyoto Protocol Article 6.1 (b)	OK	Table 2, Section B.2
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	Marrakech	OK	The Russian

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
points for approving JI projects and have in place national guidelines and procedures for the approval of JI projects.	Accords, JI Modalities, §20		national focal point is the Ministry of Economic Development. The Russian national guidelines and procedures are established by the RF Government Decree N 332 dated 28/05/07 and by RF Ministry of Economic Development and Trade Order N 444 dated 20/12/07.
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-Ф3 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

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
			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, §21(d)/24	OK	Russian Federation has established the GHG Registry by the RF Government Decree N 215-p dated 20/02/06.
9. Project participants shall submit to the independent entity a project design document that contains all information needed for the determination.	Marrakech Accords, JI Modalities, §31	OK	OJSC "RITEK" has submitted a PDD 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	The PDD was made publicly available for comments on Bureau Veritas Rus site from 06 April 2009 till 05 May 2009.

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, in accordance with procedures as determined by the host Party shall be submitted, and, if those impacts are considered significant by the project participants or the host Party, an environmental impact assessment in accordance with procedures as required by the host Party shall be carried out.	Marrakech Accords, JI Modalities, §33(d)	OK	Table 2, Section F
12. The baseline for a JI project shall be the scenario that reasonably represents the GHG emissions or removal by sources that would occur in absence of the proposed project.	Marrakech Accords, JI Modalities, Appendix B	OK	Table 2, Section B.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,	OK	Table 2, Section D

1. REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference to this protocol
	§33(c)		
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					
1. 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: "Utilization of associated petroleum gas (APG) at the Sredne-Khulymsk oil field, Western Siberia, Russia". Sectoral Scope is not indicated though this is required by [2].	CAR 02	
A.1.2. Is the current version number of the document presented?	1,2	DR	PDD Version 3.0.		OK
A.1.3. Is the date when the document was completed presented?	1,2	DR	PDD Version 3.0 is dated 24 April 2009.		OK

A.2. Description of the project					
A.2.1. Is the purpose of the project included?	1,2	DR	The project provides utilization of associated petroleum gas (APG) on two modern power stations with the total installed capacity 15 MW located on Sredne-Khulymsk oil field (owner OJSC "RITEK"). APG at the Sredne-Khulymsk oil field is obtained during the separation process at the booster pump station located next to the new power plant. The situation existing prior to the starting date of the project is described as follows. The APG was previously flared at the stacks of the booster pump station. Power production for the needs of the project owner was initially provided by the powertrains PE-6M - mobile generating facilities consuming crude oil as a basic fuel. The baseline scenario and the history of the project are not described, though this is required by [2].	CAR 03	OK
A.2.2. Is it explained how the proposed project reduces greenhouse gas emissions?	1,2	DR	The project will reduce CO2 and CH4 emissions due to: - utilization of the APG in the efficient power generating gas engines, instead of their flaring,		OK

			- substitution of crude-oil combustion in power generation by APG which has a lower CO2 emission factor.		
A.3. Project participants					
A.3.1. Are project participants and Party(ies) involved in the project listed?	1,2	DR	OJSC «RITEK» is the project participant. Party A is the Russian Federation. Party B is not defined yet. Conclusion is pending a follow-up on CAR 01.	Pending	
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 is provided in PDD Annex 1.		OK
A.3.4. Is it indicated, if it is the case, if the Party involved is a host Party?	1,2	DR	Russian Federation is indicated as a host Party in accordance with the mandatory tabular format [2].		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.		OK
A.4.1.2. Region/State/Province etc.	1,2	DR	Please refer to PDD Section A.4.1.2.		OK
A.4.1.3. City/Town/Community etc.	1,2	DR	The project is located 120 km south from the		OK

			Nadym-city in the Yamalo-Nenetzky autonomous okrug (YaNAO), Tumen oblast, 2,500 km from Moscow.		
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	Site latitude - 64°31'34". Site longitude - 71°13'50".		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 project design engineering represents current good practices. The technology and operations to be implemented by the project as well as relevant technical data and the GPP implementation schedule, are described. Ten Cummins QSV 91G generating units of 1.5 MW of nominal electrical capacity each are installed at the plant. Power plant also equipped with four heat exchangers Alfa-Laval for heat utilization with total installed capacity 0,4 Gcal/h. Heat utilization is reasonably not included in GHG calculations.		OK
A.4.2.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used	1,2	DR	The project uses the state-of-art technology of APG collection, treatment and utilisation for power generation in the modern gas fired		OK

