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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Forty-seventh Meeting
Montreal, 21-25 November 2005

PROJECT PROPOSALS: CHINA

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

Foam

- Sector plan for phasing out the use of CFC in the PU foam sector: 2006 annual programme — World Bank

Halon

- Sector plan for halon phase-out: 2006 annual programme — World Bank

Process agent

- Phase out the production and consumption of CTC for process agent and other non-identified uses (Phase I): 2006 annual programme — World Bank

Production

- Sector plan for CFC production phase-out: 2006 annual programme — World Bank
- CFCs/CTC/Halon accelerated phase-out plan: 2006 annual work programme — United States of America

Refrigeration

- Refrigeration servicing sector CFC phase-out plan (2nd tranche) — UNEP/UNIDO/ Japan

Solvent

- ODS phase-out in China solvent sector: 2006 annual programme — UNDP

PROJECT EVALUATION SHEET - MULTI-YEAR PROJECTS
PEOPLE'S REPUBLIC OF CHINA

PROJECT TITLE	BILATERAL/IMPLEMENTING AGENCY
Sector plan for phasing out the use of CFC in the PU foam sector: 2006 annual programme	World Bank

NATIONAL CO-ORDINATING AGENCY:	SEPA/FECO

LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT

A: ARTICLE-7 DATA (ODP TONNES, 2004, AS OF SEPTEMBER 2005)

CFC	18,358.39	

B: COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes, 2004 AS OF OCTOBER 2005)

ODS	Foam	Refrigeration	Aerosol	Solvents	Process agent	Tobacco
CFC	8,534.05	6,788.02	1,142.00	1,088.55	10.80	463.05

CFC consumption remaining eligible for funding (ODP tonnes)	n/a

CURRENT YEAR BUSINESS PLAN: Total funding US $ 3.32million: total phase-out 600 ODP tonnes.

PROJECT DATA		2002	2003	2004	2005	**2006**	2007	2008	2009	2010	Total
CFC-11 (ODP tonnes)	Montreal Protocol limits	57,819	57,819	57,819	28,909	**28,909**	8,673	8,673	8,673	0	N/A
	Annual consumption limit	17,200	15,500	13,100	10,400	**7,700**	4,130	3,800	300	0	N/A
	Annual phase-out from ongoing projects	14,143	13,830								N/A
	Annual phase-out newly addressed	2,000	2,500	2,500	2,500	**600**	551	0	0	0	6,151
	Annual unfunded phase-out										
TOTAL ODS CONSUMPTION TO BE PHASED OUT		2,000	2,500	2,500	2,500	**600**	551	0	0	0	10,651
Project cost as originally submitted (US $)		9,940,000	12,570,000	10,903,000	10,903,000	**3,320,000**	2,676,000	1,767,000	1,767,000	0	53,846,000
Total project funding for the World Bank (US $):		9,940,000	12,570,000	10,903,000	10,903,000	**3,320,000**	2,676,000	1,767,000	1,767,000	0	53,846,000
Total support costs for the World Bank (US $):		886,600	1,115,300	961,270	961,270	**282,800**	240,840	159,030	159,030	0	4,766,140
TOTAL COST TO MULTILATERAL FUND (US $)		10,826,000	13,685,300	11,864,000	11,864,000	**3,602,800**	2,917,000	1,926,000	1,926,000	0	58,612,140
Final project cost effectiveness (US $/kg)											N/A

FUNDING REQUEST: Approval of funding for the fifth tranche (2005) as indicated above.

SECRETARIAT'S RECOMMENDATION	Blanket approval at the costs indicated above

PROJECT DESCRIPTION

1. The World Bank has submitted, on behalf of the Government of China, with a request to release the fifth tranche of funding amounting to US $3,320,000 plus US $282,800 in support costs for the phase-out of CFC in the PU foam sector, the 2006 annual implementation programme for consideration by the Executive Committee at the 47th Meeting. The document is in two parts:

(a) Status of implementation of the 2005 annual programme (Part A); and

(b) 2006 Annual Implementation Programme (Part B).

Background

2. The Agreement on CFC phase-out in the polyurethane foam (PU) sector in China was approved at the 35th Meeting of the Executive Committee in December 2001 at a total cost of US $53.846 million. The phase-out plan provides annual control targets for CFC-11 consumption in the polyurethane foam sector in China and related funding from 2002-2009. The first implementation programme for the period December 2001 - December 2002 was approved at the 35th Meeting, the second implementation programme covering 2003 at the 38th Meeting, the third implementation programme for 2004 at the 41st Meeting and the fourth implementation programme for 2005 at the 44th Meeting. A total amount of US $48,240,448, including support cost of US $3,924,440 to the World Bank, has so far been released in the four tranches to phase out 9,500 ODP tonnes of CFC-11.

3. The CFC control targets and equivalent funding as agreed in the PU foam sector CFC-11 phase-out plan are shown in Table 1 below. However, in decision 44/59 of the 44th Meeting in November 2004 the Executive Committee approved a bilateral project submitted by the United States for accelerating the phase-out of CFC and halon production and consumption in China. The "Agreement for the CFC/CTC/HALON Accelerated Phase-out Plan in China (APP)" (UNEP/OzL.Pro/ExCom/44/73, Annex XVII) which covers the bilateral project provides a revised CFC-11 phase-out schedule in the polyurethane foam sector in China. Therefore Table 1 shows the CFC-11 consumption limits as agreed under the APP. Hence the annual CFC-11 consumption of the sector for the respective years as verified by the World Bank should be consistent with the levels agreed in the APP.

Table 1: Control targets for CFC-11 consumption in the polyurethane foam sector in China (ODP tonnes) and related funding schedule (US $ '000)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Annual national CFC-11 consumption limit (ODP tonnes)	17,200	15,500	13,100	10,400	7,700	4,130	3,800	300	0	
Annual CFC-11 consumption limit in PU foam sector* (ODP tonnes)	14,143	13,830	10,500	9,000	400	0	0	0	0	
Annual CFC-11 phase-out targets in PU foam sector (ODP tonnes)	2,000	2,500	2,500	2,500	600	551				10,651
Total annual funding (US $ X 1,000)	9,940	12,570	10,903	10,903	3,320	2,676	1,767	1,767		53,846
Programme Support Cost (US $ X 1,000)	886.6	1,115.3	961.27	961.27	282.8	240.84	159.03	159.03		4,766.14
Total cost to the Multilateral Fund (US $ X 1,000)	**10,826.6**	**13,685.3**	**11,864.27**	**11,864.27**	**3,602.8**	**2,916.84**	**1,926.03**	**1,926.03**		**58,612.14**

* Figures for annual CFC-11 consumption limits in PU foam sector for 2004-2010 are based on limits agreed under the APP.

4. The release of the funds is subject to the following:

(a) Confirmation that:

(i) All agreed phase-out targets and consumption limits for the previous year have been achieved;

(ii) It has been verified that the activities planned for the previous year were undertaken in accordance with the annual implementation programme;

(iii) CFC phase-out contracts have been signed, amounting to at least 50% of the current year contract targets and 100% of the previous year contract targets.

(b) Confirmation of performance through verification by site inspection of a minimum of 15% of the conversion activities, accounting for a minimum of 15% of the CFC consumption of the annual implementation programme;

(c) Consumption figures provided under the agreement are consistent with China's reports to the Ozone Secretariat under Article 7 of the Montreal Protocol.

5. The condition in paragraph 4 (a) above specifies that all agreed phase-out targets and consumption limits for the previous year are to be achieved. The agreed phase-out targets and consumption limits are:

(a) Annual national CFC-11 consumption limit (ODP tonnes);

(b) Annual CFC-11 consumption limit in PU foam sector (ODP tonnes);

(c) Annual CFC-11 phase-out targets in PU foam sector (ODP tonnes).

The limits are set out in Table 1 above.

6. In addition, consistent with decision 41/42 of the Executive Committee, with respect to paragraph 5, (b) and (c) above, the World Bank is required to provide satisfactory verification of the CFC-11 phased out in ongoing and new projects in the polyurethane foam sector, as well as the annual CFC-11 consumption in the sector in 2004. In light of decision 44/59 relating to the APP the verified consumption levels should be consistent with the levels agreed in the APP.

Status of Implementation of the 2002 - 2005 Annual Programmes

7. The 2006 annual programme contains an implementation status report covering 2002 to 2005 annual programmes, providing not only a narrative reflecting information such as policy and government actions, enterprise activities and technical assistance, but also tables with data such as the implementation status of enterprise activities and projects, the verification information collected, and technical assistance activities completed or on-going.

8. As in previous programmes a verification summary report is included as a response to decision 41/42, providing information on existing verification in the production sector and the related data as a basis for establishing national CFC-11 consumption in the foam sector. In addition, the report provides data on import and export of CFC-11, and on consumption in other sectors.

Government actions

9. The report describes Government efforts towards enforcing existing regulations and laws and further measures taken to support the smooth implementation of the sector plan. These include raising public awareness particularly of stakeholders with respect to relevant regulations and laws, control of CFC-11 production, export, and import and consumption through the regulation on CFC tradable production quota system, substitute development, studies and research on application of new technologies and capacity building.

Phase-out activities

10. The report describes restructuring activities undertaken and the contracts signed since the 2002 annual programme. It indicates that under the 2002-2005 annual programmes conversion contracts accounting for 8,336 ODP tonnes used by 144 enterprises have been signed. Account of contracts signed during each annual programme and corresponding CFC-11 phase-out targets are given for each annual programme from 2002 to 2005. In an effort to meet the conditions of verification in the agreement, the World Bank included a 2005 verification summary report providing verification of national CFC-11 consumption, annual CFC-11 consumption within the polyurethane foam sector, and CFC-11 consumption captured by 2005 CFC-11 phase-out contracts.

11. The phase-out of CFC-11 in the polyurethane foam sector in China is based on the principle of restructuring or consolidation of several smaller enterprises (ranging from 4-31) into a more efficient production group around a leading company. The restructuring is effected through plant closures, mergers and various forms of industrial restructuring, as a result of which

only the most competitive enterprises remain in business. As of September 2005 the implementation of the plan had resulted in mergers of a total of 143 small enterprises with leading companies. During the mergers these small enterprises are either closed, converted to CFC-free foam production or shifted to non-ODS business. The implementation of the restructuring projects involves complete dismantling of the old equipment and replacement or reconstruction with new equipment and technology.

12. Table 3 below shows the record of contract signings for phase-out activities under 2002-2005 annual programmes.

Table 3: Basic Information on Conversion Projects as of June 30, 2005

Project Name	CFC-11 Consumption (ODP tons)	Number of enterprises	Contract Number	Grant Amount (US $1,000)	Annual Program	Date of Contract Signing
1. Xinxiang Xinyuan	636.7	8	Con-F-02-Iv-01	2,441.6	2002	Sept.2, 2002
2. Chengdu Jinjiang	552	7	Con-F-02-Iv-02	2,166.3	2002	Aug.20, 2002
3. Zhejiang Chunhui	1164.98	31	Con-F-02-Iv-03	5,125.9	2002	Dec.27, 2002
4. Lanzhou Huayu	1060.08	19	Con-F-03-Iv-01	4,664.3	2003	Jan.9, 2003
5. Shaoxing Weike	969.14	5	Con-F-03-Iv-02	4,264.22	2003	Jan.9, 2003
6. Nantong Xinyuan	648.11	11	Con-F-03-Iv-03	2,510.93	2003	Jan.9, 2003
7. Dalian Yuji	294.32	7	F/III/S/04/093	1,295	2004	March 19, 2004
8. Fenghua Yongxing	484	9	F/III/S/04/094	1,800	2004	April 5, 2004
9. Beijing Zhonghai	589.9	8	F/III/S/04/095	2,595.6	2004	April 9, 2004
10. Jining Ningyu	644.3	10	F/III/S/04/254	2,577.2	2004	Nov. 23, 2004
11. Xinjiang Jingxin	275.78	4	F/III/S/04/314	1,164.1	2004	Dec.27, 2004
12. Nanjing Hongbaoli	426.9	11	F/III/S/05/009	1,878.41	2005	Feb. 3, 2005
13. Kuerle Zhujiang	171.78	5	F/III/S/05/017	704.3	2005	Mar. 10, 2005
14. Jiangsu Luyuan	418.138	9	F/III/S/05/016		2005	Mar. 10, 2005
Total	8,336.138	144				

2004 and 2005 annual programmes

13. The 2004 annual programme consisted of six restructuring projects, but one project was cancelled due to weak project management capacity. Contracts for all the remaining five projects were signed between March 2004 and November 2004. The five projects account for the phase-out of 2,288.3 ODP tonnes CFC-11. The projects are scheduled to be completed from June 2006 to December 2007. A total of 60 production lines or units are scheduled to be dismantled of which 47 have already been dismantled and disposed of. Other conversion activities such as equipment procurement and civil works are at the initial stages.

14. The 2005 annual programme has a target phase-out consumption of 2,500 ODP tonnes. Contracts for four restructuring projects were signed in February and March 2005. However one project was cancelled as the CFC-11 consumption could not be confirmed. The remaining three projects will merge a total of 28 enterprises with a total CFC-11 consumption of 1,017 ODP

tonnes, 41 per cent of the scheduled CFC-11 consumption phase-out. The total CFC-11 consumption of 1,017 ODP tonnes from the three projects is scheduled to be phased out by the end of 2007 in order to meet the CFC-11 phase-out requirement under the CFC/halon/CTC accelerated phase-out plan.

Technical assistance activities

15. Technical assistance activities under the sector plan concentrate on strengthening activities deemed to be essential to the success of the phase-out programme such as:

(a) The overall institutional framework for phase-out;

(b) Substitute chemical development;

(c) Management, monitoring and evaluation capabilities of participating institutions;

(d) Skills of enterprise managers involved in CFC-11 consumption phase-out activities; and

(e) Information exchange.

16. A total of 26 technical assistance activities have been planned during 2002-2005. Some of the activities such as training of personnel and revision of standards appear to be long-term activities. 19 of the 26 activities are reported to have been completed. The rest of the activities in the 2004 annual programme and all the activities in the 2005 annual programme are at various stages of implementation.

Verification of CFC-11 consumption and phase-out

17. In keeping with the polyurethane foam sector plan agreement, the World Bank indicated that it had verified on site and confirmed the CFC-11 consumption of 900.29 ODP tonnes in June 2004 representing 36 per cent of the 2,500 ODP tonnes phase-out target and 33 per cent of the contracts signed.

18. It also indicated that in July 2005 it carried out on-site verification of CFC-11 consumption at two projects out of six in the 2005 annual programme accounting for 822 ODP tonnes. One project accounting for 414 ODP tonnes was determined to be ineligible and cancelled. The confirmed consumption of 418 ODP tonnes of the remaining project constitutes 16.7 per cent of the 2,500 ODP tonnes phase-out target of the 2005 annual programme while the two projects verified constitute 33 per cent of the contracts signed.

19. The World Bank provided a number of tables showing the CFC-11 consumption levels for 1999-2001 and the dates of establishment of the individual enterprises of the projects verified for the 2002-2005 annual programmes.

20. The World Bank indicated that the “2005 verification summary report for the China polyurethane foam sector” which was attached to the 2006 annual programme demonstrates that the annual targets agreed in the sector plan had been met. The table below provides the summary of the verification.

Table 4: Summary results of World Bank verification of CFC-11 phase-out targets

	National CFC-11 consumption limits		CFC-11 consumption in the PU foam sector		Annual CFC Phase-out target in the PU foam sector	
	Agreement	Actual	Agreement [1]	Actual [2]	Agreement	Actual
2002	17,200	17,187	14,143	14,100	2,000	2,354
2003	15,500	13,994	13,830	11,423	2,500	2,677
2004	13,100	10,364	10,500	8,418	2,500	2,288
2005	10,400		9,000		2,500	2,500 [3]
2006	7,700		7,000		600	832 [3]
2007	4,130		400		551	0
2008	3,800		0		0	
2009	300		0		0	
2010	0		0		0	
Total					**10,651**	**10,651**

1. As per the agreement for the CFC/Halon/CTC accelerated phase-out plan
2. The actual CFC-11 consumption in the PU foam sector is calculated by deducting known consumption in other CFC-11 consuming sectors from total national consumption.
3. The actual phase-out targets will be updated based on the actual contracts to be signed in 2005 and 2006.

21. The verification was based in part on the CFC-11 production, import and export and the aggregate of known consumption from other sectors, namely tobacco, pharmaceutical aerosol and industrial, commercial and domestic refrigeration sectors. Tables 5 and 6 show the results of the verification exercise. It appears however that there are inconsistencies between the World Bank's data on import and export in the verification report and the data reported by China to the Fund Secretariat on one hand and the import and export data reported by China to the Ozone Secretariat. China reported its import and export figures as 732.334 ODP tonnes and 1,018.217 ODP tonnes respectively to the Fund Secretariat as part of the data on progress of implementation of country programme and to the Ozone Secretariat as set out in Table 5 below.

