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执行蒙特利尔议定书
多边基金执行委员会
第四十三次会议
2004 年 7 月 5 日至 9 日，日内瓦

项目提案：阿根廷

本文件载有基金秘书处对以下项目提案的评论和建议：

熏蒸剂

- 烟草和非保护性蔬菜苗床甲基溴淘汰（第四期） 开发计划署

熏蒸剂

- CFC 生产关闭计划：2003 年和 2004 年工作方案 世界银行

项目评价表

阿根廷

行业： 熏蒸剂 行业消耗臭氧层物质使用量（2003 年）： 245.7 ODP 吨

次级行业成本效益临界值： 不适用

项目名称：

(a) 烟草和非保护性蔬菜苗床甲基溴淘汰（第四期）

项目数据	**熏蒸剂**
企业消耗量（ODP 吨）	
项目影响（ODP 吨 ）	16.00
项目期限（月）	12
申请的初始金额（美元）	467,000
最终项目费用（美元）：	
增加基本建设费用(a)	
应急费用(b)	
增加经营费用(c)	
项目总费用(a+b+c)	467,000
当地所有权(%)	
出口部分(%)	
第一期申请金额（美元）	467,000
成本效益（美元/公斤）	29.19
对应方供资是否确认？	
国家协调机构	Instituto Nacional de Tecnología Agropecuaria 和臭氧机构
执行机构	开发计划署

秘书处的建议	
建议金额（美元）	467,000
项目影响（ODP 吨）	16.00
成本效益（美元/公斤）	29.19
执行机构支助费用（美元）	35,025
向多边基金申请的总费用（美元）	502,025

项目说明

背景

1. 执行委员会核准了包括在一项协定中的以下阿根廷两项淘汰甲基溴投资项目：

(a) 淘汰在草莓、鲜花和受保护蔬菜中使用的 331 ODP 吨甲基溴，由工发组织执行。该项目经执行委员会第三十次会议核准，总经费为 3,183,390 美元，资金已全部付给阿根廷政府。

(b) 淘汰在烟草和非保护性蔬菜苗床中使用的 178.8 ODP 吨甲基溴，由开发计划署执行。该项目经执行委员会第三十六次会议核准，原则同意的总经费为 3,588,000 美元。执行委员会迄今已核准项目的三期，付给阿根廷政府资金 2,187,000 美元。

2. 阿根廷政府向执行委员会第四十三次会议提交了供其审议的关于淘汰烟草苗床和大田蔬菜(西红柿、椒类、茄子等)(非保护性)苗床土壤中所有甲基溴剩余使用的项目执行情况的 2003 年进度报告和 2004 年工作方案，请求为第四期拨款资金 467,000 美元，外加 35,025 美元的机构支助费用。

进度报告

3. 2003 年，Instituto Nacional de Tecnología Agropecuaria 和臭氧机构在开发计划署协助下，执行了烟草和大田蔬菜苗床淘汰甲基溴项目的第三期。阿根廷 2002 年遇到严重经济危机后，2003 年的烟草行业仍扩大了种植面积；但整个甲基溴的消费量却下降了。

4. 由于开展几项活动，2003 年淘汰了 29.05 ODP 吨，即比项目商定条件所规定的多了 8 ODP 吨。还采取了行动保证 2002 和 2003 年季度通过项目的执行实现的甲基溴减少能够成为可持续的永久性减少，能让阿根廷的甲基溴整个国家的消费量减去这一部分。

5. 2003 年 4 月至 2004 年 3 月期间开展的主要活动包括：监测甲基溴的进口和使用；于利益相关者进行联络，导致同政府签署各项协议承诺 2007 年之前在这一行业完全淘汰甲基溴；培训 1,810 名农户和 65 名技术人员如何使用甲基溴代用品；向 18,000 名种植者提供技术援助；为 2003－2004 年生产季度进行设备的投标和采购；组织烟草行业第二次全国论坛讨论国家政策的制定；以及制定和落实提供认识的媒体活动。此外，在材料和设备的采购和散发方面收到了对应出资。

提议开展的活动

6. 现提议利用第四期的资金，另外再培训至少 20 名农业培训员和 5,000 名种植者，购买 2004－2005 年季度的投入和物资以实现另外再淘汰 16 ODP 吨甲基溴；继续与环境部和

