DETERMINATION REPORT

JSC " HALOPOLYMER PERM"

DETERMINATION OF THE

SF6 DESTRUCTION AT JSC "HALOPOLYMER PERM"

REPORT NO. RUSSIA-DET/0140/2011

REVISION NO. 02

BUREAU VERITAS CERTIFICATION

Determination Report on JI project

SF_6 destruction at JSC "HaloPolymer Perm"

Date of first issue:	Organizational unit:
23/10/2011	Bureau Veritas Certification Holding SAS
Client:	Client ref.:
JSC "HaloPolymer Perm"	Mr. P. Boyko

Summary:

Bureau Veritas Certification has made determination of the project "SF6 destruction at JSC "HaloPolymer Perm" located in Perm, Perm Krai, Russian Federation, 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 on-site 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 26 Corrective Actions Requests (CAR), 3 Clarification Request (CL) and 1 Forward Action Request (FAR), presented in Determination Protocol. The requests were closed based on appropriate actions carried out by PP.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies Guidance on criteria for baseline setting and monitoring, Version 03 and meets the relevant UNFCCC requirements for the JI and the relevant host country criteria.

Report No.:	Subject Group:	
RUSSIA-det/0140/2011	JI	
Project title: HaloPolymer Perm		
Work carried out by: Vera Skitina – Team Leader, Lead verifier Dmitriy Moldavskiy – JI specialist		
Work verified by:		
Vladimir Lukin – Internal Technical Reviewer Igor Maslennikov – JI Specialist		
Work approved by: Leonid Yaskin – Operational Manager		
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Abbreviations

AIE	Accredited Independent Entity
BVC	Bureau Veritas Certification
CAR	Corrective Action Request
CL	Clarification Request
CO_2	Carbon Dioxide
DDR	Draft Determination Report
DLG	Dry Lean Gas
DR	Document Review
EIA	Environmental Impact Assessment
ERU	Emission Reduction Unit
FCC	Fluorocarbon compounds
GHG	Greenhouse House Gas(es)
IPCC	Intergovernmental Panel on Climate Change
JI	Joint Implementation
JISC	Joint Implementation Supervisory Committee
LoA	Letter of Approval
JSC	Joint Stock Company
PDD	Project Design Document
OJSC “HaloPolymer”	Holding Company
TDU	Thermal destruction unit
PP	Project Participant
RF	Russian Federation
SF6	Sulphur hexafluoride
tCO2e	Tonnes CO2 equivalent
UNFCCC	United Nations Framework Convention for Climate Change
URES	United Regional Energy System

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1 INTRODUCTION

CARBONTRUST LIMITED has commissioned Bureau Veritas Certification to determine “SF6 destruction at JSC “HaloPolymer Perm” project (hereafter referred ‘the project’) located in Perm, Perm Krai, 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.

1.1 Objective

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

1.2 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.

1.3 Determination team

The determination team consists of the following personnel:

Vera Skitina,

Bureau Veritas Certification Team Leader, Climate Change Lead Verifier
Dmitriy Moldavskiy – Bureau Veritas Certification JI specialist, Professor

This determination report was reviewed by:

Vladimir lukin,
Bureau Veritas Certification, Internal reviewer
Igor Maslennikov – Bureau Veritas Certification JI specialist, Professor in Chemistry

2 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.

2.1 Review of Documents

The original Project Design Document (PDD) v.1.0 dd. 12/09/2011 submitted by project developer CARBONTRUST LIMITED for determination 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 and corrective action requests were reported.

To address Bureau Veritas Certification corrective action requests, CARBONTRUST LIMITED revised the original PDD and resubmitted it as v.3.0 on 17/10/2011 followed by v.4.0 dd. 17/10/2011, v.5.0 dd. 02/11/2011, and v.6.0 dd. 02/11/2011 Version 2.0 was officially recalled by PP’s.

The determination findings presented in this report relate to the project as described in the PDD versions 1.0, 3.0, 4.0, 5.0 and 6.0.

2.2 Follow-up Interviews

On 10/10/2011 Bureau Veritas Certification has performed off-site interviews with the project participants JSC "HaloPolymer Perm" through teleconference held at the OJSC "HaloPolymer" to confirm both selected information obtained through the desk assessment. Interviews with the project participants, and project owners: JSC "HaloPolymer Perm" (project operator), CARBONTRUST LIMITED (project developer), OJSC "HaloPolymer" (Holding company) were performed to confirm selected information about the technical and economic characteristics and parameters of the project JSC "HaloPolymer Perm"and to clarify issues identified in the review of the PDD v.1.0, 3.0, 4.0. Interviewed representatives of JSC "HaloPolymer Perm", CARBONTRUST LIMITED and OJSC "HaloPolymer" are listed in References. The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Project participants: JSC "HaloPolymer Perm" Holding company: OJSC "HaloPolymer"	➢ Reasoning for project implementation ➢ Project history and Implementation schedule; status of the projects as on today ➢ Baseline scenario ➢ Common practice ➢ Project scenario ➢ Emission calculation ➢ Investment issues ➢ Commissioning and proven trials ➢ Capacity issues ➢ Environmental permissions ➢ Environmental Impact Assessment ➢ Primary data on Fluorocarbon compounds production and a fuel consumption. ➢ Organizational and management system for emission monitoring. ➢ Monitoring procedures and equipment.
(LOCAL Stakeholder)	N/A
CONSULTANT: CARBONTRUST LIMITED	➢ Baseline scenario ➢ Barriers and uncommon practice ➢ Project scenario ➢ Investment issues

2.3 Resolution of Clarification and Corrective Action Requests

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

Corrective Action Request (CAR) is issued, where:

(a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;

(b) The JI requirements have not been met;

(c) There is a risk that emission reductions cannot be monitored or calculated.

The determination team may also issue Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable JI requirements have been met.

The determination team may also issue Forward Action Request (FAR), informing the project participants of an issue that needs to be reviewed during the verification.

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

3 PROJECT DESCRIPTION (excerpts from PDD v. 4.0)

Purpose of the Project and Project Scenario

The aim of the project is to destruct SF6 waste streams contributing thus to the improvement of environment situation in Perm-city and to reduction of GHG emissions. SF_6 is a GHG gas with a high global warming potential (GWP) that is 23 900 tonnes of CO2 equivalent per one tonne of SF_6.

Project activity presented in the PDD has been implemented at the JSC “HaloPolymer Perm” since 2007 and includes destruction of SF_6 emissions. The decision on the project start was made with consideration of JI-related earnings resulted from sale of GHG emission reductions to be achieved from SF_6 destruction. Except ERUs selling the project has no other income source and, therefore, there is no other stimulus for its implementation.

SF_6 destruction at JSC "HaloPolymer Perm"

Realization of the proposed project activity is implemented under the second stage of modernization of the thermal destruction unit (TDU)* and leads to destruction of SF_6 waste streams at the FOC thermal destruction unit and includes the following measures:

- Installation of stillage residue receiver;
- Installation of blowing-off transmission line from SF_6 production to thermal destruction unit with installation of receiver;
- Installation of measuring and control equipment.

For destruction of wastes in TDU the natural gas is directed in the TDU. SF_6 is utilized along with the gaseous wastes of HCFC-22 and monomer-4 production, but in a separate furnace unit of TDU. The technology and equipment for the project are developed by a domestic special-purpose institute and are certified in conformity with the norms of the Russian Federation and meet all environment protection requirements. Detailed information on the technology used in the project is presented in A.4.2. subsection.

Project Company:

HaloPolymer Perm, JSC is one of the largest chemical enterprises in Russia, was established in Perm in 1942. Currently the enterprise employs over 1.5 thousand highly-qualified workers. Aspiring to work for community's welfare, the enterprise contributes to the improvement of Perm's social sphere. The enterprise pays much attention to environmental issues and has its own environment improvement agenda. JSC "HaloPolymer Perm" fulfilled the obligations of Vienna Convention of 1995 (on Protection of the Ozone Layer) and Montréal protocol of 1987 (on Emission of Ozone-Depleting Substances) by having, in due time, discontinued production of ozone depleting halocarbons and having switched to production of ozone friendly ones. Provision of normal work conditions, protection of personnel and public health are of the enterprise's priorities.

Now JSC "HaloPolymer Perm" is one of the Russian market leaders in production of unique fluorine-containing products: fluoroplastics, fluoropolymers, and various goods manufactured from them, hydrogen fluoride, halocarbons 14, 22, 125, 318, chemical agents, and hydrofluoric acids. Produce of JSC HaloPolymer Perm is purchased by enterprises of Western Europe, America and Asia.

OJSC "HaloPolymer" is a Moscow-based holding company that managing activities of JSC "HaloPolymer Perm". OJSC "HaloPolymer" coordinates and manages all organizational, technic-economic and other issues associated with development of this JI project and with promotion of this in the international carbon market.

Situation existing prior to the starting date of the project

SF_6 production line was put into operation in 1982. During the process a considerable part of sulphur hexafluoride (approximately 20% of SF_6 output) is lost as emissions at rectification columns.

* First stage of TDU modernization is associated with destruction of HFC-23 waste streams.

SF_6 destruction at JSC "HaloPolymer Perm"

The enterprise has relevant experience of fluorine organic compounds (FOC) destruction. Thermal destruction unit for fluorine organic compounds was installed at the plant and have been successfully operated since 1987. All equipment and technology are certified in compliance with the Russian standards and meet all applicable environmental requirements. JSC HaloPolymer Perm is obliged to destroy the following waste flows, due to their high toxicity levels:

Liquid wastes

1. Still bottoms (residues) with increased water concentration from monomer 4 production; and still bottoms (residues) from HCFC 22 production;
2. Still bottoms (residues) from monomer 4 production, after R-318C and R-124a have been extracted;
3. Still bottoms from R-125 production;
4. Waste compressor oil contaminated with fluorine-containing products and liquid waste with methanol content from workshop No 26.

Gaseous wastes:

5. R-125 and halocarbon-318C blow-offs;
6. Monomer 4 production blow-offs.

At present, there is no requirement for the compulsory destruction of SF_6 in Russia. The plant has the official "Allowance for the emission of polluting substances in the atmosphere" that includes, among others, SF_6. Under the document, all SF_6 produced at the plant may be emitted into atmosphere without exceeding sanitary and hygienic norms.

Baseline scenario:

In the absence of the legislative and economic incentives to utilize (or destruct) wastes of SF_6 production the plant would continue to emit the SF_6 containing gaseous wastes in the atmosphere. This situation is the baseline scenario.

History of the project:

Initially, the SF_6 destruction project was intended to be an integral component of the comprehensive JI project that included destruction of both GHG gases HFC-23 and SF_6. For this, modernization of the TDU including installation of control and monitoring system as well as receiver vessels, relocation of the waste injection jets, and construction of waste gas transmission lines was planned which led to an efficient waste destruction. The go-decision on the JI project was made at JSC "HaloPolymer Perm" on 22.03.2007[*].

In June 2007 the management of the Company decided to part the realization of the JI project in two separate projects: HFC-23 destruction project and SF_6 destruction project[†]. The point is that the CDM approved methodology AM 0001 "Incineration of HFC-23 waste streams" (Version 05.1) that was intended to be used for development of the PDD requires addressing (among others) historical data of share of HFC-23 and SF_6 formation and their concentrations. A reason for the decision to part the projects was the availability of such historical data for

[*] For reference see the minutes of discussion dd. 22.03.2007

[†] For reference see the minutes of discussion dd. 22.06.2007

HFC-23 and the absence of those for SF_6. The Company's technical regulation at that time did not provide for the monitoring of SF_6 wastes as it was unnecessary: because of low-hazard class of SF_6 its emissions were not reported to the state supervisory organization and the Company did not calculate the maximum permissible emission. Therefore, to gather historical data on actual SF_6 waste formation and its concentration in gaseous wastes it was decided to elaborate a separate project for SF_6 destruction project in three years after the project would become operational. These data were intended to be provided through direct measurement of waste gaseous streams containing SF_6 and of concentrations, which had never been done before.

