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COMITÉ EJECUTIVO DEL FONDO MULTILATERAL
PARA LA APLICACIÓN DEL
PROTOCOLO DE MONTREAL
Cuadragésima Quinta Reunión
Montreal, 4 al 8 de abril de 2005

# PROPUESTA DE PROYECTO: ARGENTINA

Este documento contiene los comentarios y las recomendaciones de la Secretaría del Fondo sobre la siguiente propuesta de proyecto:

Eliminación:

| | |
|---|---|
| • Estrategia para la eliminación de la producción de CFC-11 y CFC-12: programa anual de 2005 | Banco Mundial |

## PROGRAMA ANUAL DE TRABAJO DE 2005 Y VERIFICACIÓN DE LA PRODUCCIÓN DE CFC DE 2004 EN LA PLANTA DE FIASA

### Antecedentes

1. En 2002, el Comité Ejecutivo en su 38ª Reunión aprobó en principio un total de 8,3 millones $EUA para la aplicación del Acuerdo para el Sector de Producción en Argentina, y desembolsó la primera partida de 0,5 millones $EUA para el proyecto. Posteriormente, el Comité Ejecutivo desembolsó las partidas correspondientes a 2003 y 2004, en la 44ª Reunión, después de convencerse con la verificación de que FIASA alcanzó los objetivos de producción de CFC para 2002 y 2003, tal como había sido estipulado en el Acuerdo. Los límites anuales de producción de CFC y las partidas de financiamiento del acuerdo se resumen en la tabla siguiente.

| Año | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Producción máxima admisible (toneladas métricas) | 3.020 | 3.020 | 3.020 | 1.647 | 1.647 | 686 | 686 | 686 | 0 * | |
| Financiación por el Fondo Multilateral (millones $EUA) | 0,5 | 3,5 | 0 | 0,3 | 2 | 0 | 1 | 1 | | 8,3 |
| Costos del organismo (millones $EUA) | 0,02 | 0,11 | 0,09 | 0,12 | 0,10 | 0,12 | 0,12 | 0,047 | | 0,727 |

(*) excepto para cualquier producción de CFC que pueda ser acordada por las Partes para satisfacer los usos esenciales de Argentina

2. El Banco Mundial solicita en la 45ª Reunión la liberación de la partida de financiamiento correspondiente a 2005 de 0,3 millones $EUA y los gastos de apoyo asociados de 0,12 millones $EUA. De acuerdo con los términos del Acuerdo que requiere una verificación independiente del logro de los objetivos anuales de producción antes de liberar la partida siguiente del financiamiento, el Banco Mundial presenta la verificación de la producción de CFC de FIASA en 2004.

3. La presentación del Banco Mundial incluye el programa de trabajo de 2005 y el informe de verificación de la producción de CFC en FIASA para 2004 (adjunto).

### Verificación de la producción de CFC de FIASA para 2004

4. La verificación fue realizada en enero de 2005 por Sr. Jorge Corona, un consultor de México, que había sido Copresidente del Comité de Opciones Técnicas de Solventes del Grupo de expertos de evaluación técnica, pero que aparentemente no tenía ninguna experiencia directa con la producción de CFC. El equipo también incluyó a una contadora de un estudio contable local. El informe incluye un informe del consultor técnico sobre la inspección física de la planta, el proceso tecnológico y el estado de la fábrica, y un informe de la contadora sobre la producción de CFC y el consumo de las materias primas de CTC y HF, a partir del examen de los datos financieros.

5. El informe técnico describió primero brevemente el proceso tecnológico de la producción de CFC en la planta y comentó que ésta carecía de un sistema de recuperación del exceso de CTC, HF y CFC-13, puesto que era costoso, y, en consecuencia, dejaba salir estos productos químicos a la atmósfera. El auditor encontró que no había flujómetros en la planta para rastrear el consumo de las materias primas, los productos intermediarios o finales, pero fue informado que los flujómetros se instalarían pronto. Sólo se podía obtener un consumo aproximado diario de materias primas y producción de CFC pesando las cisternas de almacenamiento y las cisternas de producción. Tomó varias muestras para hacer pruebas en laboratorio, pero dijo que no podía integrar los datos de producción horaria en fábrica para conseguir datos independientes de producción. Sin embargo tuvo la impresión de que los datos financieros entre el consumo de materias primas y el CFC producido eran congruentes y bastaban para sacar conclusiones.