农业部协调以拟定今后几年控制甲基溴进口的规定；以及继续开展提供认识活动和编制培训材料和出版物。

7. 今后的工作将集中于执行工作的头一两年实现减少不多的省份，以及甲基溴消费集中的大田蔬菜业地区。

秘书处的评论和建议

评论

8. 秘书处注意到开发计划署代表阿根廷政府提交报告的全面性。

9. 根据进度报告，阿根廷 2003 年甲基溴的消费总量为 245.7 ODP 吨。此消费量比阿根廷政府所同意的最大允许消费量(即 256.4 ODP 吨)少 10.7 ODP 吨。在烟草和受保护蔬菜行业，2003 年甲基溴的淘汰量为 29 ODP 吨(比政府同意的数量多了 9 ODP 吨)，尽管烟草生产地区增加了 19%。但草莓、鲜花和蔬菜行业甲基溴消费的增加，超出了阿根廷政府同意这些行业可以消费的数量将近 50 ODP 吨。

10. 鉴于对整个甲基溴协定的影响，工发组织有关草莓、鲜花和受保护蔬菜的项目在本次会议上不作报告。尽管如此，还是要求对这些行业甲基溴消费的增加的原因作出解释。秘书处就此得悉,2003 年甲基溴游说团体的游说活动和非第 5 条国家关键用途豁免的问题，对阿根廷甲基溴淘汰项目形成了考验。阿根廷政府表明，将在关于工发组织项目执行情况的进度报告提交执行委员会时提出有关这些行业甲基溴消费增加的进一步的情况。

11. 秘书处注意到，根据阿根廷政府与执行委员会达成的协定，为了达到协定中规定的甲基溴消费限量(即 256.4 ODP 吨)，阿根廷政府在组织和实施协定所涉两个项目方面拥有灵活性。在这方面，烟草和非保护性蔬菜甲基溴淘汰项目所落实的淘汰，已超出未项目议定的条件，整个协定中规定的总消费量政得到遵守。

建议

12. 秘书处建议执行委员会考虑在下表所列供资水平上一揽子核准此项目和相关的支助费用：

	项目名称	项目资金 (美元)	支助费用 (美元)	执行机构
(a)	烟草和非保护性蔬菜苗床甲基溴淘汰（第四期）	467,000	35,025	开发计划署

对阿根廷 FIASA 工厂各类 CFC 生产的审核

13. 执行委员会 2002 年第三十八次会议原则上核准了 8,300,000 美元的资金总额,用于执行《阿根廷生产行业协定》，并且向该项目支付了 500,000 美元的第一期资金。下表介绍每年 CFC 生产限额和各期支付资金数额。

年度	2002	2003	2004	2005	2006	2007	2008	2009	2010	共计
允许的最高产量(公吨)	3,020	3,020	3,020	1,647	1,647	686	686	686	0*	
多边基金支付金额(百万美元)	0.5	3.5	0	0.3	2	0	1	1		8.3
机构费用(百万美元)	0.02	0.11	0.09	0.12	0.10	0.12	0.12	0.047		0.727

(*)各缔约方同意用于满足阿根廷必需用途的任何 CFC 产量除外。

14. 《协定》要求独立核查落实每年产量指标的情形，根据这项规定，世界银行提出了 FIASA 2002 年和 2003 年 CFC 产量核查报告。

15. 世界银行要求支付的支助费用，2003 年为 110,000 美元，2004 年为 90,000 美元。根据推断,它还要求支付 2003 年期的 3,500,000 美元,不过，该报告没有具体提到这一点。目前没有提出 2004 年年度方案。

FIASA 2002 年和 2003 年 CFC 产量核查活动

16. 安东尼奥·克里斯托罗顾问于 2004 年 2 月开展了核查活动。报告包括执行摘要、报告正文和数据，数据的格式符合核查 ODS 生产淘汰情形的准则，执行委员会于 2000 年核准了这些准则。报告首先简短地介绍了 FIASA 的历史,这是一家能够生产各类 CFC 和 HCFC-22 的交替生产工厂。但是，由于生产力低，经营成本高，该厂在 2000 年之后停止了 HCFC 生产。核查活动包括检查工厂和审查记录。

17. 工厂检查包括检查原料和最终产品储存区域以及生产区域。在实地检查活动中，检查了储存能力和工厂使用的包装规格。顾问检查了生产区域的反应堆和蒸馏塔，认为厂主已做足够投资，确保 CFC 停产之前的安全。

18. 鉴于 CFC 生产所需要的所有 CTC 和 HF 均从西班牙和巴西进口,报告首先审查了原料采购记录。将发票与消费报表、月终存货报表和地方销售报表进行了比对。此外，还将公司发票与官方进口记录进行了比对。顾问接着审查了 CFC 销售记录，他报告说，50%的产品被出口，主要出口到巴西，此外，也出口到南美洲其他国家，如智利、乌拉圭和巴拉圭。最近也向东南亚出口一些产品。 2003 年，由于其他市场萎缩，比索贬值，国内销售量有所增加。核查活动审查了 3 个月的进出口销售记录,以此作为抽样样本。

