

Determination Report

Gazprom Marketing and Trading Ltd.

Determination of the

Utilization of associated petroleum gas on Talakan oil and gas condensate field, Russian Federation

Report No. RUSSIA-DET/0174/2011

Revision No. 02

BUREAU VERITAS CERTIFICATION

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| GM&T | | | | Mr. Grigory Berdin | | |
| Summary: | | | | | | | |
| Bureau Veritas Certification has made the determination of the “Utilization of associated petroleum gas on Talakan oil and gas condensate field, Russian Federation” project of company OJSC “Surgutneftegas, on the basis of UNFCCC criteria for the JI, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 6 of the Kyoto Protocol, the JI rules and modalities and the subsequent decisions by the JI Supervisory Committee, as well as the host country criteria.  The determination scope is defined as an independent and objective review of the project design document, the project’s baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final 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, Clarification and Further Actions Requests, presented in Appendix A. Taking into account this output, the project proponent 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. | | | | | | | |
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**Abbreviations**

|  |  |  |
| --- | --- | --- |
| AIE | Accredited Independent Entity | |
| BVC | Bureau Veritas Certification | |
| APG | Associated Petroleum Gas | |
| CAR | Corrective Action Request | |
| CL | Clarification Request | |
| CO2 | Carbon Dioxide | |
| CS | Compressor Station | |
| DDR | Draft Determination Report | |
| DR | Document Review | |
| EIA | Environmental Impact Assessment | |
| ERU | Emission Reduction Unit | |
| GHG | Greenhouse House Gas(es) | |
| GM&T | Gazprom Marketing & Trading | |
| IPCC | Intergovernmental Panel on Climate Change | |
| IRR | Internal Rate of Return |
| JI | Joint Implementation | |
| JISC | Joint Implementation Supervisory Committee | |
| NG | Natural gas |
| NGO | Non Governmental Organization |
| PDD | Project Design Document | |
| PP | Project Participant | |
| RF | Russian Federation | |
| tCO2e | Tonnes CO2 equivalent | |
| UNFCCC | United Nations Framework Convention for Climate Change | |

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# Introduction

Gazprom Marketing & Trading Ltd (hereafter called “GM&T”) has commissioned Bureau Veritas Certification on behalf of OJSC “Surgutneftegas” to determine JI project “Utilization of associated petroleum gas on Talakan oil and gas condensate field, Russian Federation” (hereafter called “the project”) located in Sakha (Yakutia) Republic, Russian Federation.

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.

## Objective

The determination is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), 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 emissions reductions 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.

## Scope

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

The determination is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

## Determination team

The determination team consists of the following personnel:

Vladimir Lukin

Bureau Veritas Certification Climate Change Lead Verifier

Alexey Kulakov –

Bureau Veritas Certification Technical Specialist

This determination report was reviewed by:

Dr. Leonid Yaskin

Bureau Veritas Certification, Internal reviewer

# Methodology

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

In order to ensure transparency, a determination protocol was customized for the project, according to the version 01 of the Joint Implementation Determination and Verification Manual, issued by the Joint Implementation Supervisory Committee at its 19 meeting on 04/12/2009. The protocol shows, in a transparent manner, criteria (requirements), means of determination and the results from determining 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 determiner will document how a particular requirement has been determined and the result of the determination.

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

## Review of Documents

The Project Design Document (PDD) submitted by GM&T and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for users of the joint implementation project design document form Guidance on criteria for baseline setting and monitoring, Kyoto Protocol, to be checked by an Accredited Independent Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, GM&T revised the original PDD Version 1.0 dated 26/12/2011 and following a set of revisions resubmitted it as Version 1.2 dated 04/04/2012.

The first deliverable of the document review was the Determination Protocol Revision 01 dated 23/01/2012 which contained 14 CARs, 17 CLs and 1 FAR.

The determination findings presented in this Determination Report Revision 01 and its Appendix A relate to the project as described in the PDD Version 1.0 (submitted for determination) through version 1.2 (final) dated 04/04/2012.

## Follow-up Interviews

On 17-22/02/2012 the AIE Lead Verifier Vladimir Lukin performed telephoning interviews with project developer GM&T Ltd., who has been authorized by the project participant OJSC “Surgutneftegas” through the Power of Attorney /30/ to respond the AIE’s questions and to convey the relevant information to AIE on behalf of the project participant upon the request, to confirm the selected information and to clarify some issues identified in course of the documents review. The list of the persons interviewed is provided in References. The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

|  |  |
| --- | --- |
| Interviewed organization | Interview topics |
| Project participant  OJSC “Surgutneftegas” | * Project history and Implementation schedule * Technical details of the proposed project * Baseline scenario * Project activity * Input data for investment analysis * Monitoring authority and responsibility * QC & QA procedures of monitoring * Environmental permissions * Environmental Impact Assessment |
| CONSULTANT  GM&T | * Theoretical description of baseline scenario * Investment barrier and common practice * Additionality * Monitoring plan * Emission reduction calculation |
| Stakeholders | * N/A |

## Resolution of Clarification and Corrective Action Requests

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

If Bureau Veritas Certification, in assessing the PDD and supporting documents, identifies issues that need to be corrected, clarified or improved with regard to JI project requirements, it should raise these issues and inform the project participants of these issues in the form of:

1. Corrective action request (CAR), requesting the project participants to correct a mistake in the published PDD that is not in accordance with the (technical) process used for the project or relevant JI project requirement or that shows any other logical flaw;
2. Clarification request (CL), requesting the project participants to provide additional information for Bureau Veritas Certification to assess compliance with the JI project requirement in question;
3. Forward action request (FAR), informing the project participants of an issue, relating to project implementation but not project design, that needs to be reviewed during the first verification of the project.

Bureau Veritas Certification should make an objective assessment as to whether the actions taken by the project participants, if any, satisfactorily resolve the issues raised, if any, and should conclude its findings of the determination.

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

# project description (quoted from PDD v.1.1)

Brief description of the project

The project involves construction of a compressor station (hereinafter CS) for utilization of associated petroleum gas (hereinafter APG) on Talakan oil and gas condensate field in the Sakha Republic (Yakutia), Russian Federation. In order to be utilized APG will be pumped by CS into the gas cap of the oil pool through forcing wells. The main purpose of APG injection is avoiding of its combustion in flares but the injection also has an additional minor purpose - to maintain seam pressure. The injected APG will be stored in the gas cap for a long-term period, at the moment of PDD creation there were no plans for extraction of the APG in the foreseen future. The PDD assumes that in remote future the injected APG can be extracted only for use as a fuel thus, substituting other fossil fuels. Implementation of the project allows OJSC “Surgutneftegas” to save valuable natural resource – APG and avoid pollution of the environment by combustion residues.

Purposes of project implementation

The main purposes are:

* Increase APG utilization level;
* Save natural resources for the next generations;
* Improve environmental situation near the oilfields;
* Reduce greenhouse gas (GHG) emissions;
* Substitute water injection based seam pressure maintenance.

Situation existing prior to the starting date of the project

Prior to the project implementation associated petroleum gas was combusted mainly in flare units. Only small quantities of APG were used for internal needs. APG was flared under suboptimal conditions, i.e. part of APG was not duly oxidized and was released into the atmosphere (also known as soot flaring). At the time of decision making to implement the project , APG flaring was common practice at remote oilfields in Russia. The additional impact of the project implementation such as seam pressure maintenance could be supported by means of water injection. The capacity of water injection equipment at the site was enough to provide the same level of oil extraction as in the presence of the project.

Baseline scenario

The baseline scenario can be described as follows; in the absence of the project, APG utilized by the compressor station would be flared. Seam pressure at Talakan oil and gas condensate field would be maintained by means of water injection.

The main source of emissions in the baseline scenario is CO2 emissions from combustion of hydrocarbon contents of the APG. The baseline scenario also includes fugitive emissions of hydrocarbons due to incomplete combustion of APG in flare units. Among other hydrocarbons, methane is indicated by the UNFCCC as a greenhouse gas. Thus, fugitive methane emissions from incomplete combustion of APG are included in the baseline scenario.

Expected results of the project:

Increase of APG utilization level;

* Decrease of water consumption for purposes of seam pressure maintenance;
* Preservation of the valuable natural resource – APG which consists mainly of methane. APG will not be wasted in flare units but saved and stored for further use;
* Environmental conditions near the flare units will be improved;
* Mitigation of negative environmental impacts, including reduction of GHG emissions by average 777 857 tonnes of СО2e/year.

Project scenario

Under the project scenario, a compressor station was build near Talakan oil and gas condensate field developed by OJSC “Surgutneftegas” in Sakha Republic. The compressor station is designed for pretreatment, compressing, drying and transportation of the APG to the injection wells of the Talakan oil and gas condensate field. APG will be pumped into the gas cap of the oil pool for the purposes of seam pressure maintenance. The injected APG will be stored in the gas cap for a long-term period.

The raw material for the compressor station is associated petroleum gas from Talakan oil and gas condensate field. The CS is powered by a located nearby gas turbine power plant which uses APG from the same oil and gas condensate field as the project itself. Implementation of the project will lead to a significant increase of APG utilization level and saving of fossil natural resources.

The total amount of the pumped APG will amount approximately 849 mln. m3 for the period 2010-2012.

Brief history of the Project (including its JI component)

In 2004 OJSC ”Surgutneftegas” obtained a license for the development of Talakan oil and gas condensate field. In 2005 the company started drilling exploration wells and developing basic infrastructure such as roads, power generation and supply, worker accommodation, etc. necessary for further field exploration as well as core oil processing and transportation infrastructure.

In early 2006 the company’s Environmental and corrosion control department conducted analysis of the situation with Joint Implementation mechanism in Russia . It took into account experience from gas turbine and gas piston power station APG utilization projects developed under JI framework which started in 2001 and 2005 respectively. Report suggested that despite lack of economic incentives and significant capital expenditure requirements, APG utilization at Talakan oil and gas condensate field can be co-financed through JI mechanism.

Technical parameters of the APG utilization project were initially discussed in April 2006 at the Technical Council meeting chaired by the Chief Engineer of OJSC “Surgutneftegas”. In September 2006 Chief Engineer approved an assignment for the project design development. By the end of 2007 the company received completed project design developed by OJSC “UkrKhimProject”, received all necessary state approvals (Glavgosexpertiza) and started construction of the compressor station . Construction and commissioning were completed in October 2010 as evidenced by the Construction Completion Act .

In early 2010 when regulatory regime became more transparent and Sberbank announced the first contest for host-country JI project approval, OJSC “Surgutneftegas” and Gazprom Marketing & Trading Ltd. (GM&T) started cooperation on commercializing of carbon credits generated by the company’s APG utilization JI projects. 9th June 2011 OJSC “Surgutneftegas” and Gazprom Marketing & Trading Ltd. (GM&T) concluded an Emission Reduction Purchase Agreement and commenced development of Project Design Documentation on this project titled “Utilization of associated petroleum gas on Talakan oil and gas condensate field, Russian Federation”.

# Determination conclusions

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

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

The Corrective Action Requests (CAR) and Clarification Requests (CL) are stated, where applicable, in the following sections and are further documented in the Determination Protocol in Appendix A. The determination of the Project resulted in 14 CARs, 17 CLs and 1 FAR.

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

Outstanding issues related to Project Description, PP’s response and the AIE conclusion are summarized in Appendix A (refer to CARs 01- 02 and CLs 01-06).

