"HALOPOLYMER KIROVO - CHEPETSK" LTD

DETERMINATION PROTOCOL ON THE REVISED MONITORING PLAN

"CO-DESTRUCTION OF HFC23 AND SF6 AT "KCKK POLYMER PLANT" LTD "

REPORT NO. RUSSIA-VER/0138/2011

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

Report No: RUSSIA-ver/0138/2011 rev.01

DETERMINATION PROTOCOL ON THE REVISED MONITORING PLAN

"Co-destruction of HFC23 and SF6 at "KCKK Polymer Plant" Ltd "

Date of first issue:	Organizational unit:
21/06/2011	Bureau Veritas Certification Holding SAS
Client:	Client ref.:
"HaloPolymer Kirovo-Chepetsk" Ltd.	Mr. P. Boyko

Summary:

Bureau Veritas Certification has made determination of the revised Monitoring Plan of "Co-destruction of HFC23 and SF6 at "KCKK Polymer Plant" Ltd" (sectoral scope 11), project of "HaloPolymer Kirovo-Chepetsk" Ltd. located in Kirovo-Chepetsk, Kirov Region, 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 a independent review and ex post determination by the Accredited Entity of the revised Monitoring Plan and consisted of the following three phases: i) desk review of revised Monitoring Plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final Determination Protocol and Opinion. The overall determination, from Contract Review to Determination Protocol and Opinion, was conducted using Bureau Veritas Certification internal procedures.

The output of the determination process is a list of 10 Corrective Actions Requests (CAR), 1 Clarification Request (CL) and 2 Forward Action Request (FAR) presented in Determination Protocol. The requests were closed based on appropriate actions carried out by PP.

In summary and as an Opinion, Bureau Veritas Certification confirms that the proposed revisions of the Monitoring Plan improve applicability of information collected, compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishments of monitoring plans as per paragraph 40 of the Guidance on criteria for baseline setting and monitoring, Version 02.

Report No.:	Subject Group:
RUSSIA/0138/2011	JI
Project title: "Co-destruction of HFC23 and SF6 at "KCKK Polymer Plant" Ltd"	
Work carried out by: Vera Skitina – Team Leader, Lead verifier Dmitriy Moldavskiy – JI specialist	
Work reviewed by: Leonid Yaskin – Internal Technical Reviewer Igor Maslennikov – JI specialist	
Work approved by: Leonid Yaskin – Operational Manager	

Date of this revision:	Rev. No.:	Number of pages:
21/06/2011	01	81

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Table of Contents *Page*

DETERMINATION PROTOCOL O THE COMPANY REVISED MONITORING PLAN

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
35	Does the PDD explicitly indicate which of the following approaches is used? - JI specific approach - Approved CDM methodology approach	The Revised section D of JI0109 PDD "Co-destruction of HFC23 and SF6 at "KCKK Polymer Plant" Ltd. Version 1.1 Dated 22 July 2008 explicitly indicates that a JI specific approach with CDM AM0001/Version 05.2 "Incineration of HFC23 waste streams" regarding monitoring was used. **CAR 01.** Please provide the Revised Section D of JI0109 PDD "Co-destruction of HFC23 and SF6 at "KCKK Polymer Plant" Ltd. Version 1.1 Dated 22 July 2008 in the official format with project owner's validation evidence.	CAR 01	OK
JI specific approach only				
36 (a)	Does the monitoring plan describe: - All relevant factors and key characteristics that will be monitored? - The period in which they will be monitored? - All decisive factors for the control and reporting of project performance?	The revised monitoring plan includes deviations from JI0109 PDD "Co-destruction of HFC23 and SF6 at "KCKK Polymer Plant" Ltd. Version 1.1 Dated 22 July 2008t hat were fully addressed and justified in the Monitoring Report Appendix 1 and Appendix 2. These revisions were fully justified by the verifier and found appropriate for the GHG emission reduction calculation and meet the requirements of the paragraph 40 of the "Guidance on criteria for baseline setting and		OK

		monitoring, Version 02": "the project participants are encouraged to improve the monitoring process and its results. Revisions, if any, to the monitoring plan to improve the accuracy and/or applicability of information collected shall be justified by the project participants and shall be submitted for the determination referred to in paragraph 37 of the JI guidelines by the AIE. In this case the AIE shall determine whether the proposed revisions improve accuracy and/or applicability of information collected, compared to the original monitoring plan without changing conformity with the relevant rules and regulations for the establishments of monitoring plans and in case of a positive determination, shall proceed with the determination referred to in paragraph 37 of the JI guidelines. The revised monitoring plan describes: - the relevant factors that will be monitored: 1. The quantity of technological emissions of HFC23 and SF6 from HCFC22 and sulfur hexafluoride production lines (measured continuously by mass flow meters installed on the outlet pipelines from emission sources). 2. Content of HFC23 and SF6 (measured by laboratory chromatographs once a week or more often in case technological mode change). 3. The quantity of HFC23 and SF6 supplied to the thermal hydrolysis unit (measured continuously by two down-the-line flow meters installed on each		

		waste feeding line). 4. Content of HFC23 and SF6 (measured by laboratory chromatographs once a week or more often in case technological mode change). 5. The volume of effluent gases from the unit (measured by a volumetric meter). 6. HFC23 content in the gases (measured by laboratory chromatograph once a week). 7. The quantity of produced SF6 is determined on a monthly basis as a sum of the product loaded into cylinders and containers (measured by scales) and the finished product left in the collector (measured by the collector level meter). 8. The quantity of HFC23 recovered for sale (calculated on a monthly basis as a sum of the amount of the product loaded into cylinders and containers (measured by scales) and finished product left in the collector (measured by the level meter of the finished product collector)). 9. Electricity consumption (measured by an electricity meter). 10. The quantity of gaseous emissions (CO, HCl, HF, Cl2, organic carbon, dioxins and NOx) (measured in compliance with the current environmental standards of Russia).		

