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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Forty-fifth Meeting  
Montreal, 4-8 April 2005

**PROJECT PROPOSAL: ARGENTINA**

This document consists of the comments and recommendations of the Fund Secretariat on the following project proposal:

Phase-out:

- Strategy for gradual phase-out of CFC-11 and CFC-12 production: 2005 annual programme World Bank

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**2005 ANNUAL WORK PROGRAMME AND  
VERIFICATION OF 2004 CFC PRODUCTION AT FIASA PLANT**

**Background**

1. The Executive Committee at its 38<sup>th</sup> Meeting in 2002 approved in principle a total of US \$8.3 million for the implementation of the Agreement for the Production Sector in Argentina, and disbursed the first tranche of US \$0.5 million to the project. Subsequently the Executive Committee disbursed the 2003 and 2004 tranches at the 44<sup>th</sup> Meeting after being convinced by the verification that FIASA achieved the CFC production targets for 2002 and 2003 as stipulated in the agreement. The annual CFC production limits and the funding tranches of the agreement are summed up in the following table.

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Max, allowable production (metric tonnes)	3,020	3,020	3,020	1,647	1,647	686	686	686	0*	
MLF funding \$ million	0.5	3.5	0	0.3	2	0	1	1		8.3
Agency fees \$ million	0.02	0.11	0.09	0.12	0.10	0.12	0.12	0.047		0.727

(\*) save for any CFC production that may be agreed by the Parties to meet essential uses for Argentina

2. The World Bank is requesting at the 45<sup>th</sup> Meeting the release of the 2005 funding tranche of US \$0.3million and the associated support cost of US \$0.12 million. In accordance with the terms of the Agreement, which requests an independent verification of the achievement of the annual production targets prior to releasing the next funding tranche, the World Bank is submitting the verification of CFC production by FIASA in 2004.

3. The submission of the World Bank includes the 2005 work programme and the verification report of the CFC production at FIASA for 2004 (attached).

**Verification of the 2004 CFC production at Fiasa**

4. The verification was carried out in January 2005 by Mr. Jorge Corona, a consultant from Mexico, who had been the co-chair of TEAP's Solvent Technical Options Committee, but apparently had no direct experience in CFC production. The team also included an accountant from a local accounting firm. The report includes a report by the technical consultant on the physical inspection of the plant and the technology process and status of the plant, and a report from the accountant on the CFC production and the consumption of the feedstock CTC and HF from examining the financial data.

5. The technical report first briefly described the technological process of CFC production at the plant and commented that the plant did not have a system to recover excess CTC, HF and CFC-13 since it was expensive to do so, and as a result vented these chemicals into the atmosphere. The auditor found that there were no flow meters in the plant to track the consumption of feedstock, intermediate products or final products but was told that flow meters would be installed soon. Only approximate daily consumption of feedstock and CFC production

could be obtained from weighing the storage tanks and product tanks on scales. He took a number of samples for laboratory testing but said that he could not integrate the hourly in-plant flow data to get an independent data of production. However he felt that the consistent financial data between feedstock consumption and CFC produced was adequate for drawing conclusions.

6. He reported that maintenance was low due to lack of investment in view of the plant's closure in the near future and as a result the plant was experiencing frequent shut-downs. Lower efficiency was also attributable to the ratio of CFC12/CFC11 being significantly changed from the designed 60/40 to 95/5 percent to cater to market demand.

7. The accountant's report first discussed the limitations that she had in conducting the audit. She could not check the data of the closing inventories of the raw materials and final products because these were prepared only on 30 November every year together with the financial statements. She could not access the stamped accounting records, or the journal which is stamped at the Public Registry of Commerce, and found the production daily reports did not correspond to pre-numbered or signed forms.

8. The accountant used monthly summaries and selected June, July, November and December as samples for checking. The examination covered records on feedstock consumption, CFC production, sales and purchases invoices, opening stock of the inventory but not the closing stock since the financial statement would not be available until 30 November every year.

9. The accountant confirmed CFC production on a monthly and yearly basis, and that the cumulative inventory change of CFCs corresponded to annual production and sales data. She also confirmed that cumulative change in the inventory of key raw materials was consistent with CFC production, both overall and per campaign.

10. The verification concluded that FIASA produced 3,015 mt of CFCs in 2004 which was below the target of 3,020 mt set in the agreement. The production was broken down into 112 mt for CFC-11 and 2,904 mt for CFC-12. In 2004 FIASA sold 1,837 mt domestically and 1,378 mt as exports. Its exports went mainly to Brazil, Paraguay, Chile and Egypt.

11. The data collected by the verification team are presented using the format in the guidelines for verifying ODS production phase-out which includes month-by-month production of CFC-11 and CFC-12, number of days of production, consumption ratios of feedstock to CFC and HCFC-22 production, inventory change of feedstock of CTC and HF as a way of validating the CFC production.

## **2005 annual work programme**

12. The 2005 annual work programme starts with a brief account of the results of the 2004 work programme. One of the major achievements in 2004 was the establishment by President Decree No. 1609 of the national licensing system on ODS imports and exports in November 2004. Enforcement of the system is the joint responsibility of the Secretariat of Environment and Customs and will be based on registration of importers and exporters. The grant agreement was signed between the Government and the World Bank and paved the way for implementing the

sector plan. A study on the market prospects for FIASA and reinforcing the monitoring of CFC production was also undertaken as part of the technical assistance programme.