19. FIASA 用同一反应堆生产 CFC-11 和 CFC-12，取得了 CFC-12 对 CFC-11 的 60 对 40 的最佳效绩。但该厂 2002 年和 2003 年将 CFC-12 的生产比率增加到 96%，CFC-11 的生产比

率则降为 4%。2002 年的生产组合是， 2,887 公吨 CFC-12， 128 公吨 CFC-11。2003 年的生产组合是， 2,885 公吨 CFC-12， 133 公吨 CFC-11。2003 年，该厂不得不从墨西哥进口 510 公吨 CFC-11，以满足客户需要。自从汇编每月记录之后，FIASA 销毁了原料消费和 CFC 生产每日记录表，顾问使用了每月记录，但要求该厂保留每日记录表，以备今后核查之用。

20. 核查的结论是，FIASA 2002 年生产了 3,015 公吨，2003 年生产了 3,018 公吨，两年的产量都低于《协定》规定的 3,020 公吨目标。

21. 核查小组收集的数据采用了核查 ODS 生产淘汰情形准则规定的格式，其中包括 CFC-11 和 CFC-12 逐月产量、生产日数、给料与 CFC 和 HCFC-22 产量的消费比率、以 CTC 和 HF 给料库存的变化核实 CFC 产量。

2004 年工作方案

22. 没有提交。

秘书处的评论

23. 秘书处向世界银行提出了关于核查报告的评论，并且要求提交 2004 年工作方案。但本报告截稿时，秘书处尚未收到世界银行对其评论的答复。下文摘要介绍秘书处的评论。

核查小组的资历

24. 执行委员会核准的“核查 ODS 生产淘汰情形的准则和标准格式”(《准则》)规定，从事核查工作的顾问小组应该:

- 一名组员应熟悉会计业务和财务审计(通常是一名执业会计师“会计师”)以及
- 一名组员须是技术专家，具有所审核 ODS 生产方面的经验。

25. 报告显示，只有一名顾问进行审核工作，报告没有显示顾问的学术背景和经历。鉴于这是这位顾问第一次进行审核工作，世界银行应该提供一份简历，介绍这位顾问的学术背景和工业及商业方面的经验。

CFC-11 和 CFC-12 生产

26. 报告显示，FIASA 2002 和 2003 年 CFC-11 的产量分别为 128 和 133 公吨，2002 和 2003 年 CFC-12 的产量分别为 2,887 和 2,885 公吨。下表比较 CFC-11 和 CFC-12 的历史生产比率。

FIASA 的 CFC-11 和 CFC-12 生产比率

年份	CFC 11	CFC 12
	%	%
2003	4.4	95.6
2002	4.2	95.8
2000	21.8	78.2
1999	26.6	73.4
1998	34.4	65.6
1997	42.2	57.8

27. 1997 至 2000 年期间，FIASA 因应市场的变化将 CFC-11 的产量从 CFC-11 对 CFC-12 联合生产比率的约 42%减少到约 22%；但是，CFC-11 对 CFC-12 的比率仍然高于 20%。报告显示，2002 年和 2003 年，FIASA 将 CFC 生产比率分别减少到 4.2% 和 4.4%；这是大幅度减少。顾问必须解释，FIASA 采取了哪些措施，以实现 CFC-11 生产比率的这种大幅度减少。

28. 为了增加生产中的 CFC-12 分量，经营者通常增加氟化氢(HF)对四氯化碳(CTC)的比率，并相应调整操作条件。但是，随着 HF 对 CTC 的比率增加，产生的 CFC-13(氯三氟代甲烷)也增加。因此，顾问必须报告产生的 CFC-13 数量，解释 FIASA 是如何处置产生的 CFC-13 的，因为 CFC-13 也是消耗臭氧物质(《蒙特利尔议定书》附件 B)。

CTC 库存

29. 顾问在附件一中介绍了 2002 和 2003 年每月 CTC 的期初库存、采购量和期末库存。但他显示了具体用于 CFC-11 生产的 CTC 的期初库存、采购量和期末库存，并显示了具体用于 CFC-12 生产的另一套 CTC 的期初库存、采购量和期末库存。鉴于 CFC-11 和 CFC-12 为同一反应堆同时生产，顾问应该解释他是如何分别追踪 CFC-11 和 CFC-12 的 CTC 库存的。

2004 年工作方案

30. 世界银行认为没有必要提交 2004 年年度工作方案，并表示，2004 年需要做的是维持 CFC 的生产目标。

31. 但是，《协定》的规定要求提交年度工作方案，以便继续为淘汰计划提供资金。此外，年度工作方案还介绍政府为配合支助政策和技术援助活动而计划开展的活动。2004 年，这些活动非常重要，因为在这一年之后，阿根廷必须将其 CFC 生产减少到其基准数量的 50%；此外，还应该了解，政府将制订哪些控制措施控制各类 CFC 的进口和出口。