The issued requests concern:

* Insufficient information on the technical peculiarities of the proposed project activity: technical specification of the turbines; power consumption sources (CAR 01);
* Justification of the length of crediting period (CAR 02);
* Clarification on whether or not the maintenance of seam pressure is one of the project purpose (CL 01);
* Request of the documentary evidence against the preliminary project discussion undertaken by the company (CL 02);
* Clarification regarding possibility of the further extraction of injected APG and possible future revenues (CL 03);
* Clarification of the proper entitle of the Party A (CL 04);
* Possible effect on the oil extraction that may be expected from implementation of APG injection (CL 05);
* Clarification on what is proposed to be with water injection under the project scenario (CL 06).

## Project approvals by Parties involved (19-20)

The project has no approvals by the Parties involved, therefore CAR 03 remains pending.

A Party involved other than the Host Party is United Kingdom. The Legal entity representing the Party other than Host is GM&T.

## Authorization of project participants by Parties involved (21)

The participation of OJSC “Surgutneftegas” listed as project participant in the PDD is not authorized by the Host Party because the project approval by the Host Party was not received.

The authorization is deemed to be provided with the issuance of the project approvals.

## Baseline setting (22-26)

The PDD explicitly indicates that using a methodology for baseline setting and monitoring developed in accordance with appendix B of the JI guidelines (hereinafter referred to as JI specific approach) was the selected approach for identifying the baseline.

**JI specific approach**

The PDD provides a detailed theoretical description in a complete and transparent manner, as well as justification, that the baseline is established:

1. By identification of plausible future scenarios and selecting the most plausible one. In this regard Five APG handling alternatives and two seam pressure maintenance alternatives were select and then the most plausible combination was identified as the baseline scenario. APG management alternatives are the following:

Alternative Scenario A1: Continuation of APG flaring;

Alternative Scenario A2: Construction of APG fuelled Gas Piston Power Plants or Gas Turbine Power Plants;

Alternative Scenario A3: Transportation and sale of APG to end users;

Alternative Scenario A4: Processing of APG at APG processing plant or construction of a new processing plant;

Alternative Scenario A5: Implementation of the project without involving of JI mechanism e.g. Utilization of APG by means of its injection into the gas cap of the oil pool.

Seam pressure maintenance alternatives:

Alternative Scenario B1: Seam pressure maintenance by means of water injection;

Alternative Scenario B2: Implementation of the project without involving of JI mechanism, e.g. Construction of the CS and seam pressure maintenance by means of APG injection.

Based on alternatives analysis with taking into account the key factors in b) a conclusion is made that the combination of Alternatives A1 and B1 represent the most plausible baseline scenario.

1. By taking into account key factors that affect a baseline, such as sectoral reform policies and legislation, economic situation in oil&gas sector in terms of APG utilization, availability of capital (including investment analysis), APG prices.
2. Basically in a transparent manner with regard to the choice of the JI specific approach, assumptions, parameters, data sources and key factors. The key information and data used to establish the baseline are provided in the required tabular forms.
3. Taking into account of uncertainties and using conservative assumptions.
4. In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure.
5. By drawing of the list of standard variables contained in appendix B to Guidance on criteria for baseline and monitoring.

Outstanding issues related to Baseline setting (22-26), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CARs 04 – CAR 05, CLs 07-09).

The issues requests concern:

* Justification of the possible effect on the power production by GTPP and other consumers (CAR 04);
* Application of the standard variables drawn upon appendix B of guidance for the baseline setting and monitoring (CAR 05);
* Request to provide explicit explanation of application of 3.5 % methane underburning (soot combustion) flaring factor (CL 07)
* Clarification of possible effect of gas injection on the gas factor dynamic (CL 08);
* Clarification on how the governmentally established tariffs affect the baseline (CL 09).

## Additionality (27-31)

**JI specific approach**

The approach described in paragraph 44 (c) of Annex 1 to the “Guidance on criteria for baseline setting and monitoring” Version 03 -application of the most recent version of the ”Tool for the demonstration and assessment of additionality” approved by the CDM Executive Board (allowing for a grace period of eight months when the PDD is submitted for publication on the UNFCCC JI website), or any other method for proving additionality approved by the CDM Executive Board - was selected to demonstrate that the reductions of greenhouse gas emissions from sources achieved due to the project implementation are additional to those that would have otherwise occurred in the absence of the project.

Version 05.2.1 of the Additionallity tool was applied to demonstrate the additionality nonetheless version 06.0.0 had already been issued as the determination was accomplished within the grace period as prescribed by the “Guidance on criteria for baseline setting and monitoring” v. 03.

Within the framework of the selected approach the project additionality was proved using the project alternatives analysis, the investment analysis and the common practice analysis.

The Benchmark analysis was chosen as the appropriate method to demonstrate that the project is not economically feasible without JI revenues. The investment analysis was based on calculation of NPV for the Project, taking into account investment costs, operation costs, amortization and other parameters referring to expenses (project expenditures), as well as project associated revenues from water injection savings and avoided environmental fees.

Discount rate was selected to be in the range from 13.5% to 16.5% being subject for sensitivity analysis. During determination it was demonstrated that the discount rate have been used for similar projects with similar risks, would have been used for similar projects in the same sector in the country/region.

The calculations of the basic variant supplemented by the sensitivity analysis showed that NPV<0, hence the project is not economically attractive for OJSC “Surgutneftegas”.

Outstanding issues related to Additionality (327-31), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CARs 06-08 and CLs 10-11).

The issued requests concern:

* Request to use the actual version of the Additionality tool (CAR 06);
* Request to discuss the alternatives for APG handling and the seam maintenance separately (CAR 07);
* Justification of the incorrect reference to selected alternative (CAR 08);
* Clarification of inconsistencies related to the consideration of the saving of water; the appropriateness of the period of assessment; the period of expected operation of the underlying project activity (technical lifetime), request of the evidence to support the investment analysis horizon selected and the investment analysis (CL 10);
* Clarification of the variation range used for the parameters in the sensitivity analysis (CL 11).

## Project boundary (32-33)

**JI specific approach**

The project boundary defined in the PDD encompasses all anthropogenic emissions by sources of GHGs that are (i) under the control of the project participants, (ii) reasonably attributable to the project, and (iii) significant.

Project boundary is defined on the basis of case-by-case assessment of different emission sources. The identified GHGs emissions and their sources are as follows: (a) CO2 and CH4 emissions due to APG flaring in the baseline scenario and (b) CO2 emissions due to combustion of APG at the turbines driving the CS comprising the project emissions and (c) GHG emissions due to methane leaks during transportation of additional APG volume to the GPC. CO2 emissions due to electricity consumption by the project generated due to APG combustion at the nearby GPPP are reasonably assumed to be equal to the same amount of APG combusted at the flaring excluded from consideration. It was explicitly demonstrated that N2O and CH4 emissions (the latter for the project activity) are negligible and hence excluded from consideration.

Outstanding issue related to Project Boundary (32-33), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CAR 09-10 and CL 12).

* Justification on why the emergency power consumption from the grid and Fugitive APG leaks attributable to the APG compression and injection following emission sources are not considered (CAR 09).
* Justification of the delineation of the project boundary at the figure B 1-3. (CAR 10 and CL 12).

## Crediting period (34)

Starting date of the project is defined in PDD as 09/06/2006 being the date when the equipment purchasing contract was signed.

Expected operational lifetime of the project is 25 years that was confirmed through the review of project equipment technical specification. The length of crediting period is defined as 3 years (36 months) from 02/01/2010 – 31/12/2012. The starting date of crediting period falls on the date when the first emission reductions were generated by the project.

Outstanding issue related to Crediting period (34), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CL 13).

The issued CL 13 concerns the definition of the project starting date, start of the crediting period and the operation lifetime.

## Monitoring plan (35-39)

**JI specific approach**

The PDD, in its monitoring plan section, explicitly indicates that JI specific approach was selected.

The monitoring plan specifies the indicators, constants and variables that are reliable (i.e. provide consistent and accurate values), valid (i.e. be clearly connected with the effect to be measured), and that provide a transparent picture of the emission reductions to be monitored such those listed in the PDD, Sections D.1.1.1 and D.1.1.3.

The monitoring plan provides, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured but not including data that are calculated with equations.

The monitoring plan describes:

* the relevant factors that will be monitored:

Project activity:

* Volume of associated petroleum gas pumped by the compressor station into injection wells for the purposes of seam pressure maintenance in a month m
* Volume of associated petroleum gas used by the compressor station as a fuel for pumping of APG in a month m
* Volumetric fraction of hydrocarbon of type h in associated petroleum gas pumped by the compressor station into injection wells in a month m

* all decisive factors for the control and reporting of project performance: quality control (QC) and quality assurance (QA) procedures; emergency procedures; the operational and management structure that will be applied in implementing the monitoring plan.

Constants used are the default values of the parameters as follows:

* Leaks coefficient comprises fugitive methane leaks (so called “process losses”) from the equipment installed at the compressor station.
* Underburning factor for combustion of APG (determined for the soot combustion mode on the basis of the soot combustion criteria test as per officially approved methodology by NII Athmosphera)
* Density of a hydrocarbon of type h.
* Global Warming Potential of methane
* Stoichiometric Mass Factor - mass ratio of CO2 produced from full combustion of unit mass of hydrocarbon of type h, calculated as follows: SMFh = molar mass of CO2 (44 g./mol) \* the amount of atoms of carbon in hydrocarbon of type h / molar mass of hydrocarbon of type h (molar masses were taken from GOST 31369-2008)

The defaults values originate from recognized sources as indicated above and are presented in a transparent manner.

The monitoring plan is developed subject to the list of standard variables contained in appendix B of “Guidance on criteria for baseline setting and monitoring” developed by the JISC.

The monitoring plan explicitly and clearly distinguishes:

* 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 such as the default data used;
* data and parameters that are monitored throughout the crediting period, such as those presented in Section D.1.1.1 for the project and Section D.1.1.3 for the baseline.

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording.

The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of baseline emissions and project emissions, as appropriate, such as Formulae in Section D.1.1.2 for project emissions and Formulae in Section D.1.1.4 for baseline emissions.

The monitoring plan clearly describes the operational and management structure regarding the monitoring activities. The responsibility for the JI project implementation is assigned through the internal order issued by the company for the Monitoring in general – Financial director, for data collection, checking, handling, transmitting – the Head of technical services, for Internal audit – Lead engineer of gas extraction and transporting department in Technical division and for the Methrological support – Chief metrologist. On the whole, the monitoring report reflects good monitoring practices appropriate to the project type.

The monitoring plan indicates that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project.

Outstanding issues related to Monitoring plan (35-39), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CAR 11 CLs 14-17).

The issued requests concern:

* Request to describe separately the fixed parameters and those to be monitored (CAR 11);
* Clarification of the procedure to be followed if the sources of data to be monitored would be unavailable (CL 14);
* Request for certificates for the meters and the methods applied for the monitoring (CL 15);
* Clarification on the monitoring compliance to the industrial routines usually applied by the company (CL 16);
* Request for the the documentary evidence (orders, procedures etc.) to support the appointment of responsibility for the monitoring functions (CL 17);

As all the original data sources for the APG composition were not available for the time since the crediting period started they were verified on the basis of sample and they all are to be checked at the stage of verification (FAR 01).

## Leakage (40-41)

**JI specific approach**

Leakages are not considered as the CO2 emissions related to the additional APG combustion at the GTPP/GPPP to cover additional power demands appeared due to the project activity are reasonable admitted to be the same as that would occurred due to the APG flaring without the project.