technologies in the host country?			reciprocating engines.		
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	The new power generating equipment is operated by its supplier, therefore initial training and maintenance efforts were not needed. The RITEK maintains the Environmental Management System (EMS) to ISO 14001, which is certified by Bureau Veritas Certification. Monitoring is the key element of the EMS, hence there is no need for training to monitoring.		OK
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 not exceed one page)	1,2	DR	It is stated in PDD Section A.4.3 that in the baseline scenario, 19,4 million m3 of APG will be flared annually at the Sredne-Khulymsk booster pumping station. In the project scenario, this volume of APG is captured and burned in the installed gas engines to supply 66,2 GWh of electricity per year to support pumping requirements for the Sredne-Khulymsk oil field. In the baseline scenario, the equal amount of electricity will be generated by the power trains fuelled by crude oil from oil field. According to PDD Section A.3 p. 12, GHG emission reductions due to the project will occur due to three factors: 1) a higher combustion efficiency of gas engines; 2) the combustion of the unburned in flare fraction of APG, that was previously directly escaping into atmosphere from flare stack; 3) the crude oil combustion in powertrains for power generation will be changed to combustion of APG that has a lower GHG emission factor. CO2 baseline and project emissions from		OK

			complete combustion are assumed equal.		
A.4.3.2. Is it provided the estimation of emission reductions over the crediting period?	1,2	DR	Total estimated emission reductions over the crediting period equal 454935 tones of CO2 equivalent.		OK
A.4.3.3. Is it provided the estimated annual reduction for the chosen credit period in tCO_2e?	1,2	DR	The annual average of estimated emission reductions over the crediting period is estimated to be 90987 tonnes of CO2 equivalent.		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 PDD Section A.4.3.1, Table 5.		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 follow-up on 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	The baseline is clearly described, namely "Continuation of APG flaring at the Sredne-Khulymsk oil field with power needed by the Project Owner generated by the powertrains". The tabular form on p. 19 shall be filled in as required in [2]: each data unit and its ex ante value used to establish the baseline shall be	CAR 04	OK

			indicated.		
B.1.2. Is it justified the choice of the applicable baseline for the project category?			The chosen baseline is reasonably selected with the use of the analysis including three steps: 1) listing of alternatives to the project scenario, 2) identifying of the most plausible alternatives, 3) investment analysis taking into account related financial barriers. The chosen baseline is justified as the most economically or financially attractive alternative scenario.		OK
B.1.3. Is it described how the methodology is applied in the context of the project?	1,2	DR	Following JISC "Guidance for baseline setting and monitoring" with reference to Annex B of the JI Guidelines, the PDD developer established own baseline methodology. Baseline emissions are calculated as the sum of emissions from APG flaring (calculated by the "NII Atmosphere" Methodology [3]) and emissions from crude oil combustion in power trains (calculated by default carbon content factor, tC/TJ for crude oil). The Methodology is approved by the State Environmental Committee (refer to PDD Annex 4); The baseline CH4 emission factor (Table 11 BE3, formula 3) is calculated by CH4 mass fraction (BE1, formula 10), which is estimated otherwise than prescribed by formula (5) in	CAR 05	OK

			Annex A of the Methodology [3]. The deviation from the Methodology affects the calculation of GHG emission reduction. Project emissions from engines are calculated by the Methodology [3], though it was developed for APG flaring and includes empiric coefficients for incomplete APG combustion and CO emission. Justification of this approach is not provided. Calculation of CO2 emissions from the engines by the relevant CDM tool [4] gives 21068 tAPG x 0,768 (carbon mass fraction) x 44/12 = 59363 tCO2 versus 51472 tCO2 in PDD.	CAR 06	OK
B.1.4. Are the basic assumptions of the baseline methodology in the context of the project activity presented (See Annex 2)?	1,2,3	DR	Basic assumptions of the baseline methodology are as follows: - the electricity generation, APG composition and consumption in the baseline and project scenarios are identical; - fuel consumption by the powertrains and gas engines is calculated by operational data; - black firing mode is taken for APF flaring; - methane emissions due to incomplete and black firing of APG in flares are calculated in accordance with the Methodology [3]; - EIA data on flue gas mass (C1-C5) are used for calculation of methane emissions due to		OK