建议

32. 秘书处在收到世界银行的反馈意见之前无法提出建议。

AUDIT ON THE PRODUCTION OF CFC's AT FIASA (FRIOINDUSTRIAS ARGENTINAS) PLANT IN VILLA MERCEDES, SAN LUIS, Argentina

Prepared for:
WORLD BANK

Prepared by:
Antonio Cristodero

Buenos Aires, February 25, 2004

1 SUMMARY

The objective of the audit was to verify FIASA's CFC's production closure starting with the years 2002 and 2003, according to the schedule described below, included on the CFC production closure agreement called "Strategy for gradual phase-out of CFC-11 & CFC-12 production in Argentina" 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.

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	,09	.10	.09	.12	.017	

During the visit to Villa Mercedes plant at FIASA, the following activities were done:

- Inspection of the whole plant for taking notice of its general status in reference to
- maintenance, specially in the Reactor/Distillation sector.

- Inspection of raw materials and final product storage areas.

- Inspection of the filling plant, where the final product is packed into half ton-tanks,
- cylinders and disposable cans (dac's).

- Review of imports, consumption and sales of raw materials (CTC and HF).

- Review of annual raw material stocks at the beginning and at the end of each year.

- Review of monthly production records.

The audit process was based on the "Guidelines and standard format for verification of the ODS production Phase-out", provided by the Executive Committee for the Implementation of the Montreal Protocol.

The controls, review and comparisons that were done during the audit, allow to affirm that FIASA's CFC's annual production in 2002 and 2003 were 3,015 MT and 3,018 respectively. Each of both quantities did not exceed the quota of 3,020 MT set as a maximum production level by the Montreal Protocol.

2 INTRODUCTION

The FRIO INDUSTRIAS ARGENTINA plant was built by Liquid Carbonic Argentina and other two minority partners during 1986, and begun to operate at commercial level during 1988.

In 1995 Praxair bought Liquid Carbonic, including FIASA plant.
Two years later, in 1997, Praxair sold FIASA's plant to the present owner, Pamcor from Rio Tercero, Córdoba, Argentina.

Although the plant is able to produce HCFC-22, it is no competitive due to low productivity and high operation costs. The last HCFC-22 production was only 98 MT in year 2000.

The CFC's annual production was increased from 1,500 MT at the beginning of the 90's, up to 2,600/3,000 MT between 1995 and 2001.

The current payroll at FIASA plant is 27 workers: 12 in the production area, 6 in the filling sector, 3 in maintenance, 1 in the laboratory, 2 supervisors and 1 production manager.

At the plant 5 different areas can be observed: Administration/laboratory section, raw materials storage area, final product storage sector, filling area and production sector (reactor/distillation column).

3 PLANT INSPECTION

3.1 Raw Materials Storage Area

The raw materials storage capacity inside the plant is 2,400 MT of CTC and 140 MT of HF. These two products are imported principally from Spain and Brazil.

The capacity of HF storage is sufficient for one month CFC's production. In the case of having more stock, they have to rent external storage sites. There have been some cases where they have had to rent storage sites for CTC.

Take notice that the raw material stocks mentioned in the Annex include raw materials located at Villa Mercedes and the amount stored outside the plant.

3.2 Final Product Storage Area

At the plant there are 5 stationary tanks with a total capacity of 480 MT and 3 trucks with a total capacity of 120 MT.
For CFC-12, they have 450 half ton-tanks and 3,000 cylinders of 69 kg.
Additionally, they have an important stock of around 30,000 disposable cans (dac's) of 13.6 kg.

Based on this information, the total CFC-12 storage capacity is 1,430 MT, 600 MT in bulk and 830 MT in commercial packaging.

The CFC-11 is usually sold in disposable drums of 70 kg and 290 kg. Also, small quantities are sold in half ton-tanks and dac's of 13.6 kg.

3.3 Production Area (Reactor/Distillation)

The maintenance of this sector is acceptable. It has been designed by the plant owners that the investments assigned to this area are to guarantee the normal safety conditions and maintain the production rate to reach the quota of 3,020 MT for 2003.
The reduction on the production quota of 45% for 2005/6 and 73% for 2007/8/9 confirm these trends.

Under normal operation conditions, the plant works with two reactors. The secondary reactor improves the production efficiency and the HF consumption. In 2003 the plant worked 269 days versus 201 days worked in 2002. Moreover, the HF specific consumption in 2003 was 20% higher than the 2002 consumption.