Table 5: Overall national CFC-11 consumption in 2004

Year 2004	CFC-11 production/ consumption in the agreements	Actual production/ consumption data	Verification	2004 CFC-11 data reported to the Ozone Secretariat (ODP tonnes)
CFC-11 production	NA	10,650	Verified by the Bank	10,649.99
CFC-11 imports	NA	732*	Managed under Export/Import Licensing system* and verified by the Bank	896.77
CFC-11 exports	NA	1,018*	Managed by Export/Import licensing system and verified by the Bank	1,182.66
National CFC-11 consumption	13,100	10,364	Consumption as defined by the MP	10,634.10

* Data reported to the Fund Secretariat on the progress of implementation of China's country programme indicated similar figures.

Table 6: CFC-11 consumption by other sectors in 2004

Sector level CFC-11 consumption	Target	CFC-11 consumption	Comments
Tobacco Sector	500	463	Reported by China. Accepted by the Executive Committee and funding released at the 44th meeting
Pharmaceutical Aerosol	NA	297	Consumption identified as part of the preparation of the pharmaceutical aerosol sector plan
Industrial, Commercial and Domestic Refrigeration	NA	1,186	As per China review and reporting
Total CFC-11 consumption by other sectors	**NA**	**1,946**	
Total CFC-11 consumption in the foam sector		**8,418**	The national CFC-11 consumption minus the total consumption by other sectors

2006 Annual Implementation Programme

22. Under the 2006 annual programme, an amount of US $3.32 million is planned for approval for China with US $282,800 for the World Bank as support cost. China should meet a national consumption limit of 7,700 ODP tonnes of CFC-11, with a polyurethane foam sector consumption limit of 7,000 ODP tonnes and a phase-out target of 600 ODP tonnes in the PU foam sector.

23. The programme of activities of the 2006 annual programme include policy and government action, enterprise activities and technical assistance. The policy and government actions will focus on six main activities which are considered necessary for the success of total phase-out of CFC-11 in China. As with the previous annual programme, policy and control measures which have been in force for a number of years will continue to be enforced or made more effective. These include enforcement of a ban on new construction of CFC-11 foam production facilities, production control of CFC-11, export and import control of ODS substitute development and institutional strengthening.

24. Consistent with the CFC/CTC/halon accelerated phase-out plan (APP) at the enterprise level SEPA will identify polyurethane foam enterprises to meet the accelerated phase-out target of 1,151 ODP tonnes comprising the 2006 and 2007 CFC-11 phase-out targets of 600 ODP tonnes and 551 ODP tonnes respectively. As stipulated in the APP, CFC-11 consumption in the foam sector will be banned as of 1 January 2008. Given that conversion projects are usually completed in three years all CFC-11 consuming equipment in the projects under the 2006 annual programme are scheduled to be dismantled by the end of 2007 to meet the APP phase-out targets.

25. Six technical assistance activities are foreseen including the 2004 performance audit, training of personnel involved in the implementation of phase-out activities, phase IV of standard formulation and revision, and a study on the application of LCD technology in China. The

technical assistance activities also include the 2005 performance audit and public awareness on outcomes of technical assistance activities under previous annual programmes.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Phase-out targets and consumption limits

26. The methodology used by the World Bank for the required verification was reviewed and discussed extensively in the Secretariat's comments on the 2005 annual programme (UNEP/OzL.Pro/ExCom/44/33, pages 7-9). The same approach was used to verify the consumption data in the absence of any other methodology.

CFC-11 consumption

27. China reported 2004 CFC-11 consumption of 10,364 ODP tonnes of which 8,418 ODP tonnes was consumed in the foam sector. These consumption figures are within the agreed national and foam sector consumption limits for 2004 of 13,100 ODP tonnes and 10,500 ODP tonnes (as revised under the APP) respectively as shown in Tables 4 – 6 from the verification report. However, as shown in Table 5, although the consumption data reported by China according to Article 7 of the Montreal Protocol and the consumption data reported to the Fund Secretariat and the consumption data in the verification report are consistent, there are some inconsistencies in the import and export data from the three data sources. The World Bank's attention has been drawn to this discrepancy for clarification and possible resolution with the Government of China.

28. With regard to annual CFC phase-out targets, China was required to achieve a phase-out target of 2,500 ODP tonnes. The amount achieved was 2,288 ODP tonnes, 212 ODP tonnes less than the target. However the two targets for the previous years' programmes were exceeded by 531 ODP tonnes which compensates for the underachievement in 2004, consistent with paragraph 2 of the agreement between China and the Executive Committee. Consequently China met this performance target in 2004.

Activities planned for the previous year (2004)

29. Beside the conversion projects, the other activities were Government actions and policy and technical assistance. Given the long term nature of most of these activities it is difficult to determine the actual level of performance without specific information on comparison of previous activities with current activities in the status report. However it could be inferred from the information presented that beside the training activity which appeared to incur some delay a reasonable level of performance was achieved.

CFC phase-out contracts

30. As shown in Table 3, the performance target for signing phase-out contracts were met. All (100 per cent) of the contracts of the 2004 annual programme were signed by the end of 2004 while 50 per cent of the contracts of the 2005 annual programme were signed by March 2005.

Confirmation of performance through verification by site inspection

31. As indicated in paragraph 18 above this performance requirement was met. The verification by site inspection accounted for about 17 per cent of the consumption in the 2005 annual programme and about 43 per cent of the activities.

Consistency of consumption figures with reports to the Ozone Secretariat

32. As indicated in paragraph 28 above, although the consumption figures were consistent with figures calculated by the Ozone Secretariat, import and export figures as indicated in the World Bank's verification report were not. The verified import and export figures were lower than those reported to the Ozone Secretariat by China by 165 ODP tonnes.

33. In as much as the verified consumption figure is consistent with the consumption data reported by the Ozone Secretariat, the discrepancies in the import/export figures would appear not to negate China's compliance with the requirements of paragraph 4 of the Agreement on the polyurethane foam sector phase-out plan.

RECOMMENDATION

34. The Fund Secretariat recommends blanket approval of the fifth tranche of funding of the China polyurethane foam sector phase-out plan at the funding level and associated support cost as shown in the table below.

	Project Title	Project Funding (US $)	Support Cost (US $)	Implementing Agency
(a)	Sector plan for phasing out the use of CFC in the PU foam sector: 2006 annual programme	3,320,000	282,800	World Bank

SECTOR PLAN FOR HALON PHASE-OUT: 2006 ANNUAL PROGRAMME

PROJECT DESCRIPTION

35. In accordance with the Executive Committee's approval of the Sector Plan for Halon Phase-out (Decision 23/11) and the CFC/CTC/Halon Accelerated Phase-out Plan in China (Decision 44/59), China is requesting through the World Bank the release of the ninth tranche of US $11.4 million for the implementation of the 2006 annual programme. With this funding, China's halon-1211 production and consumption will be reduced to 0 MT in 2006, halon-1301 production to a maximum level of 100 MT and consumption to a maximum of 100 MT also in 2006. Details of the annual programme are provided in the request submitted by the World Bank that is available on the Fund Secretariat's web site (www.multilateralfund.org). The 2006 annual programme includes the following:

(a) US $6 million to be used for buying back halon-1211 quotas and for complete dismantling and closure of the two halon-1211 agent production facilities;

(b) US $3.2 million to be used for buying back halon-1301 quotas consistent with the allowed halon-1301 production in 2006;

(c) US $1.8 million to be used for converting 5-10 of the remaining halon-1301 fire system manufacturers; and

(d) US $0.4 million to be used for technical assistance activities in order to support the halon phase-out programme and ensure that existing fire protection requirements can be met.

36. The Government of China will continue to implement tradable production quotas and strengthen the ban on new installation of halon extinguishers for non-essential uses through a gradual tightening of the definition of essential uses. In order to support local enforcement of the ban on non-essential uses, the Government will ensure that the details of the ban will be disseminated to prospective consumers through the news media, bulletins, etc. The local fire bureaux and environmental protection bureaux will inspect consumers on a regular basis, and submit regular reports to the Ministry of Public Security (MPS) and the State Environmental Protection Agency (SEPA); and introduce stricter control on the sale of halons.

37. The Government of China will take actions to support the halon recovery and recycling activities and to prevent unnecessary emission of halon-1211.

38. Through a combination of production quotas, bidding systems and administrative measures, enterprises will be granted funds for closure and conversion activities.

39. Technical assistance activities planned for the year 2006 include training of personnel involved in phase-out activities and performance audit for sector plan activities in 2005 to ensure the effective implementation of the programme.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

Halon-1301 as a Feedstock

40. As mentioned by the Fund Secretariat in its comments on the 2005 annual tranche of the halon sector plan, the audit report last year indicated the possibility that halon-1301 could be used as a raw material for a pesticide called Fiprohil. The auditors indicated that they could not determine the impact on the risk relating to the phase-out programme if this market for halon-1301 were to expand in China.

41. The audit report accompanying the 2006 annual tranche request indicates that China has restarted halon-1301 production at the plant that had not produced halon-1301 in 2002 and 2003. The amount produced for consumption purposes was 370 ODP tonnes that is below the allowed level of 6000 ODP tonnes. The amount produced for feedstock purposes was 1629 ODP tonnes. The two amounts together would be lower than the allowed production under the agreement.

42. This specific use of halon-1301 was not mentioned in decision 23/11 specifically as it was not foreseen and in fact its use was only confirmed this year by the Consultant. It was the understanding of the Executive Committee at the time of the approval of the halon sector plan that all halons were addressed as indicated in the General Condition A of decision 23/11:

> "The above agreement assumes that 1211 and 1301 are the only halons produced in China, and that total halon production and consumption in China (including halon 2402, or any other halons that may be produced in the country) would be limited to the aggregate 1211/1301 levels […] Halon 1202, a by-product of halon production, will also be phased out."

43. The 2006 work plan indicates that halon-1301 has been used for producing pesticide as mentioned above, but also as a pesticide and pharmaceutical intermediate. The World Bank was requested to indicate the name and process used to produce these products but at the time of writing, it was unable to provide the information. This use, according to the Bank, started in 2003, but there is no data on the amount produced. The World Bank indicated that since feedstock is not controlled by the Montreal Protocol, China is not obliged to report such production as part of its Article 7 data reporting to the Ozone Secretariat. The Bank further indicated that China had verified and confirmed the use as a feedstock and had not consulted TEAP or the Ozone Secretariat on the matter.

44. The Fund Secretariat sought technical advice about the use of halon 1301 as a feedstock, but without the names and processes involved, the advice was limited to known uses instead of the specific uses. Former halon producers indicated that the alternatives to halon-1301 are more effective feedstocks than halon-1301 because the halon-1301 molecule is very stable and hard to break down. They indicated that most industries use mono-bromo-mono-chloromethane or di-bromo-methane instead of halon 1301 because they are much more effective.

45. The auditor recommended that there should be a control system to ensure reporting on the sale of halon-1301 as finished goods/raw materials. The Bank is therefore working with China

to establish a monitoring and control system to ensure that only the sale and actual use in production as feedstock is monitored as well as any remaining stocks at the end of the year that would be counted as consumption in that year. In light of the fact that any remaining stocks of halon-1301 produced for, but not used as a feedstock would be considered consumption, there is a risk that the production of halon-1301 as a feedstock might unintentionally impact the compliance of China if such production exceeds the allowed production under the Protocol and also risks non-compliance with the Agreement made with the Executive Committee. Therefore there would be a need for China to carefully produce only that amount that would be used to ensure compliance with the Protocol and the Agreement.

Technical audits

46. The technical audits for the China Halon Plan have always been conducted by the same consulting firm since the approval of the project in 1996. Moreover, the audit verifies the previous annual tranche but it does not re-audit the production and manufacturing closures and conversions that were included in prior annual tranches. The Secretariat suggested that the World Bank and China should consider a different technical audit firm and a cumulative audit of a reasonable sample of production closures and manufacturer closures as well as conversions from prior annual tranches.

47. The World Bank indicated that the selection of the consultant had been through competitive bidding and the audit firm was selected to conduct audits over several years. It stated that the current auditor is one of the 'big four' international auditing companies with significant experience in this field of environmental auditing.

48. Concerning the possibility of a cumulative audit, the Bank noted that there was no indication of illegal halon production or import and nearly all halon-1211 fire extinguisher manufacturers had converted to non-halon substitutes. Additionally, the Bank pointed out the manufacturing and sale of halon fire extinguishers and extinguishing systems require a license from the Ministry of Public Security. This system allows close monitoring of the halon fire equipment manufacturing side. Nevertheless, the Bank stated that it would consider the Secretariat's suggestion of a cumulative audit in the context of its discussions with China about the technical audit in 2006.

Delayed Activities

49. In its review of the implementation of technical assistance activities, the Secretariat noted that two activities from the 2002 annual programme were now expected to be completed in 2007. The Bank stated that the issue of the slow progress had been discussed several times with China as part of the Bank's supervision work. However, China has not been able to convince the contractor to speed up the two projects related to the phase-out of halon-1301 and substitute technologies for halon-1301 fire extinguishing systems.

RECOMMENDATIONS

50. The Executive Committee may wish:

(a) To approve the 2006 work programme of the China halon plan at the agreed level of US $11,400,000 and an agency fee of US $855,000;

(b) To request China and the World Bank to consider a cumulative audit of the halon plan as part of the 2006 work programme; and

(c) To encourage China to limit its production of halon-1301 for the purpose of feedstock to the levels allowed under the agreement to avoid any future unintentional consumption that would be in violation of the agreement with the Executive Committee and to seek to use more effective non-ODS alternatives if possible.

PHASE OUT THE PRODUCTION AND CONSUMPTION OF CTC FOR PROCESS AGENT AND OTHER NON-IDENTIFIED USES (PHASE I): 2006 ANNUAL PROGRAMME

PROJECT DESCRIPTION

Background

51. At its 38th Meeting in November 2002, the Executive Committee approved, in principle, US $65 million for the Agreement with the People's Republic of China to phase out the production and consumption of CTC, and the consumption of CFC-113 as process agents (phase I), and disbursed the first tranche of US $2 million at the meeting to start implementation. China has committed to complying with the Montreal Protocol phase-out schedule for the controlled CTC production and consumption (25 applications) by implementing the Agreement. Subsequently at its 39th, 43rd and 46th Meetings in March 2003, July 2004 and July 2005 the Executive Committee approved the 2003, 2004 and 2005 annual programmes at funding levels of US $20 million, US $16 million and US $2 million respectively.

52. The World Bank is now submitting the 2006 annual programme on behalf of the Government of China, noting that the request for the release of the 5th tranche of funding amounting to US $16 million plus the associated support cost will be submitted to the 48th Meeting with the submission of the verification of the implementation of the 2005 annual work programme. The targets, impact and other key data of the 2006 annual programme are presented below.

Targets and Impact of the 2006 Annual Programme

Consumption	
CTC for 25 PA application	
2005	493 ODP tonnes
2006	493 ODP tonnes
Impact	0
CFC-113 for process agent	
2005	14 ODP tonnes
2006	10.8 ODP tonnes
Impact	3.2 ODP tonnes
Production	
CTC	
2005	38,686 ODP tonnes
2006	32,044 ODP tonnes
Impact	6,642 ODP tonnes
Total MLF funding approved in principle	US $65 million
Total funding released by the MLF by July 2005	US $40 million
Level of funding requested	US $16 million

53. The submission of the World Bank starts with Part A which contains a summary of the results from the implementation of the 2003 and 2004 annual work programmes, as well as a

progress report on the implementation of the 2005 annual programme. The status of implementation of the programme is summarised in the following tables, one on production and the other one on consumption.

Summary of implementation on CTC production phase out (Phase I)

Year	No. of Producers	Target in Agreement	Actual Production	Reduction	Actions
		(ODP tonnes)			
2001	14	64,152	64,152	0	Baseline established
2003	15	61,514	59,859	2,638	Closure of one CTC producer(CTC4) Production cut by 4 producers 2 new CM producers set up (CTC14 & CTC15)**
2004	12	54,857	50,194	6,657	Closure of 4 producers (CTC3,7,10 &17) Production cut by 4 producers 1 new CM producer set up (CTC 16)**
2005*	11	38,686	N/A	16,171	Closure of 1 producer (CTC6) Production cut by 3 producers

* Results in 2005 to be verified.
** CTC14, 15 and 16 were established after the 2001 baseline and not eligible for funding.

Summary of implementation of phasing out CTC and CFC-113 as process agent (Phase I)

ODS	Application	Annual consumption (ODP tonnes)			No. of Plants		Actions
		2001	2003	2004	2001	2004	
CTC	CR	965	920	1,209	8	3	4 plants closed in 2004 1 more plant to close 2005
	Endosulfan	88	231	0	2	2	Both to be closed in 2005
	CSM	1,119	1,017	1,649.7	3	1	2 closed and dismantled
	CP-70	899	817	261.9	12	8	4 closed and other 8 to be closed 2005
	Ketotifen	26	11	0	1	0	Converted to non-ODS technology
	Total	**3,097**	**2,996**	**3,120**			
CFC-113	PTFE	53	21.4	13.49	6	4	1 plant merger, and another converted

54. The Government of China has continued to implement a number of policies to assist the implementation of the CTC sector plan. Specifically a strict control was introduced since 2003 on the construction and expansion of new CTC production facilities. The "Circular on Implementing Carbon Tetrachloride (CTC) Production Quota-License System" placed all CTC producers including the newly erected chloromethane plants under control. The three new CM producers were not eligible for production quota but could buy quotas from the existing CTC producers.