In the period of June-December of 2007 the Company carried out the following activities:

- developed a process scheme of HFC-23 and SF_6 destruction, feasibility study and technical design;
- technical design underwent the necessary approval procedure with a state supervisory organization;
- bought, installed and commissioned the project equipment.

Thus, since the beginning of 2008 the HFC-23 and SF_6 have been incinerated at the thermal destruction unit. The detailed schedule of the project realization is provided in A 4.2. subsection.

Outstanding issues related to Section A of the Verification Protocol, PP's response and the AIE conclusion are summarized in Appendix A (refer to CAR 01 – 07)

The issued CARs and CLs concern:

- indicate the number of sectoral scope (CAR 01);
- briefly summarize the history of the project including its JI component (CAR 02);
- titles of project participants in table A.3 and Annex 1 shouldn't differ (CAR 04);
- provide the source of information of geographical coordinates presented in PDD (CAR 05);
- Please provide the implementation schedule of the project as required by Guidelines for users of the JI PDD Form (Version 04) (CAR 06);
- provide the table in Section A.4.3.1 fully in accordance with Guidelines for Users of the JI PDD Form (Version 04) (CAR 07).

4 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 communications are described in the Determination Protocol in Appendix A.

The Corrective Action Requests are stated, where appropriate, in the following sections and are further documented together with Clarification Requests in the Determination Protocol in Appendix A. The determination of the Project resulted in 26 Corrective Action Requests, 03 Clarification requests and 1 Further Action Request.

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

4.1 Project approvals by Parties involved (19-20)

The project has no approval by the Parties involved – Russian Federation (Host). Party B is not defined at the determination stage. This was reported in CAR 08 which left open.

4.2 Authorization of project participants by Parties involved (21)

The participation of JSC “HaloPolymer Perm” listed as project participant in the PDD is not authorized by the Parties involved as LoA has not been issued by the Parties involved.

The authorization is expected to be made through the issuance of LoA.

4.3 Baseline setting (22-26)

PDD v.6.0 explicitly indicates that baseline was set in accordance with appendix B of the JI Guidelines /4/ and with the Guidance on criteria for baseline setting and monitoring/Version 03 /5/ (hereinafter referred to as JI specific approach). 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:

(a) By listing and describing the following plausible future scenarios on the basis of conservative assumptions and selecting the most plausible being Scenario 1:

1. Continuation of the situation prior the project implementation, i.e. continuation of SF6 emissions containing in waste streams generated during SF6 production process;
2. The project itself (without being registered as a JI activity), i.e. SF6 destruction in the thermal destruction unit without being registered as a JI-project activity.

(b) Taking into account relevant key factors that affect a baseline, such as sectoral reform policies and legislation, economic situation in

chemical sector in terms of incineration of waste sulphur hexafluoride incineration, availability of capital (including investment barrier), fuel (natural gas) prices.

(c) Generally in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data 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 of the list of standard variables contained in appendix B to Guidance on criteria for baseline and monitoring version 03.

All explanations, descriptions and analyses pertaining to the baseline in the PDD are made in accordance with the referenced JI specific approach and the baseline is identified appropriately.

Based on the analysis of alternatives and taking into account the results of the simple cost analysis presented in Section B.2, a conclusion is made that Continuation of the situation prior the project implementation, i.e. continuation of SF6 emissions containing in waste streams generated during SF6 production process is the most plausible alternative.

Outstanding issues related to Baseline setting (22-26), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CAR 09 – 12)

The issued CARs and CLs concern:

- indicate which of the following approaches is used for identifying the baseline (CAR 09);
- incorrect reference to the document: “Guidelines for the criteria of the baseline scenario development and monitoring” (CAR 10);
- justification of the presence of investment barrier for alternative 2 (i.e. investment analysis, etc.) (CAR 11);
- incorrect indication of the requirement of Russian environmental legislation on the utilization of SF6 (CAR 12).

4.4 Additionality (27-31)

Additionality of the proposed project was proved in accordance with requirement Annex I, item A 44 (a) of “Guidance on criteria for baseline setting and monitoring” (version 03). This approach was applicable since the approved CDM methodology has not been used in the project context.

Traceable and transparent information of the option showing that the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to reductions of anthropogenic emissions by sources of GHGs was provided In PDD Section B.2.

The PDD provides a justification of the applicability of the approach with a clear and transparent description, as per item 4.3 above. Plausible alternative scenarios are described and scrutinized in Section B.1 (refer to item 4.3 above).

Justification of additionality has been done in several steps based on consideration of economic attractiveness of alternative technological option “Continuation of the situation prior the project implementation, i.e. continuation of SF6 emissions containing in waste streams generated during SF6 production process”, the steps are as follows:

1) Indication and description of the approach applied;
2) Application of the approach chosen;
3) Provision of additionality proofs.

The key additionality proofs were the financial (simple cost analyses, as no financial benefits are expected from the proposed project activity), and common practice analysis. The simple cost analysis (for the justification of financial barrier) shows that the project with capital investment 5,900 thousand rubles and total operational costs as 28,971 thousand rubles for the period of 2008-2012 that is absolutely unattractive from investor’s point of view.

The documented calculation with the cost analyses was made available by PP for the verifier, and Bureau Veritas Certification will submit it to JISC at the final determination as the supporting documentation. On the basis of information provided by PP and revision made in the PDD v.4.0 and cost analysis calculation the initial issues were sufficiently addressed and the cost analysis outcome was confirmed.

The common practice analysis has reasonably shown that the proposed JI project does not represent a widely observed practice in the geographical area concerned. The common practice analysis outcome was confirmed through the interviews held during site visit and the review of publicly available information at the official regional websites.

The verifier determined that additionality is demonstrated appropriately as a result of the analysis using the approach chosen.

The operation lifetime for the TDU was confirmed by information provided by equipment supplier /13/. According to the Russian accountant guidance full depreciation time for the project equipment is 20 years /13/.
Outstanding issues related to Additionality (27-31), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CAR 13, CAR 14, CL 01).

The issued CARs concern:

- irrelevant reference to “Guidelines for users of the JI PDD Form for small-scale projects and the form for submission of bundled joint implementation small-scale projects (Version 04) (CAR 13);
- justifications for applicability of a special investment analysis method - simple cost analysis - which is to be applied to demonstrate additionality in cases where no financial benefits are expected from the proposed project activity (CAR 14);
- the reliability of sources for input values for cost analysis (both CAPEX and OPEX) (CL 01)

4.5 Project boundary (32-33)

JI specific approach

The project boundary defined in the PDD, Section B.3, and Table B.3-1 for project and baseline scenario accordingly, encompasses all anthropogenic emissions by sources of greenhouse gases (GHGs) that are:

(i) Under the control of the project participants (ii) reasonably attributable to the project, and (iii) significant such as:

- Waste SF6 emissions that were avoided as a result of the project realization;
- SF6 emissions, that were not destructed in TDU;
- Emissions from natural gas combustion for destruction process.

Other emission sources which are attributable to the project but is outside the project boundary such as:

- electricity consumption due to the project activity (SF6 destruction);
- steam consumption due to the project activity (SF6 destruction);

occur outside the project boundary and hence were reasonably considered as leakage.

All above source of leakages, are less <1% of difference between project and baseline emissions (see ex-ante calculation in E2 section). Nevertheless, they are taken into account as conservative approach.

The delineation of the project boundary and the gases and sources included are appropriately described and justified in the PDD, Section B.3.

Based on the above assessment, the AIE hereby confirms that the identified boundary and the selected sources and gases are justified for the project activity.

Outstanding issues related to Project Boundary (32-33), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CAR 15, CAR 16, CAR 17, CL 02).

The issued CARs concern:

- justification of project emissions sources CO2 emissions associated with destruction of SF6” (CAR 15);
- justification of the exclusion of the project emission source “emissions associated with leaks of SF6 with waste water” (CAR 16; CL 02);
- Not correct using the graphical scheme in PDD (harming the PDD Template).

4.6 Crediting period (34)

The starting date of the project is determined as 01/11/2007, which is the date when the installation of project equipment started.

PDD v.6.0 states the expected operational lifetime of the project in years and months, which is 20 years or 240 months, as defined by the life cycle of TDU and confirmed with the information provided by equipment supplier /13/.

The PDD states the length of the first crediting period in years and months, which is 5 years/60 months (from 01/01/2008 through 31/12/2012), which is on the date the first emission reductions are generated by the project (SF6 destruction at JSC “HaloPolymer Perm).

No identified areas of concern as to the project starting date; PP’s response and BV Certification’s conclusion are described in Appendix A Table 2.

4.7 Monitoring plan (35-39)

The PDD, in its monitoring plan section, explicitly indicates that JI specific approach regarding monitoring was selected in accordance with Appendix B of the JI Guidelines /4/ and with the JISC Guidance on criteria for baseline setting and monitoring /Version 03 /5/.

JI specific approach

The monitoring plan describes all relevant factors and key characteristics that will be monitored, and the period in which they will be monitored, in particular also all decisive factors for the control and reporting of project performance, such as:

- Amount of waste gases containing SF_6 supplied for destruction;
- Concentration of SF_6 in waste gases supplied for destruction;
- Quantity of SF_6 supplied for destruction;
- Volume of gaseous emissions from destruction unit;
- Concentration of SF_6 in gaseous emissions from destruction unit;
- Quantity of SF_6 not destroyed in the unit;
- Total natural gas consumption for destruction of all wastes incinerated in TDU;
- Specific fuel consumption of natural gas for combustion of SF_6;
- Natural gas consumption during SF_6 destruction process.
- Electricity consumption for SF6 destruction
- Specific consumption of electricity for SF6 destruction
- Heat consumption for SF6 destruction
- Specific consumption of heat for SF6 destruction

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, D.1.2.1 and D.1.3.1.

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.

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

The monitoring plan explicitly and clearly distinguishes:

(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, such as:
- Global Warming Potential for SF_6 (equals to 23 900 tCO_2/tSF_6);
- Conversion factor for natural gas (equals to 33,812 TJ/mln. cubic meters);
- CO_2 emission factor natural gas (equals to 56,1 tCO_2/TJ);
- Grid emission factor equals to 0,631 tCO2/MWh;

(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-
- CO2 emission factor for heat (equals to 140,3 tCO2/TJ) consumption

(iii) Data and parameters that are monitored throughout the crediting period, such as those presented in Section D.1.2.1 for the project, Section D.1.3.1 for the leakage.

Step-by-step application of the used approach for monitoring is described in PDD Section D including monitoring procedures, formulae, parameters, data sources etc.

The monitoring plan describes the methods employed for data monitoring (including its frequency) and recording; please refer to PDD, Section D.1.2.1, and Section D.1.3.1.

The monitoring plan elaborates all algorithms and formulae used for the estimation/calculation of emission reductions and leakage, such as formula in Section D.1.1.2 for project emission (Formulae D.1.-1 – D.1.-3 5), Section D.1.1.4 for base line emission (Formula D.1.-4 – D.1.- 5), Section D.1.4 for emission reduction (Formula D.1.-6).

