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Verification Report

Quimobasicos S.A de C.V.

Periodic Verification of the Registered CDM Project

“Quimobásicos HFC Recovery and Decomposition Project”

UNFCCC 0151-CDMP

Monitoring period 15: 30th September to 30th December 2008

Report No. 1276533

21 January 2010

TÜV SÜD Industrie Service GmbH
Carbon Management Service
Westendstrasse 199 - 80686 Munich - GERMANY



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Subject:			Fifteenth Periodic Verification	
Executing Operational Unit:				
TÜV SÜD Industrie Service GmbH, Carbon Management Service Westendstrasse 199 - 80686 Munich, Federal Republic of Germany				
Project Participant (client):				
Quimobásicos S.A. de C.V. Ave. Ruíz Cortínez N° 2333 Pte. Monterrey, Nuevo León, Mexico				
Registration number / Project Title			Project 0151: “Quimobasicos HFC and Decomposition Project”	
Monitoring period:			30-09-2008 to 30-12-2008	
First Monitoring Report (version/date)			Version 01 06-01-2009	
Final Monitoring Report (version/date)			Version 03 13-01-2010	
Summary:				
<p>TÜV SÜD Industrie Service GmbH has performed the Fifteenth periodic verification of the registered CDM project: “Quimobasicos HFC and Decomposition Project”. The project consists of the installation of an in-flight argon plasma arc facility to decompose the HFC23 generated as by-product of HCFC 22 production of Quimobásicos S.A. de C.V. at their plant in Monterrey, Mexico. As a brief description of the process, the waste gas stream enters into the plasma torch, which is of segmented design, using argon as plasma gas.</p> <p>The management of Quimobásicos S.A. de C.V; is responsible for the preparation of the GHG emissions data and the reported GHG emission reductions.</p> <p>A document review, followed by a site visit was conducted to verify the information submitted by the project participant regarding the present verification period. Based on the assessment carried out, the verifier confirms the following:</p> <ul style="list-style-type: none">the project has been implemented and operated in accordance with the description given in the registered PDD (version 04, 23-05-2006, registration date 14-06-2006).the project is completely implemented as described in the registered PDD. <p>that the monitoring plan complies with the applied methodology (AM0001/Version03 (“Incineration of HFC 23 Waste Streams”), and the monitoring has been carried out as exactly following the monitoring plan. The request for revising monitoring plan is required due to the wastewater treatment plant at the Quimobásicos plant is in operation, removing fluoride as a solid using calcium hydroxide. The result is a sludge that has to be removed and transported to a landfill outside of the city of Monterrey, Mexico. In order to assess this parameter, the audit team needs to check the number of trucks leaving the project site for transportation the sludge. This parameter was not included in the revised monitoring plan, therefore a revision is requested, Revised MP has been approved by the EB on 27.11.2009.</p> <ul style="list-style-type: none">Installed equipment essential for generating emission reductions run reliably and the meters are calibrated appropriately. The project is generating emission reductions as a CDM project. <p>The verifier can confirm that the GHG emission reductions are calculated without material misstatements. Our opinion refers to the project’s GHG emissions and resulting GHG emission reductions reported, both determined using the valid and registered project’s baseline, its monitoring plan and its associated documents.</p> <p>Based on the information we have seen and evaluated we confirm that the implementation of the project resulted in 683,504 t CO_{2e} of emission reductions during the verification period 30-09-2008 to 30-12-2008</p>				

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Assessment Team Leader: Thomas Kleiser Assessment Team Members: <ul style="list-style-type: none">• Arturo Lemus (GHG Auditor)• Sergio Degener (GHG Auditor) Trainees: <ul style="list-style-type: none">• None	Veto Person: Javier Castro Certification Body responsible: Rachel Zhang
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Abbreviations

ACM	Approved Consolidated Methodology
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM-EB	CDM Executive Board
CER	Certified Emission Reduction
CMP	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
HCFC22	Chemical component (CHClF ₂)
HFC23	Chemical component (CHF ₃)
CR / CL	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
GWP	Global Warming Potential
IRL	Information Reference List
KP	Kyoto Protocol
MP	Monitoring Plan
MR	Monitoring Report
PDD	Project Design Document
PP	Project Participant
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual



Main Documents (referred to in this report)

Methodology (name / version)	AM0001 Incineration of HFC 23 waste streams version 3	
Scope	11	
Technical Area	11.1	
Registered PDD:	Version 04, 23-05-2006	
Revised Monitoring Plan:	Date of approval 27-11-2009	
	Version	Date
Published Monitoring Report	01	06-01-2009
Revised Monitoring Report	03	13-01-2010
Project documentation link:	http://cdm.unfccc.int/Projects/DB/DNV-CUK1138260062.21/view.html	

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Annex 1: Verification Protocol

Annex 2: Information Reference List



1 INTRODUCTION

1.1 Objective

Quimobasicos S.A de C.V. has commissioned an independent verification by TÜV SÜD Industrie Service GmbH (TÜV SÜD) of its registered CDM project: “Quimobásicos HFC Recovery and Decomposition Project”.

The objective of the verification work is to comply with the requirements of paragraph 62 of the CDM Modalities and Procedures. According to this assessment TÜV SÜD shall:

- ensure that the project activity has been implemented and operated as per the registered PDD “Quimobásicos HFC Recovery and Decomposition Project” Version 04 dated 23-05-2006, and that all physical features (technology, project equipment, monitoring and metering equipment) of the project are in place,
- ensure that the published MR and other supporting documents provided are complete, verifiable and in accordance with applicable CDM requirements,
- ensure that the actual monitoring systems and procedures comply with the monitoring systems and procedures described in the monitoring plan and the approved methodology,
- evaluate the data recorded and stored as per the “AM0001 Incineration of HFC 23 waste streams”, Version 03.

1.2 Scope

The verification scope encompasses an independent and objective review and ex-post determination of the monitored reductions in GHG emissions by the Designated Operational Entity. The verification is based on the submitted monitoring report, the validated project design documents including its monitoring plan and validation report, previous verification reports, the applied monitoring methodology, relevant decisions, clarifications and guidance from the CMP and the EB and any other information and references relevant to the project activity's resulting emission reductions. These documents are reviewed against the requirements of the Kyoto Protocol, the CDM Modalities and Procedures and related rules and guidance.

Based on the requirements of the VVM, TÜV SÜD has applied a rule-based approach for the verification of the project. The principles of accuracy, completeness, relevance, reliability and credibility were combined with a conservative approach to establish a traceable and transparent verification opinion.

The verification considers both quantitative and qualitative information on emission reductions.

The verification is not meant to provide any consultancy towards the client. However, stated requests for clarifications, corrective and/or forward actions may provide input for improvement of the monitoring activities.

1.3 GHG Project Description

Project activity:	“Quimobásicos HFC Recovery and Decomposition Project”
UNFCCC registration number:	0151
Project Participants:	Quimobasicos S.A de C.V.
Location of the project:	25°42'48.62" N / 100°20'07.35" W / elev 543 m
Date of registration:	14-06-2006
Starting date of the crediting period:	14-06-2006

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The project activity involves the installation of an in-flight argon plasma arc facility to decompose the HFC23 generated as by-product of HCFC 22 production of Quimobásicos S.A. de C.V. at their plant in Monterrey, Mexico. As a brief description of the process, the waste gas stream enters into the plasma torch, which is of segmented design, using argon as plasma gas. The argon plasma is generated by a direct current discharge between a cathode and an anode. At typical operating conditions the mean exit enthalpy of the plasma is about 11 MJ/Kg at a mean exit temperature in excess of 10,000°C, under these conditions the decomposition of HFC 23 is almost complete. The installation was finish and operational on 31st March 2006. Batch process of HFC 23 destruction has been implemented by Quimobasicos in order to improve the plasma consumptions.

2 METHODOLOGY

2.1 Verification Process

The verification process is based on the approach depicted in the Validation and Verification Manual.

Standard auditing techniques have been adopted for the verification process. The verification team performs first a desk review, followed by an on-site visit, which results in the formation of a protocol that includes all the findings. The next step involves the evaluation of the findings through direct communication with the PPs and then finally the preparation of the verification report. This verification report and other supporting documents then undergo an internal quality control by the CB “climate and energy” before submission to the CDM-EB.

2.2 Verification Team

The appointment of the verification team takes into account the technical area(s), sectoral scope(s) and relevant host country experience required amongst team members for verifying the ER achieved by the project activity in the relevant monitoring period for this verification.

The verification team consisted of the following members:

Name	Qualification	Coverage of scope	Coverage of technical area	Host country experience
Thomas Kleiser	ATL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Arturo Lemus	GHG-A		-.-	<input checked="" type="checkbox"/>
Sergio Degener	GHG-A		-.-	<input checked="" type="checkbox"/>

Thomas Kleiser is lead auditor for CDM and JI projects at TÜV SÜD Industrie Service GmbH and head of the Certification Body “Climate and Energy”. In his position he is responsible for the implementation of verification and certifications processes for GHG mitigation projects. He has received extensive training in the CDM and JI validation processes and participated already in many CDM and JI project assessments.

Arturo Lemus is a GHG auditor and project manager for CDM activities in Mexico City. In his position he is responsible of coordination for all activities of Validation and Verification of the projects developed in Mexico. He has received extensive training in the CDM validation and verification processes and participated already in several CDM project assessments as auditor.

Sergio Degener was a GHG auditor at the “Carbon Management Service” in the head office of TÜV SÜD Industrie Service GmbH, Germany. Mr. Degener studied environmental engineer at the University of Applied Science in Bingen, Germany. Beside his main focus in studies of environmental economics and law, he dealt with environmental management and environmental controlling issues.

2.3 Review of Documents

The Monitoring Report version 01 submitted by the PP was made publicly available on the UNFCCC website before the verification activities started. The published MR was assessed based on all the relevant documents as listed above. The aim of the assessment in the desk review was to:



- verify the completeness of the data and the information presented in the MR,
- check the compliance of the MR with respect to the monitoring plan depicted in the registered PDD and verify that the applied methodology was carried out. Particular attention to the frequency of measurements, the quality of the metering equipment including calibration requirements, and the quality assurance and quality control procedures was paid,
- evaluate the data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

A complete list of all documents reviewed is available in annex 2 of this report.

2.4 On-site Assessment and follow-up Interviews

During 15-01-2009 to 16-01-2009, TÜV SÜD performed a physical site inspection and on-site interviews with project stakeholders to:

- confirm the implementation and operation of the project,
- review the data flow for generating, aggregating and reporting the monitoring parameters,
- confirm the correct implementation of procedures for operations and data collection,
- cross-check the information provided in the MR documentation with other sources,
- check the monitoring equipment against the requirements of the PDD and the approved methodology, including calibrations, maintenance, etc.,
- review the calculations and assumptions used to obtain the GHG data and ER,
- identify if the quality control and quality assurance procedures are in place to prevent or correct errors or omissions in the reported parameters.
- Emissions of HFC's are controlled under the Kyoto Protocol. There are however no national or regional regulations with restrictions on the emission of HFC 23 in México, this information is verified by the audit team each monitoring period, through the latest information regarding the HFC 23 generated as a by-product of HCFC 22 production released to the atmosphere IRL 27.

A list of the people interviewed during this verification activity is included in annex 2.

2.5 Quality of Evidence to Determine Emission Reductions

Among several evidence items submitted, the following relevant and reliable evidence material have been used by the audit team during the verification process:

- On-site review and printouts of the DCS system
- Protocols of HFC 22 production
- Protocols of HFC 23 generated
- Protocols of electricity consumption
- External Data
- Quality assurance documents
- Compliance check with national requirements concerning HFC 23 emissions



Mass flow of HFC 23 waste gas produced will be measured by two Micro Motion flow meters placed in the entrance of the decomposition facility. The flow meters have an accuracy of $\pm 0.35\%$. The flow meters will be connected to Distributed Control System (DCS) and their data will be archived in the database of the plant.

Sufficient evidence covering the full verification period in the required frequency is available to validate the figures stated in the final MR. The source of the evidence will be discussed in chapter 3 of this report. Specific cross-checks have been done in case further sources were available. The monitoring report's figures were checked by the audit team against the raw data. The data collection system meets the requirements of the monitoring plan as per applied methodology.

2.6 Resolution of Clarification and Corrective and Forward Action Requests

The objective of this phase of the verification process is to resolve any outstanding issues which require clarification for TÜV SÜD's positive conclusion of the achieved GHG emission reduction. The findings raised as Forward Action Requests (FARs) (if any) indicated in previous reports (validation/verification) were discussed during this phase and, issues raised in the FARs were resolved, during communications between the PP and TÜV SÜD.

Concerns raised in the desk review, the on-site audit assessments and the follow up interviews and the responses provided for the raised concerns are documented in Annex 1 (verification protocol) to guarantee the transparency of the verification process.

A Corrective Action Request is raised where TÜV SÜD identifies:

- non-conformities in monitoring and/or reporting with the monitoring plan and/or methodology;
- that the evidence provided is not sufficient to prove conformity;
- mistakes in assumptions, data or calculations that impair the ER;
- FARs stated during validation that are not solved until the on-site visit.