No outstanding issues related to Leakage (40-41) were raised.

## Estimation of emission reductions or enhancements of net removals (42-47)

**JI specific approach**

The PDD indicates assessment of emissions in the baseline and project scenario as the approach chosen to estimate the emission reductions of the project.

The PDD provides the ex ante estimates of:

1. Emissions for the project scenario (within the project boundary), which are 24,182 tCO2e;
2. Emissions for the baseline scenario (within the project boundary), which are 2,357,754 tCO2e;
3. Emission reductions (based on (a), (b) above), which are 2,333,572 tCO2e.

The formulae used for calculating the estimates are referred in the PDD, Sections D.1.1.2, D.1.1.4, and D.1.4.

The PDD Section E includes an illustrative ex ante emissions calculation.

For calculating the estimates referred to above, key factors defined in the monitoring plain influencing the project and baseline emissions were taken into account, as appropriate. The estimation referred to above is based on conservative assumptions and the most plausible scenario in a transparent manner. The estimates referred to above are consistent throughout the PDD.

Outstanding issue related to 4.9 Estimation of emission reductions or enhancements of net removals (42-47), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CAR 12)

The issued CAR12 concerns inapplicability of term “the leakage inside the project boundary”.

## Environmental impacts (48)

The PDD provides explicit description demonstrating that there are no environmental impacts attributable to the project are expected to be beyond the legally established norms. The project will not lead to increase in emission rate of air pollutants due to shift from APG flaring to injection and will not be resulted an any water pollutant discharge.

The description of Environmental impacts was verified against EIA made as the part of the project feasibility study and officially approved by State Expertise conclusion.

Outstanding issues related to Environmental impacts (48), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CAR 13).

The issued CAR 13 concerns possible impacts related to water discharge and APG fugitive emissions.

## Stakeholder consultation (49)

This type of project is not liable to arrangement of stakeholders’ consultation in form of public hearing. Stakeholder comments were invited and collected in form of official conclusions issued by the local authorities and through the publications in the local medias.

Outstanding issues related to Stakeholders’ consultation (48), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CAR 14).

The issued CAR 14 concerns incorrect interpretation of legal requirements related to the stakeholder process given in initial version of PDD.

## Determination regarding small scale projects (50-57)

Not applicable.

## Determination regarding land use, land-use change and forestry (LULUCF) projects (58-64)

Not applicable.

## Determination regarding programmes of activities (65-73)

Not applicable.

# SUMMARY and report oF how due accouNt was taken of COMMENTS RECEIVED PURSUANT TO PARAGRAPH 32 OF THE JI GUIDELINES

No comments, pursuant to paragraph 32 of the JI Guidelines, were received.

# DETERMINATION opinion

Bureau Veritas Certification has performed a determination of the “Utilization of associated petroleum gas on Talakan oil and gas condensate field, Russian Federation” project. The determination was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The 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 resolution of outstanding issues and the issuance of the final determination report and opinion.

Project participant used the Tool for the demonstration and assessment of additionality ver. 05.2.1 for the demonstration of additionality. In line with this approach, the PDD provides investment analysis and common practice analysis to determine that the project activity itself is not the 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 the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfilment of stated criteria.

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. 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 1.2 dated 04/04/2012 meets all the relevant UNFCCC requirements for the determination stage and the relevant host Party criteria.

The determination is based on the information made available to us and the engagement conditions detailed in this report.

# references

**Category 1 Documents:**

Documents provided by PNGP and NCSF that relate directly to the GHG components of the project.

|  |  |
| --- | --- |
|  | PDD “Utilization of associated petroleum gas on Talakan oil and gas condensate field, Russian Federation”  a/ Version: 1.0 dd.: 26/12/2011  b/ Version: 1.1 dd.: 26/03/2012  c/ Version: 1.2 dd.: 04/04/2012 |
|  | ER Calculation Excel spreadsheet  a/ Version: 1.0 dd.: 26/12/2011  b/ Version: 1.1 dd.: 26/03/2012 |
|  | Investment Analysis Excel spreadsheet  a/ Version: 1.0 dd.: 26/12/2011  b/ Version: 1.1 dd.: 26/03/2012 |

**Category 2 Documents:**

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

|  |  |
| --- | --- |
|  | Guidelines for the implementation of Article 6 of the Kyoto Protocol  <http://unfccc.int/resource/docs/2005/cmp1/eng/08a02.pdf#page=2> |
|  | Guidance on criteria for baseline setting and monitoring Version 03  <http://ji.unfccc.int/Ref/Documents/Baseline_setting_and_monitoring.pdf> |
|  | “Guidelines for Calculation of Air Pollutant Emissions from APG Flaring” developed by the Scientific Research Institute for Atmospheric Air Protection in Saint-Petersburg (approved by the Order of the National Environmental Protection Committee of the Russian Federation dd. 08.04.98 №199) |
|  | Information note: Power consumption. Signed by the Deputy Energy Dept Head in OJSC “Surgutneftegas” E.V.Sidoruk. |
|  | The letter “On the normative technical losses limits” for 2010 #05-141 dd.21/09/2009 |
|  | The letter “On the normative technical losses limits” for 2011 and 2012 #05-1532 dd.29/12/2011 |
|  | The memorandum “on the project realization” #51-56-47 dd. 26/01/2006 |
|  | Official information note signed by the Head of oil and gas development dept. in oil and gas fields development division in OJSC “Surgutneftegas” 23/03/2012 |
|  | Explanatory note “on different seam pressure techniques”. |
|  | Explanatory note “gas factor dinamic”. |
|  | Completed facility acceptance reports:  20/10/2009 – CS capital construction (Start in Dec’2006)  20/10/2009 – Administrative building (Start in May 2008)  20/10/2009 – RMM building (Start in Jan’ 2008)  20/10/2009 – Fire extinguishing compressor station building (Start in Aug’ 2008)  20/10/2009 – Store (Start in Apr’ 2008)  20/10/2009 – Control point (Start in Apr’ 2008)  30/10/2009 – security system (Aug’ 2009)  30/09/2010 – CS equipment installation (Start in Nov’09) |
|  | Contract #643/05753490/0654-804 with for the purchase of CS equipment dd. 09/07/2006 |
|  | Technical specification of CS |
|  | Staggered measuring logbook on the intake capacity of injection wells |
|  | The order of Monitoring authority and responsibility assignment dd. 05/09/2008 |
|  | Simulation model to check the “soot combustion” conditions for APG would be flared at Khokhryakovsky oilfield |
|  | Certificate for Measuring junction at the pipeline PP-703.  Secondary meter (converter) UVP280  Ser.# 390424 calibrated on 28/04/09 valid till 2013  Primarily meters:   * metering orifice #12-170 calibrated on 30/09/08 (initial) and 25/08/10 (valid till 2013) * Thermo resister Metran-265-05 ser. #725218 calibrated on 11/11/08 (initial) and 23/07/11 valid till 2012 * Pressure meter Metran 150 TA3 ser.#823922 calibrated on 18/07/11 valid till 2013 * Pressure meter Metran 150 TG 3 ser.#457962 calibrated on 18/11/08 (initial) 17/07/11 valid till 2013 * Pressure meter Metran 150 CD2 ser #823374 calibrated on 18/07/11 valid till 2013 * Pressure meter Metran 150 TG 2 ser.#457968 calibrated on 18/11/08 (initial) and 17/07/11 valid till 2013 |
|  | Certificate for Measuring junction at the outflow from CS (2 lines) /21/.  Secondary meters (converters)   * UVP280 Ser.# 380915 calibrated on 06/10/08 (initial) and then on valid till 2013 * UVP280 Ser.# 380916 calibrated on 06/10/08 (initial) and then on valid till 2013   Primarily meters:   * Thermo resister Metran-265-02 ser. #725232 calibrated on 10/11/08 (initial) and 23/07/11 valid till 2012 * Thermo resister Metran-265-02 ser. #725233 calibrated on 10/11/08 (initial) and 23/07/11 valid till 2012 * Flowmeter Metran 350 SFA ser. 844460 calibrated on 18/05/11 valid till 2013 * Flowmeter Metran 350 SFA ser. 844461 calibrated on 17/05/11 valid till 2013 * Pressure meter Metran 150 TA4 ser.#823910 calibrated on 17/11/08 (initial) and 15/07/11 valid till 2013 * Pressure meter Metran 150 TA4 ser.#823911 calibrated on 17/11/08 (initial) and 15/07/11 valid till 2013 |
|  | Manual for Gas Chromatograph Clarus 500 GC (Perkin Elmer)  Certificate #650 #7090101, calibration date 02/09/11 |
|  | Accreditation certificate ISO 17025-2006 #ROSS RU.0001.511714 dd. 17/11/2010 valid till 2015 |
|  | Calculation of environmental fees |
|  | Information note on the water costs |
|  | License For Talakan oilfield development # JaKU 12061 NE issued on 26/12/2003 Valid till 2023 |
|  | Feasibility study for the Commpressor Station Project EIA dd.2007 |
|  | Air Pollutant Emission Permit #PDV-073/373 effective from 26/10/2007 to 26/10/2011 |
|  | State Expertise conclusion (Positive) dd. 17/12/2007 |
|  | The power of attorney for Mr. Grigory Berdin issued by OJSC “Surgutneftegaz” |

**Persons interviewed:**

List persons interviewed during the determination or persons that contributed with other information that are not included in the documents listed above.