The monitoring plan presents the quality assurance and control procedures for the monitoring process, all the QC/QA procedures are specified in PDD Section D.2

The procedures include, as appropriate, information on calibration and on how records on data and/or method validity and accuracy are kept and made available on request.

The monitoring plan clearly identifies the responsibilities and the authority regarding the monitoring activities. The operating and management structure for GHG monitoring is described in PDD Section D.3, Figure “Organizational chart of the monitoring for SF6 destruction project“. The responsibilities and the authority regarding the monitoring activities are also provided within the Section D.3.
On the whole, the monitoring report reflects good monitoring practices appropriate to the project type.
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 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 19- CAR 23, CL 03 and FAR 01).

The CARs concern to:
- The missing in monitoring of factors affecting both the project and the baseline emissions: - consumption of the electricity for destruction unit, -

specific norm of electricity consumption per 1 ton of destroyed substance, - steam consumption for destruction unit during the reporting period - specific norm of steam consumption per 1 ton of destroyed substance (CAR 19);
- transparency for the applied value for EFf – CO2 emission factor for the natural gas combustion fixed ex-ante as LTD is = 0.00187 t CO2e/m3(20 °C) (CAR 20);
- transparency for the applied value for ID FCy, g_NDy, C_ND_SF6y and ID C_SF6y in Section D.1.1.3 (how to get monthly data), ID ec, stc (no clear procedure how to get the data) (CAR 21);
- reference to national (or local approved monitoring standards and/or testing methodologies used for concentration of SF6 in gaseous emissions from destruction unit tests. Detailed descriptions of obtaining the monitored data (mainly calibration procedures are given) (CAR 22);
- detailed Organization of GHG monitoring process (Diagram + description) with clear responsibilities and the authority regarding the monitoring activities for data collection, achieving and storing (both for electronic and hard copies) (CAR 23);
- clarification of the approach for applying the initial data for specific norm of steam consumption per 1 ton of destroyed substance. The description of the applied maximum value of the specific norm of steam consumption per 1 ton of destroyed substance in the leakage calculation (refer to Section E.2) (CL 03);
- The justification of the personal manuals of persons involved in the monitoring process is to be checked on site through the first verification (FAR 01).

4.8 Leakage (40-41)

JI specific approach

The PDD appropriately describes an assessment of the potential leakage of the project. The PDD indicates two sources of leakage:
- Leakage associated with steam supply for SF6 destruction due to the project activity;
- Leakage associated with grid electricity supply for SF6 destruction due to the project activity;

Outstanding issues related to Leakage (40-41), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CARs 15-16, CAR 17 and CL 02 in para 32 (a)) and summarized in Section 4.5 as applicable.

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

JI specific approach

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

The PDD provides the ex ante estimates of:
(a) Baseline emissions:13,713,184 tCO_2e;
(b) Project emissions: 2,337 tCO_2e
(c) Leakage: 3,715 tCO_2e;
(d) Emission reduction adjusted by leakage: 13,707,132 tCO_2e.

Reporting period: From 01/01/2008 to 31/12/2012.

The estimates referred to above are given:
- On an annual basis;
- From 01/01/2008 to 31/12/2012 the fist crediting period;
- On a source-by-source basis;
- For CO2 and SF6 as GHG emitted.
- In tonnes of CO2 equivalent, using global warming potentials defined by decision 2/CP.3.

The formulae used for calculating the estimates referred above, which are Formulae in Section D.1.1.2 for project emission (Formulae D.1.-1 – D.1.-3 5), Section D.1.1.4 for base line emission (Formula D.1.-4 – D.1.- 5), Section D.1.4 for emission reduction (Formula D.1.-6) are consistent throughout the PDD. Input data for calculations and the calculations per se are presented on the spreadsheet /2/ in transparent and reproducible manner. Verifiers observed the final calculations as accurate. The results are summarized in Section E. 6.

For calculating the estimates referred to above, key factors defined in the monitoring plan 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.

Outstanding issues related to Estimation of emission reduction (42-47), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CARs 24- 25).

The CARs concern to:
- Providing in a transparent manner data sources for the data used for calculating the estimates in para 43 and rational for industrial expansion of

the applied production data for 2008-2012 for estimates of emission reductions within the project boundary (CAR 24).

- Providing estimates of emission reductions within the project boundary for 2008-2012 for each gas (CO2, SF6), source separately as required by Guidelines for users of the JI PDD form ver.04 (CAR 25);

4.10 Environmental impacts (48)

The project contributes to sustainable development of Perm Region and Russia in general by reduction of air pollution and SF6 destruction.

The foreseen Environmental impacts caused by the proposed project activity mainly by air pollutant emissions from TDU and fugitive leaks from gas and electricity transportation and processing system comply to the respective legal requirements and limits as recognized in the EIA developed as the part of project design.
The project is not associated with capital construction, therefore, according to the item 11 of the Federal Law of Russian Federation dd. 23.11.1995 # 174-FZ “On environment expertise” such expertise was not be carried out. It is only industrial safety expertise was performed.
/8/.
Outstanding issues related to environmental impacts (48), PP’s response and the AIE conclusion are summarized in Appendix A (refer to CAR 26).

The CAR concern to:

- Provision of information concerning the transboundary impacts for the project (CAR 26).

4.11 Stakeholder consultation (49)

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. Nevertheless stakeholders’ consultation in form of open meeting is not mandatory JSC “HaloPolymer Perm” has taken voluntary action to engage with stakeholders. JSC “HaloPolymer Perm” has informed Stakeholders (the information on the SF6 destruction project at JSC “HaloPolymer Perm” was submitted to an independent expert organization, OOO “IKC Promtechbezopastnost” under industrial safety expertise of the project in 2007. The Conclusion # 25-PF/07-EZS/07 dd.26/11/2007 provided by this organization confirmed that the project corresponds to all norms of industrial safety adopted in the Russian Federation. No negative comments from the local stakeholders have been received as confirmed by the interview with PP held during the off-site teleconference.

No upstanding issues are identified.

4.12 Determination regarding small scale projects (50-57) (Not applicable)

4.13 Determination regarding land use, land-use change and forestry (LULUCF) projects (58-64) (Not applicable)

4.14 Determination regarding programmes of activities (65-73) (Not applicable)

5 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.

6 DETERMINATION OPINION

Bureau Veritas Certification has performed a determination of the “SF6 destruction at JSC “HaloPolymer Perm” 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 on-site interviews with project participants; iii) the resolution of outstanding issues and the issuance of the final determination report and opinion.

Using investment analysis and common practice analysis the project participants proved 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 fulfillment 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 and the is-

sue of checking on site the personal manuals of persons involved in the monitoring process during the first verification. 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 6.0 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.

7 REFERENCES

Category 1 Documents:
Documents provided by Project developers that relate directly to the GHG components of the project.

/1/ PDD "SF6 destruction at JSC "HaloPolymer Perm"
a/ version 1.0, dd. 12/09/ 2011;
b/ version 3.0, dd.17/10/2011;
c/ version 4.0, dd.20/10/2011;
d/ version 5.0, dd. 02/11/2011;
e/ version 6.0, dd. 02/11/2011

/2/ ER Calculation Excel spreadsheet
a/ version 1.0, dd. 12/09/ 2011;
b/ version 3.0, dd.17/10/2011;
c/ version 4.0, dd.20/10/2011
d/ version 5.0, dd. 02/11/2011;
e/ version 6.0, dd. 02/11/2011

/3/ Simple cost Analysis pdf as a supported documents to PDD version 4.0 dd. 20/10/2011

Category 2 Documents:
Background documents related to the design and/or methodologies employed in the design or other reference documents.

/4/ Guidelines for the implementation of Article 6 of the Kyoto Protocol
http://unfccc.int/resource/docs/2005/cmp1/eng/08a02.pdf#page=2

/5/ Guidance on criteria for baseline setting and monitoring Version 03
http://ji.unfccc.int/Ref/Documents/Baseline_setting_and_monitoring.pdf

/6/ Implementation schedule for JI project "HFC-23 destruction at JSC Halogen, Perm " dated 28.03.2007
And Appendix to the Schedule for JI project "SF6 destruction at JSC "HaloPolymer Perm" dated 25.06.2007.

/7/ Production estimate for the Project (calculation of costs) dated 29.06.2007

/8/ Environment impact assessment procedure of Synthetic Gas (ele-gas) destruction from workshop 135 of JSC "Halogen", 2007. Developed by Projecting Institute BELZ. /extract/

/9/ Act of acceptance of the TDU into operations, dated 25.12.2007

/10/ Order #35/1 dated 15.02.11 "About implementation of the Standard СТП 49-40-2011 "Regulation for destruction process of SF6 waste generated"

/11/ Order #405 dated 29.12.07 “Responsibility about monitoring process”.

/12/ Standard СТП 49-40-2011 “Regulation for destruction process of SF6 waste generated”

/13/ Projections of maximum permissible emissions of polluting substances in atmospheric air (MPE) of HFC 23 from the source #148. Dated 2008.

/14/ Attestation on Methodology metering #223.1.02.11.35/2010, valid till 19.04.15

/15/ Calibration certificate Mass flow meter Promass 83F15. Valid for the determination stage.

/16/ Procedure of measurement of SF6 mass concentration in the air of the working zone and in the industrial emissions by gas-chromatographic method.

/17/ Calibration Certificate for Flow meter Testo №08.2514. Valid till 2012. Valid for the determination stage.

/18/ Calibration Certificate for Chromatograph Cristallux-4000M. Valid for the determination stage.

/19/ Calibration Certificate for Chromatograph LKhM-80. Valid for the determination stage.

/20/ Calibration Certificate for Chromatograph Tsvet-800. Valid for the determination stage.

/21/ Procedure M14UK2011 “Procedure of measurements of mass shares of oxygen, nitrogen, tetrafluormethane and sulphur hexafluoride in SF6 wastes by chromatographic method”

/22/ Technical data of Synthetic Gas (ele-gas) mass contents in SF6 waste generated and supplied for destruction for 2008-2011. Monthly data

/23/ Technical reports for Synthetic Gas (ele-gas) supplied to TDU and its concentration, 2008-2011

/24/ Calculation of maximum permissible emissions (MPE) of polluting substances in atmospheric air within and beyond sanitary-protection zone (SPZ), including the territories of human settlements, 2011.

/25/ A technical message from JSC “HaloPolymer Perm” signed by Chief of FCC Production Group about provision for SF6 production in 2011 and 2012.

/26/ A technical message from JSC “HaloPolymer Perm” signed by Chief of Technical Department to emissions associated with leaks of SF6 with waste water.

/27/ Basic raw materials consumption rate OAO “Halopolimer Perm” sinse 2000 till 2010, verified by Chief Engineer OAO “Halopolimer Perm” V.Andreychatenko.

/28/ Technical Passport of measuring device for natural gas consumption

/29/ Technical passport “Receiver Tank (E-5), registration #70854”, dated 02.04.09” valid for the date of verification

/30/ Register of the equipment installed in frame of JI project for 2011

/31/ Technical Passports «П-542», «П-548» for calibrating laboratory mixtures, valid for the date of determination

/32/ “Provisions about the Air Service Laboratory”, valid for the date of the verification.