13. The proposed 2005 work programme includes the target for the CFC production by FIASA, the policy to be enacted by the Government for implementation of the CFC production phase-out plan, and the planned technical assistance activities. The CFC production target for 2005 is 1,647 ODP tonnes, which is 50% of the baseline mandatory under the Montreal Protocol control schedule and is consistent with the target in the sector plan. The Government is ensuring the achievement of the target by instituting the production cap supported legally by National Law No. 24.040/1991, which established controls on the production and sale of ODS. In addition, the Government will introduce from 1 January 2005 the national ODS import and export licensing system, which will set up a registry of ODS importers and exporters and allocate annual quotas to be managed by the Secretariat of Environment and enforced by Customs.

14. The 2005 annual programme planned a number of technical assistance activities to support the sector plan and includes training the government staff to manage the national phase-out plan, developing guidelines for dismantling the equipment at FIASA, exploring alternative business opportunities for FIASA and carrying out public awareness campaigns.

15. For monitoring the implementation of the sector plan, the project implementation unit at the Secretariat of Industry and Commerce (UEPRO) will assign a professional on a part-time basis to visit FIASA to verify the production logs once a month.

16. Of the US \$3.5 million disbursed from the Fund, over US \$1 million was disbursed to FIASA, and a schedule of disbursement of the balance was agreed with the plant. The US \$0.3million from 2005 work programme would be disbursed to the enterprise based on the implementation of the annual plan for CFC production. Annex I has 4 tables with details on the various components of the 2005 programme.

### **Comments of the Secretariat**

17. There were a number of questions regarding the technical part of the audit report. The technical consultant did not describe the procedure he followed in conducting the audit exercise, the sections of the plant he inspected, or the size and kinds of tests he conducted. He commented that the plant did not have flow meters for tracking the consumption of the feedstock or the final products, but did not specify the extent that it affected his audit. He reported he was unable to integrate the hourly in-plant flow data to get an independent data of production and as a result depended on the financial data for the verification exercise. This significantly reduced the effectiveness of his contribution to the audit.

18. The accountant conducted her verification of the financial reports in a more professional manner by discussing the procedure she followed, the size of the sample she used, and the limitations she experienced in carrying out her work. It would have been better if she had discussed the impact of the limitations on her effectiveness in carrying out the audit. She confirmed the consistency from the monthly and yearly aggregate data of the consumption of CTC feedstock and the production of the final products.

19. In Annex II, the reporting format which was approved by the Executive Committee is designed to maintain a history of the verification results from year one for comparison and cross checking however the results of the verification for the years 2002 and 2003 were not included in the tables.

20. The 2005 annual work programme proposes CFC maximum allowable target, which is consistent with that in the agreement, and a number of existing and newly enacted policy measures to facilitate the implementation of the work programme. The programme also plans a number of technical assistant activities in 2005, including exploring future market opportunity for FIASA and developing guidelines for dismantling the plant in the future. As in the previous programmes, there is a system of continuous monitoring of the CFC production in the plant by the Government.

## **Recommendations**

1. The Secretariat recommends that the Executive Committee may wish to

- (a) Request the World Bank to follow in future verifications the guidelines on verifying the ODS production phase-out adopted by the Executive Committee, ensure the necessary expertise of the verification team, and achieve consistency in the verifications in countries where it is implementing ODS production phase-out plans; and
- (b) Approve the 2005 annual work programme at the level of US \$0.3 million and the associated support cost of US \$0.12 million for the World Bank, in light of the results of the verification, in particular the financial audit that the CFC production at FIASA in 2004 was 3,015 mt, which was below the target of 3,020 mt set in the agreement.

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**STRATEGY FOR GRADUAL PHASEOUT OF  
CFC-11 & CFC-12 PRODUCTION IN  
ARGENTINA**

**2005 ANNUAL PROGRAM**

**OPROZ / UEPROM  
AND**

**THE WORLD BANK**

**January 2005**

## 1. DATA

<b>Country</b>	Argentina		
<b>Year of plan</b>	2005		
<b>No. of years completed</b>	2		
<b>No. of years remaining under the plan</b>	6		
<b>Total ODS to be phaseout through the Strategy for Gradual Phaseout of CFC -11 &amp; CFC -12 Production in Argentina</b>	CFC – 11 + CFC – 12 : 3,020		
	ODS 3:		
	ODS 4:		
<b>ODS Production for the Previous year (MT)</b>	Target	Actual	
CFC 11/12	3,020	3,016	
<b>CFC production independently verified</b>	Yes		
<b>Target ODS Consumption for the year of the plan (MT)</b>	CFC 11/12 : 1,647 MT		
<b>Total MLF funding approved for the Plan</b>	US\$ 8.3 Million		
<b>Total funds released so far</b>			
	Funding	Disbursed (*)	
<b>Total funding disbursed on annual plans</b>	Year 2002	500,000	53,548.00
	Year 2003	3,500,000	1,012,000.00
	Year 2004	0	0
	Year 2005	300,000	0
	Total released	4,300,000	1,065,548.00
<b>Level of funding requested for this AP</b>	US\$ 300,000		
<b>Support costs</b>	US\$ 120,000		
<b>Lead implementing agency</b>	The World Bank		
<b>Co-operating agency (ies)</b>	UEPRO  OPROZ (Secretariat of Environment and Sustainable Development)		

(\*) Disbursements have recently started after the signature, in November 2004, of the Sub Grant Agreement between the Government of Argentina (GOA) and FIASA.