1. Grigory Berdin, GM&T Ltd. PDD developer and the authorized representative of OJSC “Surgutneftegas”.

**Bureau Veritas Certification Holding SAS**

**DETERMINATION PROTOCOL**

**Table 1**

**Check list for determination, according JOINT IMPLEMENTATION DETERMINATION AND VERIFICATION MANUAL (Version 01)**

| **Section A Paragraph**  **or**  **DVM**  **Paragraph** | **Check Item** | **Initial finding** | **Draft**  **Concl.** | **Final**  **Concl.** |
| --- | --- | --- | --- | --- |
|  | | | | |
| **Guidelines for JI PDD Form Users**  **Section A General description of the project** | | | | |
|  | | | | |
| **A.1. Title of the project** | | | | |
| A.1 | Is the title of the project presented?  Is the sectoral scope to which project pertains presented?  Is the current version number of the document presented?  Is the date when the document was completed presented? | The title of the project is: “Utilization of associated petroleum gas on Talakan oil and gas condensate field, Russian Federation”.  The sectoral scopes is:  (10): Fugitive emissions from fuels (solid, oil and gas).  The PDD Version 1.0 was originally presented to Bureau Veritas and reviewed as a part of determination.  PDD v.1.0 is dated 26/12/2011. |  | OK |
| **A.2 Description of the project** | | | | |
| A.2 | Is the purpose of the project included with a concise, summarizing explanation  (max. 1-2 pages) of the:  a) Situation existing prior to the starting date of the project;  b) Baseline scenario; and  c) Project scenario (expected outcome, including a technical description).  Is the history of the project (incl. its JI component) briefly summarized? | The main purposes are:   * Increase APG utilization level; * Save natural resources for the next generations; * Improve environmental situation near the oilfields; * Reduce greenhouse gas (GHG) emissions.   **CL 01** One of the purposes of the project is maintenance of seam pressure which is consistently emphasised throughout the rest of PDD but sec. A.2. Please gain consistency in the description.  The situation existing prior the project, the baseline and project scenarios and the project history (including JI component) are described comprehensively.  **CL 02**  Please provide the documentary evidence to confirm:  The review of APG utilization practice in Russia, including proposed JI projects, undertaken by Environmental dept. of Surgutneftegas  **CL 03** Sec. A.2 states as one of the project’s advantages that APG will not be wasted in flare units but saved and stored for further use. Nonetheless the opportunity of future beneficial use of the APG saved in course of project is not considered in terms of the project’s additionality. Please, describe the perspectives of such APG use and clarify if there are any respective financial benefits expected by the company which may improve the investment attractiveness of the project. | CL 01  CL 02  CL 03 | OK  OK  OK |
| **A.3 Project participants** | | | | |
| A.3 | Are project participants and Party(ies) involved in the project listed?  Is contact information provided in Annex 1 of the PDD? | Party A (host) is Russian Federation.  Party B is United Kingdom.  Project participant for Party A is Open Joint Stock Company “Surgutneftegas”.  Project participant for Party B is Gazprom Marketing&Trading Ltd  The contact information is provided in PDD Annex 1.  **CL 04** Sec. A3 identifies PP from Party A asOpen Joint Stock Company “Surgutneftegas”, whereas Annex 1 stays Joint Stock Company “Surgutneftegas”. Please clarify, which title (OJSC or JSC) is correct and use it consistently. | CL 04 | OK |
| **A.4 Technical description of the project** | | | | |
| A.4.1 | Location of the project | Refer to A.4.1.1-A.4.1.4. |  | OK |
| A.4.1.1 | Host Party(ies) | The Russian Federation. |  | OK |
| A.4.1.2 | Region/State/Province etc. | Sakha (Yakutia) |  | OK |
| A.4.1.3 | City/Town/Community etc. | Yakutsk |  | 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) | Sec. A 4.1.4. provides consistent information and geographical coordinate allowing unique identification of project location. |  | OK |
| **A.4.2. Technologies to be employed, or measures, operations or actions to be implemented by the project** | | | | |
| A.4.2 | Are the technology(ies) to be employed, or measures, operations or actions to be implemented by the project, including all relevant technical data and the implementation schedule described? | Section A.4.2 PDD provides description of technology and measures to be implemented to achieve the proposed emission reductions.  Pending a response to CLs 01-03  **CAR 01** As per the description given in sec. A 4.2 the compressors are driven with gas turbines. The description of gas compression technique is not comprehensive  1/Please provide the technical specification of gas turbines applied for the project.  2/ Please, specify the power consumption source. Note: the data in table A.4-2 do not correspond to the volumes of gas injected. In particular please clarify where non-zero power consumption came from in 2009 when the project equipment had not been commissioned.  3/ If the project consumes electricity to cover its auxiliary needs only, please, provide the proper justification in the PDD.  **CL 05** Please, clarify, whether or not and, if yes, on what extent the oil extraction rate may be affected by the different seam pressure maintenance technique (water pumping vs. APG pumping). The equal oil extraction in the baseline and the project shall be ensured to make the baseline selection reliable.  Please provide the water pumping capacity estimation to demonstrate that the company would be able to maintain the equal seam pressure with respective extraction rate without the project.  **CL 06**  The description in the PDD is not transparent on the water injection under the project scenario.  1/ will the water injection be continued under the project or the APG completely replaces the water injection?  2/ will the volume of water injection decrease under the project?  3/ will there be any external freshwater consumption avoided due to APG injection?  4/ will the project lead to the discharge of water that otherwise would be injected into the seam?  If the water injection is not completely substituted by the project it should be properly reflected in the description of alternatives. | Pending  CAR 01  CL 05  CL 06 | OK  OK  OK  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 | Is it explained briefly how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page.) | Sec. A 4.3 explicitly indicates the following emission reduction sources:   * Reduction of CO2 emissions from burning of APG in flare units; * Reduction of fugitive CH4 emissions from incomplete combustion of methane in flare units. |  | OK |
| **A.4.3.1. Estimated amount of emission reductions over the crediting period** | | | | |
| A.4.3.1 | Is the length of the crediting period Indicated?  Are estimates of total as well as annual and average annual emission reductions in tonnes of CO2 equivalent provided? | **CAR 02** The length of the 1st crediting period is 5 years that is not correct since the project starts in 2010.    Total as well as annual and average annual emission reductions in tonnes of CO2 equivalent are provided. | CAR 02 | OK |
| **A.5. Project approval by the Parties involved** | | | | |
| A.5 | Are written project approvals by the Parties involved attached? | **CAR 03.** The project has no approvals by the Parties involved.  The project approval by the Host Party will be provided after the determination statement is issued by the AIE. | CAR 03 | CAR 03 |
| 19 | Have the DFPs of all Parties listed as “Parties involved” in the PDD provided written project approvals? | No, pending a response to CAR 03. | Pending | CAR 03 |
| 19 | Does the PDD identify at least the host Party as a “Party involved”? | It is indicated that the Russian Federation is the host Party. |  | OK |
| 19 | Has the DFP of the host Party issued a written project approval? | No, pending a response to CAR 03. | Pending | CAR 03 |
| 20 | Are all the written project approvals by Parties involved unconditional? | No, approvals from parties involved will be requested after the Host party approval will be issued. Pending a response to CAR 03. | CAR 03 | CAR 03 |
| **Authorization of project participants by Parties involved** | | | | |
| 21 | Is each of the legal entities listed as project participants in the PDD authorized by a Party involved, which is also listed in the PDD, through:  − A written project approval by a Party involved, explicitly indicating the name of the legal entity? or  − Any other form of project participant authorization in writing, explicitly indicating the name of the legal entity? | Project participant for Party A is OJSC “Surgutneftegas”.  Project participant for Party B is Gazprom Marketing&Trading Ltd  Pending a response to CAR 03 | Pending | CAR 03 |
| **Baseline setting** | | | | |
| 22 | Does the PDD explicitly indicate which of the following approaches is used for identifying the baseline?  − JI specific approach  − Approved CDM methodology approach | PDD explicitly indicate that JI specific approach is used for baseline setting. |  | OK |
| **JI specific approach only** | | | | |
| 23 | Does the PDD provide a detailed theoretical description in a complete and transparent manner? | PDD sec. B.1 provides theoretical description of the approach applied to calculate baseline emissions.  Baseline emissions are calculated on the basis of the total volume of APG being injected under the project activity assuming the equal amount of APG would have been flared without the project activity.  Methane emissions from incomplete combustion of APG at the flaring system were taken into account.  **CL 07** Please provide the evidence (calculation) to demonstrate the applicability of 3.5 % methane underburning (soot combustion) without the project (using the equal APG volumes as the project does)  **CL 08** Please clarify, how gas injection affects the gas factor dynamic. If the project leads to increase of gas factor (as it is evidenced in several available publications) the conservative approach to estimation of APG volume in the baseline should be applied.  Please provide the possible variation range and the periods in which the gas factor may change without gas injection. Reliable documentary evidence (project geological study, scientific reviews etc.) and the historical data should be applied.  **CL 09** The State regulated tariffs on APG was partially disaffirmed on 09.02.2008 by Governmental Decree #59. Please consider this fact when discussing how the state regulated APG prices affects the baseline selection. | CL 07  CL 08  CL 09 | OK  OK  OK |
| 23 | Does the PDD provide justification that the baseline is established:  (a) By listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one?  (b) Taking into account relevant national and/or sectoral policies and circumstance?  − Are key factors that affect a baseline taken into account?  (c) In a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, date sources and key factors?  (d) Taking into account of uncertainties and using conservative assumptions?  (e) In such a way that ERUs cannot be earned for decreases in activity levels outside the project or due to force majeure?  (f) By drawing on the list of standard variables contained in appendix B to “Guidance on criteria for baseline setting and monitoring”, as appropriate? | The baseline was selected by listing of the following plausible alternatives:  Alternative Scenario 1: Continuation of APG flaring and seam pressure maintenance by means of water injection;  Alternative Scenario 2: Construction of APG fuelled Gas Piston Power Plants or Gas Turbine Power Plants and seam pressure maintenance by the method of water injection;  Alternative Scenario 3: Transportation and sale of APG to end users and seam pressure maintenance by the method of water injection;  Alternative Scenario 4: Processing of APG at APG processing plant or construction of a new processing plant and seam pressure maintenance by the method of water injection;  Alternative Scenario 5: Implementation of the project without involving of JI mechanism. Construction of the CS and seam pressure maintenance by the method of APG injection.  While discussing the alternatives the following policies and circumstances were considered:  Absence of strong legal restrictions;  Growth of environmental fees for the APG flaring;  Business-as-usual practice for APG management in Russia;  Economical attractiveness of the project.  Technical constraints preventing the other alternatives  The project description lacks of transparency in the matters requested under CLs 05-08.  **CAR 04** PDD states the APG is supplied to the GTPP providing electricity to both the CS and outside consumers (oilwells)  All described alternatives do not consider the APG consumption by GTPP. Please update the technical description and justify how the project will affect the power production by GTPP.  From the other hand additional power consumption by CS cause additional load for GTPP. Please justify whether the power capacity of GTPP is sufficient to cover the increasing electricity demand without reduction of power supply to the other power consumers and additional power intake from the grid.  Pease provide the power balance for the baseline and the project and demonstrate that the project activity does not lead to any decrease in activity outside the project boundary.  **CAR 05**  Please apply following standard variables as specified in Annex B of the Guidance for Baseline Setting and Monitoring:   * Fraction of hydrocarbons – *w*h,XX (volume or mass %) * Electricity consumption - *ECy* * Flare efficiency (underburning factor) - *ηflare,t* * Density - *ρx* | Pending  CAR 04  CAR 05 | OK  OK  OK |