/33/ Certificate to QMS of JSC “Halogen” issued by TUW TURINGEN, valid till 29/11/12

/34/ QMS Standard “Control of Records” СТП 07-56-2009

/35/ Register of personnel involved in the project GHG monitoring. 2010

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/ Marat Latypov, acting on behalf of CARBONTRUST LIMITED, Consultant (PDD developer)

/2/ Igor Kuznetsov, JSC “HaloPolymer”, Project Director

/3/ A. Zaborskiy – JSC “HaloPolymer”, Chief Financial Officer

/4/ P. Boyko – JSC “HaloPolymer Perm”, General Director

/5/ A.Birt – JSC “HaloPolymer Perm”, Head of Technical Department

/6/ L. Tolstikova - JSC “HaloPolymer Perm”, Chief of air emission monitoring laboratory

/7/ T.Legotkina - JSC “HaloPolymer Perm”, Chief of Quality Technical Department

/8/ O.Afanasyev - JSC “HaloPolymer Perm”, Chief Metrologist

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APPENDIX A
DETERMINATION PROTOCOL

Table 1

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

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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 the 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 “SF_6 destruction at JSC “HaloPolymer Perm”. Sectoral scope: Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride. **CAR 01.** Please indicate the number of sectoral scope also. Sectoral scope 11. Closed on the basis of PDD v.4.0 review. The PDD Version 1.0 was originally presented to Bureau Veritas and reviewed as a part of determination. The date of PDD version 1.0 completion: 12.09.2011. PDD version 2.0 was officially disregarded by PP’s. PDD Version 3.0 is dated 17.10.11. PDD Version 4.0 is dated 20.10.11.	CAR 01	OK
A.2 Description of the project				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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?	Requirements a), b), c) to the description of the project are met including its purpose. PDD reads: "The project is aimed at destruction of the greenhouse gas with high global warming potential (GWP) that is sulphur hexafluoride (SF6). The global warming potential of sulphur hexafluoride is 23900 tonnes of CO2 equivalent per one tonne of SF6." The history of the project including its JI component is not summarized. **CAR 02.** Please briefly summarize the history of the project including its JI component. Please indicate appropriate dates, decisions, documents if any, etc. Closed on the basis of PDD v.4.0 review.	CAR 02	OK
A.3 Project participants				
A.3	Are project participants and Party(ies) involved in the project listed?	Project participants are listed in Section A.3. Party A – Russian Federation with project participant Open Joint Stock Company "HaloPolymer Perm", Party B – Swiss Confederation with project participant Vitol S.A. **CAR 03.** The titles of project participants in table A.3 and Annex 1 shouldn't differ. Please take note: information concerning the project participant from Party B - Vitol S.A. is absent in Annex 1. Please correct. Please add in the table A.3 "To be determined at the later stage ". Closed on the basis of PDD v.4.0 review.	CAR 03	OK
A.3	Is the data of the project participants presented	The data of the project participants is presented in tabular		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	in tabular format?	format.		
A.3	Is contact information provided in Annex 1 of the PDD?	Conclusion is pending a response to CAR 03. Closed on the basis of PDD v.4.0 review.	OK	OK
A.3	Is it indicated, if it is the case, if the Party involved is a host Party?	The indicated host party is the Russian Federation.	OK	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. Pending a response to CAR 04. Closed on the basis of PDD v.4.0 review.	Pending	OK
A.4.1.1	Host Party(ies)	The Russian Federation.		OK
A.4.1.2	Region/State/Province etc.	Perm Krai.		OK
A.4.1.3	City/Town/Community etc.	The city of Perm.		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)	Detail of the physical location of the project was provided. **CAR 04.** Please provide the source of information of geographical coordinates presented in PDD. Are these coordinates of the plant or of Perm-city? Closed on the basis of PDD v.4.0 review.	CAR 04	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?	The project envisages the implementation of fluorocarbon compounds thermal destruction unit and reconstruction of existing SF6 production that leads to destruction of practically all losses of sulphur hexafluoride. **CAR 05.** Please transparently indicate in Section A.4.2 what	CAR 05 CAR 06	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		kind of reconstruction of existing SF6 production is implementing, except the implementation of fluorocarbon compounds thermal destruction unit. **CAR 06.** Please provide the implementation schedule of the project as required by Guidelines for users of the JI PDD Form (Version 04). Closed on the basis of PDD v.4.0 review.		
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 stated how anthropogenic GHG emission reductions are to be achieved? (This section should not exceed one page)	PDD v.01 reads: “The project envisages utilization of the total waste gases containing sulphur hexafluoride from the stage of rectification, emitted to the atmosphere prior the project. Given the high value of the global warming potential of this gas the project realization will significantly reduce harmful anthropogenic interference with climate system, i.e. reduce GHG emissions in tonnes of CO2 equivalent”.		OK
A.4.3.1. Estimated amount of emission reductions over the crediting period				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
A.4.3.1	Is it provided the estimation of emission reductions over the crediting period? Is it provided the estimated annual reduction for the chosen credit period in tCO2e? Are the data from questions above presented in tabular format? 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?	The estimation of emission reductions over the crediting period (5 years) is provided: 13,707,132 tonnes of CO2 equivalent. The estimated annual emission reduction for the chosen credit period is 2,741,426 tonnes of CO2 equivalent. The data from the questions above is presented in tabular format. Please refer to Section A.4.3.1. **CAR 07.** Please provide the table in Section A.4.3.1 fully in accordance with Guidelines for Users of the JI PDD Form (Version 04). Closed on the basis of PDD v.4.0 review. The length of the crediting period is 5 years. Please refer to the section A.4.3.1. The estimates of total and annual emission reductions were provided in section A.4.3.1 in tonnes of CO2 equivalent.	CAR 07	OK
A.5. Project approvals by Parties				
19	Have the DFPs of all Parties listed as “Parties involved” in the PDD provided written project approvals?	**CAR 08.** The project has no approval of the host Party.	CAR 08	Pending
19	Does the PDD identify at least the host Party as a “Party involved”?	The host Party involved is the Russian Federation.		OK
19	Has the DFP of the host Party issued a written project approval?	No, pending a response to CAR 08.	Pending	Pending
20	Are all the written project approvals by Parties involved unconditional?	Yes, the written project approvals are unconditional.		OK
Authorization of project participants by Parties involved				

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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?	The authorization of Joint Stock Company "HaloPolymer Perm" is deemed to be received together with the project approval by the host Party. Conclusion is pending a response to CAR 08.	Pending	Pending
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	**CAR 09.** Please explicitly indicate in Section B.1 which of the following approaches is used for identifying the baseline: JI specific approach or approved CDM methodology approach. Closed on the basis of PDD v.4.0 review.	CAR 09	OK
JI specific approach only				
23	Does the PDD provide a detailed theoretical description in a complete and transparent manner?	The Section B.1 contains a detailed theoretical description of the baseline. **CAR 10.** Section B.1 contains incorrect reference to the document: "Guidelines for the criteria of the baseline scenario development and monitoring". Please correct. Closed on the basis of PDD v.4.0 review.	CAR 10	OK
23	Does the PDD provide justification that the baseline is established: (a) By listing and describing plausible future	The baseline is established basically: (a) By listing and describing future scenarios available for the	CAR 11 CAR 12	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?	project owner Open Joint Stock Company “HaloPolymer Perm” and selecting the least negatively influenced by the key factors. Two alternative scenarios for the SF6 treatment at the plant were listed and described as follows: 1. Continuation of the situation prior the project implementation, i.e., process losses of SF6 during its production in the form of fugitive emissions in the atmosphere; 2. The project itself that is SF6 utilization in the thermal destruction unit without being registered as a JI-project activity. Based on alternatives analysis with taking into account the key factors: the requirement of Russian environmental legislation on the utilization of SF6, the economic situation in the sector, availability of capital (investment barrier), availability of technology, equipment, skills and best practices, a conclusion is made that alternative 1 is the baseline scenario. (b) By taking into account key factors that affect a baseline, such as sectoral reform policies and legislation, economic situation in the sector in terms of SF6 utilization, availability of capital (investment barrier), technology, equipment, skills and best practices. (c) Generally in a transparent manner with regard to the choice of approaches, assumptions, methodologies, parameters, data sources and key factors (d) Taking into account of uncertainties and using conservative assumptions.		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		(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 of the list of standard variables contained in appendix B to Guidance on criteria for baseline and monitoring. **CAR 11.** Please justify the presence of investment barrier for alternative 2 (i.e. investment analysis, etc.). Please take note: the same pertains to the financial barrier’s justification in Section B.2. Pending on the basis of PDD v.4.0 review. **CAR 12.** The indication that the requirement of Russian environmental legislation on the utilization of SF6 favours the development of the scenario 1 in Table B.1.3 is incorrect. This factor favours the development of scenario 2. Please correct. Closed on the basis of PDD v.4.0 review.		
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		OK
25	If a multi-project emission factor is used, does the PDD provide appropriate justification?	The emission factor for grid power was applied from the Operational Guidelines for Project design Documents of Joint		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Implementation Projects by Ministry of Economic Affairs of the Netherlands. May 2004.		
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".	It is explicitly indicated that a JI-specific approach is chosen for justification of additionality. For this purpose provision (a) is chosen. **CAR 13.** In Section B.2 the reference to "Guidelines for users of the JI PDD Form for small-scale projects and the form for submission of bundled joint implementation small-scale projects (Version 04) is irrelevant. Please take note: the version 02 of "Guidance on criteria for baseline setting and monitoring" has expired. Closed on the basis of PDD v.4.0 review. **CL 01.** PDD p.18 reads: "<u>The decision to initiate investment in this project (design and installation scheme for the collection and transmission) from its own funds was adopted in 2007, according to which the project could be implemented in accordance with Article 6 of the Kyoto Protocol to the UN Framework Convention on Climate Change</u>". The project costs should be specified. The documented decision needs to be provided to confirm the project (both CAPEX and OPEX) is really financed from their own founds nontheless no income other than from ERU selling is expected. Are there any savings from the environmental fees	CAR 13 CL 01 CAR 14	OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		or avoidance of penalties? If yes they should be considered. **CAR 14**. In the absence of income from the sale of ERUs, the cost of this project is not economically justified, which is expressed in the absence of any financial income. Thus, without the use of JI mechanism this project is faced with an insurmountable financial barrier. There is a special investment analysis method - simple cost analysis - which is to be applied to demonstrate additionality in casese where no financial benefits are expected from the proposed project activity. PP’s are requested to justify why this approach is ignored. Sec. B.2 in the amended PDD version 4.0 refers to Table B.2.1 step 2 where it should be demonstrated that “the presence of the financial barrier” is existed. But after revision of PDD relevant simple cost analysis data are not transparent. Remain open.		
29 (a)	Does the PDD provide a justification of the applicability of the approach with a clear and transparent description?	A JI-specific approach is based on an explanation that the project activity would not have occurred anyway due to existence of the financial barrier and that this project is not a common practice. Conclusion is pending a response to CAR 11.	OK	OK
29 (b)	Are additionality proofs provided?	To demonstrate the additionality of the project three steps were implemented: - Step 1: Indication and description of the approach applied; - Step 2: Application of the approach chosen; - Step 3: Provision of additionality proofs.	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		Also an analysis of common practice was reasonably applied (common practice analysis has shown that the project activity is not the common practice in Russia). Conclusion is pending a response to CAR 11		
29 (c)	Is the additionality demonstrated appropriately as a result?	With the unresolved CAR 11 the additionality of the project is not demonstrated.		Pending
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		OK
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 encompasses the anthropogenic emissions by sources of GHGs in the baseline scenario (refer to Section B.3): that is waste SF6 emissions that were avoided as a result of the project realization. Sources of project emissions: SF6 emissions that were not destructed in TDU, CO2 emissions from natural gas combustion for destruction process. Also Section B.3 provides assessment of leakage: - emissions associated with grid electricity supply for SF6 destruction, - emissions associated with steam supply for SF6 destruction. **CAR 15.** In table B.3.1 “CO2 emissions associated with de-	CAR 15 CAR 16 CL 02	OK OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		struction of SF6” indicated as “included” but “considered negligibly small”, however in below sections of PDD this source was not taken into account. Please provide clear justification and indication in PDD of its inclusion or exclusion from consideration. Still open on the basis of PDD v.40 review. **CAR 16.** Please justify the exclusion of the project emission source “emissions associated with leaks of SF6 with waste water”. Still open on the basis of PDD v.4.0 review. **CL 02.** Please clarify why the source “SF6 emissions, that were not destructed in TDU” exists and was included into consideration, however at the end of Section B.2 of PDD there is a phrase: “Waste gas is fully incinerated in the TDU”? The PDD version 2.0 was reviewed and still remain actual the justification of the delineation of the following emission’s sources in the project boundary: (1) There are no justifications of removing “Emissions associated with leaks of SF6 with waste water” from PDD version 2.0. The source of emissions is existed. Please comment. (2) Emissions due to transportation of used alkaline solution to neutralization are not considered (refer to Fig. A.4.2.1). Schematic diagram of SF6 destruction process). (3) Please ensure a proper format of “the delineation of the		