A Clarification Request is raised where TÜV SÜD does not have enough information or the information is not clear in order to confirm a statement or data.

A Forward Action Request is raised where TÜV SÜD identifies that monitoring and/or reporting require special attention or adjustments for the next verification period.

Information or clarifications provided as a response to a CAR, CL or FAR could also lead to a new request.

2.7 Internal Quality Control

As a final step of verification, the final documentation including the verification report and annexes have to undergo an internal quality control by the Certification Body (CB) “climate and energy”, i.e. each report has to be finally approved either by the Head of the CB or the Deputy (a Veto person can be used). In case one of these two persons is part of the assessment team, the approval can only be given by the person who is not a part of the assessment team. If the documents have been satisfactorily approved, the Request for Issuance is submitted to the CDM-EB along with the relevant documents.

3 VERIFICATION RESULTS

In the following sections, the results of the verification are stated. The verification results relate to the project performance as documented and described in the final PDD and Monitoring Report (13-01-2010, version 03), with the revision of MP approved by the EB on 27.11.2009. The verification findings for each verification subject are presented below.

3.1 FARs from Validation / Previous Verification

No FARs have been presented either in the validation report nor in the verification reports.

3.2 Project Implementation in accordance with the registered Project Design Document

The project is fully implemented according to the description presented in the PDD. The verifier confirms, through the visual inspection that all physical features of the proposed CDM project activity including data collecting systems and storage have been implemented in accordance with the registered PDD. The project activity is completely operational and the same has been confirmed on-site.

The wastewater treatment plant at the Quimobásicos plant is in operation, removing fluoride as a solid using calcium hydroxide. The result is a sludge that has to be removed and transported to a landfill outside of the city of Monterrey, Mexico.

Additionally CO₂ emissions due to transportation of solid waste from the water treatment system to the final disposal are estimated to be negligibly small. A total quantity of 308 tonnes of solid waste per year is estimated to be generated. Such solid waste will be transported by trucks along an estimated distance of 30 km.

A CO₂ emission default value per trip is calculated in order to multiply by the number of trips to obtain the total emission for transportation. Every truck entering and leaving the company is weighted so documents were provided to the audit team and crosschecked with the amount of sludge disposed.

3.3 Compliance of the Monitoring Plan with the Monitoring Methodology

The monitoring plan is in accordance with the approved methodology, AM0001 Version 3, applied by the proposed CDM project activity. The revision of the monitoring plan was required due to the wastewater treatment plant of Quimobásicos's plant is in operation, removing fluoride as a solid using calcium hydroxide. The result is a sludge that has to be removed and transported to a landfill outside of the city of Monterrey, Mexico. In order to assess this parameter, the audit team needs to check the number of trucks leaving the project site for transportation the sludge. This parameter was not included in the registered monitoring plan, therefore a revision was requested, the revised MP was approved by the EB on 27-11-2009.

3.4 Compliance of the Monitoring with the Monitoring Plan

The monitoring has been carried out in accordance with the monitoring plan contained in the revised and approved monitoring plan. All parameters were monitored and determined as per the Monitoring Plan.



The verification of the parameters required by the monitoring plan is provided as follows:

Data / Parameter:	q_HFC23y
Data unit:	Tonnes
Description:	Quantity of HFC 23 supplied to the decomposition process
Source of data used:	Two Micro Montions flow meters FIT 201 Series: 11030316 / 3061223 and FIT 202 Series: 11032275 / 3064572 measurer the flow of HFC 23 waste gas produced Mass placed in the entrance of the decomposition facility. The flow meters have an accuracy of +/- 0.35%. The flow meters are connected to Distributed Control System (DCS) and their data is archived in the database of the plant.
Means of verification/Comments:	The DCS values have been checked and confirmed on-site that there is a routine to assure the use of the lowest value of the measurements done by the 2 flowmeters. This has been verified on a sampling basis and no error has been found. Besides this, the values were also confirmed by inspection of the formulas done in the system to assure that the total amount is the result of the addition of the lowest values for every measurement.
Cross-check	The quantity of HCFC 22 produced in the plant generating the HFC23 waste was crosss checked through the production's record. In addition the verification team has cross checked through DCS system that the total value measured by each flow meter during this monitoring period is always higher than the value presented in the excel fiel. As a result it can be confirmed that the reported data are traceable and reliable

Data / Parameter:	P_HFC23y
Data unit:	%
Description:	Purity of the HFC 23 supplied to the decomposition facility
Source of data used:	Is measured by sampling using gas chromatography before entering into the decomposition facility. Verification of the equipment for gas chromatography is carried out according to the instructive CCL-7.602-01 IRL 11, using the HFC 23 standard. The analysis will be repeated in case of doubt regarding its veracity.
Means of verification/Comments:	All the reports produced by the chromatography have been compared with the values presented in the excel file and not error has been found. During the on-site visit Quimobasicos personnel have performed an analysis including sampling and the methods used. These have been verified, thus it can be confirmed that they have been correctly applied.
Cross-check	Quimobasicos personnel performed an analysis including sampling of HFC 23 during the visit on-site, and the verification team can confirm the correct knowledge to perform this activity appropriatly.

Data / Parameter:	(Q_HFC23y)
Data unit:	Tonnes
Description:	Quantity of HFC 23 supplied to the decomposition process after purity adjustments
Source of data used:	Calculated using the data from the quantity of HFC 23 and the purity.
Means of verification/Comments:	The calculation has been performed according to the requirements of the methodology and found to be correct. This information was confirmed through the spreadsheet.
Cross-check	-



Data / Parameter:	ND_HFC23y
Data unit:	Tonnes
Description:	Quantity of HFC 23 in gaseous effluent
Source of data used:	Is measured from the gas effluent of the decomposition facility. In order to determine the quantity of HFC 23 not destroyed. Concerning to the exhaust gas analysis this information is provided by the supplier Gamatek.
Means of verification/Comments:	The exhaust gas analysis is confirmed comparing the values submitted in the MR with the report provided by the supplier Gamatek. The reported figures were found in compliance with the internal procedures of the facility.
Cross-check	The quantity of HFC 23 not destroyed is obtained by multiplying the quantity of gas effluent by the fraction of HFC 23 of such effluent, determined by gas chromatography. The verification team has cross checked the values submitted in the MR through the following reports dated 03-11-08 report 3339/08, 05-11-08 report 3341/08, 12-11-08 report 3342/08, 01-10-08 report 3077/08, 13-10-08 report 3116/08 14-10-08 report 3117/08, 01-12-08 report 3519/08, 03-12-08 report 3520/08, 04-12-08 report 3521/08 (IRL 2-1).

Data / Parameter:	(CO2_NDHFC23)
Data unit:	Tonnes
Description:	Emissions from HFC 23 not destroyed by the decomposition facility
Source of data used:	Calculated using the data from the quantity of HFCE 23 in gaseous effluent.
Means of verification/Comments:	The calculation has been performed according to the requirements of the methodology and found to be correct. This information was confirmed through the spreadsheet.
Cross-check	-

Data / Parameter:	(CO2_HFC23)
Data unit:	Tonnes
Description:	Emissions from HFC 23 decomposition itself.
Source of data used:	Calculated using the data from the quantity of HFC 23 supplied to the decomposition process..
Means of verification/Comments:	The calculation has been performed according to the requirements of the methodology and found to be correct. This information was confirmed through the spreadsheet.
Cross-check	-

Data / Parameter:	(PE)
Data unit:	Tonnes
Description:	Project emissions inside of the boundary
Source of data used:	Calculated using the data from the quantity of emissions from HFC 23 not destroyed and from the decomposition.
Means of verification/Comments:	The calculation has been performed according to the requirements of the methodology and found to be correct. This information was confirmed through the spreadsheet.
Cross-check	-

Data / Parameter:	(Q_HCFC22y)0
Data unit:	Tonnes
Description:	Quantity of HCFC 22 produced in the plant generating the HFC 23 waste

Source of data used:	The production records (log sheets) are daily gathered and manually recorded in paper records and in excel files. The levels in the tanks used for the production of HCFC22 are visually recorded. These levels are then used for the calculation of HCFC22 production.
Means of verification/Comments:	The HCFC22 production has been reviewed through daily log sheets, filled by the operational staff, and have been checked over the whole monitoring period. The reported figures were found in compliance with the internal procedures of the facility..
Cross-check	Cross- checks with internal devices transfer sheets and excel file reports showing the HCFC22 production over the whole monitoring period has been performed. As a result it can be confirmed that the reported data are traceable and reliable.

Data / Parameter:	(HFC23_soldy)
Data unit:	Tonnes
Description:	HFC 23 sold by the facility generating the HFC 23 waste
Source of data used:	Currently this is not applicable, due to the all HFC 23 generation is destroyed in the Quimobasicos facility.
Means of verification/Comments:	N/A
Cross-check	-.

Data / Parameter:	(BQ_HFC23y)
Data unit:	Tonnes
Description:	Baseline quantity of HFCE 23 destroyed
Source of data used:	Estimated taking into account local regulations and using the data from the quantity of HFCE 23 supplied to the decomposition process after purity adjustments.
Means of verification/Comments:	The calculation has been performed according to the requirements of the methodology and found to be correct. This information was confirmed through the spreadsheet.
Cross-check	-

Data / Parameter:	(BEy)
Data unit:	Tonnes
Description:	Baseline Emissions
Source of data used:	Calculated using data from the quantity of HFCE 23 supplied to the decomposition process after purity adjustments and the quantity of HFC 23 destroyed.
Means of verification/Comments:	The calculation has been performed according to the requirements of the methodology and found to be correct. This information was confirmed through the spreadsheet.
Cross-check	-

Data / Parameter:	Q_Steamy
Data unit:	Tonnes
Description:	Steam consumption at the decomposition facility
Source of data used:	Quantity of steam consumed at the decomposition facility. Measured by steam meter SAM tag FIT 06 601.
Means of verification/Comments:	The data have been checked and confirmed through DCS system the total values were verified at the beginning of the period and at the end. However,

	During October to December the use of steam for tracing steam in caustic soda pipes was increased due the low temperatures.
Cross-check	The Quantity of steam consumed at the decomposition facility was cross checked through DCS system and the workbook, in fact the audit team has confirmed the data in real time during the visit on-site.

Data / Parameter:	(E_Steamy)
Data unit:	tCO ₂ /tsteam
Description:	Emission coefficient for steam generation
Source of data used:	Calculated from the boiler specific fuel consumption provided by the steam supplier.
Means of verification/Comments:	Calculated from the boiler specific fuel consumption provided by the steam supplier. According PDD this value is negligible and will continue fixed along the crediting period. The calculation has been performed according to the requirements of the methodology and found to be correct.
Cross-check	-

Data / Parameter:	(CO ₂ _Steamy)
Data unit:	Tonnes
Description:	CO ₂ emissions from fuel combustion for steam generation
Source of data used:	Calculated using the data from the steam consumption at the decomposition facility and the emission coefficient for steam generation.
Means of verification/Comments:	The calculation has been performed according to the requirements of the methodology and found to be correct. This information was confirmed through the spreadsheet.
Cross-check	-

Data / Parameter:	(Q_Powery) I. (Q_Powery) II. (Q_Powery) III.
Data unit:	MWh
Description:	Quantity of electricity consumed for: decomposition + plant of residual water treatment + water treatment system.
Source of data used:	Power meters SAM tag MEE 0002 and SAM tag MEE 0003.
Means of verification/Comments:	The data has been confirmed through pictures with the initial and the last readings obtained from the electricity meters, thus the provided data were traceable from the origin up to the workbook.
Cross-check	-

Data / Parameter:	(E_Powery)
Data unit:	MWh
Description:	CO ₂ emission factor from the isolated power plant supplying electricity to Quimobásicos
Source of data used:	The emission rate is computed from the most recent official information of the local energy supplier of Quimobásicos Iberdrola “Annual report of environment” of 2008 Mix CO ₂ emissions. The emission factor for this monitoring period is 0.3640 tCO ₂ /MWh. Taking into account that this verification is finalizing in 2010, the PP has provided already the data concerning to 2009 (0.3656 tCO ₂ /MWh).
Means of	The official information from the local energy supplier Iberdrola has been

verification/Comments:	provided by the PP has been assessed by the audit team, thus the provided data were traceable from the origin up to the workbook.
Cross-check	-.

Data / Parameter:	CO2_Powery)
Data unit:	Tonnes
Description:	CO2 emissions from electricity generation
Source of data used:	Calculated using the data from the electricity consumption by the decomposition facility and by the plant of residual water treatment.
Means of verification/Comments:	The calculation has been performed according to the requirements of the methodology and found to be correct. This information was confirmed through the spreadsheet.
Cross-check	-

Data / Parameter:	(tCO2 per trip).
Data unit:	tCO2/per trip
Description:	CO2 emissions due to transportation of solid waste from the water treatment system to the final disposal
Source of data used:	Records of the transportation of the sludge's, destination and distance crossed of each one of the shipments.
Means of verification/Comments:	The amount of waste produced has been confirmed by the audit team through the number of trucks leaving the project site for transportation the sludge. Production records concerning the solid waste generated have been provided to the audit team during the visit on-site, and also evidence of each trip..
Cross-check	According to the registered PDD a total quantity of 308 tonnes of solid waste per year is estimated to be generated, The audit team has verified that during this period has performed the following trips regarding the sludges generated in the period: 2 trips of 34.85 tonnes in October, 2 trips of 34.63 tonnes in November, and December two trips of 2.77 tonnes. This information was cross checked through the records of each trip.