| 24 | If selected elements or combinations of approved CDM methodologies or methodological tools for baseline setting are used, are the selected elements or combinations together with the elements supplementary developed by the project participants in line with 23 above? | N/A |  |  |
| 25 | If a multi-project emission factor is used, does the PDD provide appropriate justification? | Carbon emission factor for grid-based electricity generation in the Integrated Power System “East” (IPS “East”) in year y. The values of EF are taken from the baseline study “Development of the electricity carbon emission factors for Russia” 2010 sponsored by EBRD and validated by TUV Sud. |  | OK |
| **Approved CDM methodology approach only\_Paragraphs 26(a) – 26(d)\_Not applicable** | | | | |
| **Additionality** | | | | |
| **JI specific approach only** | | | | |
| 28 | Does the PDD indicate which of the following approaches for demonstrating additionality is used?  (a) Provision of traceable and transparent information showing 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 emission reductions or enhancements of removals;  (b) Provision of traceable and transparent information that an AIE has already positively determined that a comparable project (to be) implemented under comparable circumstances has additionality;  (c) Application of the most recent version of the “Tool for the demonstration and assessment of additionality. (allowing for a two-month grace period) or any other method for proving additionality approved by the CDM Executive Board”. | The PDD indicates that approach (c) application of the most recent version of the ”Tool for the demonstration and assessment of additionality” approved by the CDM Executive Board was chosen to demonstrate the additionality.    **CAR 06** PDD refers to the outdated version of Additionality tool (05.2.1). Please refer to the latest version 06.0.0. <http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v6.0.0.pdf> | CAR 06 | OK |
| 29 (a) | Does the PDD provide a justification of the applicability of the approach with a clear and transparent description? | It is justified in the PDD that the approach chosen for additionality proof was selected in accordance with requirement 2(a) of Annex 1 of JI Guidance on criteria for baseline setting and monitoring, version 03.  **CAR 07** The latest version of Additionality tool (ver. 06.0.0) cl. 17 requires the alternatives for different facilities/technologies/outputs to be determined and considered separately. For alternatives #1-4 the utilization of APG and the maintenance of seam pressure are the different outcomes requiring different technologies/facilities. For instance under alt. 2 GPPP is to be applied for APG utilization and the water pumping is used for seam pressure maintenance.  Please, discuss separately the alternatives for seam pressure maintenance and APG management and then consider their plausible combinations.  (It is also to avoid significant copy&pastes where you discuss the seam maintenance technique under each alternative).  **CAR 08** PDD (p.15) states that alt. 5 (the project without JI) is selected as the baseline…Please correct | CAR 07  CAR 08 | OK  OK |
| 29 (b) | Are additionality proofs provided? | The additionality is substantiated by using an investment analysis.  The project’s is stated to be additional as it is not financially attractive without ERU incomes.  **CL 10** Following inconsistencies with the current version of Investment analysis guidance:  1/Please consider the possible saving of water that would be injected without the project.  2/ According to the investment analysis guidance as referred to in additionality tool “project participants are requested to justify and DOEs are requested to validate the appropriateness of the period of assessment in the context of the underlying project activity… Investment indicators calculations shall as a preference reflect  the period of expected operation of the underlying project activity (technical lifetime), or, if a shorter period is chosen, include the fair value of the project activity assets at the end of the assessment period.”  Please provide the evidence to support the investment analysis horizon selected (12 years).  3/Please demonstrate that the input values used in all investment analysis are valid and applicable at the time of the investment decision taken by the project participant according to guidance #6 of Investment analysis guidance.  4/Calculation of payments for APG flaring which does not exceed 5% from APG extraction are not traceable;  5/ Please consider the postponed incomes from APG recovery in the future or provide the evidence that this source of income was not considered at the decision making time (also CL 03).  6/Please justify the figures of APG utilization in 2009 (before the project start)  7/ If APG is sold to GTPP please consider the respective income in both baseline and the project.  8/ Please identify the discount rate used for NPV calculation  Barrier analysis was not applied.  **CL 11** Please substantiate the variation range used for sensitivity analysis. | CL 10  CL 11 | OK  OK |
| 29 (c) | Is the additionality demonstrated appropriately as a result? | The Common Practice Analysis indicates that the project activity is the first of its kind.  Pending a response to CL 10-11 | Pending | OK |
| 30 | If the approach 28 (c) is chosen, are all explanations, descriptions and analyses made in accordance with the selected tool or method? | N/A |  |  |
| **Approved CDM methodology approach only\_ Paragraphs 31(a) – 31(e)\_Not applicable** | | | | |
| **Project boundary (applicable except for JI LULUCF projects** | | | | |
| **JI specific approach only** | | | | |
| 32 (a) | Does the project boundary defined in the PDD encompass all anthropogenic emissions  by sources of GHGs that are:  (i) Under the control of the project participants?  (ii) Reasonably attributable to the project?  (iii) Significant? | The project boundary defined in the PDD shall encompass all anthropogenic emissions by sources of GHGs that are:  (i) Under the control of the project participants.  (ii) Reasonably attributable to the project.  (iii) Significant.  The project emissions are the following:  Emissions from the electricity consumption;  Emissions from the APG consumption for the CS own needs;  **CAR 09** Following emission sources inside the project boundary are not considered:  Emergency power consumption from the grid  Fugitive APG leaks attributable to the APG compression and injection (methane emissions).  **CAR 10** GTPP and the oil wells are misleadingly included into the project boundary at the figure B 1-3. If GTPP is inside the project boundary its emissions shall be taken into account.  Please justify whether the project affects the APG consumption by GTPP and consider this effect in the baseline and project emission estimation. | CAR 09  CAR 10 | OK  OK |
| 32 (b) | Is the project boundary defined on the basis of a case-by-case assessment with regard to the criteria referred to in 32 (a) above? | Project boundary is defined on the basis of case-by-case analysis (not always quantitative) of emission sources.  Pending a response to CARs 09-10 | Pending | OK |
| 32 (c) | Are the delineation of the project boundary and the gases and sources included appropriately described and justified in the PDD by using a figure or flow chart as appropriate? | Pending a response to CAR 10 | Pending | OK |
| 32 (d) | Are all gases and sources included explicitly stated, and the exclusions of any sources related to the baseline or the project are appropriately justified? | **CL 12** Please indicate the project and baseline emission sources at figure B.3.1. | CL 12 | OK |
| **Approved CDM methodology approach only\_ Paragraph 33\_Not applicable** | | | | |
|  | | | | |
| 34 (a) | Does the PDD state the starting date of the project as the date on which the implementation or construction or real action of the project will begin or began? | 09/06/2006 (the date of the equipment purchasing contract signing). |  | OK |
| 34 (a) | Is the starting date after the beginning of 2000? | The project started after 2000 y. |  | OK |
| 34 (b) | Does the PDD state the expected operational lifetime of the project in years and months? | Operational lifetime is defined as 25 years.  **CL 13** Please, provide the evidence for starting date, operation lifetime and starting date of crediting period. | CL 13 | OK |
| 34 (c) | Does the PDD state the length of the crediting period in years and months? | The length of crediting period is defined as 3 incomplete years or 36 months. Starting from 02/01/2010. |  | OK |
| 34 (c) | Is the starting date of the crediting period on or after the date of the first emission reductions or enhancements of net removals generated by the project? | Comissioning certificate for CS has been provided |  | OK |
| 34 (d) | Does the PDD state that the crediting period for issuance of ERUs starts only after the beginning of 2008 and does not extend beyond the operational lifetime of the project? | yes |  | OK |
| 34 (d) | If the crediting period extends beyond 2012, does the PDD state that the extension is subject to the host Party approval?  Are the estimates of emission reductions or enhancements of net removals presented separately for those until 2012 and those after 2012? | N/A |  | OK |
| **Monitoring plan** | | | | |
| 35 | Does the PDD explicitly indicate which of the following approaches is used?  − JI specific approach;  − Approved CDM methodology approach. | It is explicitly indicated that a JI specific approach is chosen. |  | OK |
| **JI specific approach only** | | | | |
| 36 (a) | Does the monitoring plan describe:  − All relevant factors and key characteristics that will be monitored?  − The period in which they will be monitored?  − All decisive factors for the control and reporting of project performance? | The monitoring plan describes the factors and parameters affecting both the project and the baseline emissions.    Pending a response to CL 08 | Pending | OK |
| 36 (b) | Does the monitoring plan specify the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions or enhancements of net removals to be monitored? | The parameters, indicators, constants and variables used for ER are supported by reliable evidence. |  | OK |
| 36 (b) | If default values are used:  − Are accuracy and reasonableness carefully balanced in their selection?  − Do the default values originate from recognized sources?  − Are the default values supported by statistical analyses providing reasonable confidence levels?  − Are the default values presented in a transparent manner? | All default values are specified in sec. B.1. They are taken from reliable publically available sources hence statistical analysis is not applicable. |  | OK |
| 36 (b) (i) | For those values that are to be provided by the project participants, does the monitoring plan clearly indicate how the values are to be selected and justified? | PDD describes the method of data collection for all monitoring parameters. |  | OK |
| 36 (b) (ii) | For other values,  − Does the monitoring plan clearly indicate the precise references from which these values are taken?  − Is the conservativeness of the values provided justified? | The monitoring plan specifies the indicators, constants and variables used that are reliable, valid and provide transparent picture of the emission reductions to be monitored. |  | OK |
| 36 (b) (iii) | For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable? | **CL 14** Given description is not specific with regard to data unavailability procedure. Please specify the procedures to be followed if monitoring data sources are unavailable. | CL14 | OK |