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		project boundary and the gases and sources included as well as leakage emissions and sources diagramme” is used (the diagramme in on the title B.4 is loaded. Please update accordingly. Still open.		
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 assessment of different emission sources in the baseline scenario.		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?	Section B.3 of PDD has a reference:”The project boundary with the main emission sources are provided on the diagram D.1-1”. **CAR 17.** The diagram doesn’t contain any boundary delineation and emission sources indication. Please correct.	CAR 17	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?	Conclusion is pending a response to CAR 15and CAR 16.		OK
Approved CDM methodology approach only_Paragraph 33_ Not applicable				
Crediting period				
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?	The starting date of the project is indicated as: 01.11.2007, which is the date when installation of project equipment started. **SV 01.** Please provide the documentary evidence to confirm this date.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
34 (a)	Is the starting date after the beginning of 2000?	Yes, it is.		OK
34 (b)	Does the PDD state the expected operational lifetime of the project in years and months?	The expected operational lifetime of the project is 20 years, 240 months: from 01.11.2007 till 01.11.2027.		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 5 years (60 months) from 01.01.2008 to 31.12.2012.		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?	Starting date of crediting period is after the date when the first emission reductions are generated by the project.		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?	The start of crediting period is 01/01/2008 and its length is 5 years or 60 months.		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. Please take into consideration CAR 13 note also to correct the irrelevant reference to "JI guidelines on baseline setting and monitoring version 02". Guidance on criteria for baseline setting and monitoring version 03 shall be referenced.	CAR 18	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		CAR 18. Please provide in Section D.1 a detailed theoretical description in a compete and transparent manner, as well as a justification referring to the JISC’s guidance on criteria for baseline setting and monitoring/ Please include in the description all assumptions, formulae, parameters, data sources and key factors, and state how uncertainties are taken into account and conservativeness is safeguarded [1].		
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: Key factors affecting both the project and the baseline emissions are considered. The period and frequency of monitoring are indicated in table D1.1. **CAR 19.** Such factors affecting both the project and the baseline emissions are not considered as monitored in Section D.1: **ECy** - consumption of the electricity for destruction unit, MWh, **ec** - **the** specific norm of electricity consumption per 1 ton of destroyed substance, kWh/t, **StCy** - **the** steam consumption for destruction unit during the reporting period y, GJ, **stcy** - **the** specific norm of steam consumption per 1 ton of destroyed substance, GJ/t. Please correct the Data variable description in Table D.1.3.1 in line with their description in Formulae D.1-5. **CL 03.** Please clarify the approach for applying the initial data for specific norm of steam consumption per 1 ton of destroyed substance. The data are not indicated as fixed ex-	CAR 19 CL 03	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		ante in Section D.1, but specific norm of electricity consumption per 1 ton of destroyed substance is indicated as fixed ex-ante (refer to Section D.1, page 21). Please provide the description of the applied maximum value of the specific norm of steam consumption per 1 ton of destroyed substance in the leakage calculation (refer to Section E.2). Remain open.		
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 monitoring plan specifies the indicators, constants and variables used that are reliable. Conclusion is also pending a response to CAR 18, CAR 21, and CAR 22.	Pending	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?	Default value for GWP SF_6 is used on the basis of 2006 IPCC Guidelines for National Greenhouse Gas Inventories. The default values are following: - Global Warming Potential for SF6 (IPCC Guidelines for National Greenhouse Gas Inventories) ; - CO2 emission factor for natural gas combustion; - CO2 emission factors for grid electricity (Operational Guidelines for Project Design Documents of Joint Implementation Projects. Volume 1. General guidelines. Version 2.3. Ministry of Economic Affairs of the Netherlands. May 2004); - CO2 emission factor for steam consumption supplied by municipal CHP plant,	CAR 20	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		- Specific norm of electricity consumption per 1 ton of destroyed substance. **CAR 20.** Please provide in a transparent manner justification and originate recognized sources for the applied value for EF_f – CO_2 emission factor for the natural gas combustion fixed ex-ante as LTD is = 0.00187 t CO2e/m3(20 °C). Conclusion is also pending a response to CAR 18, CAR 19, and CL 03.		
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 clearly indicates how the values are to be selected and justified. **CAR 21.** There are no clear descriptions in Section D.1.1.1 how the values of ID FC_y, g_ND_y, $C\_ND\_SF6_y$ are to be selected and justified. The same request pertains actual to ID C_SF6_y in Section D.1.1.3 (how to get monthly data), ID ec, stc (no clear procedure how to get the data). Pending a response to CAR 18, CAR 19,CAR 20, and CL 03.	CAR 21	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?	Pending a response to CAR 18, CAR 19,CAR 20, and CL 03	Pending	OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	All parameters included in the monitoring plan are to be monitored, calculated under regular operational practice or taken as constants.	Pending	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
36 (b) (iv)	Are International System Unit (SI units) used?	International System Units (SI units) are used.	OK	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?	Sections B.1 and D.1.1.3 provides the data to be monitored for the baseline emissions calculation.	OK	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	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”?	The monitoring plan does not draw on the list of standard variables contained in appendix B of “Guidance on criteria for baseline setting and monitoring”. All monitoring parameters are in line with the list of standard variables contained in appendix B of “Guidance on criteria for baseline setting and monitoring”.	OK	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?	Description of the monitoring plan given in Section D.1.1 distinguishes the parameters which are to be monitored and those fixed ex-ante and available at the stage of determination including all default values: - Global Warming Potential for SF6 (IPCC Guidelines for National Greenhouse Gas Inventories) ; - CO2 emission factor for natural gas combustion; - CO2 emission factors for grid electricity (Operational Guidelines for Project Design Documents of Joint Implementation Projects. Volume 1. General guidelines. Version 2.3. Ministry of Economic Affairs of the Netherlands. May 2004); - CO2 emission factor for steam consumption supplied by	Pending	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	(iii) Data and parameters that are monitored throughout the crediting period?	municipal CHP plant, - Specific norm of electricity consumption per 1 ton of destroyed substance. Other parameters are subject for monitoring through the crediting period. Monitoring plan does not include parameters which are not to be monitored and not available at the stage of determination. Pending a response to CAR 18, CAR 19, CAR 20, and CL 03.		
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	Pending a response to CAR 21.	Pending	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 in Section D.1.1.4 for baseline emissions (Formula D.1-3) and Section D.1.1.2 for project emissions (Formula D.1-1). Leakages are calculated in Section D.1.3.2 (Formula D.1-5).	OK	OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	The underlying rationale for the algorithms/formulae is explained.	OK	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Consistent variables, equation formats, subscripts are used.	OK	OK
36 (f) (iii)	Are all equations numbered?	Yes	OK	OK
36 (f) (iv)	Are all variables, with units indicated defined?	Yes	OK	OK
36 (f) (v)	Is the conservativeness of the algorithms/procedures justified?	N/A		OK
36 (f) (v)	To the extent possible, are methods to quanti-	N/A		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	tatively account for uncertainty in key parameters included?			
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	OK
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	There are no parts of the algorithms or formulae that are not self-evident in PDD.	OK	OK
36 (f) (vii)	Is it justified that the procedure is consistent with standard technical procedures in the relevant sector?	Yes, the monitoring is in line with current operational routines.	OK	OK
36 (f) (vii)	Are references provided as necessary?	**SV 02.** Check the original data sources for all parameters used for monitoring.	Pending	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	Pending a response to CAR 19, CAR 20, CAR 21,and CL 03.	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?	N/A		OK
36 (g)	Does the monitoring plan identify a national or	N/A		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	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?			
36 (h)	Does the monitoring plan document statistical techniques, if used for monitoring, and that they are used in a conservative manner?	N/A		OK
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. **CAR 22.** Please provide the reference to national (or local approved monitoring standards and/or testing methodologies used for concentration of SF6 in gaseous emissions from destruction unit tests. Please provide more detailed descriptions of obtaining the monitored data (mainly calibration procedures are given). All environmental standards have to been provided to AIE. Its relevance is to be confirmed through the review. **SV 03.** Calibration procedures will be checked by AIE.	CAR 22	OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	**CAR 23.** Please provide more detailed Organization of GHG monitoring process (Diagram + description) with clear responsibilities and the authority regarding the monitoring activities for data collection, achieving and storing (both for electronic and hard copies). **FAR 01.** The evidence shall be checked on site through the personal manuals of persons involved in the monitoring process.	CAR 23 FAR 01	OK Pending