		11. Note: The amount of liquid effluents and its parameters (pH, COD BOD, suspended solids, fluorides and metals) are not measured as only utilizable wastes are generated in the production process. - the periods in which they will be monitored: continuously; - all decisive factors for the control and reporting of project performance: ecological reporting, quality control (QC) and quality assurance (QA) procedures; the operational and management structure is applied in the revised monitoring plan without changing the conformity with the original Section B of the PDD.		
36 (b)	Does the monitoring plan specify the indicators, constants and variables used that are reliable, valic and provide transparent picture of the emission reductions or enhancements of net removals to be monitored?	The revised monitoring plan specifies the indicators, constants and variables indicated in Section D. Conclusion is pending a response to CAR 01.	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	The used default values were presented in Section D.1.1.2, D.1.1.4 and D.1.3.2. **CAR 02.** Please justify what technical reliable information is not available to made a conclusion of non-applicability the cut-off conditions set by the PDD for the baseline GHG emission calculation (refer to the Section Justification of revisions to the monitoring plan of the project design document "Co-destruction of HFC23 and SF6 at "KCKK Polimer Plant Ltd" , page 1,	CAR 02 CAR 03 CAR 04 CAR 05 CAR 06 CAR 07 CAR 08 CL 01 FAR 01	OK

	transparent manner?	paragraph 2). **CAR 03**. The reference to the formulas D.1-10 and D.1-12 in Section "Revision 1: Cut-off conditions is not correct. **CAR 04.** No sufficient justification made to spring to the conclusion that from 2000 till 2005 the Plant had no reliable method for calculation of the real output of HCFC22 and thus, the values of HCFC22 output presented in Table B.1-1 are incorrect (refer to Table B.1.1). The statement that "these values do not take into account the amount HCFC22 recovered for sale in that period" is not correct as the Table B.1-1 and PDD Section A.4.2, page 5 states contrary. **CAR 05.** There are no sufficient data available to spring to the conclusion that "there is no overstocking of HCFC22, it confirmed by insignificant figures of stocks of goods-in-process". The Table "HCFC22 output and average shipping price" does not contain these data. **CAR 06.** The reference to the findings obtained under the 8 research runs of HCFC22 synthesis reaction which were published in the article Kinetics of chloroform fluorination by HF catalyzed by antimony pentacloride* do not applicable for the justifications of the HFC23 generation rate per unit production of HFCAC22 (refer to w_h in PDD Section D.1.1.4 formulas	FAR 02	

* Journal of Fluorine Chemistry, 44 (1989). Kinetics of chloroform fluorination by HF catalyzed by antimony pentacloride, table 1. Compositions obtained by chemical analysis at the outlet of the continuous reactor in the chloroform fluorination.

		D.1-11, page 29). **CAR 07.** The is no credible analysis done to justify the inapplicability of minimum average annual value of fraction of HFC23 per unit of HCFC-22 produced at the plant (w_h) with regard to the actual data of "KCKK Polimer Plant" Ltd. during the period 2002-2004 (refer to the PDD Table B.1-1, line w_h). **CAR 08.** The is no credible analysis done to justify the inapplicability of inapplicability the factors «the maximum annual volume of saleable SF6 produced at "KCKK Polimer Plant" Ltd. during the 2002-2004» and « the fraction of SF6 contained in waste flows from rectification column of SF6 production per unit of saleable SF6 produced at the plant » (refer to the PDD Table B.1-1. Please justify, how the "the starting-up and adjustment works at equipment for production of SF6 as well as the experimental-industrial tests" lead to non stable and credible data for saleable SF6 and the fraction of SF6 contained in waste flows. **CL 01.** Please clarify the term "synthesis-gas fed to destruction". The PDD does not contain the term. **FAR 01.** Please provide in the MR an Annex with an independent technical expert Conclusion on the Revised Monitoring Plan and make it available to the AIE for the review. **FAR 02.** Please provide the technical justifications of the starting date of the full scale operation activity for production of SF6 at the Plant.		

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?	Emission factors, including default emission factors, used for calculating the emission reductions, selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice: - the applied emission factor, **EF** (refer to Formulae (D.1-1) in PDD Section D.1.1.2) is the emissions factor that determines the amount of CO2 generated per 1 tone of destroyed HFC23. According to CDM methodology AM0001, EF =0,62857 t CO2-e/t.; - the applied for the leakage calculation emission factor, $\mathbf{EF}_{CO2,grid,y}$ is the C02 emissions factor for grid electricity during the year *y*, kg CO2/MWh. According to 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. GHG emission factor for grid electricity consumed in Russia varies for different years of the crediting period (2008-2012) as follows: 2010 = 550 kg CO2/MWh,; D.1-17 in the MR Section D.1.3.2). GWP _ HFC 23 is the Global Warming Potential (GWP) that converts 1 tonne of HFC23 to tonnes of CO2 equivalent, t CO2-e/t. The approved GWP value for HFC23 is 11 700 t CO2-e/t for the first commitment period under the Kyoto	Pending	OK

		Protocol; GWP _ SF6 is the Global Warming Potential (GWP) for conversion of 1 ton of SF6 o tons of CO2 equivalent, t CO2-e/t. The approved GWP value for SF6 is 23 900 t CO2-e/t for the first commitment period under the Kyoto Protocol. **CAR 09.** Please provide tables names and their numbering in the Annex of the MR to ensure traceability		
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?	Refer to 36 (b). Conclusion is pending a response to CAR 08.	Pending	OK
36 (b) (iii)	For all data sources, does the monitoring plan specify the procedures to be followed if expected data are unavailable?	The procedures are described in the PDD Section D.2.		OK
36 (b) (iv)	Are International System Unit (SI units) used?	Yes, SI units are used.		OK
36 (b) (v)	Does the monitoring plan note any parameters, coefficients, variables, etc. that are used to calculate baseline emissions or net removals but are obtained through monitoring?	Refer to PDD Section D.1.1.3.		OK
36 (b) (v)	Is the use of parameters, coefficients, variables, etc. consistent between the baseline and monitoring plan?	Yes, they are consistent.		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"?	Yes.		OK
36 (d)	Does the monitoring plan explicitly and clearly distinguish: (i) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), and that are available already at the stage of determination? (ii) Data and parameters that are not monitored throughout the crediting period, but are determined only once (and thus remain fixed throughout the crediting period), but that are not already available at the stage of determination? (iii) Data and parameters that are monitored throughout the crediting period?	Description of the revised Section D (refer to Section D.1) explicitly and clearly distinguishes: (i) Refer to 36 (b). (ii) N/A. (iii) Refer to 36 (a): parameters marked (1) - (10).		OK
36 (e)	Does the monitoring plan describe the methods employed for data monitoring (including its frequency) and recording?	The monitoring plan describes the methods employed for data monitoring: - For calculating are used computational techniques. The technique and instructions developed and approved in the established order; - Graphic scheme of monitoring points is provided;		OK

		Data are collected on a three-tier scheme: - Recorded daily meter readings (or electronic) and recorded in data registers; - Data registers are processed monthly and the data are recorded in the monthly form; - Annual data (or cumulative for certain monitoring period) are formed by summing the data of monthly reporting forms. Recording of data is electronically and paper.		
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?	Formulae are indicated and numbered in Sections D.1.1.2, and D.1.1.4. Conclusion is pending a response to CAR 02.	Pending	OK
36 (f) (i)	Is the underlying rationale for the algorithms/formulae explained?	Conclusion is pending a response to CAR 03 –CAR 07.	Pending	OK
36 (f) (ii)	Are consistent variables, equation formats, subscripts etc. used?	Please refer to 36 (f).		OK
36 (f) (iii)	Are all equations numbered?	Conclusion is pending a response to CAR 02.	Pending	OK
36 (f) (iv)	Are all variables, with units indicated defined?	Conclusion is pending a response to CAR 03 –CAR 07.	Pending	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 quantitatively account for uncertainty in key	N/A		OK