4 REVISION OF PURCHASES, SALES AND PRODUCTION RECORDS

4.1 Raw Materials Purchases

As it was mentioned above, FIASA imports the CTC and the HF from Spain and Brazil.
The CTC purchase is generally in big volumes.

For the year 2002, because of the high 2001 remnant stock, they imported 1,408 MT of CTC in one operation. During 2003, FIASA bought 6,647 MT in 11 import operations.

With respect to HF, each purchase was between 30/50 MT. During 2002 they imported 620 MT, and in the year 2003 they imported 1,578 MT.

During the visit to the plant, all the purchases invoices were reviewed and, based on the consumptions and small local resale, all this information was compared with the monthly closing stocks. During some months, closing stocks are negatives because of were resale and not imports.

Information on CTC and HF imports informed by FIASA was compared with official records of imports. No differences were founded between both figures.

In order to conduct a verification of the above statement, FIASA imports were calculated from the imports official records, and no differences were founded between both figures.

4.2 CFC's Sales

FIASA exports almost 50% of its CFC's production. Currently, the most important market is Brazil, and in less quantities others countries of South America (Chile, Uruguay and Paraguay). Lately FIASA has being exporting to SE Asia .

During 2003 the percentage of local sales grew, because of the peso devaluation and other market contraction. With these new figures, FIASA improved their operation costs and became more competitive. During the last months big CFC's distributors get their CFC from FIASA instead of importing it.

The exports figures are generally in big volumes, so there are a few export monthly operations (between 5 and 15).

On the domestic market their sales are from only 1 disposable can of 13.6 kg to 20 MT in bulk . Based on this situation, there are about 100-200 monthly invoices, depending on the season of the year.

Three months of local sales and three months of exports for each year were revised during the visit. Monthly sales data was compared with figures informed by FIASA and no differences were founded.

4.3 CFC's Production

At FIASA's the production of CFC is continuous and production campaigns are long.
Daily or monthly production can be regulated based on technical conditions, but other factors have influence this implementation, such as raw materials stocks policies, final product stock policy, sales forecast, financial situation, etc.

CFC-12 and the CFC-11 are produced simultaneously by the reaction between the CTC and HF. The plant performance is strongly related to the desired proportion of CFC-12/CFC-11 , and its optimum is around 60/40. During 2002 and 2003 the plant was operated to produce the higher CFC-12 possible proportion (96% against 4% of CFC-11). In 2003 FIASA imported 510 MT of CFC-11 from Mexico. This situation was done due to CFC-11 low production and the need of supplying the substance to their customers. However, in 2003 CFC-11 final stock was 655 MT.

At FIASA's plant, the CTC/HF consumption, CFC's production and other wide general information of several processes is daily recorded. This data is destroyed after being summarized in a monthly record. As a recommendation from the auditor, FIASA was asked for further inspections to keep this information until the audited year is evaluated by the independent auditor.

Doing the revision of monthly records, there were not any irregularities detected. The revised figures coincide with those informed by FIASA, and there is coherence/ balance between the produced figures and the raw materials consumptions.

5 CONCLUSIONS

During the site visit and plant inspection it was verified that the maintenance investment are only to guarantee the normal safety conditions and to maintain production rate to reach the quota of 3,020 MT for 2003 and 2004.
There is no evidence of works for increasing the production capacity.

The revision of CTC/HF imports, CFC's local sales, exports and production records didn't show differences against FIASA's reported figures.

The comparison between the CTC/HF imports official records, the CFC's exports and the local market information about FIASA participation, allow us to confirm that during 2002 the plant reached a production of 3,015 MT, and during 2003 a production of 3,018 MT was reached. This confirms that FIASA did not exceed its annual production figures agreed on the 38º meeting of the Executive Committee for the implementation of the Montreal Protocol.

Annex I

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	:	Antonio Cristodero
Functional Title	:	Auditor
Member(s)	:	
Name	:	
Functional Title	:	
Date of Plant Visit	:	
Duration of Visit	:	

*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 2002	Year
CFC-11	**1**	**3636**		**128**	
CFC-12	**1**	**5022**		**2887**	
CFC-13					
CFC-113					
CFC-114/115					
Raw Materials Production***					
HF Consumption				**1094**	
CTC Consumption				**4148**	

*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 2002	Year
Quota (CFC 11 + CFC 12)		**3020**	
Opening Stock at beginning of year		**272**	
Procured		**0**	
Production		**128**	
Loss		**18**	
Sales		**118**	
Closing stock at end of year		**264**	

*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 2002	Year
Quota (CFC 11 + CFC 12)		**3020**	
Opening Stock at beginning of year		**1095**	
Procured		**0**	
Production		**2887**	
Loss		**7**	
Sales		**2199**	
Closing stock at end of year		**1776**	

*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 2002	Year 2	Year 3	Year 4	Year 5	Year 6*
CFC-11							
HF/CFC-11 ratio		**22,23/128 0.1737**					
CTC/CFC-11 Ratio		**161/128 1.2578**					
CFC-12							
HF/CFC-12 Ratio		**1071,77/2887 0.3712**					
CTC/CFC-12 Ratio		**3987/2887 1.3810**					

* Till the year of the verification

Operational days per year

Type of Production	Baseline Year Projection	Year 1 2002	Year 2	Year 3	Year 4	Year 5	Year 6*
CFC-11 / 12	345	**201**					

*Till the year of the verification.