## A: INTRODUCTION

**Provide a brief general overview on the status of the implementation of the NOPP/SOPP and recent progress, new initiative, achievements etc.**

- 1 In compliance with the Montreal Protocol, the Government of Argentina (GOA) should fulfill the obligations on phasing-out CFC-11&12 production by 2010. The CFC Production Phase-out Plan for Argentina was approved at the 38th meeting of the Executive Committee (ExCom) of the Multilateral Fund for the implementation of the Montreal Protocol and involves a sole production facility at Frio Industrias Argentinas S.A. (FIASA). The table below summarizes the phase out schedule as per the Agreement between the ExCom and the Government of Argentina (GOA):

**Table1: Phase-out schedule as per the Agreement with ExCom:**

Year	CFC-11 and CFC-12		MLF funding (in Mill USD)	
	Target	Actual	Project funding	Support costs
2002	3,020	3,015	0.5	0.02
2003	3,020	3,018	3.5	0.11
2004	3,020	3,016	0	0.09
2005	1,647		0.3	0.12
2006	1,647		2.0	0.10
2007	686		0	0.12
2008	686		1.0	0.12
2009	686		1.0	0.047
2010	0		0	0
Total	3,020 <b>(Total impact)</b>	3,020 <b>(Total impact)</b>	8.30	0.727

(\*) save for any CFC production that may be agreed by the Parties to meet essential uses for Argentina

- 2 Along with the Annual Plan, the World Bank has submitted the findings of the independent external audit for the 2004 CFC production at FIASA. This report, includes information to support the accomplishment of the proposed maximum production targets in this period.
- 3 Measures required by the GOA and FIASA during the review of the Annual Plan 2004 were comprehensively addressed by the company.
- 4 The Sub-grant Agreement (SGA) between the GOA and FIASA was signed in November 26 , 2004.
- 5 Argentina will reduce its maximum CFC production level as agreed for 2005 to 1,647 MT, and will maintain this production level until 2006.

## B: 2005 ANNUAL PROGRAM

### 1. ACTIVITIES IMPLEMENTED FROM THE 2004 ANNUAL PROGRAM

The government of Argentina implemented several activities related to the implementation of the 2004 annual program, the list of activities were as follows:

Research for Market prospects: A comprehensive study on the conditions of the market for FIASA was funded. This studied allowed FIASA to identified areas where its activities could be diversified. This study also supported GOA in identifying sources of CFC alternatives through the implementation of an alternative production project.

Equipment purchase: The Government of Argentina, procured equipment for UEPERO in order to facility monitoring activities related to the production of CFC at FIASA during 2004 and in future years.

Facilitating monitoring capabilities and compliance with the agreement between Argentina and the Executive Committee of the MLF: This activity is under implementation and aims at controlling in a more effective way the handling of raw material as well as the production of CFC at FIASA. The proposed monitoring system has supported the Government of Argentina to production levels as agreed on the 2003 agreement.

Disbursements: The GOA, requested about 30% of the approved compensation funds in 2004. The balance is expected to be disbursed during 2005.

Facilitating monitoring capabilities and compliance with the agreement between Argentina and the Executive Committee of the MLF: This component was partially implemented by UEPERO. Three monitoring activities were implemented during

2004, in order to verify FIASA's compliance with the 2004 CFC Production agreed caps.

## **2. Programs expected to be implemented during Annual Plan 2005**

In accordance with the results from audit report attached to this AP, the GOA has complied with the maximum production levels for the 2004. OPROZ though UEPORO has continued with its monitoring activities using its enhanced systems to support this compliance

The phase-out plan under implementation includes the following activities:

- (a) Phasing out CFC production by 2010;
- (b) Dismantling FIASA's CFC production agreed equipment;
- (c) Monitoring achievement of each year's production under the maximum cap agreed with ExCom
- (d) Implementation of policy measures and technical assistance activities to support the plan in a sustainable permanent manner

For 2005, the following activities are expected to take place:

### **2.1 Policies, regulations etc. and governmental actions and initiatives**

- (e) Import / Export licensing System: The National ODS licensing system was established in November 19, by the Presidential decree No. 1609 of November 17, 2004 and is being enforced since January 1, 2005. The system is based on a national registry of ODS importers and exporters and will be located, administrated by the Secretariat of Environment and enforced by the Customs, Quotas will be allocated based on historic import/export volumes, following ODS consumption restrictions established by the Montreal Protocol.
- (f) Annual Production caps: Argentina have been in compliance with the Montreal Protocol phased-out schedules for 2004, and has been enforced by the Secretariat of Environment. Legally, the controls are supported by the National Law No. 24.040 /1991 which establishes controls to the production and commercialization of ODS.