	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?	Conclusion is pending a response to CAR 03 –CAR 07.	Pending	OK
36 (f) (vii)	Are any parts of the algorithms or formulae that are not self-evident explained?	Conclusion is pending a response to CAR 03 –CAR 07.		
36 (f) (vii)	Is it justified that the procedure is consistent with stancard technical procedures in the relevant sector?	Conclusion is pending a response to CAR 03 –CAR 07.		
36 (f) (vii)	Are references provided as necessary?	Conclusion is pending a response to CAR 08.	Pending	OK
36 (f) (vii)	Are implicit and explicit key assumptions explained in a transparent manner?	Conclusion is pending a response to CAR 03 –CAR 07.	Pending	OK
36 (f) (vii)	Is it clearly stated which assumptions and procedures have significant uncertainty associated with them, and how such uncertainty is to be addressed?	N/A		OK
36 (f) (vii)	Is the uncertainty of key parameters described and, where possible, is an uncertainty range at 95% confidence level for key parameters for the calculation of emission reductions or enhancements of net removals provided?	The uncertainty level of measured parameters is provided; please refer to D.2. It is in the range at 95% confidence level.		OK
36 (g)	Does the monitoring plan identify a national or international monitoring standard if such standard has to be and/or is applied to certain aspects of the project? Does the monitoring plan provide a	N/A		OK

	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. They include basic information about the calibration procedures for gas metering unit (flow meter), gas analyzer (chromatograph), and electric meters.		OK
36 (j)	Does the monitoring plan clearly identify the responsibilities and the authority regarding the monitoring activities?	The operational and management structure that the project participant(s) will implement in order to monitor emission reduction generated by the project is described in the revised Section D.3 (refer to Annex 1 of the MR). Responsibilities and the authority regarding the monitoring activities are indicated.		OK
36 (k)	Does the monitoring plan, on the whole, reflect good monitoring practices appropriate to the project type? If it is a JI LULUCF project, is the good practice guidance developed by IPCC applied?	Monitoring techniques are in line with current operation routines.		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	The monitoring plan provides, in tabular form, a complete compilation of the data that need to be collected.		OK

	measured or sampled and data that are collected from other sources but not including data that are calculated with equations?			
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?	**CAR 09.** Please explicitly 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.	CAR 09	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		N/A
Approved CDM methodology approach only_Paragraphs 38(a) – 38(d)_Not applicable Applicable to both JI specific approach and approved CDM methodology approach				
39	If the monitoring plan indicates overlapping monitoring periods during the crediting period: (a) Is the underlying project composed of clearly identifiable compcnents 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	N/A		N/A

	(b) Direct assessment of emission reductions			
43	If the approach (a) in 42 is chosen, does the PDD provide ex ante estimates of: (a) Emissions or net removals for the project scenario (within the project boundary)? (b) Leakage, as applicable? (c) Emissions or net removals for the baseline scenario (within the project boundary)? (d) Emission reductions or enhancements of net removals adjusted by leakage?	N/A		
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 N/A		
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?	N/A		

	(v) In tones of CO2 equivalent, using global warming potentials defined by decision 2/CP.3 or as subsequently revised in accordance with Article 5 of the Kyoto Protocol? (b) Are the formula used for calculating the estimates in 43 or 44 consistent throughout the PDD? (c) For calculating estimates in 43 or 44, are key factors influencing the baseline emissions or removals and the activity level of the project and the emissions or net removals as well as risks associated with the project taken into account, as appropriate? (d) Are data sources used for calculating the estimates in 43 or 44 clearly identified, reliable and transparent? (e) Are emission factors (including default emission factors) if used for calculating the estimates in 43 or 44 selected by carefully balancing accuracy and reasonableness, and appropriately justified of the choice? (f) Is the estimation in 43 or 44 based on conservative assumptions and the most plausible scenarios in a transparent manner? (g) Are the estimates in 43 or 44 consistent throughout the PDD?			

	(h) Is the annual average of estimated emission reductions or enhancements of net removals calculated by dividing the total estimated emission reductions or enhancements of net removals over the crediting period by the total months of the crediting period and multiplying by twelve?			
46	If the calculation of the baseline emissions or net removals is to be performed ex post, does the PDD include an illustrative ex ante emissions or net removals calculation?	N/A		
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?	N/A		
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	N/A		

	Party?			
49	If stakeholder consultation was undertaken in accordance with the procedure as required by the host Party, does the PDD provide: (a) A list of stakeholders from whom comments on the projects have been received, if any? (b) The nature of the comments? (c) A description on whether and how the comments have been addressed?	N/A		
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 determination team	Ref. to checklist question in table 1	Summary of project owner response	Determination team conclusion
CAR 01. Please provide the Revised Section D of JI0109 PDD "Co-destruction of HFC23 and SF6 at "KCKK Polymer Plant" Ltd. Version 1.1 Dated 22 July 2008 in the official format with project owner's validation evidence.	35	Response 1 The official format of the Revised Section D with the project's owner's validation evidence is provided.	Conclusion on Response 1 CAR 01 is closed due to appropriate evidence to AIE.

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project owner response	Determination team conclusion
CAR 02. Please justify what technical reliable information is not available to made a conclusion of non-applicability the cut-off conditions set by the PDD for the baseline GHG emission calculation (refer to the Annex , page 1, paragraph 2).	36 (b)	Response 1 This initial part of justification is a preamble of what is unfolded below in a greater detail. Further in Justification the accuracy and representativeness of the cut-off conditions are questioned leading to the conclusion of their elimination of the monitoring. Therefore the more correct terms would be not "reliable" but "accurate and representative". Therefore the paragraph will be as follows: «Revisions introduced in the monitoring plan of the project design document (PDD) of the above project represent elimination of such factors as the cut-off conditions and baseline quantity of HFC23 destroyed, which are, in first case, inapplicable due the absence of accurate and representative information, and, in the second case, are inapplicable due to erroneous use of the maximum permissible emissions as a measure of the state regulation of emissions of such a gas and due to the absence of information that HFC23 was historically destroyed". The appropriate correction was made in the Justification.	Conclusion on Response 1 The explanations are accepted. CAR is closed.
CAR 03. The reference to the formulas D.1-	36 (b)	Response 1	Conclusion on Response 1