Data / Parameter:	(LEy)
Data unit:	Tonnes
Description:	Leakage
Source of data used:	Calculated using the data from the emissions from the fuel combustion for steam generation, electricity from the electricity generation and emissions due to transportation of solid waste from the water treatment system.
Means of verification/Comments:	The calculation has been performed according to the requirements of the methodology and found to be correct. This information was confirmed through the spreadsheet.
Cross-check	-

3.5 Assessment of Data and Calculation of Greenhouse Gas Emission Reductions

All data has been available and all the parameters have been monitored, nevertheless a revision of the monitoring plan has been required due to the wastewater treatment plant at the Quimobásicos plant is in operation, removing fluoride as a solid using calcium hydroxide.

The external data has been verified and all parameters are in line with the requirements.



Most of the internal data is continuously acquired and stored in the computerized System and from these transferred manually to excel sheets or software. This transfer has a risk of human failure. The computerized System “Data acquisition System” (DAS) is storing raw data without any possibilities of intended or unintended overwriting.

All the data have been verified completely, besides the purity of HFC23 analysis for which the verification was made by sampling.

The emission factor of the electricity is provided by Iberdrola, which is the company that provides electricity to Quimobasicos.

The flow of HFC23 before the plasma unit is measure by two flow meters. According to the clarification given by the EB to the request AM_CLA_0019, the method to determine the amount of waste HFC23 flow is determined. The documentation provided by the DAS allows the correct used of this method.

Project documentation has been included in the Quimobasico’s ISO 9001:2000 Quality Management System and ISO 14001:2004 Quality Environmental Systems which are certified by an accredited certification body, this implementation ensure the quality of the CDM monitoring procedures.

The reported data have been cross-checked against other sources available as explained above in chapter 3.4.

The verifier confirms that the methods and formulae used to obtained the baseline, project and leakage emissions are appropriate. The same has been done in accordance with the methods and formulae described in the registered monitoring plan and applicable methodology.

The verifier confirms that the monitoring report includes all parameters and the monitored data at the intervals required by the methodology and PDD.

The verifier confirms that all the assumptions, emission factors and default values have been correctly justified. All the emission factors and default values are explicitly mentioned in the monitoring report.

4 SUMMARY OF FINDINGS

The verifier can confirm that the published MR and related documents are complete and verifiable in accordance with the CDM requirements. All the findings raised by the verification team, the responses by the PPs and the conclusion from the team are presented in Annex 1. The means of verification and resulting changes in the MR or related documents are identified in the following table:

CAR 1, means of verification
<p>This CAR was issued to the PP requesting to include in the MR a statement regarding the events which happened during the period, and the dates of crediting period, submitted in table of the analysis of HFC 23 not destroyed enclosed in the MR, should be corrected.</p> <p>In response, the PP has submitted revised MR with the requested information.</p> <p>The audit team has checked the submitted revised MR against the notes taken during onsite audit and found correct. Hence, this issue is closed.</p>
CAR 1, changes in the MR or related documents
The MR and the spreadsheet has been updated.
CAR 2, means of verification
<p>This CAR was issued to the PP requesting the revision of the monitoring plan due to the wastewater treatment plant at the Quimobásicos plant is in operation, removing fluoride as a solid using calcium hydroxide.</p> <p>In response, the PP has submitted revised MP.</p> <p>The audit team has checked the submitted revised MR against the notes taken during onsite audit and found correct. Hence, this issue is closed.</p>
CAR 2, changes in the MR or related documents
The MR and the spreadsheet has been updated.
CAR 3, means of verification
<p>This CAR was issued to the PP requesting a clarification letter from the supplier Gamatek, regarding to the mistake in the gaseous effluents analysis report</p> <p>In response, the PP has submitted the letter from the supplier Gamatek</p> <p>The audit team has checked the submitted revised MR against the notes taken during onsite audit and found correct. Hence, this issue is closed.</p>
CAR 3, changes in the MR or related documents
The MR has been updated with the required information.
CAR 4, means of verification
<p>This CAR was issued to the PP requesting comparison table of the actual emission reduction claimed in the monitoring period with the estimate in the registered PDD</p> <p>In response, the PP has submitted the MR updated including information on this regards.</p> <p>The audit team has checked the submitted revised MR against the notes taken during onsite audit and considers that the reason provided for this difference is correct taken into account that the increment of the ERs are only due to the increment of HCFC22 production based on increment of demand which has been confirmed based on the expected increase of HCFC22 production during 2008 (IRL 29). Therefore, this issue is closed.</p>
CAR 3, changes in the MR or related documents
The MR and the spreadsheet has been updated.
CAR 5, means of verification



This CAR was issued to the PP requesting the amended of the MR and the spreadsheet concerning to the steam consumption, the clarification of the the emission coefficient for steam generation, values have to be presented by formulas, clarification concerning the emission factor, application of rounded in BE, PE and Leakage.

In response, the PP has submitted the MR and the spreadsheet updated.

The audit team has checked the submitted revised MR and the spreadsheet against the notes taken during onsite audit and found correct. Hence, this issue is closed.

CAR 3, changes in the MR or related documents

The MR and the spreadsheet has been updated.

FAR 1, means of verification

This FAR was issued to the PP requesting to implement a procedure to assess the accuracy of Quimobasicos scale and the landfill scale should be established as follow: In case which the difference of weight between both scales is lower than 1%, the disposition of the sludge should be assured. Otherwise a third party is required.

In addition a monthly control with data records of the weight of the sludge generated during the period is required, as well as to do the stocktaking at the end of each month

In response, the PP has prepared a procedure and the control inventories and said this will be included in next year's verification documents.

The audit team will check this issue in next periodic verification

FAR 1, changes in the MR or related documents

N/A



5 VERIFICATION STATEMENT

TÜV SÜD Industrie Service GmbH has performed the Fifteenth periodic verification of the CDM project: “Quimobasicos HFC and Decomposition Project”. The verification is based on the currently valid documentation of the UN Framework Convention on Climate Change (UNFCCC). The management of Quimobasicos S.A de C.V is responsible for the preparation of the GHG emissions data and the reported GHG emission reductions on the basis set out within the project’s Monitoring Plan indicated in the registered PDD version 04, dated 23-05-2006 and the applied methodology AM0001/ Version03. The request for revising monitoring plan is required due to the wastewater treatment plant at the Quimobásicos plant is in operation, removing fluoride as a solid using calcium hydroxide. The result is a sludge that has to be removed and transported to a landfill outside of the city of Monterrey, Mexico. In order to assess this parameter, the audit team needs to check the number of trucks leaving the project site for transportation the sludge. This parameter was not included in the revised monitoring plan, therefore a revision is requested, Date of approval 27-11-2009.

The verifier can confirm that:

- the development and maintenance of records and reporting procedures are in accordance with the registered monitoring plan;
- the project is operated as planned and described in the project design document approved by the EB;
- the installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately;
- the monitoring system is in place and generates GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements;
- the monitoring plan in Monitoring Report is as per the PDD and monitoring plan approved by the EB;
- the monitoring plan in the approved PDD is as per the applied methodology

Our opinion is based on the project’s GHG emissions and resulting GHG emission reductions reported, which have been both determined through the valid and registered project’s baseline, its monitoring plan and its associated documents.

Based on the information we have seen and evaluated, we confirm the following statement:

Reporting period: 30-09-2008 to 30-12-2008

Verified emissions in the above reporting period:

Baseline emissions:	683,658	t CO _{2e}
Project emissions:	54	t CO _{2e}
Leakage emission:	100	t CO _{2e}
Emission reductions:	683,504	t CO _{2e}

Munich, 21/01/2010

Certification Body “climate and energy”
TÜV SÜD Industrie Service GmbH

Munich, 21/01/2010

Assessment Team Leader



Annex 1: Verification Protocol

Verification Protocol

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1. Project Activity Implementation

1.1. Technology

Project Location (s)			
	PDD Description	Verification Findings(or Results?)	Conclusion and IRL
Site Description / Address:	The Quimobásicos' plant, located in the Municipality of Monterrey, in the northeast of Mexico	The address is clearly submitted in the PDD, as well as in the monitoring report.	<input checked="" type="checkbox"/> (IRL 5)
GSP coordinates:	The GPS coordinates have been confirmed by the audit team, 25°42'48.62" N / 100°20'07.35" W / elev 543 m.	It was confirmed through Google earth.	<input checked="" type="checkbox"/>
Technical Equipment – Main Components			
	PDD Description	Verification Findings(or Results?)	Conclusion and IRL
Equipment Description	Quimobásicos installed an in-flight argon plasma arc facility for the destruction of the waste gas vent stream containing the HFC 23 to the currently operating HCFC 22 manufacturing plant.	The equipment has been observed by the audit team on-site, and works appropriately.	<input checked="" type="checkbox"/>
Component 1: Technical Features	N/A	Plasma Capacity: 60 Kg/hr Manufacturer: SRL Plascon Pty Ltd Commissioning date: 31st March 2006 Serial number: M 0201	<input checked="" type="checkbox"/>
Operation Status during verification			
	Verification Findings		Conclusion

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		and IRL
Approvals / Licenses	The licenses are clearly presented in the plant. These documents are valid and are the signed by the national authorities.	<input checked="" type="checkbox"/> (IRL 5)
Actual Operation Status	Start date of operation (each site if applicable): 31/03/2006 Under construction <input type="checkbox"/> In operation <input checked="" type="checkbox"/> Out of operation <input type="checkbox"/> Reason and date (if out of operation):	<input checked="" type="checkbox"/>
	The project has been implemented and operated in accordance with the description given in the registered PDD (version 04, 23-05-2006, registration date 14-06-2006). This was confirmed by the audit during the visit on-site, and data has been verified in real time through Distributed Control System (DCS).	<input checked="" type="checkbox"/> (IRL 1 and 5)
Remarks on Special Operational Circumstances During the Verification Period	The water treatment system is operating now; this was verified against the production sheets of the plasma. <u>Corrective Action Request No.1.</u> 1.- A statement of the events which happened during the period should be submitted in the MR. 2.- The dates of crediting period, submitted in table of the analysis of HFC 23 not destroyed enclosed in the MR, should be corrected.	CAR (IRL 5)

1.2. Organization

Project Participant (s)		
	Verification Findings	Conclusion and IRL

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Entity / Responsible person:	The responsibilities are clearly defined in the diagram “Organigrama G23” where the responsibilities of all personnel involve in the project are identified. For this period there are not new positions or functions involved in the project, so there are not changes in the document “Organigrama G23”.	<input checked="" type="checkbox"/> (IRL 12)
CDM Project management:	The responsible person is the General Manager.	<input checked="" type="checkbox"/> (IRL 12)

1.3. Quality Management System

General aspects of the Quality Management System		
	Verification Findings	Conclusion and IRL
Quality Management Manual:	There is a quality management system implemented under norm ISO 9001, 2000, the calibration and quality assurance procedures are documented, all the procedures are part of the quality management system.	<input checked="" type="checkbox"/> (IRL 7 to 12)
Responsibilities:	The responsibilities are clearly defined in the diagram “Organigrama G23” where the responsibilities of all personnel involve in the project are identified. For this period there are not new positions or functions involved in the project, so there are not changes in the document “Organigrama G23”.	<input checked="" type="checkbox"/> (IRL 12)
Qualification and Training:	The evidences about the internal qualification of the personnel were reviewed. Documents like training of plasma operation, gas measuring, monitoring procedures and list of participants have been provided.	<input checked="" type="checkbox"/> (IRL 7)
Implementation of QM-system	All the documentation is available on site in the intranet system, and is known by the personal on-site. The verifiers have confirmed on-site the correctly application of the procedures.	<input checked="" type="checkbox"/> (IRL 7 to 12)

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1.4. Outstanding FARs from previous Verifications (or forwarded issues from the validation report)

Outstanding Requests from Previous Verifications	Summary of project owner response	Audit team Conclusion and IRL
None		-

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2. Monitoring Plan Implementation

2.1. Parameters

Parameters					
Meth/tool	PDD	MR	Included in table	Compliance	Conclusion and IRL
q_HFC23y	q_HFC23y	q_HFC23y	2.1- Table 1	Values obtained during the monitoring period were verified through of spread-sheet and production sheets.	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
HFC23y	P_HFC23y	P_HFC23y	Table 2.3 determined by sampling table-1	The purity of the HFC 23 is determiner twice week. Thus an average value is considered.	
	Q_HFC23y	Q_HFC23y	2.1- Table 1	Calculated data.	
ND_HFC23y	ND_HFC23y	ND_HFC23y	Table 2.3 determined by sampling table 2	Calculated data.	
	CO2_NDHF C23y	CO2_NDHFC 23y		Emissions from HFC 23 not destroyed by the decomposition Facility (CO2_NDHFC23y), calculated data.	
	CO2_HFC23y	CO2_HFC23y		CO2 emissions from HFC 23 decomposi, tion itself (CO2_HFC23y), calculated da-ta.	