			underfiring of APG in the engines; - technological leaks at APG collection and treatment and transportation are taken equal in the baseline and project scenario and therefore neglected; - APG flaring is not prohibited locally within the crediting period by the licence for the use of the Sredne-Khulymsk oil field or country-wide by the Russian legislation; - N2O emissions are neglected. All these assumptions were checked by the verifier and found reasonable.		
B.1.5. Is all literature and sources clearly referenced?	1,2	DR	Relevant literature and sources are referenced through the text of PDD except the reference to the sources of data for: - specific fuel rates for power trains; - carbon content default value on p. 38 (2006 IPCC Volume and Chapter numbers are not indicated); - EIA (the title and year of the NIPIGasPererabotka project documentation are not indicated).	CAR 07	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	DR	To prove the project additionality, an approach was used similar to the provisions of the CDM "Combined tool to identify the baseline scenario and demonstrate additionality". After screening of seven identified alternatives, two alternative scenarios were selected, namely APG flaring with electricity production be powertrains and the project activity without registration under JI. Both scenarios do not contradict with the mandatory legislation and regulations. No particular barriers (except financial) prevent the implementation of each scenario. Analysis of investments and financial barriers has demonstrated that the proposed project activity is not most economically or financially attractive alternative scenario (ref. to Table 7 on p. 21). Therefore, the scenario with APG flaring was taken as the baseline scenario. Both the baseline and project scenarios do not generate revenues, therefore a simple cost analysis was used, which took into account annualized investment cost (investment times capital recovery factor) and operational costs. The cost analysis has shown that the annualized cost of the project is two time		

			higher than that for the baseline. Common practice analysis is limited by the statement in PDD Section B.2 that the "project is one of the first in the region, directed to utilization of associated petroleum gas for power generation; besides it is the first project connected with replacement of existing powertrains by modern generating equipment". Provide an analysis to which extent similar activities to the proposed project activity have been implemented previously or are currently underway. If similar activities are observed, then essential distinctions between the proposed project activity and similar activities shall reasonably be explained.	CAR 08	OK
B.2.2. Is the baseline scenario described?	1,2	DR	Refer to PDD Section B.1.		OK
B.2.3. Is the project scenario described?	1,2	DR	This is the alternative scenario 2 the project itself without being registered as JI activity, i.e. "reduction of APG flaring installation of the GPP and electricity generation for the local needs using the APG", which is selected ate the investment analysis from the two scenarios. The project scenario is described in PDD Sections A.4.3, B.1, B.2.		OK
B.2.4. Is an analysis showing why the emissions in the	1,2	DR	Please refer to PDD Table 4 on p. 12.		OK

baseline scenario would likely exceed the emissions in the project scenario included?					
B.2.5. Is it demonstrated that the project activity itself is not a likely baseline scenario?	1,2	DR	Refer to PDD Section B.2. The project activity without registration under JI mechanism is not a likely baseline scenario since it is not most economically and financially attractive.		OK
B.2.6. Are national policies and circumstances relevant to the baseline of the proposed project activity summarized?	1,2	DR	Succinct information about relevant regulations in the Russian Federation as to APG (methane) emission is presented in PDD Sections A.4.3 and B.1.		OK
B.3. Description of how the definition of the project boundary is applied to the project activity					
2. B.3.1. Are the project's spatial (geographical) boundaries clearly defined?	1,2	DR	Refer to Figure 12 on p. 26.		OK
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 not indicated.	CAR 09	OK
B.4.2. Is the contact information provided?	1,2	DR	LLC «Mejdunarodnaya Gruppa «Sigma» Moscow, Russian Federation Tel. +7 (495) 7753232 Fax +7 (495) 7753232 e-mail: sigma@effort.ru		OK

B.4.3. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	LLC «Mejdunarodnaya Gruppa «Sigma» is not the 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	December 1st, 2005 is defined in PDD Section C1. This cannot be the starting date of the project as design and installation started well before (ref. to PDD Table 2 on p. 9).	CAR 10	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 lifetime is defined as 30 years (360 months). This data does not correspond with the definition of the lifecycle in the investment analysis (20 years).	CAR 11	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 5 years (60 months). The starting date of the crediting period is not indicated though this is required by [2].	CAR 12	OK
D. Monitoring Plan					
D.1. Description of monitoring plan chosen					
D.1.1. Is the monitoring plan defined?	1,2	DR	The monitoring plan is established based on the own methodology which is defined in PDD		