| 36 (b) (iv) | Are International System Unit (SI units) used? | International System Units (SI units) are used. |  | OK |
| 36 (b) (v) | Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals but are obtained through monitoring? | The fixed parameters are used in the formulae description with reference to sec. B.1. where they all are properly identified. |  | OK |
| 36 (b) (v) | Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan? | There is consistency between parameters, coefficients, variables, etc. used in baseline and monitoring plan. |  | OK |
| 36 (c) | Does the monitoring plan draw on the list of standard variables contained in appendix B of “Guidance on criteria for baseline setting and monitoring”? | No. Pending a response to CAR 05. | Pending | OK |
| 36 (d) | Does the monitoring plan explicitly and clearly distinguish:  (i) 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?  (ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination?  (iii) Data and parameters that are monitored throughout the crediting period? | **CAR 11** Fixed parameters are not separated from that need to be monitored in the sec. D. Please, update MP accordingly. | CAR 11 | OK |
| 36 (e) | Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording? | Yes, the methods used and data collection frequency and recording are clearly defined in the monitoring plan tables D 1.1.1 and D.1.1.3. |  | OK |
| 36 (f) | Does the monitoring plan elaborate all algorithms and formulae used for the estimation/calculation of baseline emissions/removals and project emissions/ removals or direct monitoring of emission reductions from the project, leakage, as appropriate? | These are Formulae for baseline emissions in Section D.1.1.4, and for project emissions in Section D.1.1.2. Leakage are reasonably neglected (refer to Section D.1.3.2). |  | OK |
| 36 (f) (i) | Is the underlying rationale for the algorithms/formulae explained? | Pending response to CARs identified for the baseline setting | Pending | OK |
| 36 (f) (ii) | Are consistent variables, equation formats, subscripts etc. used? | Consistent variables, equation formats, subscripts are used. |  | OK |
| 36 (f) (iii) | Are all equations numbered? | Yes. |  | OK |
| 36 (f) (iv) | Are all variables, with units indicated defined? | Yes, |  | OK |
| 36 (f) (v) | Is the conservativeness of the algorithms/procedures justified? | Pending response to CARs identified for the baseline setting | Pending | OK |
| 36 (f) (v) | To the extent possible, are methods to quantitatively account for uncertainty in key parameters included? | **CL 15** Please, provide the certificates for the meters and the methods applied for the monitoring. | CL 15 | OK |
| 36 (f) (vi) | Is consistency between the elaboration of the baseline scenario and the procedure for calculating the emissions or net removals of the baseline ensured? | There is consistency between the elaboration on the baseline scenario and calculating the baseline emission in the spreadsheet. |  | OK |
| 36 (f) (vii) | Are any parts of the algorithms or formulae that are not self-evident explained? | N/A |  | OK |
| 36 (f) (vii) | Is it justified that the procedure is consistent with standard technical procedures in the relevant sector? | The monitoring is in line with current operational routines. |  | OK |
| 36 (f) (vii) | Are references provided as necessary? | **FAR 01.** The original data sources for the APG composition are to be checked at the stage of verification. | FAR 01 |  |
| 36 (f) (vii) | Are implicit and explicit key assumptions explained in a transparent manner? | Pending response to CARs identified for the baseline setting | Pending | OK |
| 36 (f) (vii) | Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed? | N/A |  | OK |
| 36 (f) (vii) | Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided? | The uncertainty is assessed in Table D.2  Pending a response to CL 15. | Pending | OK |
| 36 (g) | Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project?  Does the monitoring plan provide a reference as to where a detailed description of the standard can be found? | National standarts are identified in the Baseline parameters description in sec B.1.  **CL 16** PDD states that the monitoring functions are completely in line with the industrial routines usually applied by the company. Taking into account the fact that the project is first of its kind, please, clarify if there are any specific national standards governing the monitoring procedures. | CL 16 | OK |
| 36 (h) | Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner? | N/A |  |  |
| 36 (i) | Does the monitoring plan present the quality assurance and control procedures for the monitoring process, including, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available upon request? | QC/QA procedures are specified in PDD Section D.2.  . |  | OK |
| 36 (j) | Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities? | The authority/responsibility for data collection and reporting is described in PDD Section D.3, Fig. D.3.1.  **CL 17** Please provide the documentary evidence (orders, procedures etc.) to support the appointment of responsibility for the monitoring functions:  Data collection, data storage, internal audits, meters calibration, prevention of unauthorized data manipulation and the computer database safety. | CL 17 | OK |
| 36 (k) | Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type?  If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied? | Pending a response to CL 16. | Pending | OK |
| 36 (l) | Does the monitoring plan provide, in tabular form, a complete compilation of the data that need to be collected for its application, including data that are measured or sampled and data that are collected from other sources but not including data that are calculated with equations? | yes |  | OK |
| 36 (m) | Does the monitoring plan indicate that the data monitored and required for verification are to be kept for two years after the last transfer of ERUs for the project? | Yes, the data storage time is indicated (2 years after the last transfer of ERUs for the project. |  | OK |
| 37 | If selected elements or combinations of approved CDM methodologies or methodological tools are used for establishing the monitoring plan, are the selected elements or combination, together with elements supplementary developed by the project participants in line with 36 above? | N/A |  |  |
| **Approved CDM methodology approach only\_Paragraphs 38(a) – 38(d)\_Not applicable** | | | | |
| **Applicable to both JI specific approach and approved CDM methodology approach\_Paragraph 39\_Not applicable** | | | | |
| **Leakage** | | | | |
| **JI specific approach only** | | | | |
| 40 (a) | Does the PDD appropriately describe an assessment of the potential leakage of the project and appropriately explain which sources of leakage are to be calculated and which can be neglected? | Neglecting of leakage effect is justified in the PDD. |  | OK |
| 40 (b) | Does the PDD provide a procedure for an ex ante estimate of leakage? | N/A |  | OK |
| **Approved CDM methodology approach only\_Paragraph 41\_Not applicable** | | | | |
| **Estimation of emission reductions or enhancements of net removals** | | | | |
| 42 | Does the PDD indicate which of the following approaches it chooses?  (a) Assessment of emissions or net removals in the baseline scenario and in the project scenario  (b) Direct assessment of emission reductions | Assessment of emissions in the baseline scenario and in the project scenario is chosen. Option 1 is chosen. |  | OK |
| 43 | If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of:  (a) Emissions or net removals for the project scenario (within the project boundary)?  (b) Leakage, as applicable?  (c) Emissions or net removals for the baseline scenario (within the pr oject boundary)?  (d) Emission reductions or enhancements of net removals adjusted by leakage? | PDD provides ex ante estimates of:  Emissions for the project scenario;  Emissions for the baseline scenario;  Emission reductions adjusted by leakage.  Leakages are not considered. |  | OK |
| 44 | If the approach (b) in 42 is chosen, does the PDD provide ex ante estimates of:  (a) Emission reductions or enhancements of net removals (within the project boundary)?  (b) Leakage, as applicable?  (c) Emission reductions or enhancements of net removals adjusted by leakage? | N/A |  | OK |
| 45 | For both approaches in 42  (a) Are the estimates in 43 or 44 given:  (i) On a periodic basis?  (ii) At least from the beginning until the end of the crediting period?  (iii) On a source-by-source/sink-by-sink  basis?  (iv) For each GHG?  (v) In tones of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol?  (b) Are the formula used for calculating the  estimates in 43 or 44 consistent throughout the PDD?  (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate?  (d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent?  (e) Are emission factors (including default emission factors) if used for calculating the estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice?  (f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner?  (g) Are the estimates in 43 or 44 consistent throughout the PDD?  (h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve? | ER estimates are given on the periodic basis, from the beginning until the end of the crediting period for each GHG in tones of CO2 equivalent.  The formulae used for the ER calculation are consistent throughout the PDD.  The key factor influence of gas injection on the gas factor is not considered in the PDD. Pending a response to **CL 08** and all issues raised to the baseline establishing.  Default values for emission factors are taken from 2006 IPCC and other reliable sources.  The sources of data used for the ER calculations are clearly identified transparent and reliable.  **CAR 12** Please, correct the phrase “No leakages are included in the project boundary”.  1/ The leakage is the emissions change outside the project boundary, hence they could occur inside the boundary.  2/ Plural is inapplicable for leakage, refer to the definition in the JI glossary. | Pending  CAR 12 | OK  OK |
| 46 | If the calculation of the baseline emissions or  net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation? | Illustrative ex-ante estimation of baseline emissions is made in the spread sheet. |  | OK |
| **Approved CDM methodology approach only\_Paragraphs 47(a) – 47(b)\_Not applicable** | | | | |
| **Environmental impacts** | | | | |
| 48 (a) | Does the PDD list and attach documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party? | **CAR 13** PDD Section F.1 states that the project will reduce the atmosphere contamination by the harmful substances from the APG flaring. This description is neither complete nor project specific.  Nothing is said about two essential project’s consequences which may cause significant environmental impacts:  1/ Water management (both water separated from the crude oil emulsion recovered from wells and fresh soil water that would be injected into the seam without the project)  2/ Fugitive hydrocarbon emissions from APG injection (leaks from compression and from injection). | CAR 13 | OK |
| 48 (b) | If the analysis in 48 (a) indicates that the environmental impacts are considered significant by the project participants or the host Party, does the PDD provide conclusion and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party? | Pending a response to CAR 13 | Pending | OK |
| **Stakeholder consultation** | | | | |
| 49 | If stakeholder consultation was undertaken in  accordance with the procedure as required by the host Party, does the PDD provide:  (a) A list of stakeholders from whom comments on the projects have been received, if any?  (b) The nature of the comments?  (c) A description on whether and how the comments have been addressed? | **CAR 14** Russian Federal Law 7-FZ “On Environmental Protection” cl. 13 para 2 requires stakeholders' comments to be considered in decision making process to start any activity potentially causing adverse environmental effect.  Information on the proposed project activity was made publicly available through the official web site. Comments were invited through the web.  Please, correct the statement that project is not liable to the Stakeholder process. | CAR 14 | OK |
| **Determination regarding small-scale projects (additional elements for assessment)\_Paragraphs 50 - 57\_Not applicable** | | | | |
| **Determination regarding land use, land-use change and forestry projects \_Paragraphs 58 – 64(d)\_Not applicable** | | | | |
| **Determination regarding programmes of activities\_Paragraphs 66 – 73\_Not applicable** | | | | |