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Parameters					
Meth/tool	PDD	MR	Included in table	Compliance	Conclusion and IRL
	(PEy)	(PEy)		Project emissions inside of the boundary (PEy), calculated data.	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
	Q_HFC23y	Q_HFC23y		Quantity of HFC 23 supplied to the decomposition process after purity adjustments (Q_HFC23y).	
Q_HCFCy	Q_HCFC22y	Q_HCFC22y	2.2- Table 2	This parameter is in compliance with the PDD and Methodology.	
HFC23_sold	HFC23_sold y	HFC23_soldy	2.2- Table 5	This parameter is in compliance with the PDD and Methodology.	
	BQ_HFC23y	BQ_HFC23y		This parameter is in compliance with the PDD and Methodology.	
	(BEy)	(BEy)		This parameter is in compliance with the PDD and Methodology.	

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Parameters					
Meth/tool	PDD	MR	Included in table	Compliance	Conclusion and IRL
Q_F2,y,y	(Q_Steamy)	(Q_Steamy)	2.2- Table 3	Steam consumption at the decomposition facility (Q_Steamy).	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
	E_Steamy	E_Steamy		Calculated from boiler specific fuel consumption provided by the steam supplier.	
	CO2_Steamy	CO2_Steamy		CO2 emissions from fuel combustion for steam generation (CO2_Steamy), calculated data.	
Q_F1,y,y	Q_Powery	Q_Powery	2.2- Table 4	Electricity consumption by the decomposition facility (Q_Powery). The water treatment system is operating now. However, until October, 2008 the amount of energy of plant of residual water treatment 0.13311 Mw/Mounth, will be continued discounting of the Total Electricity consumption by the decomposition facility (Q_Powery).	<input checked="" type="checkbox"/> (IRL 24)
	E_Powery	E_Powery	2.4- Table 1	CO2 emission factor from the isolated power plant supplying electricity to Quimobásicos (E_Powery). The electricity emission factor is calculated by an external company Iberdrola	

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Parameters					
Meth/tool	PDD	MR	Included in table	Compliance	Conclusion and IRL
	CO2_Powery	CO2_Powery CO2 emissions due to transportation of solid waste	2.5- Table 1	<p>which is the Energy supplier and the data is submitted to Quimobasicos.</p> <p>The emission rate is computed from the most recent official information of the local energy supplier of Quimobásicos; it is updated once a year during the first quarter. Moreover already in 2009 is Update: 0.3656.</p> <p>CO2 emissions from electricity generation (CO2_Powery).</p> <p>CO2 emissions due to transportation of solid waste from the water treatment system to the final disposal (tCO2e).</p> <p><u>Corrective Action Request No.2.</u></p> <p>The request for revising monitoring plan is required, due to the wastewater treatment plant at the Quimobásicos plant is in operation, removing fluoride as a solid using calcium hydroxide.</p>	<p>☑ (IRL 1, 2 and 5)</p>

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Parameters					
Meth/tool	PDD	MR	Included in table	Compliance	Conclusion and IRL
	LEy	LEy		<p><u>Forward Action Request No. 1.</u></p> <p>1.- A procedure to assess the accuracy of Quimobasicos scale and the landfill scale should be established as follow: In case which the difference of weight between both scales is lower than 1%, the disposition of the sludges should be assured. Otherwise a third party is required.</p> <p>2. A monthly control with data records of the weight of the sludges generated during the period is required, as well as to do the stocktaking at the end of each month.</p> <p>Leakage (LEy)</p>	<p><input checked="" type="checkbox"/></p> <p>(IRL 1, 2 and 5)</p>

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2.2. Parameters measured directly with instruments in the field

Table 1

Parameter and instrumentation Information					
	PDD	Meth/Tool	MR	Verification Findings	Conclusion and IRL
Parameter title	Mass flow of HFC 23 waste gas produced.	Quantity of HFC 23 supplied to the destruction process.	Quantity of HFC 23 supplied to the decomposition process (q_HFC23y)	Measured by two flow meters located before entering into the decomposition facility.	☑ (IRL 1, 5 and 28)
Parameter ID (if available)	1	1	1	The parameter ID is consistent with the registered PDD.	☑ (IRL 1, 2 and 5)
Data Unit	Tonnes	Kg/HFC	Tonnes	The data Unit is in accordance with the registered PDD.	☑ (IRL 1, 2 and 5)
Monitoring frequency (reading)	Monthly	Monthly	Monthly	The frequency is in accordance with the registered PDD.	☑ (IRL 1, 2 and 5)
Calibration requirements	Verification of the flow meters will be done by instrument personnel using the pattern flow meters.	All of the measurement instruments are to be recalibrated monthly per internationally accepted procedures except for the HFC	Flow meters calibration every six months and patterns annually.	Flow meters Last calibration 12 August 2009 and next calibration February 2009. Patterns last calibration 15 July 2008	☑ (IRL 23)

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		23 flow meters whose recalibration frequency is weekly to reduce the error level.		and next calibration July 2009. Considering that this monitoring period it's finalizing in 2010 the calibration of 2009 has been provided by the PP, and verified by the audit team.	
Uncertainty level	N/A	N/A	Flow meters +/- 0.35%. Patterns 0.5%		<input checked="" type="checkbox"/> (IRL 5)
Measurement Principle (if applicable)	Mass flow of HFC 23	Mass flow of HFC 23	Mass flow of HFC 23	The measurement principle is in accordance with the registered PDD.	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
	Technical aspects				Conclusion and IRL
Instrument Type:	Flow meters and measuring patterns				
Serial Number:	Flow meters FIT 201 Series: 11030316 / 3061223 FIT 202 Series: 11032275 / 3064572 Patterns FIT 203 11017931 / 3050852				<input checked="" type="checkbox"/> (IRL 5)

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	FIT 204 11032019 / 3064619	
Manufacturer Model Nr.:	Flow meters FIT 06 201 / FIT 06 202 Patterns FIT 06 203 FIT 06 204	<input checked="" type="checkbox"/> (IRL 5)
Specific Location:	Located before entering into the decomposition facility.	<input checked="" type="checkbox"/> (IRL 5)
Measurement Range:	0-2 Kg/min	<input checked="" type="checkbox"/> (IRL 5)
Gaps in operating time of instrument :	Not applicable	<input checked="" type="checkbox"/>
	Default value used: Not applicable	<input checked="" type="checkbox"/>
	Justification: Not applicable	<input checked="" type="checkbox"/>
	QA/QC aspects	Conclusion and IRL
Source of data	The 2 flow meters are connected to the Distributed Control System (DCS) and two patterns for the zero check.	<input checked="" type="checkbox"/> (IRL 5)
	Procedures: Procedure flow meters verification P-7.6-09-A "Verificación de medidores de flujo en línea G23".	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Implementation of procedure: The evidences about the internal qualification of the personnel were reviewed. Documents like training of plasma operation, gas measuring, monitoring procedures and list of participants have been provided.	<input checked="" type="checkbox"/> (IRL 7 to 12)

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	Responsibility: The responsibilities are clearly defined in the diagram “Organigrama G23” where the responsibilities of all personnel involve in the project are identified.	<input checked="" type="checkbox"/> (IRL 7 to 12)
Archiving of raw data and protection measures	The 2 flow meters are connected to the Distributed Control System (DCS), and their data is archived in the database of the plant.	<input checked="" type="checkbox"/> (IRL 7 to 12)
Data transfer and protection of input data for calculations	A specialized software was developed to transfer the flow meters data from the main database to the excel files, only when the system is not working (due a change in the programming) the transfer is done manually, even with this manual transfer the risk is low because the data are not captured or typed, the data is only copied.	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Quality of evidence	Conclusion and IRL
Completeness of data	The DCS values have been checked and confirmed on-site that there is a routine to assure the use of the lowest value of the measurements done by the 2 flowmeters, this has been verified on a sampling basis and no error has been found. Besides this the values were also confirmed by inspection of the formulas done in the system to assure that the total amount is the result of the addition of the lowest values for every measurement. All data provided is enough for the calculation of the emission reductions.	<input checked="" type="checkbox"/> (IRL 1, 5 and 6)
Data verification	Consistency of raw data with calculation tool: During the Fifteenth periodic verification on-site visit, the information regarding Quantity of HFC 23 supplied to the destruction process in the spreadsheet dated 13/01/2010 was reviewed in order to identify the origin of all data.	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Consistency of calculation tool with monitoring report: The method to determine GHG emissions is fully documented base on the validated monitoring plan. The amount of HFC23 waste gas has been calculated as recommended in the clarification AM_CLA_0019 given by the EB.	<input checked="" type="checkbox"/> (IRL 19)
Crosscheck (if available)	Sample cross checking of manual transfers of data: All data which was used in the cal-	<input checked="" type="checkbox"/>

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	ulation sheets was explicitly checked. On a random basis data was checked at their primary source.	(IRL 7 to 12)
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Table 2

Parameter and instrumentation Information					
	PDD	Meth/Tool	MR	Verification Findings	Conclusion and IRL
Parameter title	Quantity of HCFC 22 produced in the plant generating the HFC 23 waste (Q_HCFC22y)	The quantity of HCFC 22 produced in the plant generating the HFC 23 waste	Quantity of HCFC 22 produced in the plant generating the HFC 23 waste (Q_HCFC22y)	Real production G22 is measured through Cells of weight.	<input checked="" type="checkbox"/> (IRL 1, 5 and 28)
Parameter ID (if available)	8	7	8	The parameter ID is consistent with the registered PDD.	<input checked="" type="checkbox"/>
Data Unit	Tonnes	Tonnes / HCFC 22	Tonnes	The data Unit is in accordance with the registered PDD.	<input checked="" type="checkbox"/> (IRL 5 and 6)
Monitoring frequency (reading)	Monthly	Monthly	Monthly	The frequency is in accordance with the registered PDD.	<input checked="" type="checkbox"/> (IRL 5 and 6)
Calibration requirements	In case of external calibration of equipment, the external company will emit the corresponding registry of	N/A	All of the measurement instruments are to be recalibrated monthly per internationally accepted procedures	Last calibration 02 June 08 and the next calibration June 09. Considering that this monitoring pe-	<input checked="" type="checkbox"/> (IRL 23)

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	calibration. These registries will be archived during a year.		except for the HFC 23 flow meters whose recalibration frequency is weekly to reduce the error level.	riod it's finalizing in 2010 the calibration of 2009 has been provided by the PP, and verified by the audit team.	
Uncertainty level	N/A	N/A	0.03%		<input checked="" type="checkbox"/>
Measurement Principle (if applicable)	Real production G22	Real production G22	Real production G22	N/A	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
	Technical aspects				Conclusion and IRL
Instrument Type:	Cell of weight				<input checked="" type="checkbox"/> (IRL 5)
Serial Number:	975369 969970				<input checked="" type="checkbox"/> (IRL 5)
Manufacturer Model Nr.:	WT-01-01 975369 WT-01-02 969970				<input checked="" type="checkbox"/> (IRL 5)
Specific Location:	In plant of production G22				<input checked="" type="checkbox"/> (IRL 5)
Measurement Range:	0 a 12000 kgs				<input checked="" type="checkbox"/>
Gaps in operating time of instrument :	Not applicable				<input checked="" type="checkbox"/>
	Default value used: Not applicable				<input checked="" type="checkbox"/>

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	Justification: Not applicable	<input checked="" type="checkbox"/>
	QA/QC aspects	Conclusion and IRL
Source of data	Production sheets. The production records are daily gathered and manually recorded in paper records and in excel files. The levels in those tanks used for the production of HCFC22 are visually recorded	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Procedures: The control of the preventive maintenance of critical equipment that affects the process is carried out through the P-6.3-10 procedure, to guarantee the good condition of the equipment, as well as the continuity and security of the operation, apart from providing improvements.	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Implementation of procedure: The evidences about the internal qualification of the personnel were reviewed. Documents like training of plasma operation, gas measuring, monitoring procedures and list of participants have been provided.	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Responsibility: The responsibilities are clearly defined in the diagram "Organigrama G23" where the responsibilities of all personnel involve in the project are identified.	<input checked="" type="checkbox"/> (IRL 7 to 12)
Archiving of raw data and protection measures	Reports from the equipment are archived as paper and digitally, including the spreadsheets.	<input checked="" type="checkbox"/> (IRL 7 to 12)
Data transfer and protection of input data for calculations	The transfer is done manually.	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Quality of evidence	Conclusion and IRL
Completeness of data	The data submitted were verified on site through the spreadsheet, frequency of data reported is according to the methodology and PDD.	<input checked="" type="checkbox"/> (IRL 5 and