			Section D and Annex 3. Instead of using the tables provided in sections D.1.1.1., D.1.1.3., D1.2.1, D.1.3.1. and D.2. of the PDD Form, the draft table recommended in [2] is completed in line with the monitoring approach chosen for all data/parameters. This table includes four sets of parameters: (1) electricity generation (in MW); (2) generation of electricity by emergency diesel generator (in MW); (3) APG data including composition, density and mass; (4) APG volume consumed by GPP (in Nm3). The measured data will be documented and stored in hard and electronic copies by the operator. Electric meters should eventually measure or estimate the electric energy in MWh rather than electric power in MW, as indicated in the monitoring plan. Please clarify the need to monitor APG density and mass. Density is calculated by the APG composition (PDD Table 11 column 2), whereas APG mass is calculated by its density and measured volume.	CAR 13 CL 01	OK OK
D.1.2. Option 1 – Monitoring of the emissions in the	1,2	DR	Refer to D.1.1.		OK

project scenario and the baseline scenario.					
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	Metered data is electricity generation by GGP and diesel (the latter is set 0). Default values are engine capacity, full-time equivalent hours of operation, molecular masses of CO2 and CH4, and mass of saturated hydrocarbons in flue gas C1-C5.		OK
D.1.4. Description of the formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2	DR	The formulae are presented in PDD Section D.1.1.2 Tables 10.1 – 10.6. They allow to calculate three, as per PDD, components of project emissions: - CH4 emissions due to incomplete combustion in GPP (based on flue gas data); - CO2 emissions from complete combustion of APG in the GGP; - CH4 emissions not combusted in the baseline but fully combusted in the project case.		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.	1,2,3	DR	Metered data is APG composition and APG volumetric flow. Default values are electricity generation, specific flow rate of referenced fuel consumption at powertrains, and parameters of the "NII Atmosphere" Methodology [3].		OK
D.1.6. Description of the formulae used to estimate	1,2,3	DR	The formulae are presented in Tables 11.1 –		OK

baseline emissions (for each gas, source etc, emissions in units of CO2 equivalent).			11.6 and Table 12. They allow to calculate three components of baseline emissions: - CH4 emissions due to incomplete combustion; - CO2 emissions from complete combustion of APG in the flare; CO2 emissions from firing crude oil in the powertrains.		
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 CO2 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	The leakages are considered negligible.		OK
D.1.11.Description of the formulae used to estimate leakage (for each gas, source etc,; emissions in units of CO2 equivalent).	1,2	DR	Not applicable.		OK

D.1.12. Description of the formulae used to estimate emission reductions for the project (for each gas, source etc.; emissions in units of CO2 equivalent).	1,2	DR	This is the straightforward formula ER = BE – PR. Refer to PDD Section D.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	A four level system for the monitoring of environmental impacts has been established at the GPP. This system allows monitoring, reporting and controlling of the maximum concentrations of the hazardous substances emissions such as CH4, NOx, and CO. This was checked during the site visit.		OK
D.1.14. Is reference to the relevant host Party regulation(s) provided?	1,2	DR	Refer to PDD Section D.1.5 and Section F.		OK
D.1.15. If not applicable, is it stated so?	1,2	DR	Refer to D.1.14.		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	The measurement devices are envisaged to be calibrated once a year. This is confirmed at the site visit. Information in the left column of the table in PDD Section D.2 in not in accordance with the description of the monitoring plan.	CAR 14	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	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	LLC «Mejdunarodnaya Gruppa «Sigma» Moscow, Russian Federation Tel. +7 (495) 7753232 Fax +7 (495) 7753232 e-mail: sigma@effort.ru		OK
D.4.2. Is the person/entity also a project participant listed in Annex 1 of PDD?	1,2	DR	LLC «Mejdunarodnaya Gruppa «Sigma» is not the 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	The formulae are presented in PDD Section D.1.1.2 Tables 10.1 – 10.6. Refer to D.1.4.		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	Calculations of GHG emissions by the formulae in Tables 10.1-10.6 are shown in PDD Tables 14 – 16. The calculated data are checked and found accurate provided that (i) the inclusion of the CH4 baseline emissions due to incomplete combustion into the project emissions is correct and (ii) "CH4 mass fraction" (BE1, column 10) does equal 0,4902. Conclusion is pending a follow up on CAR 05 and CAR 06.	Pending	OK
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	1,2	DR	The conservative assumptions are (1) zero leaks from APR collection, treatment and transportation and (2) estimation of CH4 emissions from engines based on flue gas mass (C1-C5) with the use of CH4 mass fraction in APG (these emissions are less than 1% and could be neglected).		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	Refer to D.1.10.		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 small-scale project activity emissions?	1,2	DR	The project falls under category of large scale projects. 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	The formulae are presented in PDD Section D.1.1.4 Tables 11.1 – 11.6 and Table 12. Please refer to D.1.6.		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	Calculations of GHG emissions by the formulae in Tables 11.1 – 11.6, 12 are shown in PDD Tables 17, 18. The calculated data are checked and found accurate provided "CH4 mass fraction" (BE1, column 10) does equal 0,4902. Conclusion is pending a follow up on CAR 05.	Pending	OK
E.4.3. Have conservative assumptions been used to calculate baseline GHG emissions?	1,2	DR	No conservative assumptions were used.		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.	1,2	DR	Yes, it does. Refer to PDD Section E.5.		OK