**Table 2 Resolution of Corrective Action Requests and Requests for Information**

| Draft report clarifications and corrective action requests by validation team | Ref. to checklist question in table 1 | Summary of project participant response | Determination team conclusion |
| --- | --- | --- | --- |
| **CAR 01** As per the description given in sec. A 4.2 the compressors are driven with gas turbines. The description of gas compression technique is not comprehensive  1/Please provide the technical specification of gas turbines applied for the project.  2/ Please, specify the power consumption source. Note: the data in table A.4-2 do not correspond to the volumes of gas injected. In particular please clarify where non-zero power consumption came from in 2009 when the project equipment had not been commissioned.  3/ If the project consumes electricity to cover its auxiliary needs only, please, provide the proper justification in the PDD. | A.4.2 | Response 1 dated 09.02.2012 to CAR 01  1/ There are no independent specifications for gas turbines as turbines are inseparable parts of compressors (compressors have turbine drive). There is no turbine based electricity generation at the compressor station itself. The technical specification of compressors was extended. Please review Table A.4.2-1 in Section A.4.2 of PDD.  2/The power consumption source was specified. Please review Section A.4.2 of PDD. APG is injected by APG fuelled compressors (with turbine engine) and electricity is consumed only for auxiliary needs. Thus, there is no direct correlation between volumes of injected APG and electricity consumption. The only source of electricity is GTPP located nearby. The first date of APG injection is 02.01.2010, but electricity consumption in 2009 was connected with testing and commissioning works.  3/ The project consumes electricity only for auxiliary needs. The proper justification was provided. Please review Section A.4.2 of PDD. | Conclusion on the response 1  1/ closed upon the review of PDD v. 1.1 /1b/  2/Closed upon the explicit clarification provided.  3/It was clarified that the nearby GTPP/GPPP is the only power source for the project. GTPP/GPPP has enough free capacity to supply the electricity without reduction of the output to another consumer.  Closed on the basis of the explanation provided and revision made in PDD v.1.1.  All information was verified through the review of /7/ |
| **CAR 02** The length of the 1st crediting period is 5 years that is not correct since the project starts in 2010. | A.4.3.1 | Response 1 dated 09.02.2012 to CAR 02  The length of the 1st crediting period was corrected. | Conclusion on the response 1  Closed upon the review of changes made in PDD v.1.1 /1b/ |
| **CAR 03.** The project has no approvals by the Parties involved. | A.5 | Response 1 dated 09.02.2012 to CAR 03  According to the Russian legislation, the letter of approval for the project will be issued by the Russian Government based on an expert statement issued by the AIE. Once the Approval is received, both the PDD and the determination report will be updated and the determination will become final. | Conclusion on the response 1  Left open |
| **CAR 04** PDD states the APG is supplied to the GTPP providing electricity to both the CS and outside consumers (oilwells)  All described alternatives do not consider the APG consumption by GTPP. Please update the technical description and justify how the project will affect the power production by GTPP.  From the other hand additional power consumption by CS cause additional load for GTPP. Please justify whether the power capacity of GTPP is sufficient to cover the increasing electricity demand without reduction of power supply to the other power consumers and additional power intake from the grid.  Pease provide the power balance for the baseline and the project and demonstrate that the project activity does not lead to any decrease in activity outside the project boundary. | 23 | Response 1 dated 09.02.2012 to CAR 04  The project will not affect power consumption by other power consumers as the total power capacity of GTPP and GPPP is 156.6 MW and the maximal load in 2011, including power consumption by the compressor station, was 43.5 MW. Thus, about 113.1 MW of power capacity are in reserve. Please review the updated Sections A.4.2 and B.1 and the evidence confirming that the project will not affect other power consumers (file name – “Note on power consumption.pdf”). | Conclusion on the response 1  Explanation is acceptable. Supported by the documentary evidence /7/.  closed |
| **CAR 05** Please apply following standard variables as specified in Annex B of the Guidance for Baseline Setting and Monitoring:  Fraction of hydrocarbons – *w*h,XX (volume or mass %)  Electricity consumption - *ECy*  Flare efficiency (underburning factor) - *ηflare,t*  Density - *ρx* | 23 | Response 1 dated 09.02.2012 to CAR 05  Variables have been amended throughout the PDD as per Annex B of the Guidance for Baseline Setting and Monitoring. | Conclusion on the response 1  Closed on the basis of the review of PDD v. 1.1. /1b/ |
| **CAR 06** PDD refers to outdated version of Additionality tool (05.2.1). Please refer to the latest version 06.0.0. <http://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v6.0.0.pdf> | 28 | Response 1 dated 09.02.2012 to CAR 06  PDD intentionally refers to the version 05.2.1 of the Additionality tool. Clause 44 (c) of Guidance on criteria for baseline setting and monitoring v.3 allows for a grace period (for usage of a previous version) of eight months when the PDD is submitted for publication on the UNFCCC JI website. Although Track 1 JI projects are not subjects for publication on UNFCCC site, PDD developers assumed that the date of determination start can be used as criteria for Track 1 projects as the dates of determination start and publication are very close to each other.  The version 05.2.1 was issued on 11 August 2011 and the grace period ends only on 11 April 2012. A determination protocol for this project was issued in February 2012, before the end of the grace period. As determination protocol comes after publication on the UNFCCC JI website in timeline of Track 2 JI projects the use of the version 05.2.1 is reasonable and valid.  A justification was also added to Section B.2 of PDD. | Conclusion on the response 1  Ok, explanation is accepted.  Publication is the first action that is to be done by DOE in course of determination. Hence the PDD is liable to the grace period if it was passed through the track 2. Thus grace period is accepted.  As per the clarification issued by Ministry of economic development, publication is not mandatory under track 1. |
| **CAR 07** The latest version of Additionality tool (ver. 06.0.0) cl. 17 requires the alternatives for different facilities/technologies/outputs to be determined and considered separately. For alternatives #1-4 the utilization of APG and the maintenance of seam pressure are the different outcomes requiring different technologies/facilities. For instance under alt. 2 GPPP is to be applied for APG utilization and the water pumping is used for seam pressure maintenance.  Please, discuss separately the alternatives for seam pressure maintenance and APG management and then consider their plausible combinations.  (It is also to avoid significant copy&pastes where you discuss the seam maintenance technique under each alternative). | 29 (a) | Response 1 dated 09.02.2012 to CAR 07  Discussion of alternatives for utilization of APG and maintenance of seam pressure was separated as requested.  Please review the updated Section B.2 of PDD. | Conclusion on the response 1  Closed on the review of revised alternative analysis in sec. B.1 and B.2 of PDD v.1.1 /1b/. |
| **CAR 08** PDD (p.15) states that alt. 5 (the project without JI) is selected as the baseline…Please correct | 29 (a) | Response 1 dated 09.02.2012 to CAR 08  The wrong statement was corrected.  Please review the updated Section B.2 of PDD. | Conclusion on the response 1  Ok closed on the basis of the review of changes made in PDD v. 1.1 |
| **CAR 09** Following emission sources inside the project boundary are not considered:  Emergency power consumption from the grid;  Fugitive APG leaks attributable to the APG compression and injection (methane emissions). | 32 (a) | Response 1 dated 09.02.2012 to CAR 09  The project does not have a connection to the power grid. All misleading information was deleted from PDD. Emissions in the power grid of the Integrated Power System “East” were excluded from project emissions.  All Fugitive leaks attributable to the APG compression and injection (methane emissions) are calculated by specialists of Surgutneftegas and adopted by the Ministry of Energy of the Russian Federation. Such leaks are part of so called “process losses”. Process losses were included in project emissions. Please review the updated PDD and evidences confirming applied coefficients of process losses (file names “Process losses 2010.pdf” and “Process losses 2011,2012.pdf”). | Conclusion on the response 1  Ok. Based on the documents provided by the project it was clarified that:  1/ there is no any connection to the grid.  2/Project methane losses were considered.  Corresponding changes were made in the PDD v.1.1.  Closed |
| **CAR 10** GTPP and the oil wells are misleadingly included into the project boundary at the figure B 1-3. If GTPP is inside the project boundary its emissions shall be taken into account.  Please justify whether the project affects the APG consumption by GTPP and consider this effect in the baseline and project emission estimation. | 32 (a) | Response 1 dated 09.02.2012 to CAR 10  GTPP and the oil wells were excluded from the project boundary at the Figure B.1-3.  The project does not affect APG consumption by the GTPP. Please review the evidence (file name – “Note on power consumption.pdf”) | Conclusion on the response 1  Explanation and the revision made in the PDD v. 1.1 /1b/ are accepted and supported by information provided by the company /07/  closed |
| **CAR 11** Fixed parameters are not separated from that need to be monitored in the sec. D. Please, update MP accordingly. | 36 (d) | Response 1 dated 09.02.2012 to CAR 11  Fixed parameters were separated from that need to be monitored in the sec. D.  Please review the updated Section D of PDD. | Conclusion on the response 1  Closed upon the review of PDD v.1.1 /1b/. |
| **CAR 12** Please, correct the phrase “No leakages are included in the project boundary”.  1/ The leakage is the emissions change outside the project boundary, hence they could occur inside the boundary.  2/ Plural is inapplicable for leakage, refer to the definition in the JI glossary. | 45 | Response 1 dated 09.02.2012 to CAR 12  The phrase was corrected. | Conclusion on the response 1  Closed upon the review of PDD v.1.1 /1b/. |
| **CAR 13** PDD Section F.1 states that the project will reduce the atmosphere contamination by the harmful substances from the APG flaring. This description is neither complete nor project specific.  Nothing is said about two essential project’s consequences which may cause significant environmental impacts:  1/ Water management (both water separated from the crude oil emulsion recovered from wells and fresh soil water that would be injected into the seam without the project)  2/ Fugitive hydrocarbon emissions from APG injection (leaks from compression and from injection). | 48 (a) | Response 1 dated 09.02.2012 to CAR 13  After the start of the project implementation water injection was not stopped. In 2011 4,294.18 ths. m3 of water was injected. The amount of water separated from the crude oil emulsion is very small, and the biggest share of injected water was extracted from water supply wells (more than 98% from wells). In the absence of the project the amount of water extracted from water supply wells would be even higher. It means that the project allows avoiding extraction and re-injection of fresh water. This impact is considered as a positive environmental impact.  Fugitive hydrocarbon emissions are negligibly small (please refer to the table with coefficients of process losses in Section B.1. Such emissions are less than 0.3% and are significantly lower than 3.5% fugitive emissions in the baseline scenario. This means that the project allows reducing fugitive APG emissions.  Information regarding water management and fugitive hydrocarbon emissions from APG injection was added to the Section F.1. Please review. | Conclusion on the response 1  Closed upon the updates of sec. F.1. in PDD v.1.1. |
| **CAR 14** Russian Federal Law 7-FZ “On Environmental Protection” cl. 13 para 2 requires stakeholders' comments to be considered in decision making process to start any activity potentially causing adverse environmental effect.  Information on the proposed project activity was made publicly available through the official web site. Comments were invited through the web.  Please, correct the statement that project is not liable to the Stakeholder process. | 49 | Response 1 dated 09.02.2012 to CAR 12  The wrong statement in Section F was corrected. | Conclusion on the response 1  Closed upon the updates of sec. G.1. in PDD v.1.1. |
| **CL 01** One of the purposes of the project is maintenance of seam pressure which is consistently emphasised throughout the rest of PDD but sec. A.2. Please, gain consistency in the description. | A.2 | Response 1 dated 09.02.2012 to CL 01  Consistency in the description was provided.  Please review the updated Section A.2 of PDD. | Conclusion on the response 1 Closed upon the updates of sec. A.2. in PDD v.1.1. |
| **CL 02**  Please provide the documentary evidence to confirm:  The review of APG utilization practice in Russia, including proposed JI projects, undertaken by Envi dept. of Surgutneftegas | A.2 | Response 1 dated 09.02.2012 to CL 02  Please review the documentary evidence (file name “project note.pdf”. | Conclusion on the response 1  The information fully confirmed. Closed upon the review of /10/. |
| **CL 03** Sec. A.2 states as one of the project’s advantages that APG will not be wasted in flare units but saved and stored for further use. Nonetheless the opportunity of future beneficial use of the APG saved in course of project is not considered in terms of the project’s additionality. Please, describe the perspectives of such APG use and clarify if there are any respective financial benefits expected by the company which may improve the investment attractiveness of the project. | A.2 | Response 1 dated 09.02.2012 to CL 03  Extraction of APG is not envisaged by the field development plant. The extraction is not planned at least until the end of the period of financial analysis (2020). Please find the documentary evidence attached (files names “note on further APG use.doc” and “protocol.pdf”). | Conclusion on the response 1  The information fully confirmed. Closed upon the review of /11/ |
| **CL 04** Sec. A3 identifies PP from Party A asOpen Joint Stock Company “Surgutneftegas”, whereas Annex 1 stays Joint Stock Company “Surgutneftegas”. Please clarify, which title (OJSC or JSC) is correct and use it consistently. | A.3 | Response 1 dated 09.02.2012 to CL 04  The correct title is OJSC. Wrong title in Annex 1 was corrected. | Conclusion on the response 1  Closed upon the review of changes made in PDD v. 1.1. |
| **CL 05** Please, clarify, whether or not and, if yes, on what extent the oil extraction rate may be affected by the different seam pressure maintenance technique (water pumping vs. APG pumping). The equal oil extraction in the baseline and the project shall be ensured to make the baseline selection reliable.  Please provide the water pumping capacity estimation to demonstrate that the company would be able to maintain the equal seam pressure with respective extraction rate without the project. | A.4.2 | Response 1 dated 09.02.2012 to CL 05  Please review the explanation from Surgutneftegas (file name “explanation regarding different methods of seam pressure maintenance.doc”. In general, injection of both water and APG is implemented because of the same purpose - to compensate outgoing volumes of crude oil and both methods can be substituted among themselves.  Water pumping capacity estimation was provided. Please review. | Conclusion on the response 1  Upon the review of /12/ it was clarified that both water and APG pumping can be used to maintain the seam pressure. |