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	All data provided is enough for the calculation of the emission reductions.	6)
Data verification	Consistency of raw data with calculation tool: During the Fifteenth periodic verification on-site visit, the information regarding Quantity of HCFC 22 produced in the spread-sheet dated 13/01/2010 was reviewed in order to identify the origin of all data. Daily log sheets, filled by the operational staff, have been checked over the whole period and found to be in compliance with the reported figures.	☑ (IRL 7 to 12)
	Consistency of calculation tool with monitoring report: The method to determine GHG emissions is fully documented base on the validated monitoring plan. The amount of HFC23 waste gas has been calculated as recommended in the clarification AM_CLA_0019 given by the EB.	☑ (IRL 19)
Crosscheck (if available)	Sample cross checking of manual transfers of data: Cross- checks with internal devices transfer sheets and excel file reports showing the HCFC22 production over the whole period has been performed. As a result it can be confirmed that the reported data are traceable and reliable.	☑ (IRL 7 to 12)

Table 3

Parameter and instrumentation Information					
	PDD	Meth/Tool	MR	Verification Findings	Conclusion and IRL
Parameter title	Steam consumption at the decomposition facility (Q_Steamy)	N/A	Steam consumption at the decomposition facility (Q_Steamy)	Measured by steam meter. Quantity of steam consumed at the decomposition facility. During October to December the use of steam for	☑ (IRL 1 and 5)

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				tracing steam in caustic soda pipes was increased due the low temperatures.	
Parameter ID (if available)	12	N/A	12	The parameter ID is consistent with the registered PDD.	<input checked="" type="checkbox"/>
Data Unit	Tonnes	Kg/steam	Tonnes	The data Unit is consistent with the registered PDD.	<input checked="" type="checkbox"/> (IRL 5 and 6)
Monitoring frequency (reading)	Monthly	Monthly	Monthly	The frequency is in accordance with the registered PDD.	<input checked="" type="checkbox"/> (IRL 5 and 6)
Calibration requirements	In case of external calibration of equipment, the external company will emit the corresponding registry of calibration. These registries will be archived during a year.	All of the measurement instruments are to be recalibrated monthly per internationally accepted procedures except for the HFC 23 flow meters whose recalibration frequency is weekly to reduce the error level.	Yearly for the steam meter, Transmitter of temperature line steam and Transmitter of pressure	-The last calibration of the steam meter was 07 June 08 and the next calibration June 09 -Last calibration of Transmitter of pressure 02 June 08 and the next calibration June 09. -Last calibration for the Transmitter of temperature 30 May 08 and the next calibration May 09.	<input checked="" type="checkbox"/> (IRL 23)

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				Considering that this monitoring period it's finalizing in 2010 the calibration of 2009 has been provided by the PP, and verified by the audit team.	
Uncertainty level	N/A	N/A	+/- 0.95 % Steam meter +/- 0.12% Transmitter of temperature +/- 0.2% Transmitter of pressure		<input checked="" type="checkbox"/> (IRL 5)
Measurement Principle (if applicable)	N/A	N/A	Quantity of steam consumed at the decomposition facility.	N/A	<input checked="" type="checkbox"/> (IRL 5)
	Technical aspects				Conclusion and IRL
Instrument Type:	Steam measurer Temperature transmitter Transmitter of pressure line steam				<input checked="" type="checkbox"/> (IRL 5)
Serial Number:	Steam measurer 0020281 Temperature transmitter 830053 041E6				<input checked="" type="checkbox"/> (IRL 5)

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	Transmitter of pressure 27E745171U	
Manufacturer Model Nr.:	Steam measurer SAM tag: FIT 06 601 Temperature transmitter Sam tag: TT 06 601 Transmitter of pressure SAM tag: PIT 06 601	<input checked="" type="checkbox"/> (IRL 5)
Specific Location:	In plant to decompose the waste gas	<input checked="" type="checkbox"/> (IRL 5)
Measurement Range:	Steam measurer 0 a 50 kg/hr Temperature transmitter 0 to 200°C Transmitter of pressure 0 to 14kg/cm2	<input checked="" type="checkbox"/> (IRL 5)
Gaps in operating time of instrument :	Not applicable	<input checked="" type="checkbox"/>
	Default value used: Not applicable	<input checked="" type="checkbox"/>
	Justification: Not applicable	<input checked="" type="checkbox"/>
	QA/QC aspects	Conclusion and IRL
Source of data	Steam Meter	<input checked="" type="checkbox"/> (IRL 5)
	Procedures: Calibration / maintenance requirements are met. Whenever required calibration procedures are correctly applied by Quimobasicos by ordering Third Parties to deliver this service. Records are kept in the files and electronic and can be provided completely on request	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Implementation of procedure: All necessary maintenance and quality assurance measures are performed by the quality management system. There is a quality management system implemented and certified under ISO 9001 2000 and ISO 14001:2004 standards, the calibration and quality assurance procedures are documented, all the proce-	<input checked="" type="checkbox"/> (IRL 7 to 12)

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	dures are part of the quality management system.	
	Responsibility: The responsibilities are clearly defined in the diagram “Organigrama G23” where the responsibilities of all personnel involve in the project are identified.	<input checked="" type="checkbox"/> (IRL 7 to 12)
Archiving of raw data and protection measures	Distributed control system (DCS)	<input checked="" type="checkbox"/> (IRL 7 to 12)
Data transfer and protection of input data for calculations	The data is saved in the System in magnetic tapes and/or in hard disks and also in physical form by the operators. This data is transferred to the calculation sheets automatically. The same is twice controlled. All data sources are clearly referenced.	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Quality of evidence	Conclusion and IRL
Completeness of data	The data have been checked and confirmed through DCS system the total values were verified at the beginning of the period and at the end. However, During October to December the use of steam for tracing steam in caustic soda pipes was increase d due the low temperatures.	<input checked="" type="checkbox"/> (IRL 1, 5 and 5)
Data verification	Consistency of raw data with calculation tool: During the Fifteenth periodic verification on-site visit, the information regarding Quantity of steam consumed in the spreadsheet dated 13/01/2010 was reviewed in order to identify the origin of all data. Daily log sheets, filled by the operational staff, have been checked over the whole period and found to be in compliance with the reported figures.	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Consistency of calculation tool with monitoring report: The method to determine GHG emissions is fully documented base on the validated monitoring plan.	<input checked="" type="checkbox"/> (IRL 19)
Crosscheck (if available)	Sample cross checking of manual transfers of data: Cross- checks with internal devices transfer sheets and excel file reports showing the steam consumed over the whole pe-riod has been performed. As a result it can be confirmed that the reported data are	<input checked="" type="checkbox"/> (IRL 7 to 12)

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	traceable and reliable.	
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Table 4

Parameter and instrumentation Information					
	PDD	Meth/Tool	MR	Verification Findings	Conclusion and IRL
Parameter title	Electricity consumption by the decomposition facility (Q_Powery)	Electricity consumption by the destruction process Q_F1,y,y	-(Q_Powery) I. Electricity consumption by the decomposition facility -(Q_Powery) II. Electricity consumption by the plant of residual water treatment. -(Q_Powery) III Total Electricity consumption by the decomposition facility.	Measured using electricity meters.	<input checked="" type="checkbox"/> (IRL 1, 5 and 28)
Parameter ID (if available)	15	5	15	The parameter ID is consistent with the registered PDD.	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
Data Unit	MWh	kWh	MWh	The data Unit is consistent with the registered PDD.	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
Monitoring frequency (reading)	Monthly	Monthly	Monthly	The frequency is in	<input checked="" type="checkbox"/>

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				accordance with the registered PDD.	(IRL 1, 2 and 5)
Calibration requirements	In case of external calibration of equipment, the external company will emit the corresponding registry of calibration. These registries will be archived during a year.	All of the measurement instruments are to be recalibrated monthly per internationally accepted procedures except for the HFC 23 flow meters whose recalibration frequency is weekly to reduce the error level.	Required Calibration frequency once a year.	<p>Meter SAM tag MEE 0001 and SAM tag MEE 0002, the Last calibration was in May 27 08 and the next calibration May 09</p> <p>Meter SAM tag MEE 0003 last calibration was August 06, 2008 and the next calibration August 2009.</p> <p>Considering that this monitoring period it's finalizing in 2010 the calibration of 2009 has been provided by the PP, and verified by the audit team.</p>	<input checked="" type="checkbox"/> (IRL 23)
Uncertainty level	N/A	N/A	+/- 0.175%		<input checked="" type="checkbox"/> (IRL 5)
Measurement Principle (if applicable)	N/A	N/A	Measurer the electricity consumption	N/A	<input checked="" type="checkbox"/>

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		from the facility.	(IRL 5)
	Technical aspects		Conclusion and IRL
Instrument Type:	Electricity meters		<input checked="" type="checkbox"/> (IRL 5)
Serial Number:	SAM tag: MEE 0001 036010213 SAM tag: MEE 0002 036017245 SAM tag: MEE 0003 0036009425		<input checked="" type="checkbox"/> (IRL 5)
Manufacturer Model Nr.:	SAM tag: MEE 0001 SAM tag: MEE 0002 SAM tag: MEE 0003		<input checked="" type="checkbox"/> (IRL 5)
Specific Location:	In plant to decompose the waste gas and in water treatment system.		<input checked="" type="checkbox"/>
Measurement Range:	0.000 a 9.99xE15		<input checked="" type="checkbox"/>
Gaps in operating time of instrument :	Not applicable		<input checked="" type="checkbox"/>
	Default value used: Not applicable		<input checked="" type="checkbox"/>
	Justification: Not applicable		<input checked="" type="checkbox"/>
	QA/QC aspects		Conclusion and IRL
Source of data	Electricity meters		<input checked="" type="checkbox"/> (IRL 5)
	Procedures: Calibration / maintenance requirements are met. Whenever required calibration procedures are correctly applied by Quimobasicos by ordering Third Parties to		<input checked="" type="checkbox"/> (IRL 7 to

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	deliver this service. Records are kept in the files and electronic and can be provided completely on request	12)
	Implementation of procedure: The evidences about the internal qualification of the personnel were reviewed. Documents like training of plasma operation, gas measuring, monitoring procedures and list of participants have been provided.	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Responsibility: The responsibilities are clearly defined in the diagram "Organigrama G23" where the responsibilities of all personnel involve in the project are identified.	<input checked="" type="checkbox"/> (IRL 7 to 12)
Archiving of raw data and protection measures	PC	<input checked="" type="checkbox"/>
Data transfer and protection of input data for calculations	The transfer is done manually.	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Quality of evidence	Conclusion and IRL
Completeness of data	The data has been confirmed through pictures with the initial and the last readings obtained from the electricity meters, thus the provided data were traceable from the origin up to the workbook. All data provided is enough for the calculation of the emission reductions.	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
Data verification	Consistency of raw data with calculation tool: The method to determine GHG emissions is fully documented base on the validated monitoring plan.	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Consistency of calculation tool with monitoring report: The method to determine GHG emissions is fully documented base on the validated monitoring plan.	<input checked="" type="checkbox"/> (IRL 19)
Crosscheck (if available)	Sample cross checking of manual transfers of data: All data which was used in the calculation sheets was explicitly checked. On a random basis data was checked at their	<input checked="" type="checkbox"/>

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	primary source. A spot check was done in the cases where an average was used for the calculation, only when the amount of data was too big.	(IRL 7 to 12)
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Table 5

Parameter and instrumentation Information					
	PDD	Meth/Tool	MR	Verification Findings	Conclusion and IRL
Parameter title	HFC23 sold by the facility generating the HFC23 waste.	HFC23 sold by the facility generating the HFC23 waste.	HFC23 sold by the facility generating the HFC23 waste	The title of the parameter is consistent with the registered PDD.	<input checked="" type="checkbox"/> (IRL 1 and 5)
Parameter ID (if available)	9	9	9	The ID is consistent with the registered PDD.	<input checked="" type="checkbox"/> (IRL 1 and 5)
Data Unit	tHFC23	tHFC23	tHFC23	The data Unit is in accordance with the registered PDD.	<input checked="" type="checkbox"/> (IRL 1 and 5)
Monitoring frequency (reading)	Annually	Annually	Annually	The frequency is in accordance with the registered PDD.	<input checked="" type="checkbox"/> (IRL 1 and 5)
Calibration requirements	N/A	N/A	N/A		<input checked="" type="checkbox"/> (IRL 1 and 5)
Uncertainty level	N/A	N/A	N/A		<input checked="" type="checkbox"/> (IRL 1 and 5)