Monthly CFC-11/12 production and raw material consumption*

Month of Year 2002	CFC-11	No. of operating days R11/12	CFC-11 Production	CTC/ CFC-11 Ratio	CTC Opening Stock	CTC consumption	CTC Procured/or added to stock/or sales	CTC Closing Stock
Jan		**18**	**9**	**1.2222**	**161**	**11**	**0**	**150**
Feb		**20**	**8**	**1.2500**	**150**	**10**	**0**	**140**
Mar		**8**	**4**	**1.2500**	**140**	**5**	**0**	**135**
Apr		**9**	**7**	**1.2857**	**135**	**9**	**0**	**126**
May		**13**	**5**	**1.2000**	**126**	**6**	**0**	**120**
Jun		**30**	**40**	**1.2500**	**120**	**50**	**0**	**70**
Jul		**13**	**12**	**1.2500**	**70**	**15**	**0**	**55**
Aug		**14**	**8**	**1.2500**	**55**	**10**	**0**	**45**
Sept		**16**	**6**	**1.3333**	**45**	**8**	**0**	**37**
Oct		**19**	**14**	**1.2857**	**37**	**18**	**0**	**19**
Nov		**21**	**6**	**1.3333**	**19**	**8**	**0**	**11**
Dec		**20**	**9**	**1.2222**	**11**	**11**	**0**	**0**

CFC Production and CTC consumption: TM

CFC Production and HF consumption: TM

Month of Year 2002	CFC-11	No. of operating days R11/12	CFC-11 Production	HF/ CFC–11 Ratio	HF Opening Stock	HF Consumption	HF Procured/ or added to stock or sales	HF Closing Stock
Jan		**18**	**9**	**0.1722**	**23**	**1.55**	**0**	**21.45**
Feb		**20**	**8**	**0.1725**	**21.45**	**1.38**	**0**	**20.07**
Mar		**8**	**4**	**0.1750**	**20.07**	**0.70**	**0**	**19.37**
Apr		**9**	**7**	**0.1714**	**19.37**	**1.20**	**0**	**18.17**
May		**13**	**5**	**0.1760**	**18.17**	**0.88**	**0**	**17.29**
Jun		**30**	**40**	**0.1750**	**17.29**	**7**	**0**	**10.29**
Jul		**13**	**12**	**0.1733**	**10.29**	**2.08**	**0**	**8.21**
Aug		**14**	**8**	**0.1725**	**8.21**	**1.38**	**0**	**6.83**
Sept		**16**	**6**	**0.1750**	**6.83**	**1.05**	**0**	**5.78**
Oct		**19**	**14**	**0.1714**	**5.78**	**2.4**	**0**	**3.38**
Nov		**21**	**6**	**0.1750**	**3.38**	**1.05**	**0**	**2.33**
Dec		**20**	**9**	**0.1733**	**2.33**	**1.56**	**0**	**0.77**

* Similar tables should be provided for CFC-12

CFC Production and CTC consumption: TM

Month of Year 2002	CFC-12	No. of operating days R11/12	CFC-12 Production	CTC/ CFC-12 Ratio	CTC Opening Stock	CTC consumption	CTC Procured/ or added to stock or sales	CTC Closing Stock
Jan		**18**	**174**	**1.4828**	**2694**	**258**	**0**	**2436**
Feb		**20**	**153**	**1.4444**	**2436**	**221**	**0**	**2215**
Mar		**8**	**110**	**1.3545**	**2215**	**149**	**0**	**2066**
Apr		**9**	**114**	**1.3246**	**2066**	**151**	**0**	**1915**
May		**13**	**96**	**1.2917**	**1915**	**124**	**0**	**1791**
Jun		**30**	**835**	**1.2802**	**1791**	**1069**	**-1**	**721**
Jul		**13**	**221**	**1.2851**	**721**	**284**	**0**	**437**
Aug		**14**	**150**	**1.2933**	**437**	**194**	**0**	**243**
Sept		**16**	**201**	**1.4428**	**243**	**290**	**1408**	**1361**
Oct		**19**	**248**	**1.4556**	**1361**	**361**	**0**	**1000**
Nov		**21**	**318**	**1.5440**	**1000**	**491**	**-49**	**460**
Dec		**20**	**267**	**1.4794**	**460**	**395**	**49**	**114**