represent the emission reductions due to the project during a given period?					
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	The presented Table E.6 provide the total values of project emissions, leakage, baseline emissions, and emission reductions in accordance with the JI reporting format.		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	Environmental impact assessment (EIA) was developed, under the assignment with OJSC "RITEK", research and engineering institute NIPIGasPererabotka. Analysis of the environmental impacts of the project is described in PDD Section F1.		OK
F.1.2. Are there any host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	1,2	DR	According to the Order of the State Committee of the Russian Federation for Environmental protection as of 15.05.2000 #372 "On the approval of the regulations on the assessment of the impact of the planned economic and		OK

			other activity on the environment of the Russian Federation" the project developers must include in the project documentation the clause on EIA. This was done (refer to F.1.1).		
F.1.3. Are the requirements of the National Focal Point being met?	1,2, 5,6	DR	The requirements of the National Focal Point to present the EIA should be met before the submission of the project to the Coordination Centre of National Focal Point [5,6[.		OK
F.1.4. Will the project create any adverse environmental effects?	1,2	DR	This project will emit 8,755 tonnes of C1-C5 per year (refer to PDD Section F.1). APF flaring under the baseline emits at least 361 tonnes of CH4.		OK
F.1.5. Are transboundary environmental impacts considered in the analysis?	1,2	DR	The project activity has no transboundary environmental impacts.		OK
F.1.6. Have identified environmental impacts been addressed in the project design?	1,2	DR	Refer to F.1.1.		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	This project has not been controversial since the site is within the leasehold area that RITEK has long used for oil development and the CH4 emissions from the GPP are less significant than those from the flare. Information about the project is available in		OK

			public domain. No comments were received.		
G.1.2. The nature of comments is provided?	1,2	DR	Refer to G.1.1.		OK
G.1.3. Has due account been taken of any stakeholder comments received?	1,2	DR	Refer to G.1.2		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?	1,7	DR	The Permits for air emission are issued for RITEKNadymneft division by the Yamal-Nenetsk Autonomus Okrug department of Rostekhnadzor (# 53 dated 14/06/2007 and # 242 dated 24/11/2008, the latter is valid till 31/12/2011).		OK
1.2. Are there conditions of the environmental permit? In case of yes, are they already being met?	1	DR	Please refer to 1.1 above.		OK
1.3. Is the project in line with relevant legislation and plans in the host country?	1	DR	Yes, the project is in line with relevant legislation and plans in the host country.		OK

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 4	Summary of project owner response	Determination team conclusion
		exceeding 2 mln. Euro. The key milestones of the history of the project included: - The corporate decision on the exploring alternative solutions for APG utilization including those involving the Kyoto market mechanisms, that was taken on the meeting of the RITEK Technical Board on 25.09.2003. - Commissioning of the related feasibility study by the project owner to the NIPIGasPererabotka research institute (Krasnodar, Russian Federation), contract concluded on 29.09.2003. The preliminary report of this study was issued in December 2003, the final report was ready by May 2004. The project alternatives examined by the Institute combined solution of the problem of APG utilization and electricity generation. The option chosen by the project owner presumed construction of GPP. - Commissioning of the full-cycle work on the first block of the power station in Sredne-	

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 4	Summary of project owner response	Determination team conclusion
		Khulymsk to JSC Zvezda-Energetika (Saint Petersburg, Russian Federation), contract concluded on 22.06.2004. The job was executed on turnkey basis and presumed design, manufacturing of equipment, construction, assembly and launching into operation of the first block of the power station (GPP-1), based on the Cummins reciprocating engines. - Official launch of the first block (GPP-1) into operation on 29.10.2005 - Commissioning of the full-cycle work on the second block of the power station in Sredne-Khulymsk to JSC Zvezda-Energetika (Saint Petersburg, Russian Federation), contract concluded on 25.12.2006. The job was to be executed on the turnkey basis for the second block of the power station (GPP-2), based on the Cummins reciprocating engines. - Official launch of the second block (GPP-2) into operation on 28.12.2007.	