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Measurement Principle (if applicable)	N/A	N/A	N/A		<input checked="" type="checkbox"/> (IRL 1 and 5)
	Technical aspects				Conclusion and IRL
Instrument Type:	Not Applicable				<input checked="" type="checkbox"/> (IRL 1 and 5)
Serial Number:	Not Applicable				<input checked="" type="checkbox"/> (IRL 1 and 5)
Manufacturer Model Nr.:	Not Applicable				<input checked="" type="checkbox"/> (IRL 5)
Specific Location:	Not Applicable				<input checked="" type="checkbox"/> (IRL 5)
Measurement Range:	Not Applicable				<input checked="" type="checkbox"/> (IRL 5)
Gaps in operating time of instrument :	Not applicable				<input checked="" type="checkbox"/>
	Default value used: Not applicable				<input checked="" type="checkbox"/>
	Justification: Not applicable				<input checked="" type="checkbox"/>
	QA/QC aspects				Conclusion and IRL

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Source of data	Type: It is obtained from production records of the facility	<input checked="" type="checkbox"/> (IRL 5, 6 and 20)
	Procedures: Internal procedures have been implemented in the facility, regarding the production records through Log Books.	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Implementation of procedure: Operational procedure "Determinación de %G23 En corriente de gases hacia Unidad de Plasma y ventila de planta G22"	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Responsibility: The responsibilities are clearly defined in the diagram "Organigrama G23" where the responsibilities of all personnel involve in the project are identified.	<input checked="" type="checkbox"/> (IRL 7 to 12)
Archiving of raw data and protection measures	Monthly movements of stock during the monitoring period are electronically archived in order to determine the quantity of HFC23.	<input checked="" type="checkbox"/> (IRL 7 to 12)
Data transfer and protection of input data for calculations	The transfer is done manually.	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Quality of evidence	Conclusion and IRL
Completeness of data	Sufficient evidence was available for verification.	<input checked="" type="checkbox"/> (IRL 1, 5 and 6)
Data verification	Consistency of raw data with calculation tool: Not applicable	<input checked="" type="checkbox"/> (IRL 7 to 12)

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	Consistency of calculation tool with monitoring report: The method to determine GHG emissions is fully documented base on the validated monitoring plan.	<input checked="" type="checkbox"/> (IRL 19)
Crosscheck (if available)	Not applicable.	<input checked="" type="checkbox"/>

2.3. Parameters measured through sampling

Table 1

Parameter and instrumentation Information					
	PDD	Meth/Tool	MR	Verification Findings	Conclusion and IRL
Parameter title	Purity of the HFC 23 supplied to the decomposition process (P_HFC23y)	Purity of the HFC 23 supplied to the decomposition process (P_HFC23y)	Purity of the HFC 23 supplied to the decomposition process (P_HFC23y)	The title of the parameter is consistent with the registered PDD.	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
Parameter ID (if available)	2	2	2	The ID is consistent with the registered PDD.	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
Data Unit	%	%	% / KG for the scale	The data Unit is consistent with the registered PDD	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
Monitoring frequency (reading)	Monthly	Monthly	Monthly	The frequency is in accordance with the registered PDD.	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)

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Calibration requirements	Calibration / maintenance requirements are met. Whenever required calibration procedures are correctly applied by Quimobásicos by ordering	All of the measurement instruments are to be recalibrated monthly per internationally accepted procedures except for the HFC 23 flow meters whose recalibration frequency is weekly to reduce the error level.	Yearly for the chromatograph and every 4 months for the scale.	<p>Last calibration of the chromatograph 27 August 2008 and the next calibration August 2009.</p> <p>Last calibration of the scale 30 September 08 and the next calibration date January 09</p> <p>Considering that this monitoring period it's finalizing in 2010 the calibration of 2009 has been provided by the PP, and verified by the audit team.</p>	<input checked="" type="checkbox"/> (IRL 23)
Uncertainty level	N/A	N/A	+/- 0.02% for the scale		<input checked="" type="checkbox"/> (IRL 5)
Measurement Principle (if applicable)	Sample Purity of the HFC 23	Sample Purity of the HFC 23	Sample Purity of the HFC 23	This measurement principle is in accordance with the PDD.	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
	Technical aspects				Conclusion and IRL
Instrument Type:	Chromatograph and Scale				<input checked="" type="checkbox"/>

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		(IRL 5)
Serial Number:	Chromatograph 2612A07449/ US10723009 Scale 12919502	<input checked="" type="checkbox"/> (IRL 5)
Manufacturer Model Nr.:	Chromatograph HP 5890/HP7890 Scale AND	<input checked="" type="checkbox"/> (IRL 5)
Specific Location:	Laboratory	<input checked="" type="checkbox"/> (IRL 5)
Measurement Range:	Chromatograph 0.000000 a 100% Scale 0 to 2.100 kg	<input checked="" type="checkbox"/> (IRL 5)
Gaps in operating time of instrument :	Not applicable	<input checked="" type="checkbox"/>
	Default value used: Not applicable	<input checked="" type="checkbox"/>
	Justification: Not applicable	<input checked="" type="checkbox"/>
	QA/QC aspects	Conclusion and IRL
Source of data	Type: Digital sampling reports. Measured using gas chromatography	<input checked="" type="checkbox"/> (IRL 5)
	Procedures: Verification of the equipment for gas chromatography is carried out according to the instructive CCL-7.602-01, using the HFC 23 standard. The analysis should be repeated in case of doubt regarding its veracity.	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Implementation of procedure: The evidences about the internal qualification of the personnel were reviewed. Documents like training of plasma operation, gas measuring, monitoring procedures and list of participants have been provided.	<input checked="" type="checkbox"/> (IRL 7 to 12)

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	Responsibility: The responsibilities are clearly defined in the diagram “Organigrama G23” where the responsibilities of all personnel involve in the project are identified.	<input checked="" type="checkbox"/> (IRL 7 to 12)
Archiving of raw data and protection measures	Reports from the equipment are archived as paper and digitally, including the spreadsheets.	<input checked="" type="checkbox"/> (IRL 7 to 12)
Data transfer and protection of input data for calculations	The transfer is done manually.	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Quality of evidence	Conclusion and IRL
Completeness of data	All the reports produced by the chromatographies have been compared with the values presented in the excel file and not error has been found. During the on-site visit Quimobásicos personnel have performed an analysis including sampling and the methods used. These have been verified, thus it can be confirmed that they have been correctly applied.	<input checked="" type="checkbox"/> (IRL 1, 5 and 6)
Data verification	Consistency of raw data with calculation tool: Determined by sampling, before entering into the decomposition facility an average value is considered at end of the month. The chromatographic method repeatability is calculated on the basis of gas injected chromatography (10 samples gas) versus standard gas HFC 23 and determine statistically the repeatability, the standard deviation is discounted and the values presented in the excel file are clearly addressed by the statistical study enclosed in the spreadsheet. The Weekly chromatography analyses were reviewed and positive introduced in the spreadsheet (Planilla para soporte de reporte de monitoreo- excel file, dated January 13, 2010.	<input checked="" type="checkbox"/> (IRL 7 to 12)

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	Consistency of calculation tool with monitoring report: The method to determine GHG emissions is fully documented base on the validated monitoring plan.	<input checked="" type="checkbox"/> (IRL 19)
Crosscheck (if available)	Not applicable.	<input checked="" type="checkbox"/>

Table 2

Sampling information					
	PDD	Meth/Tool	MR	Verified	Conclusion and IRL
Parameter title	Quantity of HFC 23 in gaseous effluent (ND_HFC23y	Quantity of HFC 23 in gaseous effluent	Quantity of HFC 23 in gaseous effluent (ND_HFC23y	The title of the parameter is consistent with the registered PDD.	<input checked="" type="checkbox"/> (IRL 12)
Parameter ID (if available)	4	4	4	The parameter ID is consistent with the registered PDD.	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
Data Unit	Tonnes	Tonnes	Tonnes	The data unit is in consistent with the registered PDD.	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
Sampling frequency	Monthly	Monthly	Monthly	The frequency in accordance with the registered PDD	<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
Sampling point	Plasma	Plasma	Plasma		<input checked="" type="checkbox"/> (IRL 1, 2 and 5)
Uncertainty level	N/A	N/A			<input checked="" type="checkbox"/>

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	Technical aspects	Conclusion and IRL
Sampling Principle:	It is measured from the gas effluent of the decomposition facility. In order to determine the quantity of HFC 23 not destroyed, this project activity proposes to measure the quantity of the gas effluent released to the atmosphere using a flow meter, and to determine the fraction of HFC 23 of such effluent by gas chromatography. The quantity of HFC 23 not destroyed is obtained by multiplying the quantity of gas effluent by the fraction of HFC 23 of such effluent.	<input checked="" type="checkbox"/>
Methodology of Sampling:	Verification of the equipment for gas chromatography is carried out according to the instructive CCL-7.602-01, using the HFC 23 standard. The analysis should be repeated in case of doubt regarding its veracity..	<input checked="" type="checkbox"/> (IRL 7 to 12)
Sample Analysed by:	Gamatek	<input checked="" type="checkbox"/>
Certification of Analyser/ Laboratory:	Gamatek is an environmental testing firm that offers stack testing, industrial hygiene and indoor air quality tests, ambient air analysis and gas flow and volume gauge calibrations. It is accredited by EMA (mexican accreditation organization) as an Environmental Testing Laboratory and as a Calibration Laboratory.	<input checked="" type="checkbox"/>
Methodology of Sample Analysis (if applicable)	The analysis is performed by the supplier Gamatek. The method used for chromatographic analysis is ME-USEPA TO-14. This method was submitted to the verification team.	<input checked="" type="checkbox"/>
Measurement Range:	Limit of detection: 0.2 ppb of HFC23 and HFC 22	<input checked="" type="checkbox"/>
Gaps in sampling frequency	Period: N/A	<input checked="" type="checkbox"/>
	Default value used: N/A	<input checked="" type="checkbox"/>
	Justification: N/A	<input checked="" type="checkbox"/>
	QA/QC aspects	Conclusion

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		and IRL
Source of data	<p>Exhaust gas analysis reported from Gamatek laboratory, the period information was verified by the audit team.</p> <p>The customer provided a copy of the reports dated 03-11-08 report 3339/08, 05-11-08 report 3341/08, 12-11-08 report 3342/08, 01-10-08 report 3077/08, 13-10-08 report 3116/08, 14-10-08 report 3117/08, 01-12-08 report 3519/08, 03-12-08 report 3520/08, 04-12-08 report 3521/08 (IRL 2-1).</p> <p><u>Corrective Action Request No.1.</u></p> <p>Please submit to the DOE a clarification letter from the supplier Gamatek, regarding to the mistake in the gaseous effluents analysis report, in accordance with the sample value of trifluoromethane, ppbv (Canister Nr. 1327), taken on December 03, 2008. A new report from the supplier with corrected values should be submitted to the DOE.</p> <p>MR and spreadsheet should be updated.</p>	CAR (IRL 21)
	Procedures: Verification of the equipment for gas chromatography will be carried out according to the instructive CCL-7.602-01, using the HFC 23 standard. The analysis will be repeated in case of doubt regarding its veracity.	<input checked="" type="checkbox"/> (IRL 7)
	Implementation of procedure:	<input checked="" type="checkbox"/>
	Responsibility: The responsibilities are clearly defined in the diagram "Organigrama G23" where the responsibilities of all personnel involve in the project are identified	<input checked="" type="checkbox"/> (IRL 12)
	Representativeness: The sampling is representative for the period in accordance with the MP.	<input checked="" type="checkbox"/> (IRL 19)
	Reproducibility:	<input checked="" type="checkbox"/>
Archiving of raw data and protection measures	Reports from the equipment are archived as paper and digitally, including the spreadsheets.	<input checked="" type="checkbox"/> (IRL 6)
Data transfer and protection of input	The transfer is performed manually to input data for calculations, it is realised by the	<input checked="" type="checkbox"/>

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data for calculations	personnel of laboratory.	(IRL 7 to 12)
	Quality of evidence	Conclusion and IRL
Completeness of data	The data submitted were verified on site through the spreadsheet, frequency of data reported is according to the methodology and PDD. All data provided is enough for the calculation of the emission reductions.	<input checked="" type="checkbox"/> (IRL 1 and 6)
Data verification	Consistency of raw data with calculation tool: The data is saved in the System in magnetic tapes and/or in hard disks and also in physical form by the operators	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Consistency of calculation tool with monitoring report: The method to determine GHG emissions is fully documented base on the validated monitoring plan.	<input checked="" type="checkbox"/> (IRL 19)
Crosscheck (if available)	N/A.	<input checked="" type="checkbox"/>

2.4. Parameters obtained through external sources and accounting data

Table 1

External sources and accounting information					
	PDD	Meth/Tool	MR	Verified	Conclusion and IRL
Parameter title	CO2 emission factor from the isolated power plant supplying electricity to	N/A	CO2 emission factor from the isolated power plant supplying electricity to	The emission rate is computed from the most recent official information of the	<input checked="" type="checkbox"/> (IRL 1 and 5)