55. The "Circular on CTC Consumption Quota-License System", issued in May 2003, required CTC dealers and consuming enterprises to register and apply permits both for selling and buying the controlled substance and submit quarterly reports to SEPA. In 2004 the control was extended to all CTC consumers which included the 25 applications covered by the Agreement, other new process agent applications, non-ODS feedstock applications and solvents.

56. In 2004 the Government issued the "Circular on Management Procedures for Site Supervision of CTC Production Enterprises", which introduced the same peer monitoring system used in the CFC production phase-out plan. The supervision included the newly established chloromethane producers.

57. In 2005 SEPA signed production reduction contracts with 4 CTC producers and one distiller, and one plant closure contract with another producer. These contracts were intended as the vehicle to ensure the achievement of the production target in the Agreement. Annex IV contains 3 tables which provide the production phase-out contracts between SEPA and the CTC producers in each of the 2003, 2004 and 2005 annual programmes.

58. On the consumption side, SEPA continues to use closure and conversion to achieve the reduction targets on CTC and CFC-113 covered under Phase I of the sector plan. Tables II-1 to II-5 in Annex II to the 2006 work programme provide the details of the activities on an enterprise level for each of the applications. Annex V provides a list of the contracts that have been signed between SEPA and the enterprises, with the specifics such as the name of the enterprise, the baseline, nature of the contract, year of contract and status of the plant (producing or closed).

59. Under the technical assistance programme, the World Bank submission reports progress on a number of on-going activities, such as training CTC producers and auditors, and management of the on-site supervision of the CTC producers. Another activity which was introduced in 2005 was a study on verification of the non-ODS feedstock applications of CTC in China and the status of implementation of CTC sales registration. Annex VI contains reporting on the technical assistance activities according to annual work programmes from 2003-2005.

60. Part B of the submission contains the proposed 2006 annual programme and covers the planned targets and the activities proposed to be undertaken to achieve these targets. The Government of China intends to adhere to the targets established in the Agreement and to reduce CTC production by 6,642 ODP tonnes (i.e., from 38,686 ODP tonnes in 2005 to 32,044 ODP tonnes in 2006), and to maintain the consumption of CTC for process agents under Phase I at 493 ODP tonnes in 2006. The consumption of CFC-113 for process agent would come down from 14 ODP tonnes in 2005 to 10.8 ODP tonnes in 2006, the level stipulated in the Agreement.

61. On the policy level, the Government plans to continue implementing the controls discussed in the preceding paragraphs both for the production and consumption of CTC and CFC-113. Furthermore, the Government will issue the ban on CFC-113 consumption and CFC-113 production will be terminated in 2006. Quotas equal to the targets will be allocated to the producers and consumers and formalized in contracts. For the production reduction, contracts will be signed with 3 producers to close down their production and 2-3 others to reduce the level of production. Contracts will also be signed with the 4 remaining CTC consumers to ensure that the targets under Phase I of the sector plan will be achieved. Technical assistance activities for 2006 will continue to focus on strengthening the CTC sector plan implementation and monitoring mechanisms, such as training of CTC producers, consumers, dealers and auditors, and carrying out performance audits. Daily site supervision of CTC producers will continue in 2006.

62. Table 2 in Part B provides targets for the 2006 annual programme and includes data on production, consumption, a comparison of 2005 and 2006 data, the reduction to be achieved, the level of funding for each category of activity, and monitoring indicators by key actions and dates. Table 3 provides a break-down of funding by policy action and enterprise activities under two categories of production and consumption, with key actions and dates of completion. Table 4 gives details on the technical assistance programme in 2006, with funding, action and dates of completion.

63. The submission estimates a total cost of US $16 million to implement the 2006 annual programme. However, it includes the allocation of about US $5.4 million to cover the activities in the 2005 work programme which could not be funded due to a lower level of fund allocation in the previous annual programme. This had been mentioned in the previous work programme.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

64. The 2005 annual programme has significant reductions to be achieved as required under the Agreement, namely, 16,171 ODP tonnes of CTC production and 4,556 ODP tonnes of consumption. The results of the 2005 annual programme will also be the basis for determining whether China would be able to comply with the 85 percent reduction on CTC production and consumption from the baseline level as required under the Montreal Protocol. The progress report on the 2005 annual programme seems to show that there is still a considerable amount of work to be completed by the end of the year if the annual phase-out targets are to be reached. This will be shown in the verification of the results of the 2005 work programme which will be submitted to the Executive Committee by the World Bank at the first meeting in 2006.

65. The Government of China has put in place rather strict controls on both CTC production and consumption, including the requirement for all the dealers and consumers of CTC to register and obtain permits, and for all the producers including the new chloromethane producers to produce under a permit. Furthermore, the Government has introduced the same on-site peer monitoring mechanism for the CTC producers as has been successfully applied in the case of the CFC producers.

66. The proposed 2006 annual work programme provides clear targets which are consistent with those from the Agreement and a plan of action which intends to continue the momentum and the implementation structure that has been built in the past 3 years.

RECOMMENDATION

67. The Secretariat recommends that the Executive Committee may wish:

(a) To approve the 2006 annual work programme but withhold the funding and the associated support cost until the submission by the World Bank of the verification of the results of the 2005 work programme.

SECTOR PLAN FOR CFC PRODUCTION PHASE-OUT: 2006 ANNUAL PROGRAMME

PROJECT DESCRIPTION

68. In accordance with the Agreement for the China Production Sector, which requests that annual programmes be submitted for review at the last meeting of the year preceding the year of the programme, the World Bank has submitted the 2006 annual programme for the implementation of the Agreement (attached). This is with the understanding that approval of funding for the 2006 programme will be requested at the first meeting of that year based on satisfactory performance of the programme in 2005, as per the Agreement. The table below sums up the key data of the China CFC production sector plan and those of the 2005 and 2006 work programmes.

Country	Peoples Republic of China
Project title:	Sector Plan for CFC production phase-out in China
Year of plan	2006
# of years completed	7
# of years remaining under the plan	4
Ceiling for 2005 CFC production (in ODP tons)	18,750 ODP tonnes
Ceiling for 2006 CFC Production (in ODP tons)	13,500 ODP tonnes
Total funding approved in principle for the CFC sector plan	$150 million
Total funding released from MLF as of Sept. 2005	$98 million
Total funding disbursed from World Bank to China (as of Sept. 2005)	$78.5 million
Level of funding requested for 2006 Annual Plan	$13 million

69. The submission has 2 parts:

(a) Part I is a summary report on the implementation by China of the Sector Phase-Out Agreement since its approval in 1999, including progress achieved in the implementation of the 2005 annual programme as of the middle of the year. The following are the most salient features of the summary report:

(i) Implementation of the China Production Sector Phase-Out Agreement between 1999 to 2005 has reduced the number of CFC-producing plants from 37 in 1999 to 6 in 2005, and the CFC production from 50,351 ODP tonnes in 1999 to 18,750 ODP tonnes in 2005 (which will be verified in the beginning of 2006). The annual production each year has

been confirmed by both a national audit of the annual programme conducted by the China National Audit Office and an international verification of the production commissioned by the World Bank. Starting from the 2004 annual programme, implementation of the CFC production closure programme began to establish linkages with other related sector plans under implementation in China. The Government will issue production quotas to ensure that the ceiling on the overall national CFC-11 consumption for 2005 and 2006 set out in the Agreement for CFC Phase-out in the Polyurethane Foam Sector in China will be met. The verification under the programme will provide monitoring of China's compliance on the production of CFC-13 according to the relevant Montreal Protocol control schedule. Implementation of the 2005 annual programme continues to rely on a combination of administrative measures and tradable production quotas, because the reduced number of producers and continued market demand make it increasingly difficult to rely solely on voluntary production quotas to reduce CFC production. Annex 1 includes 10 tables which provide a brief history of the results of each of the 6 annual programmes implemented to date covering names of enterprises, CFC type, capacity, production level and the status of the plant (closed or producing) in 2005. The result of implementing the 2005 programme will be verified by the World Bank and reported to the first meeting of the Executive Committee in 2006.

(ii) The progress report on the 2005 annual programme continues to list the policy controls that have been enacted by the Government of China, such as the circular on Implementing the Quota System for CFC Production issued by SEPA and the State Administration of Petroleum and Chemical Industry on 31 May 1999, the circular on Strengthening Management of ODS Import and Export issued in April 2000, and the circular on Control Mechanism of Import and Export of ODS promulgated in December 1999. Imports of CTC, a key feedstock for CFC production, were banned in April 2000. During 2005 the Government continued to implement the Regulation on Implementing Site Supervision to CFCs Production Enterprises, issued by SEPA in December 2001. Under this regulation, technical professionals from the remaining CFC producers are designated by SEPA as supervisors to be placed in the plants of peer producers to carry out year-round on-site mutual monitoring. This has proved to be an effective monitoring mechanism.

(iii) An update is provided on the implementation of the technical assistance programme under which a total of 36 activities were initiated out of the 47 planned. Apart from the traditional activities such as training of custom officers and personnel to conduct performance audits, the submission reports on the progress made in setting up the China Compliance Centre to reinforce central management of China's compliance with the Montreal Protocol control measures in the coming years. Part of the funds for setting up the centre would be coming from the CFC production sector plan. The 2005 annual programme also reported the successful

commissioning of the HFC-134a production facility in China and consideration was given to the expansion of the capacity to 10,000 MT to meet the country's growing demand in 2006. Annex 3 includes 5 tables according to annual work programmes on the status of each of the technical assistance activities planned.

(b) Part II of the World Bank's submission is a description of the components of the 2006 programme, which includes policy actions, production reduction to be achieved by producing enterprises, and technical assistance activities. The key component, namely the production reduction, would require phase-out of 5,250 ODP tonnes in 2006 to meet the Agreement target that national CFC production should be reduced from 18,750 ODP tonnes in 2005 to 13,500 ODP tonnes in 2006. China will continue to implement the reductions through a combination of allocation of production quota through bidding and administrative measures. The current policy framework will continue, especially the regulation of production quotas, which will be enforced and monitored by the on-site peer supervision of the producing plants.

70. The submission of the World Bank includes an updated list of HCFC producing enterprises in China as per the Agreement. In 2004 there were the following reported changes to the list of producers: No. 3 changed its name, presumably following a change in management; No.6, the Shanghai Chlor-Alkali Chemical Co. Ltd., closed its HCFC production and dismantled the equipment; and No.16, which was a new HCFC production facility, was added to the list. The overall number of producers remained at 15. In 2005 there were 2 new HCFC plants added to the list which brought the total number to 17.

71. 12 of the US $13 million for implementation of the 2006 programme is currently planned to be spent on compensating the enterprises for reducing CFC production and the remaining US $1 million is planned for technical assistance, although reallocation could happen once implementation starts.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

72. Implementation of the 2005 annual work programme as of August of the same year is proceeding as planned and the various controls which have been implemented are functioning well. If the programme achieves its target by the end of the year, China would be in compliance with the 50% reduction requirement of CFC production under the Montreal Protocol, considering the baseline level of 47,004 ODP tonnes. The on-site supervision by peer CFC producers instituted by SEPA has proved to be an effective tool for monitoring CFC production. A full evaluation of the 2005 work programme will be available when an independent verification of the programme is submitted to the 48th Meeting in 2006.

73. The Government of China and the World Bank have started to link up the CFC production sector plan with the other relevant consumption sector phase-out plans under implementation in China in 2004. This is a good practice for a CFC producing country because it assists the monitoring of the supply of these ODS under the consumption sector agreements, such as the consumption of CFC-113 under the solvent sector plan, the CTC sector plan and

CFC-11 under the foam sector plan. The Government of China and the World Bank are encouraged to review the linkages between the CFC production sector plan and other consumption sector plans for the purposes of monitoring their implementation.

74. The targets for the 2006 work programme are consistent with the Agreement, the activities are well planned and completion dates are reasonable. Successful implementation of the annual programme would further reduce the CFC production in China to 13,500 ODP tonnes.

RECOMMENDATION

75. The Secretariat recommends that the Executive Committee:

(a) Approve the 2006 work programme of the China CFC production closure programme, noting that the request for funding and support costs will be submitted by the World Bank to the 48th Meeting together with a verification report on the implementation of the 2005 annual programme.

CFCS/CTC/HALON ACCELERATED PHASE-OUT PLAN IN CHINA
2006 ANNUAL WORK PROGRAMME

PROJECT DESCRIPTION

76. The Government of China, through the World Bank, has requested funding of US $5,000,000 plus support costs for the 2006 annual work programme of the CFCs/CTC/halon accelerated phase-out plan.

Background

77. At its 44th Meeting, the Executive Committee approved in principle US $10 million for accelerating the phase-out of the production and consumption of halon-1301 and CFCs, and the associated consumption of CTC as feedstock for CFC production in China under the bilateral cooperation programme of the United States of America. The objective of the programme was to enable the Government of China to advance the date of phase-out from 2010 to July 2007 for these controlled substances. At the same meeting, the Executive Committee also disbursed the first instalment of US $5 million plus US $375,000 as support cost to the World Bank, which was designated as the implementing agency for the accelerated programme. The key elements of the accelerated phase-out programme are summarised in the table below.

(ODP tonnes)	Baseline	2004	2005	2006	2007	2008	2009	2010
CFCs [1]								
Montreal Protocol Reduction Schedule (Production)	47,004	47,004	23,502	23,502	7,050.6	7,050.6	7,050.6	0[2]
Montreal Protocol Reduction Schedule (Consumption)	57,819	57,819	28,910	28,910	8,673	8,673	8,673	0[2]
1. Max allowable CFCs production		25,300	18,750	13,500	7,400[3]	550	550	0 [2]
2. Max allowable CFCs total consumption		25,300	18,750	13,500	7,400	550	550	0 [2]
3. Max allowable CFC-11 consumption limit in PU Foam Sector		10,500	9,000	7,000	400	0		
4. Max. allowable net CFC exports [4]		NL[5]	NL[5]	400	200	100	50	0
CTC								
Montreal Protocol Reduction Schedule (Production)	29,367.4		4,405	4,405	4,405	4,405	4,405	0
Montreal Protocol Reduction Schedule (Consumption)	55,903		8,385	8,385	8,385	8,385	8,385	0
5. Max allowable sum of production and imports of CTC [6]		54,857	38,686	32,044	22,724	12,768	13,415	12,217 [7]
6. Max allowable CTC as CFC feedstock		39,306	28,446	21,276	11,396	847 [8]	847 [8]	0 [9]

(ODP tonnes)	Baseline	2004	2005	2006	2007	2008	2009	2010
Halon								
Montreal Protocol Reduction Schedule (Production)	40,993	40,993	20,497	20,497	20,497	20,497	20,497	0
Montreal Protocol Reduction Schedule (Consumption)	34,187	34,187	17,094	17,094	17,094	17,094	17,094	0
7. Max allowable halon 1301 production		2000	2000	1000	1000	1000	1000	0
8. Max allowable halon 1301 consumption and export [10]		1500	1500	1000	1000	1000	1000	0
9. Max. allowable net halon 1301 export		NL[5]	NL[5]	200	200	100	100	0

Notes:
1. CFCs include Annex A Group I and Annex B Group I.
2. Except for essential uses as agreed by the Parties.
3. Production based on the MP plus 10% allowed for basic domestic needs.
4. Net exports defined as exports-imports.
5. Not limited (NL): No limits on export/import of CFCs.
6. Not including CTC production for non-ODS feedstock.
7. 12,217 equals 11,997 (Row 2) plus 220 (Row 4) in the existing agreement for CTC/PA phase-out (Phase I).
8. Estimated CTC production (770 MT) used as CFC production (550 MT CFCs) to meet MDI consumption. In case of import of MDI quality CFC, the national production of CFC and CTC will reduce accordingly to ensure that the national consumption for CFC and CTC stay within the agreed consumption levels.
9. Not including CTC as CFC feedstock for CFC production for essential use.
10. For consistency with the halon 1301 production phase-out, China will limit use of halon 1301 to military and essential use (to be approved by the Parties) and limit export of halon 1301 to Article 5 countries as given in the table above (include essential uses).

78. As scheduled in the Agreement for the accelerated programme, the United States of America is submitting the 2006 work programme and requests the release of the 2nd and also the last instalment for the programme at US $5 million plus US $375,000 as support cost for the World Bank. The submission explained that the reason for requesting funding in 2004 and 2005 was because the main phase-out impact on halon-1301 would take place in 2005 and 2006 and that for CFCs would be in 2007. The focus in 2008 and 2009 would be on monitoring to sustain the results. The submission is attached to this document.

79. The submission begins with a discussion of the progress achieved in 2004 and 2005. It describes the results of the implementation of the 2004 and 2005 annual programmes under the sector plans for CFC production, PU foam, halon-1301 production and consumption and CTC production. The phase-out targets in each of the sector plans have been met for the year 2004 through independent verifications. However, only the targets in the PU foam sector and halon-1301 have been advanced for the year 2004 as a result of the accelerated phase-out programme. The other sector plans are not affected.