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
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?	Monitoring techniques are in line with current operation routines.	OK	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?	Pending a response to CAR 19, CAR 20, CAR 21,and CL 03.	Pending	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	OK	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		OK
Approved CDM methodology approach only_Paragraphs 38(a) – 38(d)_Not applicable				
Applicable to both JI specific approach and approved CDM methodology approach				
39	If the monitoring plan indicates overlapping monitoring periods during the crediting period:	N/A		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	(a) Is the underlying project composed of clearly identifiable components for which emission reductions or enhancements of removals can be calculated independently? (b) Can monitoring be performed independently for each of these components (i.e. the data/parameters monitored for one component are not dependent on/effect data/parameters to be monitored for another component)? (c) Does the monitoring plan ensure that monitoring is performed for all components and that in these cases all the requirements of the JI guidelines and further guidance by the JISC regarding monitoring are met? (d) Does the monitoring plan explicitly provide for overlapping monitoring periods of clearly defined project components, justify its need and state how the conditions mentioned in (a)-(c) are met?			
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?	PDD version 3.0 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 as a response to the issued CARs in 32 (a) above. In PDD version 3.0 it is stated:”The assessment of leakage	Pending	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
		emissions related to supply of electricity and steam and provided in the subsection E2 of the PDD demonstrates that average per year over the crediting period leakage is far less than 1% of the difference between project and baseline emissions and equal to 0, 01%. Therefore leakage effects are not taken into account while calculating emission reductions”. The AIE confirm that the PDD appropriately describes an assessment of the potential leakage of the project in line with the paragraph 18 of Guidance on criteria for baseline setting and monitoring (Version 03). Pending a response to CAR 15, CAR 16 and CL 02 in 32 (a) above.		
40 (b)	Does the PDD provide a procedure for an ex ante estimate of leakage?	Yes	OK	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	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	PDD provides ex ante estimates of: Emissions for the project scenario; Emissions for the baseline scenario;	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	Emission reductions adjusted by leakage.		
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?	(a) Estimates in 43 are given on the periodic basis, from the beginning until the end of the crediting period, in tones of CO2 equivalent. (b) The formulae used in PDD are consistent throughout PDD (for the formulae refer to Section D). (c) Key factors influencing the baseline emissions and the activity level of the project and the emissions as well as risks associated with the project are taken into account. **CAR 24.** Please provide data sources for the data used for calculating the estimates in 43 to ensure that they are clearly identified, reliable and transparent. Please provide rational for industrial expansion of the applied production data for 2008-2012 or state otherwise their appropriateness for estimates of emission reductions within the project boundary.	CAR 24 CAR 25	OK OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	(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?	(e) Default value of Global Warming Potential for SF6 (IPCC Guidelines for National Greenhouse Gas Inventories) ; - CO2 emission factor for natural gas combustion; - CO2 emission factors for grid electricity (Operational Guidelines for Project Design Documents of Joint Implementation Projects. Volume 1. General guidelines. Version 2.3. Ministry of Economic Affairs of the Netherlands. May 2004); - CO2 emission factor for steam consumption supplied by municipal CHP plant, - Specific norm of electricity consumption per 1 ton of destroyed substance. (f) Estimation in 43 is based on conservative assumptions and the most plausible scenario in a transparent manner. (d) Estimates in 43 are consistent throughout the PDD. (h) The annual average of estimated emission reductions calculated by dividing the total estimated emission reductions over the crediting period by the total months of the crediting period and multiplying by twelve. **CAR 25.** Please provide estimates of emission reductions within the project boundary for 2008-2012 for each gas (CO_2, SF_6), source separately as required by Guidelines for users of the JI PDD form ver.04.		
46	If the calculation of the baseline emissions or net removals is to be performed ex post, does	Illustrative ex-ante estimation of baseline emissions is made on the spreadsheet made available to AIE.		OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	the PDD include an illustrative ex ante emissions or net removals calculation?			
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?	PDD Section E.1 lists and attaches documentation on the analysis of the environmental impacts of the project, in accordance with procedures as determined by the host Party. **CAR 26.** Please provide information concerning the transboundary impacts for the project. **SV 04** Check the EIA and its approval.	CAR 26	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?	According to the State Committee for Ecology and Natural Resources of the Russian Federation Decree dated 15.04.2000 #372 “On compliance with regulations regarding the planned economics (and other) actions and their ecological impact”, developers must include environmental issues into the project design documentation. But the project can be considered as a project for expansion and technical upgrading of production, due to expertise of industrial safety, which does not require elaboration of the environment impact assessment (EIA). Despite this, the EIA was developed for the project. **SV 04** Check the EIA and its approval.	OK	OK
Stakeholder consultation				
49	If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide:	Referred in sec.G.1. Order №372 of the State Committee for Environmental protection “On approval of the environmental impact assessment of proposed economic and other activi-	OK	OK

DVM Paragraph	Check Item	Initial finding	Draft Conclusion	Final Conclusion
	(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?	ties in the Russian Federation" requires conducting of stakeholders' consultations at the stage of technical assignment for EIA (definitely prior the project start). As the project started in 2008 later publications mentioned in table 9 of PDD seems irrelevant to this process.		
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 and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1	Summary of project participant response	Determination team conclusion
CAR 01. Please indicate the number of sectoral scope also.	A.1	# 11. Correction was made. Please see page 2.	**Conclusion on the response 1:** CAR is closed
CAR 02. Please briefly summarize the history of the project including its JI component. Please indicate appropriate dates, decisions, documents if any, etc.	A.2	**Response 1:** Section A.4.3 has been rewritten. (the following text was input in the PDD. See page 3) The history of the project Initially, the SF6 destruction project was intended to be an integral component of the	**Conclusion on the response 1:** **1st comment:** Still open. CAR is open. Please detail in the PDD the rational of considering the JI project as eligible and not a part of the "integral component of the

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
		comprehensive “Kyoto” project that included destruction both GHG gases HFC-23 and SF6. The go-decision on the “Kyoto” project was made at JSC “Halogen”*in 2007 on 22.03.2007†. In the period of June-December of 2007 the Company carried out the following activities: • developed a process scheme of HFC-23 and SF6 destruction, feasibility study and technical design; • technical design underwent the necessary approval procedure with a state supervisory organization; • bought, installed and commissioned the project equipment. Thus, since the beginning of 2008 the HFC-23 and SF6 have been incinerated at the thermal destruction unit. The detailed schedule of the project realization is provided in A 4.2. subsection.	comprehensive “Kyoto” project that included destruction both GHG gases HFC-23 and SF6.” Pending a response.

* Previous name of JSC “HaloPolymer Perm”
† For reference see the minutes of discussion dd. 22.03.2007

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
		However, in June 2007 the management of the Company decided to part the realization of the “Kyoto” project in two stages and develop two separate PDDs: one for destruction of HFC-23 and another for SF6 destruction*. The The point is that the CDM approved methodology AM 0001 “Incineration of HFC-23 waste streams” that was used for development of the PDD requires addressing (among others) historical data of share of HFC-23 and SF6 formation and their concentrations. A reason for the decision to part the projects was the availability of such historical data for HFC-23 and the absence of those for SF6. The Company’s technical regulation at that time did not provide for the monitoring of SF6 losses as it was unnecessary: because of due low-hazard class of SF6 its emissions were not reported to the state supervisory organization and the Company did not calculate the maximum permissible emission. Therefore, to gather historical data on actual SF6 loss formation and its concentration in gaseous wastes it was decided to elaborate the PDD for SF6	

* For reference see the minutes of discussion dd. 22.06.2007

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
		destruction project in three years after the project would become operational. These data were intended to be provided through direct measurement of waste gaseous streams containing SF6 and of concentrations, which had never been done before. The incineration of SF6 (as well as HFC-23) started in January of 2008. The PDD for HFC-23 destruction project at JSC “Halogen” was developed. At present, based on a three and half years of SF6 losses destruction the Company developed this PDD according to the made decision.	
		Response 2: Please see the history of the project in the Version 4 of the PDD: Initially, the SF6 destruction project was intended to be an integral component of the comprehensive JI project that included destruction of both GHG gases HFC-23 and SF6. For this, modernization of the TDU including installation of control and monitoring system as well as receiver vessels, relocation of the waste injection jets, and construction of waste gas transmission lines was planned which led to an efficient waste destruction.	**Conclusion on the response 2:** **2nd comment:** PDD consistently describes the rational for launching the JI project as a new and eligible:” A reason for the decision to part the projects was the availability of such historical data for HFC-23 and the absence of those for SF6. The Company’s technical regulation at that time did not provide for the monitoring of SF6 wastes as it was unnecessary: because of low-

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
		The go-decision on the JI project was made at JSC “HaloPolymer Perm” on 22.03.2007 . In June 2007 the management of the Company decided to part the realization of the JI project in two separate projects: HFC-23 destruction project and SF6 destruction project . The point is that the CDM approved methodology AM 0001 “Incineration of HFC-23 waste streams” (Version 05.1) that was intended to be used for development of the PDD requires addressing (among others) historical data of share of HFC-23 and SF6 formation and their concentrations. A reason for the decision to part the projects was the availability of such historical data for HFC-23 and the absence of those for SF6. The Company’s technical regulation at that time did not provide for the monitoring of SF6 wastes as it was unnecessary: because of low-hazard class of SF6 its emissions were not reported to the state supervisory organization and the Company did not calculate the maximum permissible emission. Therefore, to gather historical data on actual SF6 waste formation and its concentration in gaseous wastes it was decided to elaborate a separate project for SF6 destruction project in	hazard class of SF6 its emissions were not reported to the state supervisory organization and the Company did not calculate the maximum permissible emission. Therefore, to gather historical data on actual SF6 waste formation and its concentration in gaseous wastes it was decided to elaborate a separate project for SF6 destruction project in three years after the project would become operational. These data were intended to be provided through direct measurement of waste gaseous streams containing SF6 and of concentrations, which had never been done before. Car is closed.

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
		three years after the project would become operational. These data were intended to be provided through direct measurement of waste gaseous streams containing SF6 and of concentrations, which had never been done before. In the period of June-December of 2007 the Company carried out the following activities: • developed a process scheme of HFC-23 and SF6 destruction, feasibility study and technical design; • technical design underwent the necessary approval procedure with a state supervisory organization; • bought, installed and commissioned the project equipment. Thus, since the beginning of 2008 the HFC-23 and SF6 have been incinerated at the thermal destruction unit. The detailed schedule of the project realization is provided in A 4.2. subsection.	
CAR 03. The titles of project participants in table A.3 and Annex 1 shouldn’t differ. Please take note: information concerning the project participant from Party B - Vitol S.A. is absent in Annex 1. Please correct.	A.3	Information concerning Party B was removed from the table A.3. That was done because it is premature. Therefore we need not to place it in Annex 1.	**Conclusion on the response 1:** CAR is closed.

CAR 04. Please provide the source of information of geographical coordinates presented in PDD. Are these coordinates of the plant or of Perm-city?	A.4.1.4	See reference 5, on page 5 of the PDD. These are coordinates of Perm. The plant is located in Perm.	**Conclusion on the response 1:** CAR is closed
CAR 05. Please transparently indicate in Section A.4.2 what kind of reconstruction of existing SF6 production is implementing, except the implementation of fluoro-carbon compounds thermal destruction unit.	A.4.2	The reconstruction at SF6 production shop (#22) was implemented at the JSC “HaloPolymer Perm” in 2007 within the framework of the comprehensive Kyoto project and aimed at destruction of HFC-23 and SF6 emissions. The process scheme providing co-destruction of these GHG gases is attached in Annex 1. The details of such reconstruction are provided in the Section A.4.2. The table with the main characteristics equipment involved in the project is added in the A 4.2.	**Conclusion on the response 1:** CAR is closed on the basis of PDD v.4.0 review.
CAR 06. Please provide the implementation schedule of the project as required by Guidelines for users of the JI PDD Form (Version 04).	A.4.3	The implementation schedule is provided in the Section A 4.2.	**Conclusion on the response 1:** CAR is closed on the basis of PDD v.4.0 review. The implementation schedule is provided in the Section A 4.2.
CAR 07. Please provide the table in Section A.4.3.1 fully in accordance with Guidelines for Users of the JI PDD Form (Version 04).	A.4.3	Done. Please the table.	**Conclusion on the response 1:** CAR is closed on the basis of PDD v.4.0 review. The needed corrections done.
CAR 08. The project has no approval of the host Party.	A.5	According to Russian procedure the approval of a potential JI-project will be issued after getting a positive AIE opinion.	**Conclusion on the response 1:** Pending

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 09. Please explicitly indicate in Section B.1 which of the following approaches is used for identifying the baseline: JI specific approach or approved CDM methodology approach.	22	JI-specific approach is used. The detailed description of the approach is also provided. The description and justification of the chosen baseline scenario will be carried out on the basis of the “Guidance on criteria for baseline setting and monitoring” (Version 03) using the following stepwise JI-specific approach: Step. 1. Indication and description of the approach chosen regarding baseline setting tep. 2. Application of the chosen approach. Below is a detailed description of these steps. Step 1. Indication and description of the approach chosen regarding baseline setting A baseline shall be identified by listing and describing plausible future scenarios on the basis of conservative assumptions and selecting the most plausible one. A baseline shall be established taking into account relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the pro-	**Conclusion on the response 1:** CAR is closed based on the basis of PDD v.4.0 review. PDD consistently describes that the JI-specific approach is used. The detailed description of the approach is also provided in Section B.1.