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	Quimobásicos (E_Powery)		Quimobásicos (E_Powery)	local energy supplier of Quimobasicos.	
Parameter ID (if available)	16	N/A	16	The ID is consistent with the registered PDD.	<input checked="" type="checkbox"/> (IRL 1 and 5)
Data Unit	tCO2e/ MWh	N/A	tCO2e/ MWh	The data Unit is in accordance with the registered PDD.	<input checked="" type="checkbox"/> (IRL 1 and 5)
	Technical aspects				Conclusion and IRL
Description of Data / Data Refers to:	The emission rate is computed from the most recent official information of the local energy supplier of Quimobasicos.				<input checked="" type="checkbox"/> (IRL 24)
Date of Data:	2006				<input checked="" type="checkbox"/>
Gaps in data	Period: Not applicable				<input checked="" type="checkbox"/>
	Default value used: Not applicable				<input checked="" type="checkbox"/>
	Justification: Not applicable				<input checked="" type="checkbox"/>
	QA/QC aspects				Conclusion and IRL
Source of data	Type: For 2007, Iberdrola has provided with monthly electricity emission factor of 2006, which is the recent data, the calculation of the new emission factor is less conservative than the emission factor of 2006, Quimobasicos has decided to continue using electricity emission factor 2006, this information has been provided to the DOE.				<input checked="" type="checkbox"/> (IRL 24)
	Responsibility: The responsibilities are clearly defined in the diagram "Organigrama G23" where the responsibilities of all personnel involve in the project are identified.				<input checked="" type="checkbox"/> (IRL 24)

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	For this period there are not new positions or functions involved in the project, so there are not changes in the document "Organigrama G23".	
	Representativeness: Iberdrola has provided with monthly electricity emission factor of 2006, which is the recent data	<input checked="" type="checkbox"/> (IRL 24)
Reliability of Data Source:	The emission rate is computed from the most recent official information.	<input checked="" type="checkbox"/> (IRL 24)
Is the Data up-to-date?	The date is the most recent.	<input checked="" type="checkbox"/> (IRL 24)
Archiving of raw data and protection measures	The IT system in use is very powerful. All the management of the information is correctly describe.	<input checked="" type="checkbox"/> (IRL 7)
Data transfer and protection of input data for calculations	The transfer is performed manually to input data for calculations, it is realised by the personnel of laboratory.	<input checked="" type="checkbox"/> (IRL 7)
	Quality of evidence	Conclusion and IRL
Completeness of data	The data submitted were verified on site through the spreadsheet, frequency of data reported is according to the methodology and PDD. All data provided is enough for the calculation of the emission reductions.	<input checked="" type="checkbox"/> (IRL 1 and 6)
Data verification	Consistency of raw data with calculation tool: The data is saved in the System in magnetic tapes and/or in hard disks and also in physical form by the operators	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Consistency of calculation tool with monitoring report: The method to determine GHG emissions is fully documented base on the validated monitoring plan	<input checked="" type="checkbox"/> (IRL 19)
Crosscheck (if available)	The data for the import of key parameters from internal sources such as production and laboratory reports had been provided to the audit team and are available in a highly structured manner as part of the Workbook. The provided data were traceable from the	<input checked="" type="checkbox"/> (IRL 6)

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	origin up to the workbook.	
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Table 2

External sources and accounting information					
	PDD	Meth/Tool	MR	Verified	Conclusion and IRL
Parameter title	Emission coefficient for steam generation (E_Steamy)	N/A	Emission coefficient for steam generation (E_Steamy)	The title of the parameter is consistent with the applied in the registered PDD	<input checked="" type="checkbox"/> (IRL 1 and 5)
Parameter ID (if available)	13	N/A	13	The parameter ID is consistent with the registered PDD	<input checked="" type="checkbox"/> (IRL 1 and 5)
Data Unit	tCO2e/ steam	N/A	tCO2e/ steam		<input checked="" type="checkbox"/> (IRL 1 and 5)
	Technical aspects				Conclusion and IRL
Description of Data / Data Refers to:	Calculated from the boiler specific fuel consumption provided by the steam supplier, According PDD this value is negligible and will continue fixed along the crediting period.				<input checked="" type="checkbox"/> (IRL 1 and 5)
Date of Data:	Balance Nacional de Energía 2003", Subsecretaría de Planeación Energética y Desarrollo Tecnológico, Secretaría de Energía, México, 2004.				<input checked="" type="checkbox"/>
Gaps in data	Period: Not applicable				<input checked="" type="checkbox"/>

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	Default value used: Not applicable	<input checked="" type="checkbox"/>
	Justification: Not applicable	<input checked="" type="checkbox"/>
	QA/QC aspects	Conclusion and IRL
Source of data	Emissions from fuel consumption for steam generation are determined multiplying the quantity of steam consumed at the decomposition facility by the emission coefficient for steam generation (in tonnes of CO2 per tonne of steam).	<input checked="" type="checkbox"/> (IRL 1 and 5)
	Responsibility: The responsibilities are clearly defined in the diagram "Organigrama G23" where the responsibilities of all personnel involve in the project are identified. For this period there are not new positions or functions involved in the project, so there are not changes in the document "Organigrama G23".	<input checked="" type="checkbox"/> (IRL 12)
	Representativeness: The data obtained is representative.	<input checked="" type="checkbox"/> (IRL 1 and 5)
Reliability of Data Source:	It has been verified that emission coefficient was calculated in a reliable way.	<input checked="" type="checkbox"/> (IRL 1 and 5)
Is the Data up-to-date?	The data has been fixed ex-ante.	<input checked="" type="checkbox"/> (IRL 1)
Archiving of raw data and protection measures	The IT system in use is very powerful. All the management of the information is correctly describe.	<input checked="" type="checkbox"/> (IRL 7)
Data transfer and protection of input data for calculations	The transfer is performed manually to input data for calculations, it is realised by the personnel of laboratory.	<input checked="" type="checkbox"/> (IRL 7)
	Quality of evidence	Conclusion and IRL

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Completeness of data	The data submitted were verified on site through the spreadsheet, calculated from the boiler specific fuel consumption provided by the steam supplier fixed ex-ante in the PDD.	<input checked="" type="checkbox"/> (IRL 1)
Data verification	Consistency of raw data with calculation tool: The data is saved in the System in magnetic tapes and/or in hard disks and also in physical form by the operators	<input checked="" type="checkbox"/> (IRL 7 to 12)
	Consistency of calculation tool with monitoring report: The method to determine GHG emissions is fully documented base on the validated monitoring plan	<input checked="" type="checkbox"/> (IRL 19)
Crosscheck (if available)	N/A	<input checked="" type="checkbox"/>

2.5. Other parameters not included in the methodology/tool but included in the PDD

Table 1

Other information				
	PDD	MR	Verified	Conclusion and IRL
Parameter title	N/A	CO2 emissions due to transportation of solid waste from the water treatment system to the final disposal (tCO2 per trip).	The calculation is in accordance with the registered PDD.	<input checked="" type="checkbox"/> (IRL 5)
Parameter ID (if available)	N/A	18		<input checked="" type="checkbox"/> (IRL 5)

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Data Unit		tCO2/per trip		<input checked="" type="checkbox"/> (IRL 5)
	Technical aspects			Conclusion and IRL
Description of Data / Data Refers to:	CO2 emission default value per trip is calculated in order to multiply by the number of trips to obtain the total emission for transportation.			<input checked="" type="checkbox"/> (IRL 1 and 5)
Date of Data:	Not applicable			<input checked="" type="checkbox"/> (IRL 1 and 5)
Gaps in data	Period: Not applicable			<input checked="" type="checkbox"/>
	Default value used: Not applicable			<input checked="" type="checkbox"/>
	Justification: Not applicable			<input checked="" type="checkbox"/>
	QA/QC aspects			Conclusion and IRL
Source of data	Type: Every truck entering and leaving the company is weighted, and documents were provided to the audit team and crosschecked with the amount of sludge disposed.			<input checked="" type="checkbox"/> (IRL 1 and 5)
	Responsibility: The responsibilities are clearly defined in the diagram "Organigrama G23" where the responsibilities of all personnel involve in the project are identified			<input checked="" type="checkbox"/> (IRL 12)
	Representativeness: Not applicable			<input checked="" type="checkbox"/>

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Reliability of Data Source:	Production records of the facility.	<input checked="" type="checkbox"/> (IRL 20)
Archiving of raw data and protection measures	Monthly movements of stock during the monitoring period are electronically archived in order to determine the quantity of sludge.	<input checked="" type="checkbox"/> (IRL 5 and 20)
Data transfer and protection of input data for calculations	The transfer is performed manually to input data for calculations, it is realised by the personnel of laboratory.	<input checked="" type="checkbox"/> (IRL 1 and 5)
	Quality of evidence	Conclusion and IRL
Completeness of data	Sufficient evidence was available for verification.	<input checked="" type="checkbox"/>
Data verification	Consistency of raw data with calculation tool: This data was verified through the excel file calculation.	<input checked="" type="checkbox"/>
	Consistency of calculation tool with monitoring report: The method to determine GHG emissions is fully documented base on the validated monitoring plan	<input checked="" type="checkbox"/>
Crosscheck (if available)	N/A	<input checked="" type="checkbox"/>

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3. Data Processing and ER calculation

Description of data processing from transferred data to final results in the calculation tool		
Step	Description	Conclusion and IRL
Consistency	All abbreviations and units are consistent with PDD and methodology, and traceable to the raw data. It was verified during on site visit.	☑ (IRL 1)
Calculation Tool description	The calculation tool is correctly applied according to the methodology and PDD. The total annual emission reductions ER of the project activity result to be: $ER_y = BE_y - (PE_y + LE_y)$	☑ (IRL 1)
Elimination of not plausible data (if applicable)	In case of failure of system the internal back up in the plant can be used to get the information.	☑ (IRL 1)
Transformation from useable data to input data for further calculation (if applicable)	All data generated by the variables that were considered for the ER calculations are obtained by the DCS system.	☑ (IRL 6)
Ex-ante data	The ex-ante data is in compliance with the PDD. The following data were fixed ex-ante in the PDD: <ul style="list-style-type: none"> • Maximum HCFC 22 production • Cut-off condition fraction (w) 2.44 • Lower heating value of natural gas • CO2 emission factor of natural gas • Global warming potential HFC 23 • CO2 emission factor of HFC 23 	☑ (IRL 1)

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	<ul style="list-style-type: none"> Quantity of CaF₂ generated per tones of HFC 23 destroyed CO₂ emissions of solid waste transport Amount of energy of plant of residual water treatment ton CO₂ emission by sampling of gas mixture 	
Default parameter	Not applicable	☑
Formulae check	All formulas for emission reduction calculation are correctly applied.	☑ (IRL 6)
Rounding functions	Rounding functions are correctly applied.	☑ (IRL 6)
Calculation tool changes and protection measures	Not applicable	☑
Reported data	The data is saved in the System in magnetic tapes and/or in hard disks and also in physical form by the operators. This data is transferred to the calculation sheets automatically. The same is twice controlled. All data sources are clearly referenced.	☑ (IRL 7)

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4. Additional assessment

4.1. Internal Review

Description and performance of internal review		
	Description	Conclusion and IRL
Procedure	The estimate and the default data were verified considering changes and accuracy levels. All values used are correctly applied in the calculations. Procedures to ensure the data protection and ensure the archiving data were implemented and documented.	<input checked="" type="checkbox"/> (IRL 7)
Documentation	Quimobasicos has a certified quality management system based on ISO 9001:2000 and ISO 14001:2004 and the internal audits include CDM procedures.	<input checked="" type="checkbox"/> (IRL 7 to 12)
Responsibilities	General Manager of Quimobasicos's Plant	<input checked="" type="checkbox"/> (IRL 7 to 12)

4.2. Peculiarities

Description of Peculiarities and unexpected Daily Events during the verification period		
	Description	Conclusion and IRL
Performance	The water treatment system is operating now. However, The solid waste disposal from the water treatment system started in October 2008, so the energy factor 0.13311 Mw/Mounth was discounted only in this month, of the Total Electricity consumption by the decomposition facility (Q_Powery). Please refer to Forward Action Request No. 1	FAR (IRL 5)
Documentation	The peculiarities are clearly indicated and traceable.	<input checked="" type="checkbox"/>

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Measures	A Project schedule of the wastewater treatment plant “Planta de Tratamiento de la descarga del Plasma” has been provided to the DOE.	<input checked="" type="checkbox"/> (IRL 16)
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4.3. Further additional requirements

Description of additional requirements to be checked		
	Description	Conclusion and IRL
e.g. environmental issues	<p>An effluent analysis is performed to check compliance with local regulation. Gases analyzed are the following: PST, NOx, CO, Cl2, HCl, F2, HF.</p> <p>Sampling and analysis were developed by the supplier Gamatek.</p> <p>The analysis reports of liquid effluents are in compliance with the environmental regulations.</p> <p>SAMARNAT: http://www.semarnat.gob.mx/Pages/inicio.aspx http://www.semarnat.gob.mx/leyesynormas/Pages/inicio.aspx</p>	<input checked="" type="checkbox"/> (IRL 21 and 27)
e.g. market price of the product	N/A	<input checked="" type="checkbox"/>