80. As new policy initiatives, China's SEPA issued a ban on the use of CFC-113 as solvent in December 2004 to be effective from January 2006, and a ban on producing and selling CFC-based compressors in the industrial and commercial refrigeration sector in December 2004 to be effective from July 2005.

81. There has also been heightened supervision on illegal production and trade in ozone depleting substances. A case of illegal CTC production was found in May 2005 and was dealt with by SEPA and the production line dismantled.

82. Part Two of the submission contains a description of the planned activities in 2006, which include the accelerated reduction targets for the production of halon-1301, the consumption of CFC-11 under the PU foam sector plan, control on the import and export of CFCs and halon-1301, stockpiling of CFCs for consumption beyond 2007, and preparing

contracts with CFC producers to close down production in 2007. SEPA plans to issue a ban in 2006 on CFC consumption in the production of domestic refrigerators, CFC-11 consumption in the tobacco sector, production of CFCs except for MDIs, and consumption of CFCs in foam production.

83. The last part of the submission is a summary of the implementation on the ongoing sector plans in 2005 and projections in 2006.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

84. The ODS reduction targets for 2004 of the ongoing sector plans have been achieved through the independent verification carried out by the responsible implementing agencies. Those for 2005 have yet to be verified for the year 2005, including those which have been advanced as a result of the accelerated phase out programme. The CFC-11 consumption reduction target in the PU foam sector plan is one of them.

85. The halon reduction targets for 2004 have been achieved through the independent verification carried out by the World Bank. The annual request for the 2006 tranche of the halon phase-out plan is addressed in this document. It discusses the use of halon-1301 as a feedstock. In the context of the APP, however, it should be noted that halon production facilities in China agreed to zero production in 2009. The Secretariat therefore asked the Bank if this meant that the facility would be closed and therefore the production of halon-1301 for its use as feedstock would cease. The Bank indicated that if China did close the facility in question, it would be more difficult to monitor and China would have the right to build a new halon production facility for the purposes of the production of halon-1301 as a feedstock. The Bank further indicated that its agreement with China would end in 2009 and there would be no further monitoring, although China could continue to produce halon-1301 as a feedstock in perpetuity.

RECOMMENDATION

86. The Executive Committee may wish to:

(a) Take note of the proposed 2006 work programme and approve the 2006 tranche of the accelerated phase-out programme at US $5 million and the associated support cost of US $375,000 for the World Bank, and credit the total amount of US $5,375,000 against the 2005 bilateral contribution of the United States of America; and

(b) Encourage the World Bank and China to monitor halon-1301 production as a feedstock, allowing only levels that will be totally consumed as a feedstock in the year of production to avoid the risk of potential non-compliance if the produced halon is not consumed.

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS
COUNTRY: CHINA

PROJECT TITLE	**BILATERAL/IMPLEMENTING AGENCY**
Refrigeration servicing sector CFC phase-out plan, 2nd tranche	UNIDO, UNEP, and Japan

NATIONAL CO-ORDINATING AGENCY:	SEPA/FECO

LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT

A: ARTICLE-7 DATA (ODP TONNES, 2004, AS OF OCTOBER 2005)

CFC	17,899.49		

B: COUNTRY PROGRAMME SECTORAL DATA (ODP TONNES, 2004 AS OF SEPTEMBER 2005)

ODS	Foam	Refr. Manufact.	Refr. service	Aerosol	ODS	Solvents	Process agent	Fumigant
CFC-12	116.0	720.0	4,565.1	845.0		0	0	0

CFC consumption remaining eligible for funding (ODP tonnes)	940.5

CURRENT YEAR BUSINESS PLAN (JAPAN): Total funding US $3,000,000 total phase-out: 511 ODP tonnes

Project data		2004	2005	2006	2007	2008	2009	2010	Total
CFC-12 (ODP tonnes)	Montreal Protocol limits	6,934	5,713	5,637	5,805	406	406	0	n.a.
	Annual consumption limit	5,083	4,572	3,790	2,997	2,317	1,786	1,181	n.a.
	Annual phase-out from ongoing projects	0	0	0	0	0	0	0	0
	Annual phase-out newly addressed	0	511	782	793	680	531	605	3,902
	Annual unfunded phase-out	0	0	0	0	0	0	0	0
TOTAL ODS CONSUMPTION TO BE PHASED OUT		0	511	782	793	680	531	605	3,902
Total ODS consumption to be phased-in (HCFCs)		0	0	0	0	0	0	0	0
Final Project costs (US $):									
Funding for lead agency, UNIDO		550,000	270,000	100,000	620,000	620,000	725,000	0	2,885,000
Funding for Japan (coop. agency)		1,000,000	2,500,000	500,000	0	0	0	0	4,000,000
Funding for UNEP (coop. agency)		450,000	230,000	100,000	80,000	80,000	60,000	0	1,000,000
Total project funding		2,000,000	3,000,000	700,000	700,000	700,000	785,000	0	7,885,000
Final Support costs (US $)									
Support cost for lead agency, UNIDO		41,250	20,250	7,500	46,500	46,500	54,375	0	216,375
Support cost for Japan (coop. agency)		130,000	325,000	65,000	0	0	0	0	520,000
Support cost for UNEP (coop. agency)		58,500	29,900	13,000	10,400	10,400	7,800	0	130,000
Total support costs		229,750	375,150	85,500	56,900	56,900	62,175	0	866,375
TOTAL COST TO MULTILATERAL FUND (US $)		2,229,750	3,375,150	785,500	756,900	756,900	847,175	0	8,751,375
Final Project cost effectiveness (US $/kg)									5.48

FUNDING REQUEST: Amendment of Agreement, increase of total cost to the Multilateral Fund and approval of funding for 2nd tranche (2005) as indicated above

SECRETARIAT'S RECOMMENDATION	**Individual consideration**

PROJECT DESCRIPTION

87. UNIDO, as the lead agency of the Refrigeration-Servicing Sector CFC Phase-out Plan for China, submitted for consideration at the 47th Meeting of the Executive Committee a request for release of the second tranche of that plan. The request was accompanied by a report about the first eight months of implementation of the first tranche, an implementation plan for 2006 and a verification of consumption in the sector.

88. In December 2004, at the 44th Meeting of the Executive Committee, the Refrigeration-Servicing Sector CFC Phase-out Plan for China was approved with UNIDO as the lead agency and Japan as co-operating bilateral agency. At its 45th Meeting, the Executive Committee approved an amendment of the Agreement reflecting the request of the Government of China to include UNEP as co-operating implementing agency to undertake training and awareness activities in the framework of this sector plan.

89. UNIDO reported on the 2004 consumption in the refrigeration-servicing sector, which was determined by using China's total consumption and deducting from that total the consumption in other sectors. The consumption in the other sectors is typically known with a somewhat higher degree of certainty than the consumption in the refrigeration-servicing sector. The comparison between targets and results is shown in the following table:

Target achieved, 2004 (ODP tonnes)		**Target set in Agreement, 2004 (ODP tonnes)**	
Total national CFC-12 consumption:	**6,246**	Total national CFC-12 consumption:	**6,934**
Total CFC consumption in the sector:	**4,868**	Total CFC consumption in the sector:	**5,083**

90. UNIDO also reported on the progress of project implementation achieved during January and August 2005 and the future activities planned for the remaining part of 2005. The activities have concentrated on the use of recovery and recycling of ODS contained in mobile A/C (MAC) in cars at their end of life. They are covering a wide array of activities, such as field and desk studies, including a comprehensive questionnaire-based study on present practice, development of training material, identification of suitable locations and equipment, awareness activities, and drafting of regulations.

91. There are clear indications that all the milestones set for the first tranche in the CFC phase-out plan for the refrigeration-servicing sector for China either were achieved or will be completed by the end of 2005. A coordination group with the support of the implementing agencies is managing and monitoring the phase-out programme and is undertaking the necessary corrective measures if and when required.

92. For 2006, the agreement foresees as targets a maximum allowable total national consumption of CFC-12 of 5,637 ODP tonnes and a total consumption of CFCs in the refrigeration-servicing sector of 3,790 ODP tonnes.

93. The implementation plan for 2006 covers a large number of activities, relating again to the recovery of CFCs from MAC at the end of the useful life of the car. These activities include: training of technicians; update and dissemination of training manuals; two train-the-trainers programmes; training of 2,000-2,300 technicians during 2006; preparation of on-line training;

identification of the beneficiaries of recycling equipment (phase II); purchase and delivery of equipment; operation of the management information system; monitoring of the training and CFC recovery and recycling activities; awareness activities; and compilation, production and distribution of a manual "code of good practice". As regards government action, the ongoing development of detailed implementation rules for vehicle disposal is planned to be carried out in cooperation with the relevant ministries. The plan for the next and indication on subsequent years shows a significantly increased role for UNEP.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

94. UNIDO provided, on behalf of the Government of China, information regarding the consumption of CFCs in the refrigeration service sector in 2004 that indicate that consumption targets for the sector relating to the year 2004 have been met.

95. The Secretariat informed UNIDO about the concerns regarding the intensity of the recovery activity related to MAC systems in cars at the end of their useful life, which seemed very high as compared to other activities. On the basis of assumptions regarding the age distribution of cars in China, the share of air-conditioned cars as part of the total in particular in older cars, the fraction of the original refrigerant filling remaining in the systems before scrapping, and the use of non-ODS alternatives in newer cars, it seems doubtful if the benefits (in terms of reduction in CFC consumption) in comparison to other possible activities are significant in case of recovery and recycling at the end of life of cars with MAC systems. The funding used for this purpose is the by far the most predominant part of the funding requests for 2005 and 2006. UNIDO cited in their reply the position of the Government of China, pointing out inter-alia that these activities are also planned as a nation-wide demonstration of recovery and recycling with subsequent follow-ups in the MAC servicing sector.

96. The Secretariat informed UNIDO as the lead agency that the agreement between China and the Executive Committee regarding this plan needed to be amended if the roles and funding schedules of implementing agencies were to be changed. For this purpose, UNIDO has been requested to submit a new version of the agreement as well as a letter from the Government of China proposing this new agreement for approval by the Executive Committee.

97. The Secretariat noted that this was the third version of the agreement within the first year after approval of the original agreement. As with the first change from the version approved at the 44th Meeting to the one approved at the 45th Meeting, the change approved now relates to the shares of agencies. The implementation of the project is apparently predominantly performed by the State Environmental Protection Agency of the Government of China, SEPA, or contractors or other government entities selected with strong involvement by SEPA, and only for a small part through direct agency involvement, reducing the impact of any change of agency.

98. UNIDO as the lead agency was requested to provide explanations regarding the reasons for this change in agency shares and payment schedule. UNIDO was also asked to provide an alternative 2006 work plan, based on the amended agreement as approved at the 45th Meeting. Further, UNIDO was asked to discuss with the Government of China and UNEP how the overall funding level approved by the Executive Committee could be maintained, since through UNEP's higher entitlement for support costs the overall funding requested for the plan is increasing by US $30,245 above that in the agreement approved at the 45th Meeting.

99. UNIDO informed the Secretariat that the allocation of tasks and funding between agencies was only finished during the first year of implementation, and that in the view of the Government of China the changes in the agreement were part of the flexibility provided. The Secretariat notes that the flexibility clause relates clearly to the content of the agreement, and not to issues which would require a change to a substantial part of that content.

100. UNEP pointed to an e-mail from the Government of China to UNIDO sent prior to the 45th Meeting that suggested an allocation of US $2,000,000 for UNEP in the agreed budget, of which US $450,000 could be released to UNEP in 2005. However, neither the amendment to the agreement, approved by both China and the Executive Committee, nor the report of the Meeting nor the pre-meeting documentation contained any indication to that effect. As a deviation from the e-mail mentioned, the Government of China is now requesting an allocation of US $1,000,000 for UNEP. UNEP further pointed out that through the management of their activities, information transfer from successful UNEP activities in other countries is intended, and that the funding received at the 45th Meeting was for taking over a number of activities for one year of implementation, management of which would have to be transferred back to UNIDO in case of non-approval of the amendment submitted for consideration.

101. UNIDO confirmed that the implementation is being carried out through contractual arrangements between UNIDO and SEPA as well as UNEP and SEPA, and that the role of the agencies is limited to advisory, technical and financial monitoring and verification services. The Secretariat noted in this regard that the proposed agreement did not alter the role of UNIDO nor that of UNEP as defined in its respective appendices 6-A and 6-B in comparison to the agreement as amended at the 45th Meeting. In addition, and upon the request of the Secretariat, an alternative version of the 2006 work plan was to be submitted in relation to the agreement as approved at the 45th Meeting, but has not been received as of writing of this document.

102. The inclusion of an extra co-operating implementing agency, and redistribution of the total approved in principle among the implementing agencies through the amendment of the agreement at the 45th Meeting, had implicitly resulted in an unintended increase of the total funding for the plan by US $24,750 through an increase in the support cost, a consequence only discovered in the preparation for this meeting. In the discussions with the Secretariat, UNEP explained their understanding that this increase presents a universally applicable precedence relating to both the stipulation of the agreement that the "Country accepts that […] it is precluded from applying for or receiving further funding from the Multilateral Fund" as well as the implicit principle that an agreement establishes a finite limitation of the liability of the Multilateral Fund regarding the consumption covered in the agreement.

103. As a consequence of the redistribution of the total cost approved in principle among the agencies, and if the support cost scheme relating to UNEP is applied to the transferred amount, the change of agency would result in an additional financial burden to the fund of US $30,250. Upon the request of the Secretariat, UNIDO informed the Secretariat that China is not prepared to absorb the difference between UNIDO's and UNEP's agency fees. Similarly, UNEP, when asked by the Secretariat, explained that they are not in a position to change the level of support costs given the existing support cost regime of the Multilateral Fund.

104. In summary, this submission to the Executive Committee contains the third version of the same agreement within 12 months, with no changes other than a reduced change in lead agency share versus the share of another agency already involved, without apparent changes in the actual implementation structure of the project. Approval of the amendment will result in a higher financial burden to the Multilateral Fund, a reduction in the role of the lead agency and, on a more general note, a potential decrease in commitment to such agreements. The Secretariat would like to point out that lack of limitations regarding the permanent transfer of funds from the lead agency to other agencies could weaken the position of the lead agency in their role as representative of the Multilateral Fund in discussions with the countries.

105. The Secretariat has therefore endeavoured to ensure that there are two independent and complete options for approval by the Executive Committee. Both options have their own annual work plans, which have been reviewed by the Secretariat.

RECOMMENDATION

106. The Executive Committee may wish to:

(a) Take note of the submission of the report of the 2005 work programme (January to August) and the verification of the 2004 CFC consumption targets in the sector;

(b) To consider, in light of the comments provided above, whether to:

(i) Retain the agreement between the Government of China and the Executive Committee as amended through decision 45/46, and to:

a) approve the related 2006 annual work plan; and

b) approve the second tranche of the Refrigeration-servicing sector CFC phase-out plan, at the level indicated in the following table:

	Project Title	Project Funding (US$)	Support Cost (US$)	Implementing Agency
(a)	Refrigeration servicing sector CFC phase-out plan: second tranche	0	0	UNIDO
(b)	Refrigeration servicing sector CFC phase-out plan: second tranche	0	0	UNEP
(c)	Refrigeration servicing sector CFC phase-out plan: second tranche	3,000,000	390,000	Japan

Or

(ii) Approve the request of the Government of China to modify the agreement between the Government of China and the Executive Committee according to the text contained in the attachment to this document, and to:

a) approve in principle the funding as indicated in Appendix 2-A of this agreement, as well as the increase in overall funding under the agreement by US $30,250;

b) approve the related 2006 annual work plan; and

c) approve the second tranche of the Refrigeration-servicing sector CFC phase-out plan, at the level indicated in the following table:

	Project Title	**Project Funding (US$)**	**Support Cost (US$)**	**Implementing Agency**
(a)	Refrigeration servicing sector CFC phase-out plan: second tranche	270,000	20,250	UNIDO
(b)	Refrigeration servicing sector CFC phase-out plan: second tranche	230,000	29,900	UNEP
(c)	Refrigeration servicing sector CFC phase-out plan: second tranche	2,500,000	325,000	Japan

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS
COUNTRY: CHINA

PROJECT TITLE	BILATERAL/IMPLEMENTING AGENCY
ODS phase-out in China solvent sector: 2006 annual programme	UNDP

NATIONAL CO-ORDINATING AGENCY:	SEPA

LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT

A: ARTICLE-7 DATA (ODP TONNES, 2003, AS OF 22 OCTOBER 2004)

Annex-A Group-I Substances (CFCs) ODP tonnes	23,349.61	Annex-B Group-III Substances (TCA) ODP tonnes	380.64
Annex-B Group-II Substances (CTC) ODP tonnes	2,109.89	Annex-E Group-I Substances (MeBr) ODP tonnes	1,087.80

B: COUNTRY PROGRAMME SECTORAL DATA (ODP TONNES, 2003, AS OF 22 OCTOBER 2004)

Substance	Aerosols	Foams	Refrigeration	Substance	Solvents	Process Agent	Fumigant
CFC-11	278.86	11,423.48	1,672	CTC	5.53	20,014.36	0
CFC-12	780.32	116.00	6,044	TCA	336.83	0	0
CFC-115			311.69	MeBr			1,008

CFC consumption remaining eligible for funding (ODP tonnes)	N/A

CURRENT YEAR BUSINESS PLAN: Total funding US $11,540,000: total phase-out 85 ODP tonnes

PROJECT DATA		2000-2004	2005	2006	2007	2008	2009	2010	Total
CFC-113 (ODP tonnes)	Annual Consumption Limit	N/A	550	0	0	0	0	0	N/A
	Annual Phase-out	N/A	550						N/A
TCA (ODP tonnes)	Annual Consumption Limit	N/A	424	339	254	169	85	0	N/A
	Annual Phase-out	N/A	85	85	85	84	85	0	N/A
CTC (ODP tonnes)	Annual Consumption Limit	N/A	0	0	0	0	0	0	N/A
	Annual Phase-out	N/A	0	0	0	0	0	0	N/A
TOTAL ODS CONSUMPTION TO BE PHASED OUT									
Annual CFC phase-out target in the Solvent Sector (ODP tonnes)		N/A	635	85	85	84	85	0	N/A
Total Annual Funding Instalments (US$)		31,345,000	5,680,000	5,055,000	5,480,000	1,480,000	1,480,000	1,480,000	52,000,000
Total Support Costs (US$)		2,851,750	426,000	379,125	411,000	111,000	111,000	111,000	4,400,875
Total Costs to Multilateral Fund		34,196,750	6,106,000	5,434,125	5,891,000	1,591,000	1,591,000	1,591,000	56,400,875

FUNDING REQUEST: Approval of funding for 7th tranche (2006) as indicated above.