<table>
<tr><th>Draft report clarifications and corrective action requests by determination team</th><th>Ref. to checklist question in table 1</th><th>Summary of project owner response</th><th>Determination team conclusion</th></tr>
<tr><td>10 and D.1-12 in Section "Revision 1: Cut-off conditions is not correct.</td><td></td><td>The reference to the formula D 1-12 was replaced with the reference to the formula D 1-11.</td><td>The explanations are accepted. CAR is closed.</td></tr>
<tr><td>CAR 04. No sufficient justification made to spring to the conclusion that from 2000 till 2005 the Plant had no reliable method for calculation of the real output of HCFC22 and thus, the values of HCFC22 output presented in Table B.1-1 are incorrect (refer to Table B.1.1). The statement that "these values do not take into account the amount HCFC22 recovered for sale in that period" is not correct as the Table B.1-1 and PDD Section A.4.2, page 5 states contrary.</td><td>36 (b)</td><td><u>Response 1</u>
The statement "these values do not take into account the amount HCFC22 recovered for sale in that period" is not correct as the Table B.1-1 and PDD Section A.4.2, page 5 states contrary." was removed from Version 2 of Justification. Also, the further correction was made in Version 2 :
The values of annual amounts of HCFC22 produced in 2002-2004 were provided in the table B.1-1 "Data needed for calculation of GHG emission reductions" of PDD:
Table 1. Annual amounts of HCFC22 produced in 2002-2004 provided in the PDD
<table>
<tr><th>Designation</th><th>Unit</th><th>2002</th><th>2003</th><th>2004</th></tr>
<tr><td>P_HCFC22y</td><td>t</td><td>13 135,4</td><td>10 562,7</td><td>16 956,5</td></tr>
</table></td><td><u>Conclusion on Response 1</u>
The response is accepted.
CAR is closed.</td></tr>
</table>

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project owner response	Determination team conclusion
		But these values are inaccurate and therefore cannot be representative. It should be noted that historically until 2003 the Plant had no reliable method for the calculation of the actual output of HCFC22 as it was not a target product and its production (except of saleable HCFC-22 that made 4-6% of overall HCFC-22 production) was not monitored. From 2003 separate norm of consumption HCFC22 per unit of M-4 produced was accepted. However this consumption norm was determined on the base of parameters measured during HCFC-22 production process with the use of metering equipment of lower accuracy class than those of nowadays. For example, the measurement of quantities of HCFC-22, monomer-4, fluoroplastics was implemented with use of buoy level gages with accuracy class of 1.5 and diaphragm flowmeters with diaphragm manometers (accuracy class 2-2.5). In 2005 under modernization of monitoring system at the Plant the new high precision metering devices were introduced. From 2005 on, more accurate radar level gages "VEGA" (accuracy class 0.5) and mass flow meters	

<table>
<tr><th>Draft report clarifications and corrective action requests by determination team</th><th>Ref. to checklist question in table 1</th><th>Summary of project owner response</th><th>Determination team conclusion</th></tr>
<tr><td></td><td></td><td>"PROMASS" (accuracy class 0.15) are used to control output of products including HCFC22 at the Plant. The high quality and accuracy of measurements are provided through automatization of the processes by introduction at the Plant of the workstation . Below is the table showing the old norms of HCFC-22 consumption per unit of M-4 produced that were before 2005 and the new norms that were introduced after 2005.
Table 2. Norm of HCFC-22 consumption per M-4 produced at KCKK Polymer Plant
<table>
<tr><td>Designation</td><td>Unit</td><td>2002</td><td>2003</td><td>2004</td><td>2005</td><td>2006</td></tr>
<tr><td>HCFC-22 consumption per unit of M-</td><td>t/t</td><td>No norms exist</td><td>2,14</td><td>2,14</td><td>2,12</td><td>2,07</td></tr>
</table>
</td><td></td></tr>
</table>

<table>
<tr><th>Draft report clarifications and corrective action requests by determination team</th><th>Ref. to checklist question in table 1</th><th>Summary of project owner response</th><th>Determination team conclusion</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>4 produced</td><td></td><td>ed</td><td></td><td></td><td></td><td></td></tr>
</table>
For 2011 the norm of HCFC-22 consumption per unit of M-4 equals to 2,054 t/t. The recalculation of HCFC-22 production during 2002-2004 with the use of this more accurate norm gives divergence from the values of HCFC produced in 2002-2004 provided in the PDD.
Table 3. Divergence in values HCFC-22 production in 2002-2004
<table>
<tr><td>Designation</td><td>Unit</td><td>2002</td><td>2003</td><td>2004</td></tr>
<tr><td>HCFC-22 HCFC-22 production recalculated according to PDD</td><td>t</td><td>13135</td><td>10563</td><td>16957</td></tr>
</table>
</td><td></td></tr>
</table>

<table>
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<tr><td></td><td></td><td>
<table>
<tr><td>HCFC-22 production recalculated according to 2011 norm</td><td>t</td><td>12029</td><td>9970</td><td>15363</td></tr>
<tr><td>Absolute divergence</td><td>t</td><td>-1107</td><td>-593</td><td>-1594</td></tr>
<tr><td>Relative divergence</td><td>%</td><td>-9,2</td><td>-5,</td><td>-10,4</td></tr>
</table>
The divergence in values of HCFC-22 production in 2002-2004 is considerable ranging within -5,9% till -10,4%. Therefore the values of HCFC-22 production in 2002-2004 in PDD are inaccurate and, hence, cannot be applicable for setting the cut-off condition for the baseline GHG emissions calculation.
</td><td></td></tr>
<tr><td>CAR 05. There are no sufficient data available to spring to the conclusion that "there is no overstocking of HCFC22, it confirmed by insignificant figures of stocks of goods-in-process". The Table "HCFC22</td><td>36 (b)</td><td><u>Response 1</u>
These data which confirm that there was no overstocking of HCFC-22 contain the column "Stocks of goods-in-process as of the 1st January". As can be seen figures in</td><td><u>Conclusion on Response 1</u>
The response is accepted.
CAR is closed.</td></tr>
</table>

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project owner response	Determination team conclusion
output and average shipping price" does not contain these data.		this column are under of 0.2% of overall HCFC22 output	
CAR 06. The reference to the findings obtained under the 8 research runs of HCFC22 synthesis reaction which were published in the article Kinetics of chloroform fluorination by HF catalyzed by antimony pentacloride* do not applicable for the justifications of the HFC23 generation rate per unit production of HFCAC22 (refer to wh in PDD Section D.1.1.4 formulas D.1-11, page 29).	36 (b)	Response 1 This argumentation was removed from the Version 2 of Justification.	Conclusion on Response 1 The response is accepted. CAR is closed.
CAR 07. The is no credible analysis done to justify the inapplicability of minimum average annual value of fraction of HFC23 per unit of HCFC-22 produced at the plant (wh) with regard to the actual data of "KCKK Polimer	36 (b)	Response 1 The further analysis was provided in the Version 2 of Justification: The values of the fraction of HFC23 per unit of HCFC-22	Conclusion on Response 1 The response is accepted. CAR is closed.