| **CL 06**  The description in the PDD is not transparent on the water injection under the project scenario.  1/ will the water injection be continued under the project or the APG completely replaces the water injection?  2/ will the volume of water injection decrease under the project?  3/ will there be any external freshwater consumption avoided due to APG injection?  4/ will the project lead to the discharge of water that otherwise would be injected into the seam?  If the water injection is not completely substituted by the project it should be properly reflected in the description of alternatives. | A.4.2 | Response 1 dated 09.02.2012 to CL 06  1/ APG injection will substitute water injection only partially and after implementation of the project water injection will be continued;  2/ Yes, the volume of water injection will decrease under the project as APG injection will substitute injection of water;  3/ Yes, water extraction from fresh water oilwells will be avoided.  4/ No, the project will not lead to discharge of water. Even after implementation of the project more than 90% of the amount of water injected was extracted from wells. It means that the project will decrease extraction of water from wells but not discharge of water.  The description in the PDD was updated. Please review. | Conclusion on the response 1  1/,2/, 3/ 4/Ok, confirmed by the review of /7/ and /12/  Closed |
| **CL 07** Please provide the evidence (calculation) to demonstrate the applicability of 3.5 % methane underburning (soot combustion) without the project (using the equal APG volumes as the project does) | 23 | Response 1 dated 09.02.2012 to CL 07  Please find the documentary evidence attached (file name - “Note on flaring efficiency .pdf”).  As it is seen from the attached evidence non-soot flaring is prohibited by technical documentation but the calculation also confirms that amount of APG injected by the CS would be flared under conditions of soot combustion. According to the clause 6.4.2 of the NII Atmosphere methodology soot flaring occurs when the speed of APG in flare is less than 0.2 of acoustic speed (According to the appendix G of the methodology acoustic speed of APG is 406 m/s ). Accordingly, if speed of APG in flare is less than 81.2 m/s than it is soot flaring.  Talakan oilfield is equipped with three flare units.The minimal diameter of flares is 0.4 m. The maximal amount of annual APG injection is than 431 mln. m3 per year (in 2012) or 13.67 m3 per second. The non-soot flaring will occur only if more than 74% (10.11 m3 per second) of the whole injected APG amount would be directed to the one, smallest flare unit which is highly unlikely.  Detecting S = (*πd*2)/4 = 3.1415926 \* 0.42 / 4 = ~0.12 m2.  Detecting speed of APG = 10.11 / 0.12 = 80.48 m / s.  As it is seen from the calculations above, conditions for soot flaring should be applied. | Conclusion on the response 1  The soot combustion criterion compliance was checked through the simulation excel model calculation /19/ using the input values of APG composition, maximum annual APG utitlization volume, 20 C – temperature of APG and flaring head diameters taken from flare specifications.  Soot mode of APG combustion with standard anderburning factor of 3.5% was confirmed.  Closed. |
| **CL 08** Please clarify, how gas injection affects the gas factor dynamic. If the project leads to increase of gas factor (as it is evidenced in several available publications) the conservative approach to estimation of APG volume in the baseline should be applied.  Please provide the possible variation range and the periods in which the gas factor may change without gas injection. Reliable documentary evidence (project geological study, scientific reviews etc.) and the historical data should be applied. | 23 | Response 1 dated 09.02.2012 to CL 08  Please review the attached evidence (file name “Note on gas factor.pdf”). | Conclusion on the response 1  As per the review of gas factor dynamic analysis provided by the company /13/ the project has not and is not expected to affect the gas factor of oilfield.  closed |
| **CL 09** The State regulated tariffs on APG was partially disaffirmed on 09.02.2008 by Governmental Decree #59. Please consider this fact when discussing how the state regulated APG prices affects the baseline selection. | 23 | Response 1 dated 09.02.2012 to CL 09  The Governmental Decree #59 dated 09.02.2008 cancels state regulation of tariffs for APG which is supplied for processing at APG processing plants. This change does not affect the project as there was no possibility to use APG from Talakan oilfield at any APG processing plants because of the location of the oilfield. The same explanation was added to the PDD. Please review. | Conclusion on the response 1  The justification was made in PDD v. 1.1.  closed |
| **CL 10** Following inconsistencies with the current version of Investment analysis guidance:  1/Please consider the possible saving of water that would be injected without the project.  2/ According to the investment analysis guidance as referred to in additionality tool “project participants are requested to justify and DOEs are requested to validate the appropriateness of the period of assessment in the context of the underlying project activity… Investment indicators calculations shall as a preference reflect  the period of expected operation of the underlying project activity (technical lifetime), or, if a shorter period is chosen, include the fair value of the project activity assets at the end of the assessment period.”  Please provide the evidence to support the investment analysis horizon selected (12 years).  3/Please demonstrate that the input values used in all investment analysis are valid and applicable at the time of the investment decision taken by the project participant according to guidance #6 of Investment analysis guidance.  4/Calculation of payments for APG flaring which does not exceed 5% from APG extraction are not traceable;  5/ Please consider the postponed incomes from APG recovery in the future or provide the evidence that this source of income was not considered at the decision making time (also CL 03).  6/Please justify the figures of APG utilization in 2009 (before the project start)  7/ If APG is sold to GTPP please consider the respective income in both baseline and the project.  8/ Please identify the discount rate used for NPV calculation | 29 (b) | Response 1 dated 09.02.2012 to CL 10  /1 Possible saving of water was added to the investment analysis please review the updated Section B.2 of PDD and investment analysis v.1.1 (excel file). Please also review evidence confirming water injection price (file name “note on water injection price.pdf”) Although possible incomes from saving of water enhanced financial indicators the project remaind unprofitable.  /2 Fair value (termination value) was added to the investment analysis. Termination value was taken equal to asset book value minus depreciation (with depreciation period 25 years - operational lifetime). This approach is ultra conservative as big part of equipment has operational lifetime less than 10 years (compressors, turbines) and in real live will be replaced before within 10 years. Please review the updated investment analysis (cell Q55).  /3 Investments were taken from Certificates of construction completion as this approach allows achieving high accuracy of the investment analysis and this approach was already implemented in previous JI projects implemented by OJSC “Surgutneftegas” which received final positive determination (“Construction of gas turbine power plants for utilization of associated petroleum gas at thirteen oilfields developed by OJSC “Surgutneftegas” in Khanty-Mansiysk Autonomous Okrug, Russian Federation”).  /4 The calculation of payments for APG flaring which does not exceed 5% from APG extraction is attached (file name “Calculation of payments for emissions.xls”). Please review.  /5 Please review the clarification note from OJSC “Surgutneftegas” which confirms that APG recovery was not considered (file name “note on further APG.pdf”.  /6 APG utilization began only on 2 January 2010. Please review the attached evidence (file name “confirmation of the first day of APG injection.pdf”). In 2009 very small amount of APG was used for technology purposes only (testing of the equipment).  /7 All objects (including GTPP) located at Talakan oil and gas condensate field are owned by OJSC “Surgutneftefas”. As there is no practice of selling APG between objects of one single company no respective income is considered.  8/ The discount rate was identified. Please review the updated Table B. 2-1 in Section B.2. | Conclusion on the response 1  1/ ok water savings are considered appropriately /25/  2/ ok, accepted as conservative approach  3/Closed upon the review of construction acceptance certificates /14/  4/ ok confirmed by /24/  5/ It was assured by the company that there were no any postponed incomes expected by company /11/  6/ ok explanation accepted  7/ ok closed upon the review of revised PDD v.1.1.  Closed. |
| **CL 11** Please substantiate the variation range used for sensitivity analysis. | 29 (b) | Response 1 dated 09.02.2012 to CL 12  The variation range +-10% was taken equal to the variation range used for JI project (“Construction of gas turbine power plants for utilization of associated petroleum gas at thirteen oilfields developed by OJSC “Surgutneftegas” in Khanty-Mansiysk Autonomous Okrug, Russian Federation”) for which the determination was deemed final.  OJSC “Surgutneftegas” did not expect fluctuations more than +-10% in regard to factors used for the sensitivity analysis. | Conclusion on the response  The project “Construction of gas turbine power plants for utilization of associated petroleum gas at thirteen oilfields developed by OJSC “Surgutneftegas” in Khanty-Mansiysk Autonomous Okrug, Russian Federation” has been positively determined by BV.  Explanation accepted. |
| **CL 12** Please indicate the project and baseline emission sources at figure B.3.1. | 32 (d) | Response 1 dated 09.02.2012 to CL 12  The project and baseline emission sources were indicated at figure B.3.1. | Conclusion on the response 1  Closed upon the review of revised PDD v.1. |
| Operational lifetime is defined as 25 years.  **CL 13** Please, provide the evidence for starting date, operation lifetime and starting date of crediting period. | 34 (b) | Response 1 dated 09.02.2012 to CL 13  Please review the enclosed evidences:  - for starting date 09/07/2006 (file name “contract 1.pdf)  - for 25 years operation lifetime period (file name “Technical specification.pdf”)  - for starting date of crediting period (file name “confirmation of the first day of APG injection.pdf”). | Conclusion on the response 1  Ok confirmed upon the review of /15/  /16/ and /17/.  Closed. |
| **CL 14** Given description is not specific with regard to data unavailability procedure. Please specify the procedures to be followed if monitoring data sources are unavailable. | 36 (b) (iii) | Response 1 dated 09.02.2012 to CL 14  The requested procedure was added to PDD. Please review the updated Section D.3. | Conclusion on the response 1  1) Calculate parameters on the basis of other manufacturing parameters. This option should be applied when it is possible to calculate a measured parameter on the basis of other directly measured parameters.  2) Take the most conservative data from a past period. This option can be applied to establish APG composition;  3) Exclude emission reductions for such period from monitoring reports.  Accepted. |
| **CL 15** Please, provide the certificates for the meters and the methods applied for the monitoring. | 36 (f) (v) | Response 1 dated 09.02.2012 to CL 15  Please review the requested information (folder name “measuring equipment”). | Conclusion on the response 1  Following Monitoring equipment were checked:  1/ the APG volume injected  Certificate for Measuring junction at the outflow from CS (2 lines) /21/.  Secondary meters (converters)   * UVP280 Ser.# 380915 calibrated on 06/10/08 (initial) and then on valid till 2013 * UVP280 Ser.# 380916 calibrated on 06/10/08 (initial) and then on valid till 2013   Primarily meters:   * Thermo resister Metran-265-02 ser. #725233 calibrated on 10/11/08 (initial) and 23/07/11 valid till 2012 * Thermo resister Metran-265-02 ser. #725232 calibrated on 10/11/08 (initial) and 23/07/11 valid till 2012 * Flowmeter Metran 350 SFA ser. 844461 calibrated on 17/05/11 valid till 2013 * Flowmeter Metran 350 SFA ser. 844460 calibrated on 18/05/11 valid till 2013 * Pressure meter Metran 150 TA4 ser.#823910 calibrated on 17/11/08 (initial) and 15/07/11 valid till 2013 * Pressure meter Metran 150 TA4 ser.#823911 calibrated on 17/11/08 (initial) and 15/07/11 valid till 2013   2/ the APG own consumption by gas turbines driving CS  Certificate for Measuring junction at the pipeline PP-703 /20/.  Secondary meter (converter) UVP280  Ser.# 390424 calibrated on 28/04/09 valid till 2013  Primarily meters:   * metering orifice #12-170 calibrated on 30/09/08 (initial) and 25/08/10 (valid till 2013) * Thermo resister Metran-265-05 ser. #725218 calibrated on 11/11/08 (initial) and 23/07/11 valid till 2012 * Pressure meter Metran 150 TA3 ser.#823922 calibrated on 18/07/11 valid till 2013 * Pressure meter Metran 150 TG 3 ser.#457962 calibrated on 18/11/08 (initial) 17/07/11 valid till 2013 * Metran 150 CD2 ser #823374 calibrated on 18/07/11 valid till 2013 * Pressure meter Metran 150 TG 2 ser.#457968 calibrated on 18/11/08 (initial) 17/07/11 valid till 2013   3/ Manual for Gas Chromatograph Clarus 500 GC (Perkin Elmer)  Certificate #650 #7090101, calibration date 02/09/11 /20/  Closed upon the review of documents provided. |
| **CL 16** PDD states that the monitoring functions are completely in line with the industrial routines usually applied by the company. Taking into account the fact that the project is first of its kind, please, clarify if there are any specific national standards governing the monitoring procedures. | 36 (g) | Response 1 dated 09.02.2012 to CL 16  Despite of the fact that the project is first if its kind it consists of common technologies. Compressor equipment, measurement equipment, turbine equipment, pipes, electrics, etc. are common technologies for OJSC “Surgutneftegas”. OJSC “Surgutneftegas” is a company with a long history connected with oil and a gas technologies, thus running the compressor station is “business as usual” activity for the company. No unique technologies such as cold synthesis or new nanotechnologies have been used. The description in the PDD was also updated, please review Section D.3. | Conclusion on the response 1  Explanation accepted.  Closed |
| **CL 17** Please provide the documentary evidence (orders, procedures etc.) to support the appointment of responsibility for the monitoring functions:  Data collection, data storage, internal audits, meters calibration, prevention of unauthorized data manipulation and the computer database safety. | 36 (j) | Response 1 dated 09.02.2012 to CL 17  Please review the documentary evidence (file name “Order on monitoring.pdf”. | Conclusion on the response 1  Upon the review of /18/ the personal responsibility was assigned to  1/Monitoring in general – Financial director  2/Data collection, checking, handling, transmitting – the Head of technical department  3/ Internal audit – Lead engineer in Technical division  4/Methrological support – Chief metrologist  PDD v.1.2 contains all necessary information.  closed |
| **FAR 01.** The original data sources for the APG composition are to be checked at the stage of verification. | 36 (f) (vii) |  |  |

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