6. Informó que el mantenimiento era escaso debido a la carencia de inversiones en vista del futuro cierre de la planta y que, en consecuencia, la planta experimentaba paros frecuentes. Se podía atribuir también una eficiencia más baja a que la relación de CFC12/CFC11 había cambiado significativamente de 60/40 a 95/5 por ciento, diseñada así para abastecer la demanda del mercado.

7. El informe de la contadora trató primero las limitaciones que tuvo para hacer la auditoría. No pudo comprobar los datos de las materias primas y de los productos finales al cierre de los inventarios, porque éstos se prepararon sólo el 30 de noviembre de cada año, junto con los estados financieros. Tampoco pudo tener acceso a los registros contables sellados, ni al diario sellado en el Registro Público de Comercio, y encontró que los informes producidos diariamente no correspondían a los formularios prenumerados o firmados.

8. La contadora utilizó resúmenes mensuales y seleccionó junio, julio, noviembre y diciembre como muestras de verificación. El examen abarcó expedientes sobre el consumo de materias primas, producción de CFC, facturas de compra y venta, materias primas a la apertura del inventario pero no al cierre, puesto que el estado financiero anual no estaría disponible hasta el 30 de noviembre.

9. La contadora confirmó la producción de CFC anual y mensual, y que el cambio de inventario acumulativo de CFC correspondía a los datos anuales de producción y de ventas. Asimismo confirmó que el cambio acumulativo en el inventario de materias primas clave coincidía con la producción de CFC, tanto en general como por sección.

10. La verificación concluyó que FIASA produjo 3 015 toneladas métricas de CFC en 2004, lo que estaba por debajo del objetivo de 3 020 toneladas métricas, estipulado en el acuerdo. La producción se dividió en 112 toneladas métricas para CFC-11 y 2 904 toneladas métricas para CFC-12. En 2004 FIASA vendió 1 837 toneladas métricas dentro el país y exportó 1 378 toneladas métricas. Sus exportaciones fueron principalmente a Brasil, Paraguay, Chile y Egipto.

11. Los datos recogidos por el equipo de verificación se presentan en el formato estipulado en las directrices para la verificación de la eliminación de la producción de SAO, que incluye la producción mensual de CFC-11 y de CFC-12, el número de días de producción, los índices de

consumo de materias primas para la producción CFC y HCFC-22, el cambio de inventario de materias primas de CTC y HF, como maneras de validar la producción de CFC.

**Programa anual de trabajo de 2005**

12. El programa anual de trabajo de 2005 comienza con una breve recapitulación de los resultados del programa de trabajo de 2004. Uno de los logros principales de 2004 fue, en noviembre de 2004, el establecimiento, por Decreto Presidencial No.1609, del sistema nacional de otorgamiento de licencias para las importaciones y exportaciones de SAO. La Secretaría del Medio Ambiente y Aduanas son conjuntamente responsables de aplicar el sistema, que se basará en el registro de importadores y exportadores. El Gobierno y el Banco Mundial firmaron un acuerdo de donación y prepararon el terreno para ejecutar el plan sectorial. También se realizó, como parte del programa de asistencia técnica, un estudio sobre las perspectivas de mercado para FIASA y el refuerzo de la supervisión de producción de CFC.

13. El programa de trabajo de 2005 propuesto incluye el objetivo de producción de CFC para FIASA, la política que promulgará el Gobierno para la ejecución del plan de eliminación de producción de CFC, y las actividades previstas de asistencia técnica. El objetivo de producción de CFC para 2005 es de 1 647 toneladas PAO, lo que representa el 50% de la base obligatoria, conforme al calendario de control del Protocolo de Montreal, y que coincide con el objetivo del plan de sector. El Gobierno asegura la realización del objetivo instituyendo un tope de producción, apoyado legalmente por la Ley nacional No. 24.040/1991, que estableció controles de producción y venta de SAO. Además, el 1° de enero 2005 el Gobierno introducirá el sistema nacional de otorgamiento de licencias a la importación y exportación de SAO, que establecerá un registro de importadores y exportadores de SAO y asignará las cuotas anuales que la Secretaría del Medio Ambiente administrará y Aduanas hará cumplir.

14. El programa anual de 2005 planeó varias actividades de asistencia técnica para apoyar al plan de sector e incluye la capacitación de personal gubernamental para administrar el plan nacional de eliminación, el desarrollo de directrices para desmontar equipos en FIASA, explorar otras oportunidades comerciales para esa empresa y realizar campañas de sensibilización para el público.