## **2.2 Technical assistance activities for 2005**

The technical assistance component (\$500,000) will be implemented throughout the project implementation (up to 2010). The following activities will be implemented during 2005:

- *Supporting the GOA to strengthen technical capacity of local staff:* This will include training of GOA staff, plus workshops for various participants in the phase-out program, including training in reclamation and re-cycling;
- *Public Awareness campaign:* This activity will support the ozone protection communication strategy prepared by OPROZ, and is linked to other activities currently being implemented by OPROZ;
- *Develop environmental guidelines for dismantling of the FIASA agreed equipment :* A set of environmental guidelines to address environmental friendly activities regarding the plant dismantling will be developed by the government of Argentina.
- *Develop a legal framework to address work compensation schedules for the closing enterprise:* As the project includes labor compensation of the employees lay off of their duty by the closure of the enterprise, a legal framework and estimations of the amount of the compensation will be develop.
- *Technical assistant to FIASA:* This component aims at supporting FIASA to implement substitute production in Argentina outlined in the technical proposals approved by the ExCom.

The terms of reference and work schedule will be agreed with World Bank prior to initiating work.

## **2.3 Project Management Unit**

The existing project coordination unit established at UEPERO will continue its activities. However, UEPERO will allocate on a part-time basis one professional staff position for maintaining technical, financial and statistical records to manage this phase-out program. The consultant will visit the plant on a regular basis, at least once every four weeks, to verify production logs.

## **2.4. Compensation to FIASA**

The US\$3.5 Million was approved to be disbursed to the enterprise in 2004. A total of US\$ 1,012,000 has been disbursed to the enterprise and an schedule to disbursed the remaining funds from the US\$ 3.5 million has been agreed with the company. There are several tranches under the ExCom agreement which will be disbursed accordingly.

Additional \$500,000 approved by the Executive Committee for the Implementation of the Montreal Protocol are being used in Technical Assistance for the Government as detailed above.

For this Annual Plan 2005, a request of 300,000 is being made according to the Agreement between the GOA and the ExCom. These resources will be disbursed based on the accomplishments by FIASA of the 2004 CFC production caps of the same agreements. These accomplishments were certified by an independent team of auditors, of which its report is annex to this plan.

**ANNEX 1**  
**PROPOSED ACTIVITIES IN THE 2005 ANNUAL PROGRAM**

**TABLE 1A: POLICIES AND REGULATIONS**

<b>Proposed policy/regulation</b>	<b>Estimate costs</b>	<b>Ministry/Agency to be in charge</b>	<b>Planned date of effectiveness</b>
Import / Export licensing system		Secretariat of Environment and Sustainable Development	Done
Production caps		OPROZ / UEPORO	Accomplished/ Continuing as of 2005

**TABLE 1B TECHNICAL ASSISTANCE ACTIVITIES AND TRAINING ACTIVITIES**

<b>Name of TA/Training activity</b>	<b>Estimated costs</b>	<b>Duration</b>
Supporting the GOA to strength technical capacity of local staff;	10,000	1 Year
Public Awareness	20,000	1 Year
Develop environmental guidelines for dismantling of the FIASA's agreed equipment	15,000	1 Year
Develop a legal framework to address work compensation schedules for the closing enterprise	10,000	
Facilitating monitoring capabilities and compliance with the agreement between Argentina and the Executive Committee of the MLF.	45,000	1 Year
Technical assistance for alternatives to CFC	100,000	1 Year

**TABLE 1C: PROJECT MANAGEMENT UNIT**

<b>Name of activity</b>	<b>Estimated costs</b>	<b>Duration</b>
One professional staff part-time;	8,000	1 Year

**TABLE 1D: COMPENSATION TO FIASA**

<b>Name of activity</b>	<b>Estimated costs</b>	<b>Duration</b>
Signature of SGA with FIASA	300,000	2005

(\*) The total amount of the Sub Grant Agreement is \$7.8 Million and will be disbursed in tranches according to the Agreement between the ExCom and the GOA.

## **ANNEX 2**

**Contact Agency/Organization and person in charge of managing the national import/export licensing system.**

**Secretariat of Environment and Sustainable Development**

Oficina Programa Ozono (OPROZ)

Miguel Angel Craviotto

Laura Berón

Tel. 54 11 43 48 8425 / 8413

E-mail: [mcraviotto@medioambiente.gov.ar](mailto:mcraviotto@medioambiente.gov.ar)

**Secretariat of Industry and Commerce**

Marcelo Vita

UEPRO (Project Implementation Unit)

Tel. 54 11 43 49 3728

e-mail: [mavita@mecon.gov.ar](mailto:mavita@mecon.gov.ar)



**AUDIT PROCESS FOR THE CLOSURE OF THE CFC PRODUCTION  
SECTOR IN ARGENTINA  
(FRIOINDUSTRIAS ARGENTINAS S.A.;FIASA) PLANT IN VILLA  
MERCEDES, SAN LUÍS, ARGENTINA)**