CFC Production and HF consumption: TM

Month of Year 2002	CFC-12	No. of operating days R11/12	CFC-12 Production	HF/ CFC–12 Ratio	HF Opening Stock	HF consumption	HF Procured/ or added to stock or sales	HF Closing Stock
Jan		**18**	**174**	**0.3729**	**387.00**	**64.88**	**0**	**322.12**
Feb		**20**	**153**	**0.3693**	**322.12**	**56.50**	**53.5**	**319.12**
Mar		**8**	**110**	**0.3684**	**319.12**	**40.52**	**-2**	**276.60**
Apr		**9**	**114**	**0.3740**	**276.60**	**42.64**	**108**	**341.96**
May		**13**	**96**	**0.3725**	**341.96**	**35.76**	**0**	**306.20**
Jun		**30**	**835**	**0.3711**	**306.20**	**309.89**	**72.5**	**68.81**
Jul		**13**	**221**	**0.3737**	**68.81**	**82.59**	**129**	**115.22**
Aug		**14**	**150**	**0.3708**	**115.22**	**55.62**	**-2**	**57.60**
Sept		**16**	**201**	**0.3691**	**57.60**	**74.19**	**18**	**1.41**
Oct		**19**	**248**	**0.3701**	**1.41**	**91.78**	**120**	**29.63**
Nov		**21**	**318**	**0.3729**	**29.63**	**118.58**	**157.62**	**68.67**
Dec		**20**	**267**	**0.3701**	**68.67**	**98.82**	**69.38**	**39.23**

Annex I

Questionnaire for
ODS Production Phase Out Verification for 2003 (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	:	Antonio Cristodero
Functional Title	:	Auditor
Member(s)	:	
Name	:	
Functional Title	:	
Date of Plant Visit	:	
Duration of Visit	:	

*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 2 2003
CFC-11	**1**	**3636**		**128**	**133**
CFC-12	**1**	**5022**		**2887**	**2885**
CFC-13					
CFC-113					
CFC-114/115					
Raw Materials Production***					
HF Consumption				**1094**	**1311**
CTC Consumption				**4148**	**4531**

*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 2** 2003
Quota (CFC 11 + CFC 12)		**3020**	**3020**
Opening Stock at beginning of year		**272**	**264**
Procured		**0**	**510**
Production		**128**	**133**
Loss		**18**	**0**
Sales		**118**	**252**
Closing stock at end of year		**264**	**655**

*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 2** 2003
Quota (CFC 11 + CFC 12)		**3020**	**3020**
Opening Stock at beginning of year		**1095**	**1776**
Procured		**0**	**33**
Production		**2887**	**2885**
Loss		**7**	**0**
Sales		**2199**	**3299**
Closing stock at end of year		**1776**	**1395**

*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	Year 4	Year 5	Year 6*
CFC-11							
HF/CFC-11 ratio		**22.23/128 0.1737**	**26.4/133 0.1985**				
CTC/CFC-11 Ratio		**161/128 1.2578**	**174/133 1.3083**				
CFC-12							
HF/CFC-12 Ratio		**1071.77/2887 0.3712**	**1284,6/2885 0.4453**				
CTC/CFC-12 Ratio		**3987/2887 1.3810**	**4357/2885 1.5102**				

* Till the year of the verification

Operational days per year

Type of Production	Baseline Year Projection	Year 1	Year 2 2003	Year 3	Year 4	Year 5	Year 6*
CFC-11 / 12	**345**	**201**	**269**				

*Till the year of the verification.

Monthly CFC-11/12 production and raw material consumption*

CFC Production and CTC consumption: TM

Month of Year 2003	CFC-11	No. of operating days R11/12	CFC-11 Production	CTC/ CFC-11 Ratio	CTC Opening Stock	CTC Consumption	CTC Procured/ or added to stock or sales	CTC Closing Stock
Jan		**26**	**9**	**1.2222**	**0**	**11**	**208**	**197**
Feb		**25**	**26**	**1.2692**	**197**	**33**	**0**	**164**
Mar		**29**	**20**	**1.3000**	**164**	**26**	**0**	**138**
Apr		**17**	**20**	**1.3500**	**138**	**27**	**0**	**111**
May		**26**	**12**	**1.3333**	**111**	**16**	**0**	**95**
Jun		**25**	**11**	**1.3636**	**95**	**15**	**0**	**80**
Jul		**8**	**4**	**1.3000**	**80**	**5.2**	**0**	**74.8**
Aug		**15**	**10**	**1.3000**	**74.8**	**13**	**0**	**61.8**
Sept		**27**	**9**	**1.3333**	**61.8**	**12**	**0**	**49.8**
Oct		**23**	**4**	**1.3000**	**49.8**	**5.2**	**0**	**44.6**
Nov		**27**	**4**	**1.3250**	**44.6**	**5.3**	**0**	**39.3**
Dec		**21**	**4**	**1.3250**	**39.3**	**5.3**	**0**	**34**