* Journal of Fluorine Chemistry, 44 (1989). Kinetics of chloroform fluorination by HF catalyzed by antimony pentacloride, table 1. Compositions obtained by chemical analysis at the outlet of the continuous reactor in the chloroform fluorination.

<table>
<tr><th>Draft report clarifications and corrective action requests by determination team</th><th>Ref. to checklist question in table 1</th><th>Summary of project owner response</th><th>Determination team conclusion</th></tr>
<tr><td>Plant" Ltd. during the period 2002-2004 (refer to the PDD Table B.1-1, line wh).</td><td></td><td>produced in 2002-2004 were provided in the line wh.of the table B.1-1 "Data needed for calculation of GHG emission reductions" of PDD:
Table 6. Fraction of HFC23 per unit of HCFC-22 produced in 2002-2004 as per PDD
<table>
<tr><td>Designation</td><td>Unit</td><td>2002</td><td>2003</td><td>2004</td><td>2005</td><td>2006</td></tr>
<tr><td>wh</td><td>%</td><td>1,31</td><td>1,59</td><td>1,06</td><td>1,15</td><td>1,41</td></tr>
</table>
However these figures cannot be justified by the Plant's data as it is quite unclear what the point was (or the points were) which data were taken from for defining wh. The matter is that this factor can be calculated given the results of composition analysis of the HCFC-22 production as after synthesis reactor so in the other HCFC22 production line points. Therefore the above figures are not justified and, thus, are not representative.
The accurate and justified figures of the fraction of HFC23 per unit of HCFC-22 produced in 2002-2006 are obtained from the monthly technical reports on production of fluoroplastics, monomer-4 and HCFC-22 for this period .</td><td></td></tr>
</table>

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project owner response	Determination team conclusion
		The averaged data on HCFC-22 composition are recorded in the technical reports from the logs of control of raw HCFC-22 production. The control is provided for ensuring the desired quality of HCFC-22. Performance control data including HFC23 concenttration are periodically registered with those logs. Each gas sampling result is registered and signed by the operator with indication of the date, time, and position where HCFC-22 raw gas was measured including gas content with HFC-23 concentration. The averaging of HFC23 concentration is made taking into account the time of HCFC reactor's operation and periodicity of sampling. So, averaging HFC23 content on the annual base is giving the accurate wh values, which are backed by the documentary evidences. Therefore the average annual fractions of HFC23 validated by approved technical reports are actual and reliable information. Based on these data the following wh values were obtained. Table 7. Actual average annual values of the fraction of HFC23 per unit of HCFC-22 in 2002-2004 obtained from the technical reports and deviation from wh values in PDD	

<table>
<tr><th>Draft report clarifications and corrective action requests by determination team</th><th>Ref. to checklist question in table 1</th><th>Summary of project owner response</th><th>Determination team conclusion</th></tr>
<tr><td></td><td></td><td>
<table>
<tr><td>Designation</td><td>Unit</td><td>2002</td><td>2003</td><td>2004</td></tr>
<tr><td>wh</td><td>%</td><td>1,67</td><td>1,89</td><td>2,19</td></tr>
<tr><td>Deviation from wh values in PDD</td><td>%</td><td>27,48</td><td>18,87</td><td>106,60</td></tr>
</table>
As can be seen by comparison of the above tables 6 and 7 the divergence between the wh values in PDD and those obtained through averaging actual annual data from the technical reports is considerable.
Direct measurements of the waste HFC-23 gas fed to destruction under the project give more accurate results. Data on the waste gas are directly measured in the points set at the pipelines offtaking after the rectification column to the destruction unit. Based on measurements the mass flow, chemical composition and density of the gas are defined. Devices used for measurements of these data undergo periodically through calibration and testing procedure in compliance with the requirements of the
</td><td></td></tr>
</table>

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project owner response	Determination team conclusion
		Federal Agency for Technical Control and Measurements and have the high accuracy level. Resume: 1. Data provided in the table B1-1 of PDD, on the base of which the minimum value of the fraction of HFC23 per unit of HCFC-22 produced at the plant in the period of 2002-2004, cannot be justified by the Plant's documentary evidences therefore these data are not representative. 2. The representative data on values of the fraction of HFC23 per unit of HCFC-22 produced at the Plant can only be obtained from the monthly technical reports on production of fluoroplastics, monomer-4 and HCFC-22. Given averaging, on a yearly basis, the wh values based on the data of the technical reports differ considerably from PDD wh values. 3. In connection with above the minimum average annual value of fraction of HFC23 per unit of HCFC-22 produced at the "KCKK Polimer Plant" Ltd during the period 2002-2004 must be eliminated as the cut-off condition for calculation of the baseline GHG emissions from the monitoring plan of the mentioned project.	
CAR 08. The is no credible analysis done to	36 (b)	Response 1	Conclusion on Response 1

<table>
<tr><th>Draft report clarifications and corrective action requests by determination team</th><th>Ref. to checklist question in table 1</th><th>Summary of project owner response</th><th>Determination team conclusion</th></tr>
<tr><td>justify the inapplicability of the factors «the maximum annual volume of saleable SF6 produced at "KCKK Polimer Plant" Ltd. during the 2002-2004» and « the fraction of SF6 contained in waste flows from rectification column of SF6 production per unit of saleable SF6 produced at the plant » (refer to the PDD Table B.1-1. Please justify, how the "the starting-up and adjustment works at equipment for production of SF6 as well as the experimental-industrial tests" lead to non stable and credible data for saleable SF6 and the fraction of SF6 contained in waste flows.</td><td></td><td>To respond to CAR 08 the further analysis was provided in the Version 2 of Justification:
In PDD the values of annual volume of saleable SF6 produced at "KCKK Polimer Plant" Ltd. and the fraction of SF6 contained in waste flows from rectification column of SF6 production per unit of saleable SF6 produced at the plant during the 2002-2005 are provided in table "Data needed for calculation of GHG emission reductions":
Table 8. Annual volumes and the fraction of SF6 contained in waste flows from rectification column of SF6 production per unit of saleable SF6 produced at the Plant during the 2002-2005.
<table>
<tr><td>Designation</td><td>Unit</td><td>2002</td><td>2003</td><td>2004</td><td>2005</td></tr>
<tr><td>P_SF6y</td><td>t</td><td>157,80</td><td>158,2</td><td>219,90</td><td>391</td></tr>
<tr><td>ws</td><td>%</td><td>1,4</td><td>3,04</td><td>2,28</td><td>1,4</td></tr>
<tr><td colspan="6">The cut-off conditions are represented by the following:</td></tr>
</table></td><td>The response is accepted.
CAR is closed.</td></tr>
</table>