**Prepared for:**  
**WORLD BANK**  
**UEPRO**

**Prepared by:**

**Jorge Corona (Consultant)**  
**Gisela Holgado (Accountant; Shilton, Weyer y Asociados, Argentina.)**

**Buenos Aires, January 15, 2005**

## **1 OBJECTIVE**

To conduct an Audit on the Production of CFCs at Frioindustrias Argentinas S.A. FIASA in accordance to the Agreement for the Argentina Production Sector and the Guidelines of the Executive Committee for the Implementation of the Montreal Protocol ExCom, with regards to monitoring CFC Production closure for year 2004, according to the attached "Terms of Reference" and the "Draft Guidelines and Standard Format for Verification of ODS Production Phase-Out." The schedule of maximum allowable production of CFC is as follows:

<b>Year</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
Max, allowable production (Tons of CFC)	3,020	3,020	3,020	1,647	1,647	686	686	686	0*
MLF funding \$Mil	0,5	3,5	0	0,3	2	0	1	1	
Agency fees, \$ Mil	,02	,11	0.09	0.12	.10	.12	.12	.04	

Note: FIASA is the only manufacturer of CFCs in Argentina.

## **2 PERSONS CONTACTED**

### **UEPRO**

Guillermo J.Bidone  
Asesor Tècnico PRESAO  
Ministerio de Economia y Produccìon  
Secretarìa de Industria, Comercio y de la Pequeña y Mediana Industria

### **FIASA**

Alfonso Salvador Silva  
Presidente (President)

Raùl A. Gobbato  
Gerente (Manager)

Oder Acebedo  
Jefe de Produccìon (Manufacturing Manager)

## **3 SUMMARY**

Previous Audits have been conducted in years 2002 and 2003 by the Auditor Antonio Cristodero. The present Audit is to update the information with 2004 figures and to certify that the

production of CFC-11 and CFC-12 by FIASA is in compliance with the Agreement "Strategy for gradual phase-out of CFC - 11 & CFC - 12 production closure" signed by the Government of Argentina and the Montreal Protocol at the 38<sup>th</sup> Meeting of the Executive Committee for the implementation of the Montreal Protocol " considering the CFCs production and feedstock uses (mainly CTC and HF), during 2004.

In order to perform the Audit, a site visit was made to FIASA plant, located in Villa Mercedes, San Luis, Province in Argentina. The Audit was performed by Jorge Corona, technical consultant who is familiar with CFC producing plants in México (Quimobásicos S.A. de C.V.), and by the Argentinean accounting firm Shilton Weyers & Asociados, represented by Mrs. Gisela Holgado.

The visit to the plant took place from January 12 - 13, 2004.

After carefully studying the information supplied by FIASA, collected and revised by the auditor team, and taking into consideration the present plant conditions and apparent operational status, both by direct observation and by communications with the plant manufacturing manager Oder Acebedo, it was concluded that the 2004 production of CFC -11 was of 112.18 M tones and CFC-12 of 2,903.83. The total CFCs production was of 3,016.01 M tones, which is in compliance with the Argentina Production Sector presented at the 38th Meeting of the Executive Committee for the implementation of the Montreal Protocol, which states that the Maximum Allowable Production of CFCs for FIASA during year 2004 should be 3,020 M tones.

#### **4 PLANT INSPECTION**

The plant was inspected following the attached Flow Sheet. It consists mainly of two reactors, where CTC reacts with HF in the presence of antimonium pentachloride as catalyst producing a blend of CFC-11 and CFC-12, a reaction column, HCl recovery section, neutralizing and drying columns, CFC-11 and 12 recycling section with the required compressors and a distillation column, where CFC-11 and CFC-12 are separated. If a higher amount of CFC-12 is required, CFC-11 is recycled for further fluorination. There is no recovery system for excess CTC, HF nor CFC-13, which is produced as an undesirable byproduct, and these substances are vented into the atmosphere.

It is important to mention that during the visit, the plant was not operating because of the lack of CTC (it is supposed to arrive at the end of January), therefore it was not possible to verify on site production of CFCs, or monitoring plant production during a certain period making conciliation of figures with those reported in the accounting books. Besides that, there are no flow meters in the plant for any of the main feedstock, intermediate products and final products. (UEPRO has already agreed to get support from the technical component of this project the installation in FIASA's plant of flow meters so that in the future more reliable information of use of feedstock and finished products can be supplied. The flow meters will be supplied during the next months.

The present way to have an approximate figure for CTC day to day consumption and CFC production is that the storage tanks (only those feeding the reactors), of CTC and that of CFCs recently produced, are mounted on scales.

Taking into account the lack of precise equipment to monitor the CFC production, the procedure followed was based on the "Draft Guidelines and Standard Format for Verification of ODS Production Phase-Out.". The audit aims at monitoring variables such as temperature and pressure in the different production stages (reactors, distillation columns etc), which can be read in the computer in the control room, and opening or closing the valves by hand. Samples of products taken in several locations are sent to the laboratory to assist process control. During the visit it was not possible to integrate hourly in-plant flow rate data, over time, to get an independent data of production.

However, the consistency found in the accounting audit between daily feedstock consumption rates and final CFCs production amounts in the same period, is an indication that the lack of more precise plant information was not instrumental for getting a sufficiently reliable yearly consumptions and production.