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 4	Summary of project owner response	Determination team conclusion
CAR 04 The tabular form on p. 19 shall be filled in as required in [2]: each data unit and its ex ante value used to establish the baseline shall be indicated.	B.1.1	The table was filled in with information about APG volume, APG composition, electric energy supply, and crude oil consumption (refer to PDD Section B.1 pp. 20-21.	The adequate table is presented, which includes the key parameters characterising the baseline. The CAR is closed based on the amendments made to PDD.
CAR 05 The baseline CH4 emission factor (Table 11 BE3, formula 3) is calculated by CH4 mass fraction (BE1, formula 10), which is estimated otherwise than prescribed by formula (5) in Annex A of the Methodology [3]. The deviation from the Methodology affects the calculation of GHG emission reduction.	B.1.3	Corrections are made in calculation of the baseline CH4 emission factor (Table 11 BE3, formula 3) with calculation of CH4 mass fraction (BE1, formula 10), estimated as prescribed by formula (5) in Annex A of the Methodology [3]	The calculating method was brought in conformity with the Methodology [2]. The calculations were checked and found correct. The CAR is closed based on the amendments made to PDD.
CAR 06 Project emissions from engines are calculated by the Methodology [3], though it was developed for APG flaring and includes empiric coefficients for incomplete APG combustion and CO emission. Justification of	B.1.3	Actually, the presented estimation and the used approach are not the best. Usually every engine tunes for the type of available fuel. No any engine can provide full combustion of APG due to its varieties. It is simply impossible. So the only principle of estimations can be based on	The incorrect approach was replaced by a reasonable one. Project emission from engines were recalculated by the appropriate CDM tool [4], which neglects incomplete combustion.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 4	Summary of project owner response	Determination team conclusion
this approach is not provided. Calculation of CO2 emissions from the engines by the relevant CDM tool [4] gives 21068 tAPG x 0,768 (carbon mass fraction) x 44/12 = 59363 tCO2 versus 51472 tCO2 in PDD.		incomplete burning of so-called saturated carbons establishing by engine producer. Being converted by CO and CH4 factor, they can give total volume of CO and CH4 emissions due to under-firing. From another side, such model presumes also a change (growth) of under-firing due to engine's amortization. This makes calculations very difficult, especially for procedures of validation and verification. Thus, the CDM tool [4] was applied as the easiest approach. The result is 59363 tonnes of CO2 emissions.	Note 1. The mass of unburned C1-C5 components is 8,77 t per year (ref. PDD Section F.1 Table 20). This amounts only 0,04% of APG mass (8,77/21068). This means that GHG emissions from the incomplete combustion can be lower than 1% and can be neglected. Note 2. According to IPCC 2006 Volume 2 Chapter 2 Table 2.7, utility CH4 emission factor for Natural Gas Fired Reciprocating Engine (four strokes) is 597 kg CH4/TJ. Assessment for the project gives 0,597 x 19,4 mln m3 x 42,4 MJ/m3 = 0,491 t CH4. Thus, the assumption of complete combustion of APG in engines is supported by different arguments. The CAR is closed based on the

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 4	Summary of project owner response	Determination team conclusion
			amendments made to PDD.
CAR 07 Relevant literature and sources are referenced through the text of PDD except the reference to the sources of data for: - specific fuel rates for power trains; - carbon content default value on p. 38 (2006 IPCC Volume and Chapter numbers); - EIA (the title and year of the NIPIGasPererabotka project documentation).	B.1.5	- Specific fuel rate for power trains based on the five-year record of operating experience and an official energy-audit carried out in the end of 2006 by company "Energoperspectiva" Ltd. equal 0,596 tonnes of unified fuel per MWh. Refer to PDD p. 48 - Carbon content default value was taken from 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 2 Chapter 1 Tables 1.2, 1,3. Refer to PDD p.40. - On assignment with RITEK, a scientific research institute, JSC NIPIGasPererabotka, has elaborated the environmental impact assessment (EIA) ("Feasibility study on rational APG utilization on exploiting oil fields" from 2003. Contract #2003.30) for the Project. Refer to PDD p. 49.	The missing information was added. The supporting documents are in possession of the verifier. The CAR is closed based on the amendments made to PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 4	Summary of project owner response	Determination team conclusion
CAR 08 Provide an analysis to which extent similar activities to the proposed project activity have been implemented previously or are currently underway. If similar activities are observed, then essential distinctions between the proposed project activity and similar activities shall reasonably be explained.	B.2.1	Analysis of similar activities is provided as follows. 27-28 Similar activities to the proposed project activity that have been implemented previously or are currently underway are reasonably selected according to the following similarity criteria: - similarity of the equipment type and capacity; - comparable environment and geographical location. Several projects were implemented or on-going in Russia do comply with the above criteria, namely: - Yarainer GPP, 5 Cummins engines of 6575 KW total capacity, operating on APG, Project Owner – Sibneft; launched in November 2003; - Kharampur GPP, 5 Cummins engines of 7500 KW total capacity, operating on APG, Project Owner – Rosneft; launched in summer 2005;. - Kisso-Katyn GPP, 8 Cummins engines of 12000 KW total capacity, operating on APG,	PDD was added by the appropriate reasonings. The information about the similar activities is available in public domain and is known to the verifiers. Indeed, the similar activities were financially competitive to the available alternatives - the consumption of the electric energy from the grid and/or own power generation on diesels - and therefore were implemented. The project activity, on the contrary, is financially not attractive as compared with the available alternative of electricity energy supply from power trains with the specific cost of 135 euro per kW installed. No other power solution can offer such low investment