SECRETARIAT'S RECOMMENDATION	Blanket approval

PROGRESS REPORT ON IMPLEMENTATION OF THE SOLVENT SECTOR PLAN FOR ODS PHASE-OUT IN CHINA FOR 2004/2005, 2006 ANNUAL IMPLEMENTATION PROGRAMME AND REQUEST FOR FUNDING OF THE SEVENTH TRANCHE

PROJECT DESCRIPTION

107. On behalf of the Government of China, UNDP has submitted to the 47th Meeting of the Executive Committee the 2005 Annual Progress Report and Implementation Programme for 2006 for the Solvent Sector Plan for ODS Phase-out in China. Funding for the 2006 annual implementation programme of US $5,434,125 including support costs is requested. This funding is included in UNDP's 2005 business plan.

Background

108. The solvent sector plan for China was approved in principle at the 30th Meeting at a total cost of US $52 million. Funds totalling US $37,451,000 have been approved for the first six annual tranches from 2000 to 2005 inclusive.

109. The phase-out is being achieved through a combination of investment activities targeting specific enterprises and a technical assistance programme for smaller enterprises managed through a voucher system. Consumption limits are being maintained through regulation of production and imports. The reductions in production are controlled under China's production sector phase-out plans for CFCs and CTC. The use of CTC as a cleaning solvent has been prohibited since 1 June 2003 and the use of CFC-113 as a solvent will be prohibited from 1 January 2006 onwards. The only ODS solvent remaining in use after 1 January 2006 will be methyl chloroform (1.1.1 TCA) which, under the Plan, will be completely phased out by 1 January 2010.

Phase-out from investment projects and activities

110. SEPA and UNDP continued to implement enterprise-level phase-out activities through ODS Reduction Contracts initiated in 2003, 2004 and 2005 as well as activities under a voucher system initiated in 2003.

ODS phase-out activities initiated in 2003

111. The situation of SARS in China, with the attendant travel restrictions, had a significant impact on the organization of the 2003 enterprise-level phase-out activities and the initiation of the Voucher System. ODS Reduction Contracts with 12 enterprises were only signed in November 2003. Equipment procurement was initiated in two batches between June 2004 and May 2005 and contracts for equipment were signed only in June 2005. All enterprises had their equipment delivered, installed, commissioned and trial undertaken, phasing out a total of 223 ODP tonnes of CFC-113, and 0.94 ODP tonnes of TCA by September 2005.

112. The Voucher System was initiated in June 2003 as a pilot project in Chengdu, Guangzhou and Xian. Three Intermediate Execution Agents (IEAs), one in each region were trained in investigation and identification of small ODS consuming enterprises, verification procedures to evaluate eligibility, registration and operational mechanisms. The first vouchers organized by these three IEAs were issued on 20 January 2004. In all, a total phase-out of 463.8 ODP tonnes of CFC-113 and 36.72 ODP tonnes of TCA has been achieved in 2005 from activities initiated in 2003.

ODS phase-out activities initiated in 2004

113. Twelve enterprises signed reduction contracts using the reimbursement mechanism. All 12 enterprises have submitted project completion reports and final contracts were to be signed by the end of September 2005, for complete phase out of 87.79 ODP tonnes of CFC-113 and 2.15 ODP tonnes of TCA by the end of 2005.

114. In May 2004, the Contracts Committee of the Foreign Economic Cooperation Office (FECO/SEPA) approved the recruitment of an additional four IEAs in Shenzhen, Chongqing, Shanghai and Zhejiang to broaden implementation of the Voucher System. It will cover 290 SMEs in these regions. Since the Voucher System will also adopt the reimbursement mechanism from now on, a potential phase-out of 649.97 ODP tonnes of CFC-113 and 51.82 ODP tonnes of TCA will be achieved, when the conversion activities in these SMEs is completed by November 2005.

ODS phase-out activities initiated in 2005

115. The Solvent Special Working Group (SWG) has identified 23 enterprises to sign Reduction Contracts using the reimbursement mechanism, while conversion activities have already been initiated by the enterprises themselves. Contracts will be signed in October 2005 and upon completion of their phase-out activities by end of 2005, phase-out of an additional 269 ODP tonnes of CFC-113 and 15 ODP tonnes of TCA will be achieved.

116. In addition, the procurement of equipment for 20 enterprises manufacturing liquid crystal displays was initiated in June 2005; contracts for the equipment were signed in September 2005, with delivery in November 2005. Installation and commissioning will be completed by the end of 2005.

117. Furthermore, under the Voucher System, the seven IEAs will identify additional enterprises to participate in phase-out activities, on a retroactive reimbursement basis, to contribute additional phase-out towards the 2005 phase-out targets.

Cumulative ODS phase-out 2000-2005

118. A summary of progress with phase-out through investment activities is indicated in Table 3 of UNDP's project submission, as reproduced below:

Table 3: Phase-out through 2000 – 2005 ODS reduction contracts, voucher system, retro-active reimbursement and self-phase-out mechanisms

			CFC-113 (ODP tonnes)	TCA (ODP tonnes)	CTC (ODP tonnes)	No. of Enterprises	Funding (US$ 1,000)
2000	Contracts for future phase out	Planned	372.8	10	0	10 – 20	$5,000
		Signed	378.4	10.1	8.36	16	$4,132
	Phase out achieved	On-going projects	-	7.4	-		
	Total 2000 phase out		-	7.4	-		
2001	Contracts for future phase out	Planned	524	10	0	10 – 20	$5,505
		Signed	541.6	10.6	0	21	$4,361
	Phase out achieved	On-going Projects	54.1	-			
		2000 Contracts	340.1	9.8	8.36		
	Total 2001 phase out		**394.2**	**9.8**	**8.36**		
2002	Contracts for future phase out	Planned	500	25	55	20 – 40	$5,830
		Signed	535.8	43.2	17.94	32	$4,004
	Phase out achieved	On-going Projects	291.3	41.7			
		2000 Contracts	38.4	0.4	-		
		2001 Contracts	-	-			
	Total 2002 phase out		**329.7**	**42.1**	-		
2003	Activities for future phase out	Planned	600	78	55	120-140	$5,255
		Signed	475.3	37.9	0	226	$5,100
	Phase out achieved	On-going Projects	-	-	-		
		2001 Contracts	336.3	7.3			
		2002 Contracts	-	-	-		
		2003 Activities *	142.1	37.9			
	Total 2003 phase out		**478.4**	**45.2**	-		
2004	Activities for future phase out	Planned	550	78	0-		$4,000
		Identified	767.3	119.7		216	4,729
	Phase out achieved	2001 Contracts	205.3	3.3			
		2002 Contracts +	108.6	18.3	16.5		
		2003 Activities	-	-			
		2004 Activities *	49.4	9.8			
	Total 2004 phase Out		**363.3**	**31.4**	**17.94**		
2005	Activities for future phase out	Planned	550	85	0		$4,280
		Identified	268.89	14.88			$4,200
	Phase out achieved	2002 Contracts	427.2	24.9	1.44		
		2003 Activities	463.8 (478.3)	36.7 (37.6)	0		
		2004 Activities	0 (737.8)	0 (54)			
	Total 2005 phase out		**891 (1,643.3)**	**61.6 (116.5)**			
Six-year cumulati-ve total	Phase out planned		3,096.8	286	110		
	Phase out targets		3,300	282	110		
	Phase out to be achieved by completion of on-going projects and signed contracts		2,967.29	236.38	26.3		
	Actual phase-out achieved +		2,456.6 (3,208.9)	190.1 (245)	26.3		

* From retroactive reimbursement and gradual self-phase-out activities

\+ Phase-out achieved as of September 2005. Figures in blanket ( ) indicate phase out to be achieved as of December 2005

119. UNDP advises that the identification of SMEs under the Voucher System programme is on-going. As the Voucher System is operating on a retroactive reimbursement basis from 2005 onwards, and since the total number of SMEs participating is not yet known, the total quantity of ODS to be phased out under the Voucher System has not yet been reflected in the 2005 figures shown in Table 3 above.

120. Consistent with previous advice, China and UNDP have indicated that the difference between the planned and actual phase-out is due to:

(a) Delays in recording phase-out which has actually occurred until all administrative procedures necessary to declare a project complete have been undertaken;

(b) Gradual phase-out during implementation, prior to project completion, which results in national level reductions in consumption being greater than the recorded enterprise level phase-out.

Policy measures

121. In January 2004, the Solvent Special Working Group in FECO/SEPA issued a Solvent Consumption Certification for a total of 169.7 MT of CFC-113 and 163.45 MT tonnes of TCA.

122. On 13 September 2004, SEPA issued the "Notice on Recommended Alternatives (First List) for the Elimination of ODS" for all sectors, including the solvent sector.

123. On 7 December 2004, SEPA formally enacted "The Ban on Using CFC-113 as Solvent starting 1 January 2006"

Technical assistance activities

124. Pursuant to a contract awarded in 2003 to the China Medical Machinery Organisation, in August 2005, SEPA accepted a final report on the testing and verification of the non-ODS alternative to the use of CFC-113 in the siliconization of syringe needles in the medical equipment sector. UNDP advised that to date, almost every syringe needle needs to be siliconized with CFC-113, with a correspondingly large consumption in this sub-sector.

125. The College of Environmental Science of Peking University was contracted in April 2004 to undertake the technical assistance activity entitled "Strategy and Study on Essential Usage of ODS". The investigation has been basically completed and the final report is expected to be available by the end of 2005.

126. With the advancement of phase-out activities, China is concerned about the possibility of illegal production, import and consumption (labelled as the Three Illegal Activities). SEPA has established an "Environmental Emergency and Accident Investigation Centre" and is cooperating with state environmental law-executing institutes to form a State Environmental Law Execution Team. To date there are 2,906 environmental supervision sub-institutes in 31 provinces in China with a force of more than 40,000 people. It is expected that with the

organization of such a team, the ability to deter the three illegal activities and achieve the planned phase-out will be greatly reinforced. Additionally, to support this activity, a website and system for public reporting on the three illegal activities has been developed. It was approved on 15 July 2005 and is now operating. This project will be carried out for three years until December 2008.

127. The Solvent International Expo and Forum was held successfully in Beijing in November 2003. Approximately 6,000 visitors and 51 technical papers were presented. The forum was staged again in Shanghai in August 2004 with approximately 10,000 attendees and 31 technical papers. These activities provided a forum for the exchange of technical knowledge on cleaning technologies, alternative solvents and non-ODS cleaning equipment.

128. In June 2004, teaching material prepared under contract by the College of Environmental Science of the Peking University was published. A training programme based on the teaching material was held 23 - 27 August, 2004 in Shanghai with 52 participants coming from different areas and fields in the China solvent sector.

Verification of 2004 ODS consumption limits

129. China has already met the 2000, 2001, 2002 and 2003 consumption control targets stipulated in the Agreement. The 2004 national consumption of CFC-113, TCA and CTC is presented in Table 4 of the report, reproduced below:

Table 4: ODS solvent consumption for the year 2004 (ODP tonnes)

	CFC-113 (ODP tonnes)	TCA (ODP tonnes)	CTC (ODP tonnes)
Consumption control target	**1,100**	**502**	**0**
Production	1,099.4	105.6	-
Import	-	264.6	-
Export	-	-	-
Solvent consumption	**1,099.4**	**370.2**	**0**

130. Consistent with verification in previous years, UNDP included the China Solvent Sector Plan project in its regular annual management and financial audit undertaken in 2005 by the National Audit Office of the People's Republic of China (CNAO). The audit was conducted in conformity with the provisions of the project document, international generally accepted auditing standards, relevant Chinese auditing standards and the principles and procedures prescribed for the United Nations with respect to funds obtained from or through UNDP. The audit included examination of accounting records, tests of internal control systems and other procedures considered necessary for due performance of this audit.

131. SEPA and UNDP also commissioned an independent accounting firm, Beijing Tian Hua Zheng Certified Public Accountants Co. Ltd., to undertake a performance verification at 24 recipient enterprises, being a sample of the enterprises converted under the 2004 Annual

Implementation Programme (consistent with decision 42/12 of the Executive Committee) as well as the technical assistance activities undertaken under the Solvent Sector Phase-out Plan and the national consumption limits, through verification of TCA production, import and export quantities of CFC-113 and TCA, and CTC consumption in the remaining 21 of the 34 enterprises originally identified in the Solvent Sector Plan.

National Level Consumption

132. Based on the CNAO Audit Report on CFC-113 production, indicating production of 1,099 ODP tonnes in 2004, and the official government import and export data, indicating nil import or export of CFC-113 in 2004, the total consumption of CFC-113 was found to be below the 2004 consumption control target of 1,100 ODP tonnes.

133. According to the data reported by the TCA manufacturers, the total 2004 production quantity of TCA was 105.6 ODP tonnes. The data from the ODS Import and Export Control Office showed an import quantity of 264.60 ODP tonnes. Therefore the total national consumption of TCA was 370.20 ODP tonnes, which was below the 2004 consumption control target of 502 ODP tonnes.

134. For CTC as a cleaning solvent, an independent audit by Zhong Tian Hua Zheng CPA Co. Ltd found that 27.5 kg of CTC was consumed by two enterprises, however, all the CTC had been purchased prior to June 2003; no CTC was purchased in 2004 and therefore their 2004 consumption was verified as zero. Through this verification and by extrapolation, the control target on zero CTC consumption was therefore realized. In view of this finding, SEPA will continue to monitor annually the consumption of CTC as a cleaning solvent.

Enterprise-level consumption

135. Of the 24 enterprises visited, 18 were found to have stopped consuming OD solvents, phasing out a total of 114.37 ODP tonnes of CFC-113 and 1.78 ODP tonnes of TCA.

136. The progress of the ODS phase-out plan of the large- and middle-size enterprises was found to be in order, and should be completed on schedule. While progress for the small enterprises under the Voucher System was not as good, it was found that phase-out activities at most of the enterprises under the Voucher System could still be completed on schedule; however some smaller enterprises would need additional technical assistance to resolve their difficulties.

Technical assistance

137. The performance verification also confirmed the implementation of policies and technical assistance activities and noted that the notice banning the use of CTC as a cleaning solvent from 1 January 2006 had been announced well in advance, on 1 June 2003. During the verification, the auditing firm found that many enterprises were aware of the announcement.

138. The audit verified the completion of the compilation of teaching materials, completion of the "Strategy and Study on Essential Use of ODS Solvent," and the activities on "Crackdown on Illegal Production, Illegal consumption and Illegal Trade" that were underway. It further

verified that all policy and technical assistance carried out by FECO/SEPA were in conformity with the actual situation of the 2004 Annual Implementation Programme of the phase-out project.

Audit recommendations

139. The performance verification noted that in some enterprises, the use of non-ODS solvents had reduced the quality of cleaning because satisfactory substitutes had not been found. This was the main reason why phase-out activities had not been completed on time. It has been recommended that the relevant parties (especially the Intermediate Executing Agents) provide continuous technical support through the Voucher System so that the phase-out activities can be completed as soon as possible.

140. With regard to CTC, the auditor noted that while CTC use as a cleaning solvent has been banned, it recommended that SEPA should establish a mechanism for careful monitoring and effective enforcement, not only on CTC, but also on CFC-113 that will be phased out by 1 January 2006.