The plant maintenance has suffered detriment during the last years, because of lack of motivation of the owners to invest in a plant that will be closed in 2010, so that most maintenance procedures have been limited to those required to keep the operation as safe as possible and minimizing shut-down times, but in many times at several locations there are CTC and other products leaks, reducing plant efficiency. Other sources of materials losses (vented into the atmosphere), are the frequent shut downs of the plant for maintenance, either planned or caused by emergencies.

Other aspect which has been considered, because in many CFC-11 and 12 plants has been identified as an undesirable by product, is the case of CFC-13. This substance has an ODP of 1, and is controlled by the Montreal Protocol as a substance of Annex B Group I, so that in theory should be recovered and destroyed. This is an expensive procedure, and FIASA is not performing this activity, and undetermined amount could be vented into the atmosphere unintentionally by FIASA . No formal evaluation has been made to determine the amount of this product generated.

Another important issue relevant to the plant operation, is that the original design was made considering CFC-11/CFC-12 production at an optimal ratio of 40/60. In the measure that production departs from this ratio, the plant efficiency is deteriorated. At present, the plant is working at about 5/95 ratio because of market reasons, and the efficiency suffers accordingly. Some of the reasons for the loss of efficiency, are that in the reactors a higher proportion of HF has to be added, and that the excess of CFC-11 produced, has to be recycled for further fluorination.

## **5 PRODUCTION, CFC-11 AND CFC-12**

	Year 1 2002	Year 2 2003	Year 3 2004
CFC-11	128	133	112
CFC-12	<u>2,887</u>	<u>2,885</u>	<u>2,904</u>
Total	<b><u>3,015</u></b>	<b><u>3,018</u></b>	<b><u>3,015</u></b>
Feedstock			
HF	1,094	1,311	1,219
CTC	4,148	4,531	4,182
Ratio			
HF/CFC	0,36	0,43	0,40
CTC/CFC	1,37	1,50	1,38

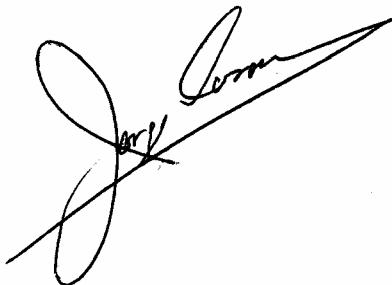
## **6 SALES**

	<u>Domestic</u>	<u>Export</u> *	<u>Total</u>
CFC-11	291	46	337
CFC-12	1,546	1,332	2,879

\* Exports were mainly to Brazil, Paraguay, Chile and Egypt.

## **7 OTHER RAW MATERIALS EXPORTS, IMPORTS, SALES**

These figures can be seen in Annex 1 and in the Accountant's report.



Jorge Corona

Buenos Aires, January 17, 2005.-

## ACCOUNTING REVIEW

### UNITED NATIONS ENVIRONMENT PROGRAMME

#### I .OBJECTIVE AND SCOPE

The objective of this report is to detail the task performed pursuant to United Nations Environment Programme, exclusively related to accounting aspects, for verification of the “ODS production” phase-out of the company FRIO INDUSTRIAS ARGENTINA S.A. The term under analysis is from January 1, 2004 to December 31, 2004.

The scope of the accounting review included compliance with sections 11(i), 11(ii), 11(iii) and 12 (i), 12 (iii), 12 (iv), 12 (v), 12 (vi) contained in the “Draft Guidelines and Standard Format for Verification of ODS Production Phase-Out” dated October 24, 2000:

The two-day fieldwork was carried out in FRIO INDUSTRIAS ARGENTINA S.A. industrial plant, located in Villa Mercedes – Province of San Luis- on January 11 and 12, 2005. On such days the plant was closed due to vacation.

The accounting review approach was oriented to verifying the information provided by the Company, with supporting documentation and accounting records. For that purpose, prior to our visit, we prepared and sent to the Company a detailed report of all the accounting information deemed necessary to meet the objectives we have set.

Appendix I prepared by the Company, which contains the information subject to this accounting review, is attached and signed by us for its identification.

#### SCOPE RESTRICTIONS

When carrying out the task, we found that it was not possible to implement certain accounting auditing procedures deemed necessary to validate the analysed information, such as:

- It was not possible to obtain the appraised listings of inventories at starting and closing of raw material and manufactured products under analysis, since according to the Company, such information is only prepared on November 30 every year to prepare the financial statements. As a consequence, we were unable to check the balances of the inventory mentioned against the accounting records.
- The selected sales invoices were verified against the books (not stamped Sales VAT) only by viewing the invoice date and number. We were not allowed to verify the invoiced amounts since the prices and customer's names are deemed confidential by the Company.

- We were not able to verify the information against stamped accounting records (Journal) since it was not available for checking.
- The production daily reports do not correspond to prenumbered or signed forms.
- Owing to the limited time we had to carry out this review and considering the volume of information to be checked, we were unable to analyse 100% of the operations under analysis. Therefore, we carried out the task by selecting samples -the results of which are reported in the following section.

### **III. DEVELOPMENT**

**These are the task we performed in each point subject to our review:**

**Confirm production quantities and raw material consumption from production log.**

The “monthly production summaries” made by the Company were viewed. Such summaries include “ODS products” production and related raw material consumption.