4.4. Data Reporting

Description of the Monitoring Report		
	Comments and Results	Conclusion and IRL
Compliance with UNFCCC regulations	Please refer to Corrective Action Request No.4	<input checked="" type="checkbox"/> (IRL 5)
Completeness and Transparency	Please refer to Corrective Action Request No.1	<input checked="" type="checkbox"/>
Correctness	Mostly of the information is correctly presented and consistent to the Excel sheets, external data and the PDD.	<input checked="" type="checkbox"/> (IRL 5 and 6)

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5. Compilation and Resolutions of CARs, CRs and FARs

Corrective Action Requests by audit team			
	Comments and Results	Ref	Conclusion and IRL
Issue	<u>Corrective Action Request No.1.</u> 1.- A statement of the events which happened during the period should be submitted in the MR. 2.- The dates of crediting period, submitted in table of the analysis of HFC 23 not destroyed enclosed in the MR, should be corrected.	Reference from tables above 1.1	(IRL 5) <input checked="" type="checkbox"/>
Response	<u>Monitoring report has been updated according to the DOE requirement, in section 4.0 (page 7) and page 31.</u>		
Assessment	The MR has been updated and assessed by the audit team, the CAR can be considered closed.		
Issue	<u>Corrective Action Request No.2.</u> The request for revising monitoring plan is required due to the wastewater treatment plant at the Quimobásicos plant is in operation, removing fluoride as a solid using calcium hydroxide	Reference from tables above 2.1	(IRL 19) <input checked="" type="checkbox"/>
Response	<u>The revision of the MP has been submitted to the UNFCCC May 15 2009.</u>		
Assessment	The revision of the MP has been submitted by the PP and uploaded in the UNFCCC web page.		
Issue	<u>Corrective Action Request No.3.</u> Please submit to the DOE a clarification letter from the supplier Gamatek, regarding to the mistake in the gaseous effluents analysis report, in accordance with the sample value of trifluoromethane, ppbv (Canister Nr. 1327), taken on December 03, 2008. A new report from the supplier with corrected values should be submitted to the DOE.	Reference from tables above 2.3	(IRL 25) <input checked="" type="checkbox"/>

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	MR and spreadsheet should be updated.		
Response	<u>1) Letter of supplier has been sending to DOE.</u> <u>2) Analysis Report has been updated according to the DOE requirement.</u> <u>3) Monitoring report and spreadsheet has been updated according to the DOE requirement.</u>		
Assessment	The letter has been provided and the MR together with the spreadsheet has been updated. The CAR can be considered closed by the audit team.		
Issue	<p><u>Corrective Action Request No.4.</u> In accordance with the EB 48 annex 68 the following requirement should be included in the MR.</p> <p>1.- Comparison of the actual emission reduction claimed in the monitoring period with the estimate in the registered PDD, should be included in the MR.</p>		(IRL 5) <input checked="" type="checkbox"/>
Response	<u>1) Monitoring report has been updated according to the DOE requirement, in section 7.0 page 37.</u>		
Assessment	The MR has been amended in accordance with requirement.		
Issue	<p><u>Corrective Action Request No.5.</u> The spreadsheet and the MR should be updated according to the following issues:</p> <p>1.- On December the steam consumption has increased considerably, due to this a brief statement should be included in the MR and the spreadsheet, explaining the reason of it. 2.- The emission coefficient for steam generation has been constant since 2006, an explanation should be included in the MR in the section of comments. 3.- The values regarding the electricity consumption have not been presented correctly in the spreadsheet, the submission of them should be amended. 4.- Please clarify to the DOE why the emission factor from the supplier Iberdrola has not changed in the last 3 years, a note should be included in the spreadsheet and in the MR. 5.- An explanation about the formula to get the value of the emission from sampling should be included in the MR page 31.</p>		(IRL 5 and 6) <input checked="" type="checkbox"/>

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	<p>6.- As part of the consideration for emission reductions calculation, the MR should include which the baseline is rounded to the integer before.</p> <p>7.- Data which are not relevant should be erased from the spreadsheets. In addition formulas are required to have for the traceability.</p> <p>8.- Due to the disposition of solid waste from the water treatment system began operation in October 2008, a clarification should be included in the spreadsheet and the MR which the valued adopte of 0.13311 Mw/Mounth has been used only in October, and it will not be used any more.</p> <p>9.- The values presented in the spreadsheet to get the purity of the HFC 23 do not have the traceability, these should be transparently presented with formulas. In addition a table should be included in the excel file addressing these values which came from the sampling using a gas chromatography before entering into the decomposition facility.</p> <p>10.- The values submitted in the spreadsheet regarding the electricity consumption from each meter should be presented with formulas, with an additional table displaying the values obtained during the monitoring period.</p>		
Response	<p><u>Monitoring report and Spreadsheet has been updated according to the DOE requirement:</u></p> <ol style="list-style-type: none"> 1) <u>Monitoring Report: in section 4.0, pag 7, in section 7.0 “comments” and spreadsheet: in sheet “Steam and Electricity”</u> 2) <u>Monitoring Report: in section 7.0, pag 28 “comments”.</u> 3) <u>Spreadsheet: in sheet “Steam and Electricity” is annexed table “Electricity Consumption”.</u> 4) <u>Monitoring Report: in section 7.0, pag 28 “comments” and spreadsheet: in sheet “Steam and Electricity”</u> 5) <u>Monitoring Report: in section 7.0, pag 31 “Calculated Emission by sampling”.</u> 6) <u>Monitoring Report: in section 7.0, pag 37 “consideration”.</u> 7) <u>Spreadsheet: No relevant data were erased and included formulas.</u> 8) <u>Monitoring Report: in section 4.0, pag 7, and spreadsheet: in sheet “Steam and Electricity”</u> 9) <u>Spreadsheet: in sheet “HFC23” is annexed table of “values of purity”.</u> 		

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	<u>10) Spreadsheet: in sheet “Steam and Electricity” is annexed table “Electricity Consumption”.</u>		
Assessment	The MR and the excel file have been updated accordingly.		
Clarification Requests by audit team			
	Comments and Results	Ref	Conclusion and IRL
Issue	None		
Response			
Assessment			
Forward Action Requests by audit team			
	Comments and Results	Ref	Conclusion and IRL
Issue	<u>Forward Action Request No. 1.</u> 1.- A procedure to assess the accuracy of Quimobasicos scale and the landfill scale should be established as follow: In case which the difference of weight between both scales is lower than 1%, the disposition of the sludges should be assured. Otherwise a third party is required. 2. A monthly control with data records of the weight of the sludges generated during the period is required, as well as to do the stocktaking at the end of each month	Reference from tables above 2.1	Open
Response	<u>The Procedure has been updated, where the activities are included, in case of differences of weights in scale.</u> <u>The Control Inventories of every monthly has been implemented. In addition, the number of trips will be cross check with the weight of the trucks and the amount of waste produce.</u>		

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Assessment	The procedure implemented and the control inventories will be verified by the audit team in the next periodic verification.		
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Annex 2: Information Reference List

Final Report	21/01/2010	<p>Verification of the CDM Project “Quimobásicos HFC Recovery and Decomposition Project” in Monterrey, Mexico.</p> <p>Information Reference List</p>	Page 1 of 4	 Industrie Service
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Ref No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date	Additional Information (Relevance in CDM Context)
0	TÜV SÜD	<p>Onsite interview (January, 15th and 16th, 2008) carried out by TÜV SÜD: Validation Team:</p> <p>Thomas Kleiser TÜV SÜD Group GmbH / ATL Arturo Lemus TÜV SÜD Group Mexico / GHG Auditor Sergio Degener TÜV SÜD Group GmbH / GHG Auditor</p> <p>Interviewed Persons:</p> <p>Armando Ortega Superintendent of Quality Assurance Sergio Lozano General Director Mauricio Puente Superintendent of Process Rodolfo Vidaurri Manager of the Plant Encarnacion Ramirez Process Engineer Juan Alejandro Treviño Instrumentation and configuration Engineer</p>	16/01/2009	
1.	PDD / UNFCCC Webpage	<p>Project Design Document of Quimobásicos HFC Recovery and Decomposition Project, Version 4, dated, May 23, 2006; registered under the number 0151 on June 14, 2006. UNFCCC homepage http://www.unfccc.int</p>	14/06/2006	
2.	DNV	Validation Report Quimobasicos HFC Recovery and Decomposition Project, Report Number 2005-1191, Rev. 02	25/09/2005	
3.	TÜV SÜD	Initial verification report Quimobasicos HFC Recovery and Decomposition Project	27/10/2006	

Final Report	21/01/2010	<p>Verification of the CDM Project “Quimobásicos HFC Recovery and Decomposition Project” in Monterrey, Mexico.</p> <p>Information Reference List</p>	Page 2 of 4	 Industrie Service
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Ref No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date	Additional Information (Relevance in CDM Context)
4.	TÜV SÜD	Last verification report Quimobasicos HFC Recovery and Decomposition Project for the period from 31st August to 29th September 2008	05/01/2009	
5.	Quimobasicos	Latest Monitoring Report Quimobásicos HFC Recovery and Decomposition Project period 30th September to 30th December 2008	13/01/2010	Version 3
6.	Quimobasicos	Final Caculation workbook Planilla para soporte de reporte de monitoreo-excel file, dated January 13, 2010	13/01/2010	
7.	Quimobasicos	Procedure Plasma operation “Instructivo Operacion de Unidad Plasma” word file	19/10/2009 Rev 06	
8.	Quimobasicos	Procedure flow meters verification P-7.6-09-A “Verificación de medidores de flujo en linea G23”.	08/11/2009 Rev 03	
9.	Quimobasicos	Operational procedure “Determinación de %G23 En corriente de gases hacia Unidad de Plasma y ventila de planta G22”	11/11/2009 Rev 01	
10.	Quimobasicos	Operational procedure “Instructivo de la determinación del % de error y la incertidumbre”	? 04/11/2009 Rev 04	
11.	Quimobasicos	Operational procedure “Control, calibración y verificación del cromatografos”	11/11/2009 Rev 05	
12.	Quimobasicos	Organization chart “Organigrama G23” power point file	23/09/2009	
13.	Quimobasicos	Historic results of gas analyzer through chromatography of G23 (October, November and December 2008).	Oct: 88.507%, Nov:87.869%, Dec:88.157%	
14.	Quimobasicos	Updated for the configuration of gas Analyze Method “Ventila .M”, dated September 01, 2008.	01/09/2008	
15.	Quimobasicos	Results G23 analysis October, November and December 2008), 2008 developed in Quimobásicos Laboratory	15/01/2009	
16.	Quimobasicos	Project schedule of the wastewater treatment plant “ Planta de Tratamiento	15/01/2009	

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Ref No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date	Additional Information (Relevance in CDM Context)
		de la descarga del Plasma”		
17.	Quimobasicos	Reports from maintenance department “Sistema de Administración de Mantenimiento,	15/01/2009	
18.	Quimobasicos	Validation of the revised Monitoring Plan of the Registered CDM Project 0151 Quimobasicos HFC Recovery and Decomposition Project – dated Aug 02, 2007 by TÜV SÜD.	02/08/2007	
19.	Quimobasicos	Latest Revised monitoring plan of the Registered CDM Project 0151 Quimobasicos HFC Recovery and Decomposition Project – Approved 27-11-2009	02/12/2009	
20.	Quimobasicos	G22 Production period October, November and December 2008, from Quimobasicos Plant.	15/01/2009	
21.	Quimobasicos	Results from Gamatek SA de CV of “Reporte de Evaluación de Emisión a la Atmósfera” Reports from October, November and December Numbers. 03-11-08 report 3339/08 , 05-11-08 report 3341/08 , 12-11-08 report 3342/08 , 01-10-08 report 3077/08 , 13-10-08 report 3116/08 , 14-10-08 report 3117/08 , 01-12-08 report 3519/08 , 03-12-08 report 3520/08 , 04-12-08, report 3521/08 .	15/01/2009	
22.	Quimobasicos	Calibration certificate of the standard gas used for chromatography verification. CRM, Inc. Preparation date: 03/12/07, expiration date: 03/12/09. Standard No. STDP031207B	03/12/07	
23.		Calibration certificates of the following equipments: According to the MP no equipment was necessary to calibrate during this period.	15/01/2009	
24.	Iberdrola	Emission Rate from the local Energy supplier Iberdrola	15/01/2009	
25.	Gamatek	Letter from the supplier Gamatek	20/01/2009	

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Ref No.	Author/Editor/ Issuer	Title/Type of Document. Publication place	Issuance and/or submission date	Additional Information (Relevance in CDM Context)
26.	Quimobasicos	First Monitoring Report Quimobásicos HFC Recovery and Decomposition Project period 30th September to 30th December 2008	06/01/2009	For GSP
27.	SEMARNAT	Local regulation with local regulation (Secretaria de Medio Ambiente y Recursos Naturales). http://www.semarnat.gob.mx/Pages/inicio.aspx	18/01/2010	
28.	UNFCCC	AM0001 Methodology (Incineration of HFC 23 waste streams)	13/05/2005	Version 3
29.	Quimobásicos	Internal Quimobasicos e-mail confirming expectation of the increase of HCFC22 production during 2008.	10/01/2008	