Technical audit

141. In addition to UNDP's financial audits and the performance verification carried out by an independent auditor, UNDP's international and national solvent sector experts team also carried out a technical evaluation of ten enterprises in August 2005 and made extensive technical recommendations about equipment specifications, safety issues and training. The technical audit found that all enterprises evaluated had made progress to phase out their original ozone depleting solvent uses. No projects evaluated had completed their phase-out activities at the time of technical evaluation, but many had stopped consuming ODS solvents. All enterprises were expected to have completed their projects and to have achieved their phase-out by the end of 2005. Domestic alternative choices are now greater in number and have improved in quality. Overall, technical assistance appears to be lacking in some smaller enterprises and is therefore the greatest risk to the sustainability of an otherwise successful solvent sector programme.

142. UNDP noted that the recommendations of the performance verification and the technical audit will be fully evaluated by SEPA and UNDP, and significant attention and effort will be devoted to finding the correct solutions to address the problems identified.

The 2006 annual implementation programme

143. The Government of China has also submitted for review and approval by the Executive Committee the 2006 Annual Implementation Programme. The consumption of CFC-113 as a cleaning solvent will be completely phased out by 1 January 2006, therefore new investment activities will be directed solely to the phase-out of 85 ODP tonnes of TCA, contributing to the 2006 consumption control limit. TCA phase-out activities initiated in 2004 and 2005 will also contribute to the 2006 phase-out targets. For 2006, phase-out activities at the enterprise level will be achieved through the Voucher System agreements for enterprises undertaking direct gradual phase-out and a retroactive reimbursement mechanism for enterprises that have already

initiated and achieved phase-out independently. To ensure that phase-out activities can be completed by the end of 2006, these will be initiated in early 2006.

144. The technical assistance activities proposed in 2006 are indicated in the following tables:

Technical assistance activities in the 2006 AIP

Activity	**Description**	
Public Awareness	Objective	Introduce and publicize country-wide ODS phase-out in solvent sector to attract attention and participation
	Target group	Small solvent consumers in both formal and informal enterprises
	Impact	Increase awareness and interest in participation
Support usage of Alternative Solvents	Objective	To ensure result of phase-out activities and avoid the enterprise to revert to ODS use after completion
	Target Group	Enterprises converted to non-ODS cleaning and enterprises with potential to participate in phase-out activities
	Impact	Sustained non-ODS conversion
Study on Essential Use	Objective	To address demand of alternative substitute after 2010
	Target Group	Research institutions and enterprises requiring essential use of certain OD solvents
	Impact	Smooth management of essential ODS usage
Programme against illegal import, illegal production and illegal consumption of ODS	Objective	To ensure effective monitoring and enforcement on ODS usage
	Target Group	Local EPB, customs authorities
	Impact	Effective mechanism to tackle illegal ODS production and usage
Support on Ozone Friendly Demonstration Provinces/cities	Objective	To achieve early phase out of CFCs and Halon in the demonstration provinces/cities
	Target Group	Selected participating provinces/cities
	Impact	Effective strategy on policies, regulatory and enforcement efforts to support early phase out
Standards and Technical Specifications	Objective	Continue effort to establish general standards and technical specifications on alternative technologies and solvents use
	Target Group	Enterprises and industrial sectors in the solvent sector
	Impact	Effort to sustain phase out achieved
Survey and study on TCA consuming enterprises	Objective	To address effective and smooth phase out of TCA as cleaning solvent
	Target Group	TCA consuming enterprises
	Impact	Timely and orderly phase out to minimize economic and social impacts
Training on alternative cleaning technologies, implementation mechanism	Objective	To understand available alternative cleaning technologies and the appropriate selection and application; to improve implementation efficiency
	Target Group	Intermediate Executing Agents, potential equipment suppliers, recipient enterprises
	Impact	Selection of appropriate and effective cleaning technologies, correct understanding of MLF procedures, ensure workplace and worker safety

Government actions in the 2006 AIP

Policy/Activity Planned	Schedule of Implementation
Monitoring of CTC and CFC-113 ban as cleaning solvent	Throughout the year
Promulgate Regulation on Management and control of HEP-2 production	Mid 2006
Promulgate Regulation on Management of OD solvent for essential use	Mid 2006
Public Awareness	Throughout the year
The following additional activities will be continued and efforts will be increased in 2005: • Continuing identification and monitoring of enterprises who undertook phase-out at their own initiatives, verify phase-out and implement reimbursement of phase-out costs. • Continuing identification of enterprises who decide to undertake gradual phase-out, finalize agreement	

2006 Budget

145. The total amount requested for the 2006 annual implementation programme is US $5,055,000 plus support costs of US $379,125 for UNDP. In previous years and as indicated in the funding table of the agreement, funding is to be requested at the first meeting of the year. However for the 2006 tranche, UNDP and China are requesting approval of funding at the current meeting. UNDP has indicated that approval at the 47th Meeting will make funds available to both UNDP and SEPA to mobilize for the retroactive reimbursement mechanism to be used with the Voucher System. This will avoid loss of momentum and simplify the administrative structure under which the enterprises will seek reimbursement. UNDP indicated that funding for the additional tranche for the 2006 AIP was included in its 2005 business plan approved at the 45th Meeting. The breakdown of expenditure is indicated below:

Activity	Planned expenditures (US $)
Enterprise-level phase-out activities - Voucher system, retroactive reimbursement and gradual self phase-out mechanism	3,340,000
Technical Assistance - Public awareness ($100,000) - Support usage of alternative solvents ($100,000) - Study on essential use ($60,000) - Support on ozone-friendly demonstration in provinces/cities ($1,000,000) - Standards and technical specifications ($225,000) - Survey and study on TCA-consuming enterprises ($100,000) - Training and audit on performance audit ($30,000) - International and national technical experts ($100,000)	1,715,000
TOTAL	**5,055,000**

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

146. The original proposal from UNDP did not include information on the use of CTC as a feedstock at the plant level. In decision 44/31, the Executive Committee agreed that it was no longer necessary for annual reports to make reference to the quantity of CFC-113 used as a feedstock or a chemical intermediate. However the requirement still exists for CTC as per clause (c) of the Agreement. UNDP subsequently provided the required data which indicated that a total of 3,886 ODP tonnes of CTC was used as a process agent for the uses approved as process agents at the time the agreement was concluded. This conforms to the limit of 5,500 ODP tonnes specified in the Agreement.

147. The Secretariat sought more information on the action taken by the auditors to establish that the import and export figures found in the records of the Ministry of Foreign Trade and Economic Cooperation were consistent, for instance through examining the process that is used to collect and record the data or by cross checking with import figures obtained for other sources. UNDP indicated that the import quantities are official government data provided by the General Administration of Customs (GAC) of the People's Republic of China. The data was collated by the auditors and is consistent with data for quotas issued and implemented by the Import and Export Office of SEPA. The Import and Export Office is an inter-ministerial office established jointly with SEPA, the General Administration of Customs and the Ministry of Commerce.

148. The Secretariat indicated the need to provide in reports and AIPs information on financial disbursement in previous tranches, and on the proposed overall implementation time for the activities listed in the 2006 AIP. UNDP subsequently provided the following financial information, which meets the requirement:

Funding US $	Value of Contracts Signed US $	Funds Disbursed US $	Funds Committed US $	Planned Remaining disbursement US $ (year)	Balance Undisbursed or Uncommitted	Planned year of Disbursement
Previous tranches						
37,025,000	31,600,593	13,117,143	18,483,450	18,483,450	5,424,407	
Investment Activities	28,791,997	11,677,303	17,114,694	8,382,385 (2005)		
Non-Investment Activities	2,808,596	1,439,840	1,368,756	10,101,065 (2006)	$834,360 – TA activities	End 2006
					$2,000,000 – Production of HEP-2	Mid 2007
					$1,295,023 – Contingencies	End 2006
					$1,295,024 - Contingencies	End 2007
2006 AIP						
5,055,000	n.a.	n.a.	n.a.	n.a.	5,055,000	
Investment Activities	n.a.	n.a.	n.a.	n.a.	3,340,000	End 2007
Non-Investment Activities	n.a.	n.a.	n.a.	n.a.	1,715,000	End 2006 / 1st quarter 2007

149. The Secretariat pointed out that in Section 3.1 of the 2005 AIP the targeted phase-out for 2005 was 1234.3 ODP tonnes, while in Table 3 of the 2005 report, the planned phase-out for 2005 is indicated as 1643.3 ODP tonnes. UNDP indicated that some of the sub-projects under the 2002 and 2003 AIP had been completed in 2004, however due to administrative delays these sub-projects were not recorded as completed until 2005. Therefore the phase-out recorded in 2005 will be greater than the target figure.

150. Detailed recommendations are made in the verification and technical reports on a number of technical issues. The Secretariat sought clarifications as to what implementation activities were included in the 2006 AIP to give effect to these recommendations. UNDP indicated that during the technical review period, UNDP and SEPA officials had initiated discussions and training with the IEAs and an equipment supplier on the relevant issues. Additional training would be organized during 2006 for potential equipment suppliers, recipient enterprises and national and local government officials to continue to address issues identified during the performance verification and technical audit. UNDP provided a revised 2006 AIP to reflect these issues, including a revised technical assistance table.

RECOMMENDATIONS

151. The Executive Committee may wish to note with appreciation the progress report from the Government of China and UNDP on the implementation of the solvent sector plan for ODS phase-out in China for 2004/2005.

152. The Fund Secretariat recommends blanket approval of the 2006 annual implementation plan for the solvent sector in China and funding for the seventh tranche of the project with associated support costs at the level shown in the table below:

	Project Title	Project Funding (US$)	Support Cost (US$)	Implementing Agency
	ODS phase-out in China solvent sector: 2006 annual programme	5,055,000	379,125	UNDP

Annex I

PROPOSED DRAFT AGREEMENT BETWEEN CHINA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE PHASE-OUT OF CFCs IN THE REFRIGERATION SERVICING SECTOR

1. This Agreement represents the understanding of China (the "Country") and the Executive Committee with respect to the complete phase-out of controlled use of the ozone depleting substances in the refrigeration-servicing sector in the country set out in Appendix 1-A (the "Substances") prior to 2010 in compliance with Protocol schedules.

2. The Country agrees to phase out the controlled use of the Substances in accordance with the annual phase-out Targets set out in Appendix 2-A (the "Targets, and Funding") and this Agreement. The annual phase-out targets will, at a minimum, correspond to the reduction schedules mandated by the Montreal Protocol. The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to the Substances other than funding for the MDI and Pharmaceutical Aerosol sectors, which are not considered in this Agreement. The country reserves the right to request funds for the MDI and Pharmaceutical Aerosol sectors in the future in accordance with the prevailing eligibility and funding criteria of the Multilateral Fund.

3. Subject to compliance with the following paragraphs by the Country with its obligations set out in this Agreement, the Executive Committee agrees in principle to provide the funding set out in row 12 of Appendix 2-A to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A (the "Funding Approval Schedule").

4. The Country will meet the consumption limits for each Substance as indicated in Appendix 2-A. It will also accept independent verification by the relevant Implementing Agency of achievement of these consumption limits as described in paragraph 9 of this Agreement.

5. The Executive Committee will not provide the Funding in accordance with the Funding Approval Schedule unless the Country satisfies the following conditions at least 30 days prior to the applicable Executive Committee meeting set out in the Funding Approval Schedule:

(a) That the Country has met the Targets for the applicable year;

(b) That the meeting of the Targets set out in Appendix 2-A Row 1 (Max Allowable total consumption of CFC-12) has been independently verified as described in paragraph 9, and that the meeting of targets set out in Appendix 2-A Row 2 (Total consumption of CFCs in the refrigeration servicing sector) has been confirmed through monitoring and auditing activities undertaken by the Country as listed in Appendix 5-A ("Monitoring Institutions and Roles");

(c) That the Country has substantially completed all actions set out in the last Annual Implementation Programme; and

(d) That the Country has submitted and received endorsement from the Executive Committee for an annual implementation programme in the form of Appendix 4-A ("Format for Annual Implementation Programmes") in respect of the year for which funding is being requested.

6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 5-A will monitor and report on that monitoring in accordance with the roles and responsibilities set out in Appendix 5-A. This monitoring will also be subject to independent verification as described in paragraph 9.

7. While the Funding was determined on the basis of estimates of the needs of the Country to carry out its obligations under this Agreement, the Executive Committee agrees that the Country may use the Funding for other purposes that can be demonstrated to facilitate the smoothest possible phase-out, consistent with this Agreement, whether or not that use of funds was contemplated in determining the amount of funding under this Agreement. Any changes in the use of the Funding must, however, be documented in advance in the Country's Annual Implementation Programme, endorsed by the Executive Committee as described in sub-paragraph 5(d) and be subject to independent verification as described in paragraph 9.

8. Specific attention will be paid to the execution of the activities in the refrigeration servicing sector:

(a) The Country would use the flexibility available under this agreement to address specific needs that might arise during project implementation;

(b) The recovery and recycling programme for the refrigeration servicing sector will be implemented in stages so that remaining resources can be diverted to other phase-out activities, such as additional training or procurement of service tools, in case where the proposed results are not achieved, and will be closely monitored in accordance with Appendix 5-A of this Agreement.

9. The Country agrees to assume overall responsibility for the management and implementation of this Agreement and of all activities undertaken by it or on its behalf to fulfil the obligations under this Agreement. UNIDO has agreed to be the lead implementing agency (the "Lead IA") and UNEP and Japan have agreed to be co-operating implementing agencies ("Co-operating IAs") under the lead of the Lead IA in respect of the Country's activities under this Agreement. The Lead IA will be responsible for carrying out the activities listed in Appendix 6-A including but not limited to independent verification. The Co-operating IAs will be responsible for carrying out the activities listed in Appendix 6-B. The country also agrees to periodic evaluations, which will be carried out under the monitoring and evaluation work programmes of the Multilateral Fund. The Executive Committee agrees, in principle, to provide the Lead IA and the Co-operating IAs with the fees set out in rows 7, 9 and 11 of Appendix 2-A.

10. Should the Country, for any reason, not meet the Targets for the elimination of the Substances set out in Appendix 1-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding

Approval Schedule. In the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all of its obligations that were due to be met prior to receipt of the next instalment of Funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amounts set out in Appendix 7-A in respect of each ODP tonne of the amount exceeding the total consumption of CFCs, in the refrigeration service sector any one year.

11. The funding components of this Agreement will not be modified on the basis of any future Executive Committee decision that may affect the funding of any other consumption sector projects or any other related activities in the Country.

12. The Country will comply with any reasonable request of the Executive Committee and the Lead IA and the Co-operating IAs to facilitate implementation of this Agreement. In particular, it will provide access to the Lead IA and the Co-operating IAs to information necessary to verify compliance with this Agreement.

13. All of the agreements set out in this Agreement are undertaken solely within the context of the Montreal Protocol and as specified in this Agreement. All terms used in this Agreement have the meaning ascribed to them in the Protocol unless otherwise defined herein.

Appendix 1-A THE SUBSTANCES

The ozone-depleting substances to be phased out under the Agreement are as follows.

Annex A:	Group I	CFC-11 and CFC-12

Appendix 2-A THE TARGETS, AND FUNDING

	2004	2005	2006	2007	2008	2009	2010	Total
Montreal Protocol Reduction Schedule (ODP tonnes)	57,818.7	28,909.3	28,909.3	8,672.8	8,672.8	8,672.8	0	n/a
Max allowable total consumption of CFCs[1] (ODP tonnes)	25,300[2]	18,750	13,500	7,400	550	550	0[4]	n/a
1. Max allowable total National Consumption of CFC-12 [production-exports + imports] (ODP tonnes)	6,934[2]	5,713	5,637	5,805	406	406	0[4]	n/a
2. Total consumption of CFCs in the refrigeration servicing sector (ODP tonnes)	5,083[2]	4,572	3,790	2,997	2,317	1,786	1,181[3]	n/a
3. Reduction from on-going projects (ODP tonnes)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
4. New reduction under plan (ODP tonnes)	0.0	511	782	793	680	531	605	3,902
5. Total annual reduction (ODP tonnes)	0.0	511	782	793	680	531	605	3,902
6. Lead I.A. agreed funding (UNIDO)	550,000	270,000	100,000	620,000	620,000	725,000	0	2,885,000
7. Lead I.A. support costs (UNIDO)	41,250	20,250	7,500	46,500	46,500	54,375	0	216,375
8. Co-operating I.A. agreed funding (Japan)	1,000,000	2,500,000	500,000	0	0	0	0	4,000,000
9. Co-operating I.A. support cost (Japan)	130,000	325,000	65,000	0	0	0	0	520,000
10. Co-operating I.A. agreed funding (UNEP)	0	680,000	100,000	80,000	80,000	60,000	0	1,000,000
11. Co-operating I.A. support cost (UNEP)	0	88,400	13,000	10,400	10,400	7,800	0	130,000
12. Total agreed funding (US $ million)	1,550,000	3,450,000	700,000	700,000	700,000	785,000	0	7,885,000
13. Total agency support costs (US $ million)	171,250	433,650	85,500	56,900	56,900	62,175	0	866,375

[1] According to the "Accelerated CFC and Halons Phase-out Plan in China", including CFCs Annex A, Groups I and II.
[2] Estimate
[3] Service tail requirement to be covered from stockpile.
[4] Except for essential uses as agreed by Parties

Appendix 3-A FUNDING APPROVAL SCHEDULE

Funding will be considered for approval at the last meeting of the year preceding the year of the annual programme.