We selected the months of June, July, November and December 2004 as the sample of the information to be reported; these months record the highest level of production. We verified day by day the daily production and raw material consumption amounts reported in the “monthly production summaries” against the daily production reports prepared by the Company.

No worth mentioning remarks arose from such task, except that the production reports do not correspond to the prenumbered or signed forms. The outcome of our task may be summarized as follows:

	<b>CFC-11</b>	<b>CFC-12</b>	<b>Total</b>
Total production in 2004 (in TN) reported by the Company in Appendix I, section C	112	2904	3016
Production verified against daily reports (in TN)	59	1580	1639
Percentage verified out of the total quantity	53%	52%	54%

	<b>HF</b>	<b>CTC</b>	<b>Total</b>
Total consumption in 2004 (in TN) reported by the Company in Appendix I, section C	1220	4183	5403
Consumption verified against daily reports (in TN)	620	2135	2755
Percentage verified out of the total quantity	51%	51%	51%

### **Verify sales and acquisition of monitored ODS products against financial records.**

A detailed report of “ODS products” sales made by the Company was viewed.

We selected the months of June, July, November and December 2004 as the sample of the information to be reported. We selected a sample of operations randomly and the sold units were verified against the sales invoices. Besides, the invoice date and number was viewed in the Sales VAT book (not stamped).

No worth mentioning remarks arose from such task, except that the amounts of the selected invoices could not be verified against the books. The outcome of our task may be summarized as follows:

TN	
CFC-11 Sales year 2004 reported by the Company in Appendix I, section DIC	337
CFC-12 Sales year 2004 reported by the Company in Appendix I, section DIC	2.879
Total	3.216
Sales verified against documentation	1.248
Percentage verified out of the total quantity	39%

### **Verify stock at the beginning and the end of year against financial records.**

It was not possible to obtain the appraised listings of inventories at starting and closing of raw material and manufactured products under analysis, since according to the Company, such information is only prepared on November 30 every year to prepare the financial statements. As a consequence, we were unable to verify the balances of the inventory mentioned against the accounting records.

However, we verified the stock at the beginning of the year against those on December 31, 2003 reported in FIASA's audit report submitted the previous year. The details of such information are:

	CFC-11	CFC-12	Total
Stock at the beginning of the period (in TN) reported by the Company in Appendix I, section DIC	655	1395	2050
Stock verified against auditing report 31/12/03 (in TN)	655	1395	2050
Percentage verified out of the total quantity	100%	100%	100%

	<b>HF</b>	<b>CTC</b>	<b>Total</b>
Stock at the beginning of the period (in TN) reported by the Company in Appendix I, section DIC	(11,6+450,4)	(34+2124)	2620
Stock verified against auditing report 31/12/03 (in TN)	462	2158	2620
Percentage verified out of the total quantity	100%	100%	100%

**Review the accuracy of the record information system.**

With the purpose of carrying out the current review, we requested the Company to make the Purchases VAT, Sales VAT and Journal books available to us.

The Purchases and Sales VAT were prenumbered but not stamped at the Public Registry of Commerce. The information in those books could be verified although we want to emphasise that it was not possible to view the invoices amounts in the Sales VAT book.

Moreover, we were not able to view the Journal stamped at the Public Registry of Commerce, which constitutes an important accounting document when carrying out the accounting control, since the Purchases and Sales VAT books are not stamped.

**Audit daily production records for monitored ODS production and “key” feedstock consumption data.**

We refer back to the content of section III. 1) above.

**Confirm production of monitored ODS on a monthly and yearly basis.**

We refer back to the content of section III. 1) above.

**Confirm that cumulative inventory change of monitored ODS corresponds to annual production and sales data.**

To be able to verify the evolution of the “ODS production” inventory, we verified the changes in it, as follows:

- Initial Inventory (we refer to the content of III. 3) above.
- Production (we refer to the content of III. 1) above.
- Sales (we refer to the content of III. 2) above.

The consumption of R11 to produce R12 was verified against the production reports.

We were not able to verify the reductions against any supporting accounting record or documentation nor the final stock, as mentioned in section III. 3) above.

**Confirm that cumulative inventory change of “key” raw material is consistent with production, both overall and per campaign.**

To be able to verify the evolution of the inventory of the main raw material for the manufacturing of “ODS products”, we verified the changes in it, as follows

- Initial inventory (we refer to the content of III. 3) above.
- Consumption (we refer to the content of III. 1) above

**Purchases**

The increase in units resulting from the purchases of the term was analysed by viewing the samples of selected invoices and by their verification in the Purchases VAT book (not stamped) of the year 2004. No worth mentioning remarks arose from the mentioned task. The outcome of our work may be summarized as follows:

Raw material purchases reported by the Company	5.738
(This information is included in Appendix I, section DIC, in the column “Procured or added to stock or sales”)	

Verified Purchases	3.013
Percentage verified out of the total quantity	52 %

**Sales**

The reduction due to raw material sales, mainly of CTC, produced in March, May, June, July and September 2004, was analysed by selecting a sample of operations at random. We verified the units sold against the sales invoices. Besides, the invoices date and number were viewed in the sales VAT book (not stamped).