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 4	Summary of project owner response	Determination team conclusion
		Project Owner – Bashneft; launched in September 2007 - Zapadno-Krapivinsk GPP, Wakesha engines, 1.2 MW total capacity, operating on APG, Project Owner – Sibneft; launched in October 2006 - Vakhitov GPP, operating on APG, Project Owner – TNK-BP; launched in February 2005 - Vostochno-Yelovoye & Talakan GPP, operating on APG, Project Owner – Surgutneftegaz; under development The said activities were mostly implemented in the following cases: - financially viable projects; - corporate environmental commitments in case of unprofitable projects. The cases of financial viability of the project are normally those with an expensive alternative, that is attributed to two basic circumstances: - the project with AGP fired GPP substituting expensive power acquired by the Project Owner	cost. The GPP used by the project cost circa 1000 euro per kW installed. This implies the financial additionality of the project. It should be noted that the project and the referred similar activities do not generate revenues from the electric energy production and therefore are always unprofitable. Cost of available alternatives depends on many factors: remoteness of the electric grid, severe climate conditions, hard-to-reach areas, availability and cost of the diesel fuel. Such information may not be available to the PDD developer. Yet, oil companies make decisions based on their corporate requirements which are also not disclosed to

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 4	Summary of project owner response	Determination team conclusion
		previously from the local power generating company. The prices charged by the local power operator normally exceed those that can be obtained by the Project Owner at his own facilities (cases of Surgutneftegaz projects, Vakhitov project of TNK-BP, Kisso-Katyn project of Bashneft); - the project with AGP fired GPP substituting expensive power previously generated with diesel engines, with the costs of transporting the diesel fuel to the generating facilities considered by the Project Owner as inadmissibly high (cases of Zapadno-Krapivinsk and Yarainer projects of Sibneft). In some cases, financially unviable projects are still implemented due to the considerations of the corporate environmental policy. These considerations are particularly true for the Russian National oil leaders – Rosneft and LUKOIL that are following the Western standards of the corporate environmental	third parties. The CAR is closed base on the amendments made to the PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 4	Summary of project owner response	Determination team conclusion
		responsibility and operating within their own sustainability strategies. In case of the Rosneft, this company normally opts for Kyoto JI mechanisms to cover the losses within the projects initiated for environmental reasons, the way it has been with the Khasirey project, that has been developed as a JI project and therefore not included into the above list; this gives a reason to expect that Kharampur project implemented by the Rosneft has a strong chances to be developed as a JI project in due course of time. In the case of the LUKOIL Group it should be specially noted that JSC RITEK occupies a special position of an advanced innovative facility, used as a testing ground for technological and environmental solutions to be later followed by other companies of the Group. This explains the evident financial disadvantages for RITEK within the Project that could be partly covered by the carbon revenues.	

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 4	Summary of project owner response	Determination team conclusion
		The difference between this project and other similar activities is that this project is an innovative one and is specially conceived and developed as a GHG abatement project within the Kyoto protocol framework. This gives a clue to the big capital investments that were undertaken by the Project Owner regardless of the availability of a cheap baseline option of generating the power on powertrains, which were technically adjusted by the company to combust the combination of own cheap crude oil with APG rather than the expensive diesel fuel.	
CAR 09 The date of the baseline setting is not indicated.	B.4.1	24/04/2009 is indicated as the baseline setting.	The date of baseline setting is defined as the date of PDD Version 3.0 (refer to A.1.3). The original baseline, which was set in PDD Version 2.0, was revised following the site visit (ref. Section 2.2 p.11 of this report) The CAR is closed based on the