15. Para supervisar la ejecución del plan de sector, la dependencia de ejecución del proyecto, que se encuentra en la Secretaría de Industria y Comercio, asignará a un profesional a tiempo parcial para que visite FIASA y verifique los registros de producción mensuales.

16. De los 3,5 millones $EUA desembolsados por el Fondo, más de 1 millón $EUA se pagó a FIASA, con la cual se convino un calendario de desembolsos del saldo remanente. El 0,3 millón $EUA del programa de trabajo de 2005 se pagaría a la empresa, conforme a la ejecución del plan anual de producción de CFC. El Anexo I contiene 4 tablas con detalles sobre los varios componentes del programa de 2005.

**Comentarios de la Secretaría**

17. Hubo varias preguntas sobre la parte técnica del informe de auditoría. El consultor técnico no describió el procedimiento que siguió al hacer la auditoría, ni las secciones de la

planta que examinó, ni el tamaño o clase de pruebas que llevó a cabo. El auditor comentó que la planta no tenía flujómetros para rastrear el consumo de materias primas o productos finales, pero no especificó hasta qué punto esto afectó su auditoría. Informó que no podía integrar los datos del programa de producción horaria en fábrica para conseguir datos de producción independientes, y que, en consecuencia, para la verificación dependió de los datos financieros. Esto redujo considerablemente la eficacia de su contribución a la auditoría.

18. La contadora hizo la verificación de los informes financieros de una manera más profesional, explicando el procedimiento que siguió, el tamaño de la muestra utilizada y las limitaciones que experimentó durante la realización de su trabajo. Hubiera sido mejor si hubiera tratado las limitaciones en su eficacia al realizar la auditoría. Confirmó la congruencia de los datos agregados mensuales y anuales de consumo de materias primas de CTC, y de la producción de los productos finales.

19. En el Anexo II, el formato de la evaluación, que fue aprobado por el Comité Ejecutivo, se diseñó para mantener una historia de resultados de verificación, de un año al otro, para la comparación y la comprobación cruzada. No obstante, los resultados de la verificación correspondiente a los años 2002 y 2003 no se incluyeron en las tablas.

20. El programa anual de trabajo de 2005 propone un objetivo máximo admisible de CFC, que es coherente con el acuerdo, y varias medidas de políticas existentes y recientemente promulgadas para facilitar la ejecución del programa de trabajo. El programa también prevé varias actividades de asistencia técnica en 2005, inclusive la exploración de oportunidades de un mercado futuro para FIASA y la elaboración de directrices para desmontar la planta en el futuro. Como en los programas anteriores, existe un sistema de supervisión continua de la producción de CFC en la planta, a cargo del Gobierno.

**Recomendaciones**

1. La Secretaría recomienda que el Comité Ejecutivo pueda querer:

   a) Solicitar al Banco Mundial que en las verificaciones futuras siga las directrices de verificación de la eliminación de la producción de SAO, adoptadas por el Comité Ejecutivo, asegurar la pericia necesaria para el equipo de verificación, y lograr verificaciones congruentes en los países donde se están ejecutando proyectos de eliminación de producción de SAO; y

   b) Aprobar el programa anual de trabajo de 2005 en el nivel de 0,3 millones $EUA y los costos de apoyo asociados de 0,12 millones $EUA para el Banco Mundial, en vista de los resultados de la verificación, en particular la auditoria financiera de la producción de CFC en FIASA, que en 2004 fue 3 015 toneladas métricas, lo que estaba por debajo del objetivo de 3 020 toneladas métricas estipulado en el acuerdo.

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

## 2005 ANNUAL PROGRAM

OPROZ / UEPRO
AND

THE WORLD BANK

**January 2005**

## 1. DATA

| | | | |
|---|---|---|---|
| **Country** | Argentina | | |
| **Year of plan** | 2005 | | |
| **No. of years completed** | 2 | | |
| **No. of years remaining under the plan** | 6 | | |
| **Total ODS to be phaseout through the Strategy for Gradual Phaseout of CFC -11 & CFC -12 Production in Argentina** | CFC – 11 + CFC – 12 : 3,020 | | |
| | | | |
| | ODS 3: | | |
| | ODS 4: | | |
| **ODS Production for the Previous year (MT)** | | Target | Actual |
| | CFC 11/12 | 3,020 | 3,016 |
| **CFC production independently verified** | Yes | | |
| **Target ODS Consumption for the year of the plan (MT)** | CFC 11/12 : 1,647 MT | | |
| **Total MLF funding approved for the Plan** | US$ 8.3 Million | | |
| **Total funds released so far** | | | |
| | | Funding | Disbursed (*) |
| **Total funding disbursed on annual plans** | 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 |
| **Level of funding requested for this AP** | US$ 300,000 | | |
| **Support costs** | US$ 120,000 | | |
| **Lead implementing agency** | The World Bank | | |
| **Co-operating agency (ies)** | 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 (Total impact) | 3,020 (Total impact) | 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 were 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 UEPRO 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 UEPRO. Three monitoring activities were implemented during