No worth mentioning remarks arose from such task, except that the amounts of the selected invoices could not be verified against the books. The outcome of our task may be summarized as follows

Raw material sales reported by the Company	( 2.092)
(This information is included in Appendix I, section D. II, in the column “Procured or added to stock or sales”)	

Verified sales	629
Percentage verified out of the total quantity	30 %

### **Other items**

According to the Company, there was a reduction in stock due to consumption of raw material (HF and CTC) for the manufacturing of other products not subject to analysis in this report. Such information could not be verified against any supporting accounting record or documentation.

As to reductions, it was not possible to verify them against any supporting accounting record or documentation, nor could we verify the final stock, as mentioned in section III. 3) above.



## Annex 2

### **Questionnaire for ODS Production Phase Out Verification (Including Gradual Closure)**

#### **A. Plant identification**

Name of Enterprise : FRIO INDUSTRIAS ARGENTINAS SA  
Plant Ref. Number\* : 1  
Sector Plan #\* :  
SRI # \* :  
Address of the Plant : Ruta 7 Km 703 y Ruta Provincial 2 – Villa Mercedes – San Luis – Argentina  
Contact person(s) and Functional Title : Cr. Raúl Gobbato – Gerente  
Telephone Number : 03571 – 424111      0351- 156145137  
Fax Number : 03571 – 422351  
E-mail Address : [rgobbato@sinectis.com.ar](mailto:rgobbato@sinectis.com.ar)

#### **B. Verification**

Team Composition :  
**Leader** :  
Name : Ing. Jorge Corona De la Vega  
Functional Title : Consultor Técnico  
**Member(s)** :  
Name : Shilton, Weyers & Asoc.  
Functional Title : Auditores Contables  
Date of Plant Visit : 11 y 12/01/05  
Duration of Visit : 2 días

\*As applicable, e.g. SRI# for China's CFC plants.

### C. Plant History

Date of construction:				
<b>ODS Products</b>	No. of Lines	Capacity in Baseline Year*TM Projection	<b>TM Production**</b>	
			Baseline Year*	Year 1
CFC-11	1	<b>3636</b>		<b>112</b>
CFC-12	1	<b>5022</b>		<b>2904</b>
CFC-13				
CFC-113				
CFC-114/115				
<b>Raw Materials Production***</b>				
HF Consumption				<b>1220</b>
CTC Consumption				<b>4183</b>

\*The year from which data is used for approving the ODS production phase out project.

\*\*Till the year prior to the verification.

\*\*\*This applies to plants where production of either HF or CTC or both is integrated.

### D. Plant Activity in the Year Verified

#### I. Plant for Complete Closure

- No. of CFC-11/12 lines closed :
- Date of CFC production ceased :
- Date of dismantling completed :
- Verification of destruction of key components by : [ Name of certifying body]
- Reactor tank(s) dismantled and destroyed : Yes/No
- Control and monitoring equipment dismantled and destroyed : Yes/No
- Pipes dismantled and destroyed : Yes/No
- Utilities dismantled and destroyed Evidence of destruction (photos or videos) : Yes/No
- Chance of resuming production : Yes/No
- Assessment by the verification team to be included in the verification report :

## II. Plant for gradual closure

Annual CFC-11/12 quotas, production, sales and stocks since the baseline year\*

(Please use one table for each CFC product)

CFC Products (CFC-11) TM	Baseline Year*	Year 1	Year 3 2004
Quota ( CFC 11 + CFC 12 )			<b>3020</b>
Opening Stock at beginning of year			<b>655</b>
Procured			<b>0</b>
Production			<b>112</b>
Loss			<b>-208</b>
Sales			<b>337</b>
Closing stock at end of year			<b>222</b>

\*The year from which data is used to approve the ODS production phase out project.

\*\*Till the year of the verification

CFC Products ( CFC-12 ) TM	Baseline Year*	Year 1	Year 3 2004
Quota ( CFC 11 + CFC 12 )			<b>3020</b>
Opening Stock at beginning of year			<b>1395</b>
Procured			<b>0</b>
Production			<b>2904</b>
Loss			<b>-5</b>
Sales			<b>2879</b>
Closing stock at end of year			<b>1415</b>

\*The year from which data is used to approve the ODS production phase out project.

\*\*Till the year of the verification

### Annual HF/CFC TM and CTC/CFC ratios

Ratio	Baseline Year	Year 1	Year 2 2003	Year 3 2004	Year 4	Year 5	Year 6*
CFC-11							
HF/CFC-11 ratio				<b>19,69/112 0,1758</b>			
CTC/CFC-11 Ratio				<b>135,52/112 1,2100</b>			
CFC-12							
HF/CFC-12 Ratio				<b>1199,86/2904 0,4132</b>			
CTC/CFC-12 Ratio				<b>4047,32/2904 1,3937</b>			

\* Till the year of the verification

### Operational days per year

Type of Production	Baseline Year Projection	Year 1	Year 2 2003	Year 3 2004	Year 4	Year 5	Year 6*
<b>CFC-11 / 12</b>	<b>345</b>			<b>214</b>			

\*Till the year of the verification.