Appendix 4-A ANNUAL IMPLEMENTATION PROGRAMME

1. **Data**

Country

Year of plan

# of years completed

# of years remaining under the plan

Target ODS consumption of the preceding year

Target ODS consumption of the year of plan

Level of funding requested

Lead implementing agency

Co-operating agency(ies)

2. **Targets**

Target:				
Indicators		**Preceding Year, 2003**	**Year of Plan, 2004**	**Reduction**
Supply of ODS	Import			
	Production*			
	Total (1)			
Demand of ODS	Manufacturing			
	Servicing			
	Stockpiling			
	Total (2)			

* For ODS-producing countries

3. **Industry Action**

Sector	Consumption Preceding Year (1)	Consumption Year of Plan (2)	Reduction within Year of Plan (1)-(2)	Number of Projects Completed	Number of Servicing Related Activities	ODS Phase-Out (in ODP tonnes
Manufacturing						
Aerosol						
Foam						
Refrigeration						
Solvents						
Other						
Total						
Servicing						
Refrigeration						
Total						
GRAND TOTAL						

4. **Technical Assistance**

Proposed Activity:
Objective:
Target Group:
Impact:

5. **Government Action**

Policy/Activity Planned	Schedule of Implementation
Policy Control on ODS Import	
Public Awareness	
Others	

6. **Annual Budget**

Activity	Planned Expenditures (US $)
TOTAL	

7. Administrative Fees

Appendix 5-A MONITORING INSTITUTIONS AND ROLES

1. The State Environmental Protection Administration (SEPA) will monitor the consumption data of all ODS and the implementation activities of the Plan. Inspections at converted companies by the IAs and SEPA are foreseen to ensure permanent phase out of CFCs after project completion. The licensing system, which is under approval, will be a tool to monitor and ensure compliance of control measures.

2. The Country will ensure continuity of activities and their endorsement for the efficient implementation of the projects as well as verification of consumption through the institutional support component. This will guarantee the success of any activity approved for the Country under this Agreement.

3. In addition to the establishment of the country-wide scheme of refrigerant recovery and recycling, the monitoring activity will be initiated to determine whether the project is successfully implemented and whether the CFC phase out target is achieved.

4. The monitoring component will include the following activities:

(a) Establishing a system to ensure that every recycling and reclamation centre and substantive-size service workshop is encouraged or obliged to report data and give information to the recovery and recycling scheme. This may be enabled through forms to be filled by recycling centres and service workshops;

(b) Setting up adequate office facilities including a computer system to collect and analyse the data;

(c) Regular communication with the regional environmental and industry departments, customs offices, education and training institutions and industry associations;

(d) Occasional visits to service workshops, recycling and reclamation centres; and

(e) Providing access and support as well as bearing the cost of independent audits required for the verification of CFC consumption.

5. Following information will have to be supplied by the recycling and reclamation centres and substantive-size service workshops.

<u>CFC quantity</u>

- Number of appliances subjected to refrigerant recovery and type of appliances at every service workshop (commercial, MAC, domestic, etc.);
- Amount of recovered CFC refrigerants at every workshop;
- Amount of recovered CFC refrigerants sent to the recycling centres at every workshop;
- Amount of recovered CFC refrigerants stored at every workshop;

- Amount of recovered CFC refrigerants received from service workshops at every recycling centre;
- Amount of recycled/reclaimed CFC refrigerants at recycling/reclaim centres;
- Amount of recycled/reclaimed CFC refrigerants returned (sold) to workshops;
- Amount of recycled/reclaimed CFC refrigerants used in workshops and its application;
- Amount of virgin refrigerant by type consumed in workshops and its application;
- Amount of CFC refrigerants, which can not be recycled and are subject to further treatment (e.g., sent to reclaiming plants or decomposition plants abroad);
- Other data relevant for monitoring the scheme (amount of imported CFC refrigerants, etc.).

Cost information

- Cost of recovery at every service workshop and parties who bear the cost;
- Cost of recycling at every recycling centre and parties who bear the cost;
- Price of recycled CFC refrigerants;
- Cost of reclaiming at every reclamation centre and parties who bear the cost;
- Price of reclaimed CFC refrigerants;
- Other financial information relevant to monitoring the recovery recycling and reclamation scheme.

6. The collected data and information will be analysed to check for the adequate operations of the scheme.

Appendix 6-A ROLE OF THE LEAD IMPLEMENTING AGENCY (UNIDO)

1. The Lead IA will be responsible for a range of activities specified in the project document as follows:

(a) Ensuring performance and financial verification in accordance with this Agreement, and with the rules and guidelines of the Multilateral Fund, and with specific internal procedures and requirements as set out in the refrigeration servicing sector phase-out plan;

(b) Providing verification to the Executive Committee that the Targets have been met and associated annual activities have been completed as indicated in the annual implementation programme;

(c) Assisting the Country in preparation of the Annual Implementation Programme;

(d) Ensuring that achievements in previous Annual Implementation Programmes are reflected in future Annual Implementation Programmes;

(e) Reporting on the implementation of the Annual Implementation Programme of the preceding year and preparing an Annual Implementation Programme for the year for submission to the Executive Committee at its last meeting of the year;

(f) Ensuring that technical reviews undertaken by the Lead IA are carried out by appropriate technical experts;

(g) Carrying out required supervision missions;

(h) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Annual Implementation Programme and accurate data reporting;

(i) Verification for the Executive Committee that consumption of the Substances has been eliminated in accordance with the Targets;

(j) Ensuring that disbursements are made to the Country in a timely and effective manner; and

(k) Providing assistance with policy, management and technical support when required.

Appendix 6-B ROLE OF THE CO-OPERATING IMPLEMENTING AGENCIES (JAPAN and UNEP)

1. The Co-operating IAs will be responsible for:

   (a) Assisting the Country in the implementation and verification of the activities to be undertaken by the Lead IA as funded in rows 8 and 10 of Appendix 2-A and as specified in the project document;

   (b) Ensuring that disbursements are made to the country through the Lead IA in a timely and effective manner;

   (c) Reporting to the Lead IA on these activities; and

   (d) Providing assistance relating to the activities being undertaken when required.

Appendix 7-A REDUCTIONS IN FUNDING FOR FAILURE TO COMPLY

In accordance with paragraph 10 of the Agreement, the amount of funding provided may be reduced by US $10,000 per ODP tonne of reductions in national CFC-12 consumption not achieved in the year.

Sector Plan for Phaseout of ODS in Phase One of Chemical Process Agent Applications and Carbon Tetrachloride Production in China

2006 ANNUAL PROGRAM

July 19, 2005

Data Sheet

Country	China
Name of project	Sector Plan for Phaseout of ODS in Phase One of Chemical Process Agent Applications and Carbon Tetrachloride Production in China
Year of plan	2006
# of years completed	3
# of years remaining under the plan	4
Target ODS consumption of the preceding year	Not to exceed 493 ODP Tons (Max.) for CTC consumption in 25 PA applications and 14 ODP tons for CFC-113
Target ODS consumption of the year of plan	Not to exceed 493 ODP Tons (Max.) for CTC consumption in 25 PA applications and 10.8 ODP Tons for CFC-113.
Target ODS Production of the year of plan	Not to exceed 32,044 ODP Tons of CTC production
Total MLF funding approved in principle	US$ 65 million
Total MLF funding released (by Oct 2004)	US$ 40 million
Total funding disbursed from the World Bank to China by July 2005 (excluding supporting fee)	$ 30.4 million
Level of funding requested	US$ 16 million

National Implementing operating agency	State Environment Protection Administration
International implementing agency	The World Bank

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Introduction

1. At its 38th meeting, the ExCom approved the "Agreement with the People's Republic of China to Phase-out CTC and Process Agents (Phase I)" (UNEP/Ozl.Pro/ExCom/38/70, Annex XIII), with total funding of $65 million. The 2003 and 2004 Annual Programme for the CTC/PA sector plan of China has been effectively implemented. The 2005 Annual Programme is presently under implementation.

2. Under the 2003, 2004 and 2005 Annual Programme, China has initiated various sector phaseout activities, including the establishment of policies and regulations, enterprise-level phaseout activities and technical assistance activities (Details see Annex III, IV, V andVI). As a result, all the ODS production and consumption in 2003 and 2004 met the targets under the Agreement (Table 1).

3. China is hereby requesting release of the fifth tranche of US$ 16 million for the implementation of the 2006 Annual Program to meet the control targets of 2006 specified in the Agreement (Table 1).

Annual Phaseout Targets and Funding Level

4. ***Phaseout obligations.*** As the CFC/CTC/Halon Accelerated Phaseout Plan (APP) was approved in December 2004, the agreed phaseout targets have been revised and reflected in the following table. The corresponding funding for the phase I of the PA consumption and CTC production sectors phaseout remains the same.

Table 1: Allowable CTC Production, ODS Consumption in PA and Agreed funding

Year	ODP tons						US$ million
	Maximum allowable sum of production and imports of CTC (Row 1 of the Agreement)		Maximum allowable CTC consumption in PA Sector (25 applications) (Row 4 of the Agreement)		Maximum allowable CFC-113 consumption in the PA Sector (25 applications) (Row 6 of the Agreement)		Agreed funding
	Allowed	Verified	Allowed	Verified	Allowed	Verified	
Baseline /1	86,280	N/A	3,825	N/A	17.2	N/A	
2001 [1]	64,152	N/A	4,347	N/A	17.2	N/A	
2002 [1]	64,152	N/A	5,049	N/A	17.2	N/A	2
2003	61,514	59,860 [2]	5,049	3,507 [3]	17.2	17.2 [3]	20
2004	54,857	50,195 [4]	5,049	3,886	14	10.8	16
2005	38,686		493		14		2
2006	32,044		493		10.8		16
2007	22,724		493		8.4		5
2008	12,768		493		0		3
2009	13,415		493		0		1
2010	12,217 [5]		220		0		
Total :							65

/1: For consumption, average of 1998-2000; for CTC Production, 2000 data.

1: The sector plan was approved in November 2002 and the first control year is 2003.

2: Total CTC production in 2003 was 56,230.87 MT (61,853.957 ODP tones), of which 1,813.08 MT (1,994.388 ODP tones) was used for non-ODS feedstock applications. Therefore, the verified 2003 CTC production was 54417.79 MT (59,859.57 ODP tonnes).

3: This is the purchased amount in 2003. The actual consumption is 3,080 ODP tons for CTC and 17.1 ODP tons for CFC-113.

4: Total CTC production in 2004 was 51,096.98 MT (56,206.678 ODP tones) , of which 5,465.47 MT (6,012.017) was used for non-ODS feedstock applications. Therefore, the verified 2004 CTC production was 45,631.51 MT (50,194.67 ODP tonnes).

5: 12,217 equals 11,997 (Row 2) plus 220 (Row 4) in the original agreement for CTC/PA phaseout (Phase I).

PART A

IMPLEMENTATION STATUS OF PREVIOUS YEARS' ANNUAL PROGRAMS

Phase-out targets

5. Through production and consumption quota system established, annual CTC production, CTC and CFC-113 consumption as process agent have met the targets specified in the Agreement (Phase I) between China and the Excom (see Table 1). All the production and consumption amounts were verified by the World Bank and audited by China National Audit Office.

The phaseout targets in 2005 are as follows:

(a) Total CTC production and imports will not exceed 38,686 ODP tons (35,169 MT). As CTC imports into China have been banned since April 1, 2000, the target will therefore be met by limiting the total CTC production in 2005 to not more than 38,686 ODP tons;

(b) Total CTC consumption in the PA sector (25 applications) will not exceed 493 ODP tons (448 MT); and

(c) Total CFC-113 consumption in the PA sector (25 applications) will not exceed 14 ODP tons (17.5 MT).

Policy actions

6. After the implementation of past annual programs, the following policies were established effectively (details see Annex III):

(a) Constructing production and consumption facilities using ODS (in the list of 25 PA applications) have been baned since September 26, 1999, and the construction and expansion of new CTC productin projects have been strictly controlled since April 7, 2003.

(b) CTC production quota license system was established in 2003, and all CTC producers, including newly-built chloromethane plants are put into this system. Their productions are sitely-supervised by the supervisors dispatched by SEPA.

(c) CTC consumption license system was established in 2003 only covered 25 applications, which is gradually extended to all CTC consumptions, such as approved PA applications by the Parties, other PA applications, non-ODS chemical feedstock applications, reagent uses and etc. The consumers can buy CTC only with CTC license.

(d) CTC sales registering policy was issued in November 2003 and started to implement in 2004 after the CTC production and consumption quota licence system put into operation. At present, all registered CTC dealers are required to make record and report CTC sales information and undertake their CTC business in accordance with this system. This system combined with CTC production and consumption license system try to control and manage the whole course of CTC consumption.

(e) Annual verification: annual verification of CTC production, CTC and CFC-113 consumption of 25 PA applicatgions are conducted in 2004 and 2005 on 2003 and 2004 Annual Program respectively by the independent verification team of World Bank according to the established policies operating mechanism. The results reflect that China has met the requirements of the Agreement of year 2003 and 2004 successfully.

Enterprise-level activities

7. CTC Production Phaseout

Under CTC Productin Sector Plan, there are total 17 CTC producers. 13 CTC producers were covered by the technical audit commissioned by the ExCom (3 stopped production, 3 dedicated producers, 3 CMs producers, 1 co-producer with PCE, 1 with CMs producer and dedicated CTC production line and 2 distilling plants) and one additional stopped production enterprise identified later and three new chloroform producers were put into operation of 2 in 2003 and 1 in 2004. 11 CTC producrs were remained in 2005 and the 4 stopped production plants and 2 dedicated producers dismantled their CTC production lines in 2004 and 2005 (Details see Annex I) under the monitoring of local EPBs and verified by the independent verification team of World Bank.

(a) Under 2003 Annual Program, the first implementing annual program of the sector plan, CTC production in China was controlled under CTC production quota license system. 67,465.2 ODP tonnes (61,332 MT) CTC production of 2001 was set forth as the national baseline based on the technical audit report and only those 10 enterprises with production in 2001 have the initial CTC production quota as their 2001 production. To meet the annual control target of 61,514 ODP tonnes (55,922 MT), total 5,951 ODP tonnes (5,410 MT) production quota was reduced from the baseline year of which 5,916.9 ODP tonnes (5,379 MT) quota was redued through 4 CTC production reduction contracts signed with 4 dedicted producers (Details see Table IV-1 of Annex IV) and 34.1 ODP tonnes (31MT) quota reduction of one distiller (Chongqing Tiansheng) without contract and funding (this distiller will be funded only when its production line is dismantled). The 4 stopped production plants were not allowed to recover their production and without quota issued. The 2 new CMs producers with "Zero" CTC production quota were allowed to get quota through quota trading and administration adjustment. The verified 2003 CTC production was 59,859.57 ODP tonnes (54,417.79 MT) and below the annual target of 61,514 ODP tons (55,922 MT).

(b) Under 2004 Annual Program, at least 6,657 ODP tons (6,052 MT) CTC production quota must be reduced from 61,514 ODP tons (55,922 MT) as so to meet the ageed annual target of 54,857 ODP tons (49,870 MT). 3 CTC production reduction contracts and 1 closure contract were signed with 4 dedicated CTC producers with total CTC quota reduction of 8,514 ODP tons (7,740 MT). Additional 40 ODP tonnes (37 MT) production quota was reduced to Chongqing tiansheng (distilling plant) as in 2003. (Details see Table IV-2 of Annex IV). 4 closure contracts were signed with 4 stopped production plants which ceased their CTC production before 2001 and the CTC production lines were fully dismantled by the end of 2004. In the end of 2004, one new CMs producer was put into operation with "Zero" CTC production quota. The 3 CMs

producers with "Zero" CTC production quota in 2004 got quota through quota trading and administration adjustment. Among the 12 CTC producers/by-producers, 10 were monitored by supervisor under site supervision system which was put into operation since 2004 except the 2 distilling plant. The verified 2004 CTC production was 50,194.67 ODP tonnes (45,631.51 MT) and withi the agreed target.

(c) Under 2005 Annual Program, one dedicted producer was closed and there are 11 CTC production enterprises remain. Total of 16,852ODP tonnes (15,320MT) production quota were reduced from 52,960ODP tonnes (48,145MT) of 2004 to 36,108ODP tonnes (32,825MT) in 2005 to ensure the annual production of CTC below the agreed limit of 38,686ODP tonnes (35,169 MT). Total production quota of 32,825 MT were issued to 8 producers at the beginning of 2005 consisting with CTC production license system. " Zero" quota were issued to the three new CMs producers and they could get quotas through quota trading and/or administration adjustment. There are 3 reduction contracts and 1 closure contract were signed with total 15,225 MT quota reduction and 95 MT CTC quota reduction to one distilling plant (Chongqing Tiansheng) without contract and funding as in 2003 (Details see Table IV-3 of Annex IV). All CTC producers are monitored continucely by daily site supervision except 2 distilling plants.