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project owner response	Determination team conclusion
		The maximum annual amount of saleable SF6 produced at the plant during the historical period is 219.9 t (2004). For the fraction ws its minimum average annual value according to actual data of "KCKK Polimer Plant" Ltd. during the period 2002-2004 was assumed. According to Section B.1 ws = 1.40% (2002). However, these conditions are inapplicable by the following reason: According to the applicability criteria provided in AM0001/Version 05.1 "Incineration of HFC23 waste streams", the production facility must has an operating history at least of three years between the beginning of the year 2000 and has been in operation from 2005 until the start of the project activity. However, the operation activity for production of SF6 started at the KCKK Polimer Plant only in 2006. Equipment for production of SF6 was installed in 1998, and in 1998-2006 the starting-up and adjustment works as well as the experimental-industrial tests were implemented. Therefore this methodology and the cut-off conditions are not applicable for SF6 utilization project activity at the Plant. Besides, as can be seen from the table 8 the values of ws	

<table>
<tr><th>Draft report clarifications and corrective action requests by determination team</th><th>Ref. to checklist question in table 1</th><th>Summary of project owner response</th><th>Determination team conclusion</th></tr>
<tr><td></td><td></td><td>are not stable from year to year that can be explained by the adjustment period.
From 2006 on, subject to adjustment of the process, the production operations started. In 2006-2010 the output of saleable SF6 rose up by 50% on average as compared with the adjustment period. The formation of the waste SF6 became more stable showing only two plateaus: one of 3,5% in 2007-2008 and then a slide down to about 2% in 2009-2010. The figures on saleable and ws are presented in the following table 9:

<table>
<tr><td>Design ation</td><td>Unit</td><td>2006</td><td>2007</td><td>2008</td><td>2009</td><td>2010</td></tr>
<tr><td>P_SF6y</td><td>t</td><td>449</td><td>280</td><td>359</td><td>322</td><td>344</td></tr>
<tr><td>ws</td><td>%</td><td>1,3</td><td>3,5</td><td>3,5</td><td>2,0</td><td>1,9</td></tr>
</table>
Therefore the maximum annual volume of saleable SF6 produced at "KCKK Polimer Plant" Ltd. during the 2002-2004 and the fraction of SF6 contained in waste flows from rectification column of SF6 production per unit of</td><td></td></tr>
</table>

Draft report clarifications and corrective action requests by determination team	Ref. to checklist question in table 1	Summary of project owner response	Determination team conclusion
		saleable SF6 produced at the plant are not applicable as the cut-off conditions for the monitoring of the baseline emissions.	
CAR 09. Please provide tables names and their numbering in the Annex of the MR to ensure traceability	36 (b) (i)	Response 1 The tables were provided with appropriate names and numbers. Please see Version 2 of Justification.	Conclusion on Response 1 CAR is closed due to amendments done.
CAR 10. Please explicitly 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.	36 (m)	Response 1 This statement is provided in the Revised Monitoring Plan.	Conclusion on Response 1 CAR is closed due to amendments done.
CL 01. Please clarify the term "synthesis-gas fed to destruction". The PDD does not contain the term.	36 (b)	Response 1 The term "synthesis gas fed to destruction" was removed from the Justification to provide consistency with the PDD.	Conclusion on Response 1 CL is closed due to amendments done.
FAR 01. Please provide in the MR an Annex with an independent technical expert Conclusion on the Revised Monitoring Plan and make it available to the AIE for the review.	36 (b)	Response 1 The Conclusion of the independent expert was provided in the Appendix 6 of the Revised Monitoring Report, V2.1. dd. 24.06.2011. Also this conclusion is attached to the Verification Report.	Conclusion on Response 1 FAR is closed due to amendments done.

REFERENCES

Category 1 Documents:
Documents provided by Type the name of the company that relates directly to the GHG components of the project.

/1/ Monitoring Report (Versions 2 dated 22.06.11 and 2.1 (English) 24.06.11) "Co-destruction of HFC23 and SF6 at "KCKK Polymer Plant" Ltd". Monitoring period 01.01.2010 – 30.09.2010.
Excel spreadsheet with calculation of emission reduction. Provided by PDD Developer.

/2/ Monitoring Report (Versions 2.0 dated 21.05.10. Monitoring period 01.01.2009 – 31.12.2009.
Excel spreadsheet with calculation of emission reduction. Provided by PDD Developer.

/3/ License No ЭХ-00-009501 (ЖХ) of 21.12.2009 granted to "KCKK Polymer Plant" by Federal Service for Environment, Technological, and Atomic Monitoring.

/4/ License No ВП-00-009478 (ЖХ) of 14.01.2009 granted to "KCKK Polymer Plant" by Federal Service for Environment, Technological, and Atomic Monitoring.

/5/ License No 2/05454 of 25.12.2003 granted to "KCKK Polymer Plant" by Federal Service for Environment, Technological, and Atomic Monitoring. Valid till 26.12.13.

/6/ License No ОТ-47-000279(43) of 20.09.2007 granted to "KCKK Polymer Plant" by Federal Service for Environment, Technological, and Atomic Monitoring.

/7/ License No ВП-00-009526 (КСХ) of 28/01/2009 granted to JSC "Halogen" by Federal Service for Environment, Technological, and Atomic Monitoring.

/8/ Attestation of Registration #47-10901 dated 17.10.08 granted to "KCKK Polymer Plant" by Federal Service for Environment, Technological, and Atomic Monitoring.

/9/ Technical Data for calculation of GHG in 2010, KCKK Polymer Plant

/10/ JD's for the personnel, involved in the monitoring of GHG process, KCKK Polymer Plant

/11/ Provisions of Departments, involved in the monitoring of GHG process, KCKK Polymer Plant

/12/ Temporary Technological Provision for maintenance operation of a thermal hydrolysis unit for destruction of fluorine organic compounds (FOC) of workshop #2.

/13/ Order #503 dated 31.12.09 "About Quality Instruction implementation ИК-5-004-2009"

/14/ Corporate Standard SO 6-020-2011 "GHG destruction process" with Revision set by Order #190 dated 24.06.11.

/15/ Methodologies metering № М3-57-2007, М-256-2-2007, М3 – 110 – 2007, М3

– 111 – 2007.

/16/ Attestation on Methodologies metering № M3-57-2007, M-256-2-2007, M3 – 110 – 2007, M3 – 111 – 2007, all valid till 2012.

/17/ Technical Passport of the thermal oxidizer for destruction of fluorine organic compounds (FOC), #801 in the Register, valid for the date of verification

/18/ Attestation to conduct non-destructive examination by Laboratory #53A470184 issued by "ALTON", valid till 06.09.13.

/19/ Permission # 1-03/632 for air pollutant emissions for a period 2008-2011, given by Federal Service for Ecological, Technical and Atomic Supervision. All valid on the date of the site visit.

/20/ State statistic environmental form 2-tp (air) of "KCKK Polymer Plant" in 2010.