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
		ject sector. Key factors that affect a baseline shall be taken into account, e.g.: (a) Sectoral reform policies and legislation; (b) Economic situation/growth and socio-demographic factors in the relevant sector as well as resulting predicted demand. Suppressed and/or increasing demand that will be met by the project can be considered in the baseline as appropriate (e.g. by assuming that the same level of service as in the project scenario would be offered in the baseline scenario); (c) Availability of capital (including investment barriers); (d) Local availability of technologies/techniques, skills and know-how and availability of best available technologies/techniques in the future; (e) Fuel prices and availability; (f) National and/or subnational expansion plans for the energy sector, as appropriate; (g) National and/or subnational forestry or agricultural policies, as appropriate.	

CAR 10. Section B.1 contains incorrect reference to the document: "Guidelines for the criteria of the baseline scenario development and monitoring". Please correct.	23	Corrected. Please see revision.	**Conclusion on the response 1:** CAR is on the basis of correction made in the PDD.
CAR 11. Please justify the presence of investment barrier for alternative 2 (i.e. investment analysis, etc.). Please take note: the same pertains to the financial barrier's justification in Section B.2.	23	**Response 1:** The appropriate tables B1.3 (Findings of Investment Analysis of SF6 destruction project) and B 2.1. (Simple cost analysis) are added. The financial model and its description developed by Economics Department of JSC "Halogen" in 2007 before the decision on the project was made is submitted to AIE with comments to CARs. **Response 2:** The simple cost analysis was made as required. Please see the table B1.3. (Simple Cost Analysis of SF6 destruction project). To support this analysis the Budget of expenditures on installation and operation of the unit for thermal destruction of SF6 emissions presented by JSC "HaloPolymer Perm" is made available to the verifier.	**Conclusion on the response 1:** **1st comment:** CAR is open due to not transparent data presented. **Conclusion on the response 1:** **2nd comment:** 1/ The simple cost analysis with all expenses are made traceable in the latest revision of PDD. Sorted on the basis of justifications provided. CAR is closed.
CAR 12. The indication that the requirement of Russian environmental legislation on the utilization of SF6 favours the development of the scenario 1 in Table B.1.3 is incorrect. This factor favours the development of scenario 2. Please correct.	23	**Response 1:** Russian environment legislation does not impose on domestic SF6 producers strict limits regarding SF6 emissions and does not force them to mandatory utilize this gas. Instead the Government has established a loose sanitary protection zone (SPZ) within which the SF6 producer may emit the gas. For	**Conclusion on the response 1:** CAR is on the basis of correction made in the PDD.

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
		HaloPolymer Perm the SPZ limit on SF6 emissions ten times higher than SF6 production capacity at the Plant. In this context the Plant can freely emit SF6 without restrictions. From that point of view Scenario 1 develops in comfortable conditions, i.e. the legislation comforts or favours the continuation of this Scenario 1 (or at least does not influence on it). The correction “No influence” was made in the table B.1.3.	
CAR 13. In Section B.2 the reference to “Guidelines for users of the JI PDD Form for small-scale projects and the form for submission of bundled joint implementation small-scale projects (Version 04) is irrelevant. Please take note: the version 02 of “Guidance on criteria for baseline setting and monitoring” has expired. of penalties? If yes they should be considered.	28	The correction was made. More detailed description of an approach of additionality justification was introduced. Please see section B2.	**Conclusion on the response 1:** CAR is on the basis of correction made in the PDD.
CAR 14. In the absence of income from the sale of ERUs, the cost of this project is not economically justified, which is expressed in the absence of any financial income. Thus, without the use of JI mechanism this project is faced with an insurmountable financial barrier. There is a special investment analysis method - simple cost analysis - which is to be applied to demonstrate additionality in casese where no financial bene-	28	**Response 1:** This argumentation was displaced with a more simple sentence “It is quite obvious that without JI-related incomes the project activity lacks any economic sense.” **Response 2**: (1) Tables B1.3 and B2.1 were changed now they represent Simple Cost Analysis. The	**Conclusion on the response 1:** **Comment 1:** (1) Sec. B.2 refers to Table B.2.1 step 2 where it should be demonstrated that “the presence of the financial barrier” is existed. But after revision of PDD relevant simple cost analysis data are not

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
fits are expected from the proposed project activity. PP are requested to justify why this approach is ignored.		appropriate supportive documents from HaloPolymer Perm on the project costs (Budget of expenditures on installation and operation of the unit for thermal destruction of SF6) is attached. (2) The summary table B 1.4. “Factor analysis of the alternative scenarios” is supplemented with consideration of such key factors as *Fuel prices and availability* and *National and/or subnational expansion plans for the energy sector and national and/or subnational forestry or agricultural policies.* For reference see new PDD version 4.	transparent. The presented in the Table B.1.3. “Findings of Investment Analysis of SF6 destruction project” data do not correspond with the applied simple cost analysis approach. Please provide to AEA the mentioned “Financial and economic analysis of SF6 destruction project” (“The financial model of SF6 destruction project was developed by Economics Department of JSC “Halogen” referred as 14 in Section B.1) for the review. Please update PDD accordingly. Also the comments are applicable to the CL 01. (2) The summary in Table B.1.4. “Factor analysis of the alternative scenarios” are not full in terms of “Guidance on criteria for baseline setting and monitoring” (Version 03). Please update accordingly. Still open. **Conclusion on the response 1:** **2nd comment:** Special investment analysis method -

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
			simple cost analysis - which is to be applied to demonstrate additionality in cases where no financial benefits are expected from the proposed project activity was implied. “Budget of expenditures on installation and operation of the unit for thermal destruction of SF6” was analyzed by the verifier to check the presence of financial barrier as a main additionality proves. Closed on the basis of PDD v.4 revision.
CAR 15. In table B.3.1 “CO2 emissions associated with destruction of SF6” indicated as “included” but “considered negligibly small”, however in below sections of PDD this source was not taken into account. Please provide clear justification and indication in PDD of its inclusion or exclusion from consideration.	32 (a)	**Response 1:** These CO2 emissions are removed from the table B.3.1. as inapplicable. During destruction of SF6 no CO2 emissions occur as this gas contains no carbon. **Response 2:** (1) No SF6 contains in waste water from TDU. During incineration SF6 decomposes in SO3 and HF. Alkaline solution treats those combustion gases remained after incineration with formation of NaF, Na2SO4 and H2O. Therefore there is no SF6 emission from this source. This argumentation	**Conclusion on the response 1:** **Comment 1:** Still open. Please consider the leakage section in the Protocol. But still remain actual the justification of the delineation of the following emission’s sources in the project boundary: (1) There are no justifications of removing “Emissions associated with leaks of SF6 with waste water” from PDD version 2.0. The source of emissions is existed. Please comment. (2) Emissions due to transportation of

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
		contains in the table B3.1. of Version 4 of PDD. (2) Emissions due to transportation of used alkaline solution to neutralization. Electricity consumption for such transportation is provided from the grid. Therefore these emissions have been already included in the emissions associated with grid electricity supply for SF6 destruction. (3) It was corrected.	used alkaline solution to neutralization are not considered (refer to Fig. A.4.2.1. Schematic diagram of SF6 destruction process). (3) Please ensure a proper format of “the delineation of the project boundary and the gases and sources included as well as leakage emissions and sources diagramme” is used (the diagramme in on the title B.4 is loaded. Please update accordingly. Still open. **Conclusion on the response 1:** **2nd comment:** Closed on the basis of PDD v.4 revision. The leakages are taken into consideration as a conservative approach (see PDD Section B.3).

CAR 16. Please justify the exclusion of the project emission source “emissions associated with leaks of SF6 with waste water”.	32 (a)	**Response 1:** This emission source is removed from the table B.3.1. as SF6 leaks with waste water occur in any case during SF6 production process. The JI-project realization does not provide any influence on those leaks. To support this argumentation the information reference from the head of technical department of JSC “HaloPolymer” on SF6 leaks with waste water is provided. **Response 2:** No SF6 contains in waste water from TDU. During incineration SF6 decomposes in SO3 and HF. Alkaline solution treats those combustion gases remained after incineration with formation of NaF, Na2SO4 and H2O. Therefore there is no SF6 emission from this source. This argumentation contains in the table B3.1 of new Version 4 of PDD.	**Conclusion on the response 1:** **Comment 1:** The explanation is accepted. But the exclusion of the project emission source “emissions associated with leaks of SF6 with waste water” needs to be assessed in the PDD as appropriate for the consideration. Please fulfill the explanations in the PDD. Remain open. **Conclusion on the response 1:** **2nd comment:** The verifier received documented evidence from the site that SF6 does not contain in waste water from TDU (“A technical message from JSC “HaloPolymer Perm” signed by Chief of Technical Department to emissions associated with leaks of SF6 with waste water, /26/). Closed on the basis of PDD v.4 revision.

CAR 17. The diagram doesn't contain any boundary delineation and emission sources indication. Please correct.	32 (c)	**Response 1:** The diagram is provided with indication of gases and an emission source is provided in Section B.3. **Response 2:** It is corrected. Please see new PDD version 4.	**Conclusion on the response 1:** **Comment 1:** Please ensure a proper format of "the delineation of the project boundary and the gases and sources included as well as leakage emissions and sources diagramme" is used (the diagramme in on the title B.4 is loaded. Please update accordingly. Still open. **Conclusion on the response 1:** **2nd comment:** Closed on the basis of PDD v.4 revision due to corrections made.
CAR 18. Please provide <u>in Section D.1</u> a detailed theoretical description in a compete and transparent manner, as well as a justification referring to the JISC's guidance on criteria for baseline setting and monitoring/ Please include in the description all assumptions, formulae, parameters, data sources and key factors, and state how uncertainties are taken into account and conservativeness is safeguarded [1].	35	**Response 1:** A detailed theoretical description with all assumptions, formulae, parameters, data sources and key factors was introduced in the Section D.1. Description contains also a provision on how conservativeness is safeguarded. Please see Section D1, the corrections are marked with yellow. **Response 2**: (1) Excessive citation was removed. The Section D1 was corrected as was requested. (2) Corrected. Please see new PDD version 4.	**Conclusion on the response 1:** **Comment 1:** **(1)** Please remove from Section D.1 the citation from Guidelines for users of JI PDD form (Version 04) as it is inappropriate. **Please proper answer to the request.** (2) Please ensure the correct title of Guidance on criteria for baseline setting and monitoring is used in Section D.1, page 27.

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
			Still open. **Conclusion on the response 2:** **2nd comment:** Closed on the basis of PDD v.4 revision due to corrections made.
CAR 19. Such factors affecting both the project and the baseline emissions are not considered as monitored in Section D.1: **ECy** - consumption of the electricity for destruction unit, MWh, **ec** - **the** specific norm of electricity consumption per 1 ton of destroyed substance, kWh/t, **StCy** - **the** steam consumption for destruction unit during the reporting period y, GJ, **stcy** - **the** specific norm of steam consumption per 1 ton of destroyed substance, GJ/t. Please correct the Data variable description in Table D.1.3.1 in line with their description in Formulae D.1-5.		**Response 1:** Leakage effects associated with electricity and steam consumption from the sources are not taken into account in the Section D.1. Because, the paragraph 18 of Guidelines on criteria for baseline setting and monitoring (Version3) states: "Project participants must undertake an assessment of the potential leakage of the proposed JI project and explain which sources of leakage are to be calculated, and which can be neglected. All sources of leakage that are included shall be quantified and a procedure for an ex ante estimate shall be provided. Only those emission sources that account for, on average per year over the crediting period, more than 1 per cent of the difference between project and baseline emissions, or which exceed an amount of 2,000 tonnes of	**Conclusion on the response 1:** **Comment 1:** Still open as an applied JI approach based on conservative assumption is not justified in this case.