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 4	Summary of project owner response	Determination team conclusion
			elimination of the omission in the PDD.
CAR 10 December 1st, 2005 is defined in PDD Section C1. This cannot be the starting date of the project as design and installation started well before (ref. to PDD Table 2 on p. 9).	C.1.1	The starting date of the Project was chosen as the date of corporate decision on the exploring alternative solutions for APG utilization including those involving the Kyoto market mechanisms, taken on the meeting of the RITEK Technical Board on 25.09.2003,	Such profile meetings serve a triggering mechanism for implementation of any RITEK project. The minutes of the meeting is in the possession of the verifier. The CAR is closed based on the elimination of the inadequacy in the PDD.
CAR 11 The lifetime is defined as 30 years (360 months). This data does not correspond with the definition of the lifecycle in the investment analysis (20 years).	C.2.1	Lifecycle of project based on amortization terms of equipment and (temporary) buildings. As the main funds equals to zero no investment analysis can be carried out. Changed to 20 years	The lifetime was reasonable connected with the period of amortization of equipment and buildings and the lifecycle in the investment analysis. The CAR is closed based on the elimination of the inadequacy in the PDD.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 4	Summary of project owner response	Determination team conclusion
CAR 12 The starting date of the crediting period is not indicated though this is required by [2].	C.3.1	Corrected as follows: January 1, 2008 till December 31, 2012.	The omission in PDD was eliminated. The CAR is closed based on the amendments made to PDD.
CAR 13 Electric meters actually measure the electric energy in MWh rather than in MW, as indicated in the monitoring plan. This was observed during the site visit.	D.1.1	Corrected as MWh (refer to PDD pp. 30-31).	The inadequacy in PDD Section D.1 is corrected. Electric meters record data in MWh units. The CAR is closed based on the amendments made to PDD.
CAR 14 Information in the left column of the table in PDD Section D.2 in not in accordance with the description of the monitoring plan.	D.2.1	Duly corrected (refer to PDD p. 41)	Information in the left column is connected with the monitoring points (M1 – M4). The CAR is closed based on the .amendments made to PDD.
CL 01 Please clarify the need to monitor APG density and mass. Density is calculated by the APG composition (PDD Table 11 column 2), whereas APG mass is calculated by its	D.1.1	The parameters to be measured are defined as follows: electric energy supply, APG composition, and APG volume (refer to PDD pp. 30-32). Density is calculated by the APG composition (PDD Table 11 BE1 column 2),	The adequate table is presented, which includes the key parameters to be measured to define emissions in the project scenario.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in tables 1, 2, 4	Summary of project owner response	Determination team conclusion
density and measured volume.		whereas APG mass is calculated by its density and measured volume.	The CAR is closed based on the amendments made to PDD.
CL 01 Please clarify the need to monitor APG density and mass. Density is calculated by the APG composition (PDD Table 11 column 2), whereas APG mass is calculated by its density and measured volume.	D.1.1	The parameters to be measured are defined as follows: electric energy supply, APG composition, and APG volume (refer to PDD pp. 30-32). Density is calculated by the APG composition (PDD Table 11 BE1 column 2), whereas APG mass is calculated by its density and measured volume.	The adequate table is presented, which includes the key parameters to be measured to define emissions in the project scenario. The CAR is closed based on the amendments made to PDD.

Appendix B: Verifiers CV's

Mr. Flavio Gomes:
Lead Verifier
Bureau Veritas Certification Holding SAS – Global Manager for Climate Change

Flavio Gomes is a Chemical and Safety Engineer graduated from «UNICAMP – Universidade Estadual de Campinas», with a MSc title in Civil Engineer (Sanitation). He spent four years at RIPASA Pulp and Paper as Environmental Process Engineer. He is, since 2006 the Global Manager for Climate Change. Previously and since 1997, he was senior developer for Bureau Veritas Consulting in fields of Environment, Health, Safety, Social Accountability and Sustainability audit and management systems. He also acted as Clean Development Mechanism verifier, and Social/Environmental Report auditor, in the name of Bureau Veritas Certification. Flavio is pursuing his PhD on Energy Management at the Imperial College – London.

Leonid Yaskin, PhD (thermal engineering)
Verifier.
Bureau Veritas Certification Rus General Director- Lead Auditor, Lead Tutor, 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 10 JI projects.

Ashok Mammen - PhD (Oils & Lubricants).
Bureau Veritas Certification - Internal Technical Reviewer
Over 20 years of experience in chemical and petrochemical field. Dr. Mammen is a lead auditor for environment, safety and quality management.