/21/ Approved Limits for waste generation and their placement for a period 2008 – 2013, given by Federal Service for Ecological, Technical and Atomic Supervision. Valid till 10.12.13.

/22/ Permission # 1-03/34 for wastewater for a period 2008 –2013, given by Federal Service for Ecological, Technical and Atomic Supervision. Valid till 2013.

/23/ Register of the equipment installed in frame of JI project

/24/ Inventory of measuring devices involved in monitoring of GHG emission at KCKK Polymer Plant, actual for 01.01.13. Data for calibrations status.

/25/ Schedule for instrument calibration scale of measuring equipment involved in monitoring of GHG emission at KCKK Polymer Plant. 2010

/26/ Records of testing, calibration of the measuring equipment involved in monitoring of GHG emission at KCKK Polymer Plant.

/27/ Training records for the personnel, responsible for monitoring of GHG emission at KCKK Polymer Plant.

/28/ State positive conclusion about "Technical data for the outlet GHG emission for 2009 at KCKK Polymer Plant", given by Federal Service for Ecological, Technical and Atomic Supervision on 02.11.2009.

/29/ QMS Business process Card "Co-destruction of HFC23 and SF6 at "KCKK Polymer Plant" Ltd".

/30/ Operational and administrative flow cart of the monitoring GHG process "Co-destruction of HFC23 and SF6 at "KCKK Polymer Plant" Ltd". 2010.

/31/ Technical Reports of KCKK Polymer Plant Ltd. (SF 26, HFC23, HCFC22). January-December, 2010.

/32/ Technical Data "Air quality in the sanitary-hygienic zone monitoring results, 2009", dated 20.01.10, #01/43-03/19.

/33/ Contingency plan ПЛА-1-2-99 with rev.#1, valid on the date of the site visit.

/34/ Technical Letter about Contingency plan on the thermal oxidizer for destruction of fluorine organic compounds (FOC), #801 in the Register

/35/ Expert Conclusion 06.04.09 #829-11-665П.

/36/ Order #1343LC of experimental works from 25.09.1998

/37/ Technical solution #34-1044 of the minimum production start from 06.04.1998

/38/ list of design work for the start of production at full capacity from 08.02.1999

/39/ Report on complex testing unit for production of sulfur hexafluoride (SF6) from 1999

/40/ Results of SF6 comparative analysis from 2002

/41/ Letter from KCKK on SF6 production_# 01_62-13_26_dd 23.06.2011

/42/ Letter of SF6 quality from 19.01.2001

/43/ Letter of SF6 quality rating from 11.09.2002

/44/ Technical certificate from 2002

/45/ Technical solution to change the method of operation of the pyrolysis block from 22.02.1999

/46/ Technical solution to change of pyrolysis block #3 from 07.06.2002

/47/ Official letter to changes in the flow chart from 03.04.2000

/48/ Technical solution to install an additional dryer from 2001

/49/ Technical solution of additional cooling of raw SF6 from 2001

/50/ Official letter to changes in the flow chart from 07.08.2001

/51/ Offers to increase of the quality of alkali-refining unit from 01.02.2001

/52/ Technical solution to change of pumping equipment from 17.07.2002

/53/ Technical solution to reduction of the temperature of pyrolysis block from 2002

/54/ Explanatory note of the commissioning of low-temperature pyrolysis from 2002

/55/ Activities for production at full capacity from 10.01.2002

/56/ Minutes of technical discussion from 08.04.2002 (about SF6 productions problems)

/57/ Minutes of discussion from 25.03.2002 (about moisture gauge install)

/58/ list of activities to ensure of stable production for 2002 year

/59/ Minutes of discussion from 27.01.2003 (balance of the production)

/60/ Minutes of discussion from 11.05.2004 (April balance of production)

/61/ Minutes of discussion from 29.07.2005 (Jule balance of production)

/62/ List of activities to ensure of stable production for 2005 year

/63/ Technical solution to sulfur pipeline from 29.07.2005

/64/ Annotation report on the improvement of dryer unit of SF6 from 2001

/65/ Program of development work for research system of «SF6-water» from 2001

/66/ Plan of research and development for 2002

/67/ Annotation report of research facilities for purification of SF6 from 2003

/68/ List of experimental works for 2003-2004 years.

/69/ Schedule of activities, providing the productions of SF6 in accordance with customer requirements from 31.08.2001

/70/ The schedule of works to production an additional dryer unit from 19.09.2001

/71/ Report of execution of works to production an additional dryer unit from 30.11.2001

/72/ Plan of activities from 2001

/73/ Program of quality stabilization from 11.10.2001

/74/ Minutes of discussion from 09.04.2001 (about SF6 production problem with moisture 1.3)

/75/ Program of quality stabilization from 2002

/76/ Plan-schedule to expand of production from 04.06.2006

/77/ Annotation report of receipt of high purity SF6

/78/ Offers to modernization from 25.11.2006

/79/ Order of appointing the head of operations from 16.01.2007

/80/ Order of complex testing from 24.07.2006

/81/ Program of works of complex testing from 10.07.2006

/82/ Program of works from 21.11.2006

/83/ Minutes of discussion from 28.06.2006 (about real production capacity)

/84/ Minutes of discussion from 06.12.2005 (about increase production level of SF6)

/85/ Minutes of discussion from 17.11.2006 (about discussion plan to increase production level to 60t)

/86/ Official letter to development of new technical specification for SF6 from 02.11.2005

/87/ Report of execution of works from 14.09.2006

/88/ Technical letter to the rate of HCF23, dated 31.05.11, #01/62-13/17

/89/ Technical letter #01/62-13/15 "About environmental Control of Air Emissions (HCF23, SF6). Dated 30.05.11.

/90/ Technical letter #01/43-03/73 "About maximum level of permissible emissions (MPE) of HFC23 and of SF6 into the atmosphere from the sources of KCKK" dated 17.02.10.

/91/ LoA #DO7.1040. dated 04.08.2010 issued by the Ministry of Economic Development of the Russian Federation

/92/ The Declaration of Approval from Switzerland, acting through the Federal Department of the Environmental, Transport, Energy and Communications DETEC, Federal Office of the Environment FOEN, Climate Division Energy Agency, being the Designated Focal Point for Joint Implementation (JI) in Switzerland has been received for the project by 26th October 2010

/93/ Official Letter from the Ministry of Economic Development of Russian Federation #ДО7-839 dated 10.06.11

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

/1/ JI0109 PDD "Co-destruction of HFC23 and SF6 at "KCKK Polymer Plant" Ltd. Version 1.1 Dated 22 July 2008.

/2/ Verification Report of the 2nd Periodic Verification of the "Co-destruction of HFC23 and SF6 at "KCKK Polymer Plant" Ltd". Report No. Russia/0071-2/2010, Version 1.

/3/ JISC Guidance on criteria for baseline setting and monitoring. Version 02.