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
		CO2 equivalent, whichever is lower, shall be included”. The estimate of leakage provided in the Section E2 demonstrates that annual leakage emissions are 0,01% of the difference between project and baseline emissions. Therefore such factors as consumption of the electricity for destruction unit, steam consumption for destruction unit, norms of electricity and steam consumption are not taken into account and excluded from monitoring. This statement is provided in the Section D1.	
		Response 2: To provide conservatism the leakage effects are considered in the new Version 4 of PDD. Such parameters as consumption of electricity for destruction of SF6, specific electricity consumption for destruction of SF6, consumption of heat for destruction of SF6 and specific consumption of heat of destruction of SF6 are presented in the Section D as a whole and in the table D 1.3.1. and formulas D1.-8 – D.1-11 in particular.	**Conclusion on the response 2:** **2nd comment:** Closed on the basis of PDD v.4 revision due to corrections made. The leakage effects are considered in the new Version 4 of PDD.

CAR 20. Please provide in a transparent manner justification and originate recognized sources for the applied value for EF_f – CO_2 emission factor for the natural gas combustion fixed ex-ante as LTD is = 0.00187 tCO2e/m3(20 °C).	36 (b)	**Response 1:** For estimation of CO2 emissions due to natural gas combustion the 2006 IPCC factor is used in the new PDD version that is equal to 56,1 tCO2/TJ. For conversion of physical volume of natural gas expressed in cubic meters into energy units the conversion factor of 33,812 TJ/mln m3 is applied. This value is taken from National Report on Cadaster of Anthropogenic Emissions from Sources and Absorption by Sinks of Greenhouse Gases Not Regulated by Montreal Protocol for 1990-2009. Part 1. Moscow, 2011. Table 3.5, page 38.	**Conclusion on the response 1:** Explanation is accepted. CAR closed.
CAR 21. There are no clear descriptions in Section D.1.1.1 how the values of ID FC_y, g_ND_y, $C\_ND\_SF6_y$ are to be selected and justified. The same request pertains actual to ID C_SF6_y in Section D.1.1.3 (how to get monthly data), ID ec, stc (no clear procedure how to get the data).	36 (b) (i)	**Response 1:** Appropriate comments were introduced in D 1.1.1 table. **Response 2:** The table D 1.3.1 is applicable now as leakages are taken into consideration. Please see the answer to CAR 19 Response 2.	**Conclusion on the response 1:** **Comment 1:** Still open as an applied JI approach based on conservative assumption is not justified in this case. **Conclusion on the response 2:** **2nd comment:** Closed on the basis of PDD v.4 revision due to corrections made. The leakage effects are considered in the new Version 4 of PDD.

CAR 22. Please provide the reference to national (or local approved monitoring standards and/or testing methodologies used for concentration of SF6 in gaseous emissions from destruction unit tests. Please provide more detailed descriptions of obtaining the monitored data (mainly calibration procedures are given). All environmental standards have to been provided to AIE. Its relevance is to be confirmed through the review.	36) (i)	1. Federal Law on Provision of Unity of Measurements. 2. Maximum Permissible Concentration (MPC) of Hazardous Emissions in the Air of Working Zone. MPC for HaloPolymer Perm was determined and equals to 11067 t SF6 per year. The calculation was provided by OOO “BELZ” on 30/05/2011 and approved by General Director of HaloPolymer Perm. The Calculation of MPC is submitted to AIE. 3. Approximate Safe Impacts Level (ASIL_ОБУВ) of Hazardous Emissions in the Atmosphere Air of Settlements. (ГН 2.1.6.2309-07). Hygienic norms approved by Resolution of Head State Doctor # 92 dd. 19.12.2007. For HaloPolymer Perm:ASIL of atmospheric air is 20 mg/m3. SF6 is the substance of the forth hazard class. 4. Quantitative Chemical Analysis of Air. Procedure of measurement of SF6 mass concentration in the air of the working zone and in the industrial emissions by gas-chromatographic method. # 469-00-2007 signed by Chief Metrologist and approved by Chief Engineer dd 23/11/2007. 5. Quantitative Chemical Analysis of Air. Procedure of measurement of SF6 mass concentration in the air of the working zone and in the industrial emissions by gas-chromatographic method. # 469-00-2010 signed by Chief Metrologist and approved by Chief Engineer dd 19/03/2010.	**Conclusion on the response 1:** **Comment 1:** Closed on the basis of PDD v.4 revision due to corrections made.

CAR 23. Please provide more detailed Organization of GHG monitoring process (Diagram + description) with clear responsibilities and the authority regarding the monitoring activities for data collection, achieving and storing (both for electronic and hard copies).	36 (j)	The diagram and description is provided in the D 3 Section of the new version of PDD.	**Conclusion on the response:** Explanation is accepted. CAR closed.
CAR 24. Please provide data sources for the data used for calculating the estimates in 43 to ensure that they are clearly identified, reliable and transparent. Please provide rational for industrial expansion of the applied production data for 2008-2012 or state otherwise their appropriateness for estimates of emission reductions within the project boundary.	45	**Response 1:** The data sources are provided with the answers to CARs. SF6 expansion plans are confirmed by the orders of clients and good perspectives in terms of signing new long-term contracts with customers in 2012. The appropriate letter from HaloPolymer is attached.	**Conclusion on the response 1:** **Comment 1:** Explanation is not accepted. CAR not closed. Please include in Section E.1. E.2, E.3 the required data sources for the data used for calculating the estimates in 43 to ensure that they are clearly identified, reliable and transparent. Please provide rational for industrial expansion of the applied production data for 2008-2012 or state otherwise their appropriateness for estimates of emission reductions within the project boundary. Still open. **Conclusion on the response 2:** **2nd comment:** Closed on the basis of PDD v.4 revision due to corrections made. The data sources for the data used for calculating the estimates in 43 in the new Version 4 of PDD now.

CAR 25. Please provide estimates of emission reductions within the project boundary for 2008-2012 for each gas (CO_2, SF_6), source separately as required by Guidelines for users of the JI PDD form ver.04.	45	**Response 1:** This was done in Section E. Please see new version of the PDD. **Response 2:** All data source are included in the new version PDD. Calculation of emissions in the PDD is provided for each gas and source. Please see new version of the PDD.	**Conclusion on the response 1:** **Comment 1:** Explanation is not accepted. CAR not closed. Please include in Section E.1. E.2, E.3 the required data sources for the data used for calculating the estimates in 43 to ensure that they are clearly identified, reliable and transparent. Please provide rational for industrial expansion of the applied production data for 2008-2012 or state otherwise their appropriateness for estimates of emission reductions within the project boundary (refer to Section D.1 with identified gases and emission sources). Still open. **Conclusion on the response 2:** **2nd comment:** Closed on the basis of PDD v.4 revision due to corrections made.

CAR 26. Please provide information concerning the transboundary impacts for the project.	48 (a)	**Response 1:** The project provides no transboundary effects. It is proven by the fact that JSC “HaloPolymer Perm” may emit SF6 10 times higher than its production capacity. The calculation was provided by OOO “BELZ” on 30/05/2011 and approved by General Director of HaloPolymer Perm. The Calculation of MPC is submitted to AIE.	**Conclusion on the response 1:** All environmental standards have been provided to AIE. Its relevance is confirmed. The amendments made in PDD and accepted. CAR closed.

CL 01. PDD p.18 reads: “The decision to initiate investment in this project (design and installation scheme for the collection and transmission) from its own funds was adopted in 2007, according to which the project could be implemented in accordance with Article 6 of the Kyoto Protocol to the UN Framework Convention on Climate Change”. The project costs should be specified. The documented decision needs to be provided to confirm the project (both CAPEX and OPEX) is really financed from their own founds nontheless no income other than from ERU selling is expected. Are there any savings from the environmental fees or avoidance?	28	**Response 1:** As supportive material the following documents will be provided: 1. Minutes of discussion dd. 22.03.2007, JSC "Halogen", Perm; 2. Minutes of discussion dd. 16.05.2007, JSC "Halogen", Perm; 3. Minutes of discussion dd. 22.06.2007, JSC "Halogen", Perm; 4. Financial and economic analysis of SF6 destruction project; Due to a low hazard grade the payments for emissions of SF6 are not charged as according to the Decree of the Government of RF dd. 12.06.2003 № 344 “On norms of payments for emissions in the atmospheric air” the norms of payments for emissions of such a gas are not provided for. **Response 2:** To support the simple cost analysis a document prepared by Analytical Department of HaloPolymer Perm (Budget of expenditures of installation and operation of the unit for thermal destruction of SF6 emissions) is provided.	**Conclusion on Response 1:** **Comments:** See the CAR 14. Please provide to AEA the mentioned “Financial and economic analysis of SF6 destruction project” (“The financial model of SF6 destruction project was developed by Economics Department of JSC “Halogen” referred as 14 in Section B.1) for the review. Still open. **Conclusion on the response 2:** **2nd comment:** Closed on the basis of PDD v.4 revision due to evidence provided – “Budget of expenditures of installation and operation of the unit for thermal destruction of SF6 emissions” /26/.

CL 02. Please clarify why the source “SF6 emissions that were not destructed in TDU” exists and was included into consideration, however at the end of Section B.2 of PDD there is a phrase: “Waste gas is fully incinerated in the TDU”?	32 (a)	**Response 1:** This statement was changed with “Almost all waste gas is incinerated in the TDU”. **Response 2**: SF6 emissions that were not destructed in TDU are presented in Section E of the PDD. This project emission source is considered separately. Please see formula E1-1.	**Conclusion on the response 1:** **Comment 1:** The explanation is not accepted. The source is the main for project emissions (see the Section D.1.1.2, Formula D.1.1-1). The inclusion of the project emission source needs to be assessed in the PDD as appropriate for the consideration. Please fulfill the explanations in the PDD. Remain open. **Conclusion on the response 2:** **2nd comment:** Closed on the basis of PDD v.4 revision due to evidence provided in Section E of the PDD.

CL 03. Please clarify the approach for applying the initial data for specific norm of steam consumption per 1 ton of destroyed substance. The data are not indicated as fixed ex-ante in Section D.1, but specific norm of electricity consumption per 1 ton of destroyed substance is indicated as fixed ex-ante (refer to Section D.1, page 21)	36	**Response 1:** Leakage from steam consumption is not taken into account in the new version of the PDD. Please see the answer to CAR 19. **Response 2:** The approach for applying the specific consumption of heat and electricity is provided in the table 1.3.1. They are assumed to be equal to the planned consumption norms that are effective at JSC HaloPolymer Perm and subject to approval on annual basis. Leakage estimation is provided in D1 section. Consumption norms are provided with Responses.	**Conclusion on the response 1:** **Comment 1:** Please provide the description of the applied approach in Section E.1 for Leakage calculation as the data are used there. Remain open. **Conclusion on the response 2:** **2nd comment:** Closed on the basis of PDD v.4 revision due to evidence provided in Section E of the PDD. to be equal to the planned consumption norms that are effective at JSC “HaloPolymer Perm” and subject to approval on annual basis. This is to be additionally checked during the verification stage.
FAR 01. The evidence shall be checked on site through the personal manuals of persons involved in the monitoring process.	36 (j)	-	**Conclusion on the response 1:** Pending a verification stage checking.