CFC Production and HF consumption: TM

Month of Year 2003	CFC-11	No. of operating days R11/12	CFC-11 Production	HF/ CFC–11 Ratio	HF Opening Stock	HF Consumption	HF Procured/ or added to stock or sales	HF Closing Stock
Jan		**26**	**9**	**0.1889**	**0**	**1,7**	**38**	**36,3**
Feb		**25**	**26**	**0.1808**	**36,3**	**4,7**	**0**	**31,6**
Mar		**29**	**20**	**0.2000**	**31,6**	**4**	**0**	**27,6**
Apr		**17**	**20**	**0.2000**	**27,6**	**4**	**0**	**23,6**
May		**26**	**12**	**0.2083**	**23,6**	**2.5**	**0**	**21,1**
Jun		**25**	**11**	**0.2091**	**21,1**	**2.3**	**0**	**18,8**
Jul		**8**	**4**	**0.2000**	**18,8**	**0.8**	**0**	**18**
Aug		**15**	**10**	**0.2000**	**18**	**2**	**0**	**16**
Sept		**27**	**9**	**0.2222**	**16**	**2**	**0**	**14**
Oct		**23**	**4**	**0.2000**	**14**	**0.8**	**0**	**13,2**
Nov		**27**	**4**	**0.2000**	**13,2**	**0.8**	**0**	**12,4**
Dec		**21**	**4**	**0.2000**	**12,4**	**0.8**	**0**	**11,6**

* Similar tables should be provided for CFC-12

CFC Production and CTC consumption: TM

Month of Year 2003	CFC-12	No. of operating days R11/12	CFC-12 Production	CTC/ CFC-12 Ratio	CTC Opening Stock	CTC Consumption	CTC Procured/ or added to stock or sales	CTC Closing Stock
Jan		**26**	**283**	**1.4523**	**114**	**411**	**1265**	**968**
Feb		**25**	**251**	**1.4821**	**968**	**372**	**0**	**596**
Mar		**29**	**229**	**1.5066**	**596**	**345**	**296**	**547**
Apr		**17**	**202**	**1.5198**	**547**	**307**	**593**	**833**
May		**26**	**247**	**1.5223**	**833**	**376**	**2299**	**2756**
Jun		**25**	**197**	**1.5228**	**2756**	**300**	**400**	**2856**
Jul		**8**	**104**	**1.5192**	**2856**	**158**	**0**	**2698**
Aug		**15**	**251**	**1.5418**	**2698**	**387**	**-26**	**2285**
Sept		**27**	**299**	**1.5050**	**2285**	**450**	**26**	**1861**
Oct		**23**	**262**	**1.5229**	**1861**	**399**	**500**	**1962**
Nov		**27**	**285**	**1.5228**	**1962**	**434**	**1018**	**2546**
Dec		**21**	**275**	**1.5200**	**2546**	**418**	**-4**	**2124**

CFC Production and HF consumption: TM

Month of Year 2003	CFC-12	No. of operating days R11/12	CFC-12 Production	HF/ CFC–12 Ratio	HF Opening Stock	HF Consumption	HF Procured/ or added to stock or sales	HF Closing Stock
Jan		**26**	**283**	**0.3792**	**40**	**107,3**	**178**	**110,7**
Feb		**25**	**251**	**0.3996**	**110,7**	**100,3**	**338**	**348,4**
Mar		**29**	**229**	**0.4323**	**348,4**	**99**	**68**	**317,4**
Apr		**17**	**202**	**0.4604**	**317,4**	**93**	**101**	**325,4**
May		**26**	**247**	**0.4615**	**325,4**	**114**	**82**	**293,4**
Jun		**25**	**197**	**0.4619**	**293,4**	**91**	**104**	**306,4**
Jul		**8**	**104**	**0.4615**	**306,4**	**48**	**66**	**324,4**
Aug		**15**	**251**	**0.4861**	**324,4**	**122**	**60**	**262,4**
Sept		**27**	**299**	**0.4348**	**262,4**	**130**	**60**	**192,4**
Oct		**23**	**262**	**0.4580**	**192,4**	**120**	**214**	**286,4**
Nov		**27**	**285**	**0.4632**	**286,4**	**132**	**290**	**444,4**
Dec		**21**	**275**	**0.4655**	**444,4**	**128**	**134**	**450,4**