/4/ AM0001 / Version 05.2 "Incineration of HFC23 waste streams"

/5/ Operational Guidelines for Project Design Documents of Joint Implementation Projects. Volume 1: General guidelines. Version 2.3. Ministry of Economic Affairs of the Netherlands. 2004.

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

/1/ A.Rassokhin – KCKK Polymer Plant Ltd., Chief Engineer

/2/ A. Zaborskiy – JSC "HaloPolymer", Chief Financial Officer

/3/ V.Poznyak – JSC "HaloPolymer", Legal Director

/4/ I.Kuznetsov – JSC "HaloPolymer", Project Director

/5/ A.Kolesnikov – HaloPolymer Kirovo-Chepetsk Ltd., Chief Technologist, acting as Deputy Environmental Director

/6/ V.Khoroshavin - HaloPolymer Kirovo-Chepetsk Ltd., Chief power engineer

/7/ N.Dubenetskiy - HaloPolymer Kirovo-Chepetsk Ltd., Chief instrument man

/8/ A.Mikheev - HaloPolymer Kirovo-Chepetsk Ltd., Chief maintenance man

/9/ E.Loginova - HaloPolymer Kirovo-Chepetsk Ltd., Chief Accounting Officer

/10/ N.Agaphonova- HaloPolymer Kirovo-Chepetsk Ltd., Chief Accountant of Financial Department

/11/ N.Shilyaeva – HaloPolymer Kirovo-Chepetsk Ltd., Chief of QMS Department

/12/ D.Shabalin - HaloPolymer Kirovo-Chepetsk Ltd., Main Specialist , Deputy Manager of New Technology development Department

/13/ V.Filatov - HaloPolymer Kirovo-Chepetsk Ltd., Chief of Environmental Department

/14/ T.Vorozhtsova - HaloPolymer Kirovo-Chepetsk Ltd., Environmental laboratory principal

/15/ I.Deyanova- HaloPolymer Kirovo-Chepetsk Ltd., Acting as Technical Department principal

/16/ V.Kuznetsov - HaloPolymer Kirovo-Chepetsk Ltd., technologist of workshop

#27

/17/ S.Sedova - HaloPolymer Kirovo-Chepetsk Ltd., principal of Laboratory of workshop #27

/18/ G.Sumarokova - HaloPolymer Kirovo-Chepetsk Ltd., principal of energy resources account bureau

/19/ O.Vakhrushev - HaloPolymer Kirovo-Chepetsk Ltd., Automatic Control Laboratory principal

/20/ A.Bogomolov - HaloPolymer Kirovo-Chepetsk Ltd., Lead Engineer of Technical Supervision

APPENDIX A: VERIFICATION TEAM

The verification team consists of the following personnel:

Mrs. Vera Skitina, PhD (chemistry)

Lead Verifier
Bureau Veritas Certification Russia Certification Director - Lead Auditor, Lead Tutor, Lead Verifier
She has over 15 years of experience in powder metallurgy, aluminium metallurgy, plastic metal working, physical-chemistry processes, gas production at power plant, environmental science. She worked in Irkutsk Aluminium Plant, SUAL powder metallurgy plant, Nadvoitzky aluminium plant, Central Scientific Institute of Metals. She is a Lead auditor of Bureau Veritas Certification for Quality Management Systems (IRCA registered), Environmental Management System (IRCA registered), Occupational Health and Safety Management System (IRCA registered). She performed over 200 audits since 2004. Also she is a Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and a Lead Tutor of the IRCA registered ISO 9001 Lead Auditor Training Course. She is an Assuror of Social Reports. She has undergone intensive training on Clean Development Mechanism /Joint Implementation and was/is involved in he was involved in the determination/verification over 50 JI projects.

Mr. D.Moldavsky, Professor (chemistry)

JI Specialist
Professor of the "RSC Applied Chemistry" Federal State Unitary Enterprise. The main disciplines: technology of heavy organic synthesis, organic chemistry, general chemical technology, processes and apparatus of chemical technology.
Specialty: chemistry and technology of heavy organic synthesis (specialty code 051704).
Post-graduate work at State Institute of Applied Chemistry (GIPKh) (1968-1971), currently "RSC Applied Chemistry" Federal State Unitary Enterprise (FGUP).

PhD (Chemistry) (1971), specialty – chemistry and technology of heavy organic synthesis. The theme of candidate thesis: "Interaction of chlorine fluorides and organic fluoro-olefins".
Doctoral studies at RSC Applied Chemistry (1997-2002), currently "RSC Applied Chemistry" Federal State Unitary Enterprise (FGUP).
Doctor of Engineering (2002), specialty – organic substances technology. The theme of doctoral thesis: "Production of perfluorinated organic compounds by direct fluorination".
Scientific tutor of degree works of 4 graduands of St. Petersburg University of plant polymers.

Mr. Leonid Yaskin, PhD (thermal engineering)

Internal Technical Reviewer.
Bureau Veritas Certification Rus General Director, Climate Change Local Manager, Lead Auditor, IRCA Lead Tutor, Climate change Lead Verifier,

He has over 30 years of experience in heat and power R&D, engineering, and management, environmental science and investment analysis of projects. He worked in Krzhizhanovsky Power Engineering Institute, All-Russian Teploelectroproject Institute, JSC Energoperspectiva. He worked for 8 years on behalf of European Commission as a monitor of Technical Assistance Projects. He is a Lead auditor of Bureau Veritas Certification for Quality Management Systems (IRCA registered), Environmental Management System (IRCA registered), Occupational Health and Safety Management System (IRCA registered). He performed over 250 audits since 2002. Also he is a Lead Tutor of the IRCA registered ISO 14000 EMS Lead Auditor Training Course, and a Lead Tutor of the IRCA registered OHSAS 18001 Lead Auditor Training Course. He is an Assuror of Social Reports. He has undergone intensive training on Clean Development Mechanism /Joint Implementation and was/is involved in the determination of over 60 JI/CDM projects.

Mr. Igor Maslennikov, Professor (chemistry)

JI Specialist
Professor of Leningrad Technological Institute im. Lensoveta (now Saint-Petersbur State Technological Institute (Technical University), assistant, docent, professor.
The main disciplines: technology of heavy organic synthesis, organic chemistry, general chemical technology, processes and apparatus of chemical technology. Organofluoric and Organophosphorus Chemistry
Specialty: chemistry and technology of heavy organic synthesis (specialty code 051704).

Post-graduate work at Leningrad Technological Institute im. Lensoveta (now Saint-Petersburg State Technological Institute (Technical University), assistant, docent, professor (till now) and vice-rektor (2003-2010).

Всего прошито, пронумеровано
и скреплено печатью 45 (Сорок пять) листов

Представитель
ООО «ГалоПолимер Кирово-Чепецк»
по доверенности № 01/20-15/1 от 09.03.2011 г. Заберский А.С.