2004, in order to verify FIASA'a 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 UEPRO 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 UEPRO will continue its activities. However, UEPRO 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$3.5 Million was approved to be disbursed to the enterprise in 2004. A total of U$ 1,012,000 has been disbursed to the enterprise and an schedule to disbursed the remaining funds from the U$ 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

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

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

| Name of TA/Training activity | Estimated costs | Duration |
|---|---|---|
| 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

| Name of activity | Estimated costs | Duration |
|---|---|---|
| One professional staff part-time; | 8,000 | 1 Year |

### TABLE 1D: COMPENSATION TO FIASA

| Name of activity | Estimated costs | Duration |
|---|---|---|
| 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
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# 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:

| Year | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|---|---|---|---|---|---|---|---|---|---|
| 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 Economìa y Producciòn
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 Producciòn (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 38th 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 Mèxico (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 | Year 2 | Year 3 |
|---|---|---|---|
| | 2002 | 2003 | 2004 |
| CFC-11 | 128 | 133 | 112 |
| CFC-12 | 2,887 | 2,885 | 2,904 |
| Total | **3,015** | **3,018** | **3,015** |
| | | | |
| 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 |

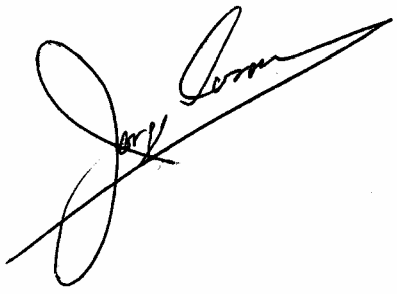
## 6 SALES

| | Domestic | Export * | Total |
|---|---|---|---|
| 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:

| | CFC-11 | CFC-12 | Total |
|---|---|---|---|
| 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% |

| | HF | CTC | Total |
|---|---|---|---|
| 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% |

| | HF | CTC | Total |
|---|---|---|---|
| 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 (This information is included in Appendix I, section DIC, in the column "Procured or added to stock or sales") | 5.738 |
| 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 (This information is included in Appendix I, section D. II, in the column "Procured or added to stock or sales) | ( 2.092) |
| 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 |

### 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: | | | | | |
|---|---|---|---|---|---|
| **ODS Products** | No. of Lines | Capacity in Baseline Year*TM Projection | **TM Production**** | | |
| | | | Baseline Year* | Year 1 | Year 3 2004 |
| CFC-11 | **1** | **3636** | | | **112** |
| CFC-12 | **1** | **5022** | | | **2904** |
| CFC-13 | | | | | |
| CFC-113 | | | | | |
| CFC-114/115 | | | | | |
| **Raw Materials Production***** | | | | | |
| HF Consumption | | | | | **1220** |
| CTC Consumption | | | | | **4183** |

*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 : Yes/No

Evidence of destruction (photos or videos) :

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 ) | | | **3020** |
| Opening Stock at beginning of year | | | **655** |
| Procured | | | **0** |
| Production | | | **112** |
| Loss | | | **-208** |
| Sales | | | **337** |
| Closing stock at end of year | | | **222** |

*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 ) | | | **3020** |
| Opening Stock at beginning of year | | | **1395** |
| Procured | | | **0** |
| Production | | | **2904** |
| Loss | | | **-5** |
| Sales | | | **2879** |
| Closing stock at end of year | | | **1415** |

*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 | | | | **19.69/112 0,1758** | | | |
| CTC/CFC-11 Ratio | | | | **135.52/112 1,2100** | | | |
| CFC-12 | | | | | | | |
| HF/CFC-12 Ratio | | | | **1199.86/2904 0,4132** | | | |
| CTC/CFC-12 Ratio | | | | **4047.32/2904 1.3937** | | | |

* 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* |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| **CFC-11 / 12** | **345** | | | **214** | | | |

*Till the year of the verification.