8. PA Consumption Phaseout

There are 6 different products in PA sector plan. The number of enterprises with different products, and contracts signed under different annual programs are as follows. (Details see Annex II and Annex V)

(a) **CR enterprises:** There are totally 8 enterprises, including Fujian Wantaixing, which was identified in 2004 and is not eligible for funding. Under 2003 Annual Program, 5 enterprise signed closure contracts, of which 4 enterprises dismantled their production lines by the end of 2004 and the other one will dismantle its production line by end of 2005 after its stock CTC is used up. Under 2005 Annual Program, 2 enterprses signed CTC consumption reduction contracts and will close their plants before the end of 2009. For Fujian Wantaixing, no contract will be signed but modifications to reduce its CTC consumption level have to be done at its own costs, and the plant will be closed before the end of 2009.

(b) **CP-70 enterprises:** there are totally 12 enterprises in PA I sector plan. However, during the implementation, only 10 were funded because: 1 enterprise was found ineligible for funding and its production line was dismantled by itself, another shut down early and was no longer existing when the sector plan began to be implemented. Under 2003 Annual Program, 8 closure contracts were signed and all plants were dismantled before July 2005. Under 2004 Annual Program, 2 contracts were signed, 1 was closure contract and its plant was dismantled before the end of 2004, another was retroactive contract for its technical conversion to non-ODS in the end of 2003.

(c) **CSM enterprises:** there were 3 enterprises in PA I sector plan, but only Jilin is now under implementation. Other 2 enterprises shut down early and were no longer in existence when the sector plan began to be implemented. Under 2004 Annual Program,

Jilin signed emission control contract after failed to find substitute technology of CTC process. The characteristic of the project is a drying screwer, which is specially designed and imported, to release CTC packed in the product. The renovated production line was put into operation in the end of 2004 as planned. After half year's test operation, it was found that the performance of the screwer could not reach the design requirements. Modifications are being made continuely in 2005. Meantime, the enterprise entrusted several universities and/or research institutes to seek substitute technologies to replace CTC application. If all efforts fail, the CSM production level will have to be lowered to fulfil CTC consumption target set by the contract so as to ensure the CTC national consumption level of to meet the requirement of the Agreement.

(d) **Ketotifen enterprise:** There is only one Ketotifen producer under the sector plan. The enterprise convred its CTC process to ODS free technology successfully with support of one research institute in 2004 after one and half year tests and trails. Under 2005 Annual Program, a retroactive contract was signed with the enterprise to compensate its own conversion cost.

(e) **Endosulphan enterprises:** There were 2 Endosulphon producers newly found after the sector plan approved by the ExCom. 2 closure contracts were signed with the two producers under 2004 Annual Program and both production lines were dismantled in early of 2005.

(f) **PTFE enterprises:** There were 6 enterprises in PA I sector plan and now only 5 remianed because one of them, Shanghai Tianyuan, was merged by Shanghai 3F in 2002. One producer, Jiangsu Meilan, had convered to ODS free technology in 2002 and there are 4 users remained to be phaseout its CFC-113 application. In the period of PA I sector plan was compiled and approved, PTFE market and production increased very rapidly. In result, actual CFC-113 consumption level was much more than the baseline of the average of year 1998-2000. In order to meet CFC-113 consumption target set by the Agreement for 2003-2005, 3 renovation contracts were signed with 3 PTFE producers under 2003 Annual Program so as to reducer their CFC-113 consumption level through improvement of their recylcling system because it was impossible to convert CFC-113 consumption process to ODS free technology in the limited period. The other plant, Liaonin Fuxin, due to its very consumption level and its production was not in normal condition for its ownership transformation, no contract was signed for its CFC-113 consumption reduction. Consumption quotas of CFC-113 were also issued to the 4 users in both 2003 and 2004. The CFC-113 PA consumption in 2003 and 2004 were verified by the Bank's independent verification team and met the agreed annual target for each year. In 2005, total of 12 ODP tonnes (15MT) CFC-113 consumption quota have issued to 4 users. Liaoning Fuxin is renovating and converting its process of CFC-113 to ODS free technique and one retroactive contract will be signed under 2005 Annual Program after the commissioning of the conversion.

Technical Assistance

9. There are total 14 TA activities under 2003 and 2004 Annual Programs, of which 9 were completed, 2 are on going and 3 were cancelled because of integration with other TA or situation changes (Details please refer to Annex VI).

10. The status of 2005 TA activities are as follows:

(a) *Training of personnel involved in implementation of phaseout activities.* In order to implement the sector plan effectively, it is necessary to train the personnel in CTC production enterprises, PA enterprises, CTC dealers and audit agencies. 3 training workshops respectively for CTC producers, CTC dealers and PA enterprises were held in October 2004 and April, Auguest 2005. TOR for auditor training is under preparation and will be conducted in early of 2006.

(b) *Daily site supervision for CTC producers:* The daily site supervision on CTC producer was implemented in 2004 and proved that it is effective on control of CTC production. This activity is continually carried out in this year for the purpose of strengthening the supervision of CTC production. Total 18 site supervisor were trained and dispatched to 9 CTC producers (except 2 distilling plants) in the latest week of 2004 to supervise the enterprises' CTC production in 2005. Experience exchanging meeting in the midyear was held in July 2005 to privede further training to the supervisors and one summing-up meeting will be held at the end of this year accordingly.

(c) *Performance audit for 2004 Annual Program:* As required in Schedule 3, Section A, Paragraph 6 (b) of the ODS IV Grant Agreement between China and the World Bank, an audit has been undertaken in May to June 2005 to audit the implementation status of 2004 Annual Program under the CTC/PA sector plan as well as on going activities under 2003 Annual Program. The auditors visited all CTC producers and PA enterprises mainly focused on CTC production and CTC, CFC-113 consumption of related enterprises respectively. This activity has been completed by end of June 2005 and the Audit Report was submitted to World Bank in July.

(d) *CTC non-ODS feedstock and CTC dealers verification:* It is an additional TA activity to 2005 Annual Program and aimed to verify the non-ODS feedstock applications of 2004 in China and implementation status of CTC sales registration policy of CTC dealers. The TOR was prepared and under review and clearance of World Bank.

PART B

2006 ANNUAL PROGRAM

11. **The targets for the 2006 Annual Program,** according to Table 1, are as follows:

    (a) Total CTC production and imports will not exceed 32,044 ODP Tonnes (29,131 MT);

    (b) Total CTC consumption in the PA sector (25 applications) will not exceed 493 ODP Tonnes (448 MT); and

    (c) Total CFC-113 consumption in the PA sector (25 applications) will not exceed 10.8 ODP Tonnes (13.5 MT).

12. Funding for the 2006 Annual program will be allocated for CTC production reduction in CTC producers, ODS phaseout in PA enterprises by closing plants or conversion to substitute technologies, CTC emission control, and for technical assistance activities, which are described in detail below.

Programmed Activities In 2006

13. ***Policy actions.*** In 2006, the following policies and measures will be implemented to ensure a successful ODS consumption and CTC production reduction targets in China**.**

    (a) Management of established CTC production and consumption quota-license system, and sales registering system: These systems will be implemented continuously in 2006. Under these systems, CTC production and consumption will only be permitted with a licence issued by SEPA, and only the dealers which have registered in SEPA can sell CTC. Under the series of production, consumption and sales management, CTC production and PA sector plan will be effectively implemented. These systems will be further enforced by coordinating with local EPBs and local industry administrative department.

    (b) Annual reporting and verification: All CTC production, consumption and sales data will be reported quarterly by CTC producers, consumers and dealers for tracing and controlling. Annual verification of production, consumption and sales will be conducted to monitor and supervise the implementation of the annual program activities.[1]

    (c) Ban on CFC-113 consumption (include of process agent applications) will be issued by the Government as CFC-113 production will be completely stopped in 2006 and import of CFC-113 has been banned since 2000.

14. ***Enterprise-level activities.*** There will be four activities at the enterprise level: production reduction and closure for CTC producers, CFC-113 consumption phaseout for technical

1 CTC consumption as the feedstock of non-ODS chemicals will also be reported quaterly by CTC producers, dealers and consumers respectively.

conversion of PTFE producers, CTC production quota issued to CTC producers and CTC consumption qota issued to PA enterprises rspectively. .

(a) *CTC production quota licenses for CTC producers:* CTC production Quotas will be assigned to each CTC producer to ensure that the maximum allowable CTC production limit of 32,044 ODP Tons in 2006 is not exceeded.

(b) *Signing three closure contracts and 2-3 production reduction contracts with CTC producers:* closure contracts will be with last two producers having dedicated CTC production lines, Sichuan Honghe and Luzhou Xinfu, and with one distiller, Chongqing Tiansheng, with total CTC production reduction of 3,912 ODP tonnes (3,556 MT). There will have 2-3 production reduction contracts with co-producers to ensure the Agreement targets.

(c) *Four contracts with PTFE producers for CFC-113 consumption phaseout:* Three conversion phaseout contracts will be signed with three enterprises which still consume CFC-113 in 2005 to ODS free technologies, and one retroactive contract will be signed with Jiangsu Meilan which completed its conversion of CFC-113 consumption to non-ODS process in 2002 for retroactive compensation. No CFC-113 consumption quota will be issued in 2006 and afterwards.

(d) *CTC consumption quota licenses for PA enterprises:* Quotas will be assigned to 4 remaining CTC consumers in PA I to ensure that the maximum allowable consumption limits in 25 applications are not exceeded the Agreement targets.

15. ***Technical assistance activities.*** Following 4 TAs will be carried out in 2006 AP:

(a) *Training of personnel involved in implementation of phaseout activities.* To implement the phaseout plan effectively, it is necessary to provide training to CTC producers, ODS consumers in the PA Sector, CTC dealers and auditors respectively. Training is also needed for enterprises to understand the closure procedures.

(b) *Daily site supervision to CTC producers.* This TA is implemented successfully in last APs. It will continue in 2006 and the following years. Its purpose is to strengthen the management of CTC production. The CTC producers will be put under daily site supervision by technical professionals who will be selected from CTC producers and dispatched by SEPA according to the "Circular on Implementing Site Supervision to Carbon Tetrachloride Production Enterprises" promulgated on July 10, 2003. Daily production records will be made by the supervisors and monthly report will be prepared and submitted to SEPA.

(c) *Performance audit.* A performance audit is required under the CTC sector plan and PA sector plan. A TOR for the 2005 performance audit will be agreed between the World Band and SEPA by December 2005, and the audit is expected to be completed by June 30, 2006.

(d) *New feedstock and dealers verification.* The aim of the TA is to verify CTC consumption as feedstock of non-ODS chemicals, and CTC sales data provided by dealers. The verification will be done by consultants recruited and management officials.

(e) *Other activities.* Other TA activities that are identified in the course of the year may be taken up as necessary.

16. The above targets, policy initiatives, enterprise-level and technical assistance activities in 2006 are summarized in Tables 3 -5 below.

Table 2: Targets under 2006 Annual Program

Target I: Maximum Allowable sum of production and Imports of CTC							
Indicators	**Sub-sector**	**2005** (Preceding Year)	**2006** (year of Program)	**Reduction**	**Funding**	**Key actions required**	**Key dates**
		(ODP Tons)			$ million		
Supply of CTC	Import	0	0			None; imports banned on April 1, 2000	N/A
	CTC Producers	38,686	32,044	6,642	14.2 *	1. Sign CTC closure /production reduction contracts with 5-6 CTC producers 2. Issue CTC production quota-licenses.	1. By Dec. 31, 2005 2. By March 31, 2006
	Subtotal	38,686	32,044	6,642	14.2		
Target II: Maximum Allowable CTC Consumption in the PA Sector (25 Applications)							
CTC Consump-tion	Related PA enterprises	493	493	0	0	1. .Issue CTC consumption quota-licenses.	1. By March. 31, 2006
Target III: Maximum Allowable CFC-113 Consumption in the PA Sector							
CFC-113 Consump-tion	Related PTFE Manufac-turers	14	10.8	3.2	1.0	1. Sign 3 conversion contracts and one retroactive contract.	1. By December 31, 2005

*: Around 5.4 millions funding will be used for CTC production reduction contracts under 2005 AP because of its funding shortage.

Table 3: Policy Actions and Enterprise activities in 2006

Initiatives	Funding (US$ Million)	Actions Required	Key Dates
1. Management of CTC Production	14.2	1. Train CTC producers 2. Sign CTC production reduction/closure contracts with 5-6 CTC producers 3. Issue CTC production quota-licenses 4. Implement CTC production reduction contracts, including production reporting and verification	1. By Nov. 30, 2005 2. By Dec. 31, 2005 3. By March 31, 2006 4. Through 2006
2.Management of CTC and CFC-113 consumption (25 applications)	1.0	1. Train PA enterprises 2. Sign 3 conversion contracts with 3 PTFE enterprises 3. Issue CTC and CFC-113 quota-licenses 4. Implement the contracts, including collection and verification of contracts' progress situations.	1. By Dec. 31, 2005 2. By Dec. 31, 2005 3. By March 31, 2006 4. Through 2006
3. Management of CTC sales	0	1. Train CTC dearler. 2 Issue CTC sales registering certification 3. Collect CTC sales data and verify CTC sales situations	1. By Dec. 31, 2005 2. By March. 31, 2006 3. Through 2006
Subtotal	15.2		

Table 4: Technical Assistance Activities in 2006

	Initiatives	Funding (US$ Million)	Actions Required	Key Dates
CTC-2006-TA-01	1. Training of personnel involved in implementation of phaseout activities	0.05	1. TORs to be agreed with the World Bank 2. Training all CTC producers, PA enterprises and CTC dearlers on CTC production reduction, ODS consumption phaseout approaches in PA sector, quota-license system, supervision and verification system, project implementation manual, and funding contracts.	1. By Nov. 30, 2005 2. By Dec. 31, 2005. Specific schedules to be detailed in TORs
CTC-2006-TA-02	2. Daily site supervision to CTC producers	0.35	1. TOR to be agreed with the World Bank 2. Implementation of site supervision	1.By Nov. 30, 2005 2. Through 2006
CTC-2006-TA-03	3. Performance audit for 2005	0.1	1. TOR to be agreed with the World Bank 2. Audit implementation 3. Audit completion	1. By Jan. 31, 2006 2. By April 30, 2006 3. By June 30, 2006
CTC-2006-TA-04	4. New feedstock and dealers verification	0.1	1. TOR to be agreed with the World Bank 2. Site verification	1.By Dec. 31, 2005 2. Before June 2006
	5. Other activities	0.2		
	Subtotal	0.8		

Annex I
Table I-1: Production and Status of CTC producers

No.	Enterprise Name	Type of CTC production facility	Capacity in 2001[1] (MT/year)	CTC Production Recorded				Status
				2001	2002	2003	2004	
CTC-1	Luzhou North Chemical Industrial Co., Ltd.	Co-production	3,000	2,106	2,318	2,105	2093.8	Producing
CTC-2	Zhejiang Quhua Flurochemical Co. Ltd.	Co-production	20,000 (22,250)	16,204	17,217	16,204	15986.01	Producing
CTC-3	Liaoning Panjin No. 3 Chemical Plant	Dedicated	3,000	0	0	0	0	Dismantled in May 2004
CTC-4	Chongqing Tianxuan Chemical Co., Ltd.	Dedicated	4,400	2,100	3,067	870	0	Dismantled in Dec 2003
CTC-5	Chongqing Tiansheng Chemical Co. Ltd	Distilling	500	245	195	130	31.14	Producing
CTC-6	Chongqing Tianyuan Chemical General Plant	Dedicated	9,000	8,009	8,198	6,114	1429.27	Dismantled in Dec 2004
CTC-7	Taiyuan Chemical Industrial Co., Ltd.	Dedicated	4,000	0	0	0	0	Dismantled in Nov 2004
CTC-8	Luzhou Xinfu Chemical Industry Co. Ltd.	Dedicated	8,000	6,903	7,754	5,203	4488.6	Producing
CTC-9	Jiangsu Meilan Chemical Co., Ltd.	Co-production	3,500 (10,000)	703	2,929	3,396	3450.46	Producing
CTC-10	Guangzhou Hoton Chemical (Group) Co., Ltd.	co-production	5,000	0	0	0	0	Closed and Dismantled in 1997
CTC-11	Sichuan Honghe Fine Chemical Co., Ltd.	Co-production	4000	3,451	21,018	13,763	11935.78	Producing
		Dedicated	16,000 (17,750)	13,806				Producing
CTC-12	Shanghai Chlor-Alkali Chemical Co., Ltd.	Co-production with PCE	10,000	7,209	9,192	7,209	7909	Producing

Annex I

Table I-1: CTC producution and Status of CTC producers (Continued)

No.	Enterprise Name	Type of CTC production facility	Capacity in 2001[1] (MT/year)	CTC Production Recorded				Status
				2001	2002	2003	2004	
CTC-13	Quzhou Jiuzhou Chemical Co., Ltd.	Distilling	1,000	596	477	594	602.5	Producing
CTC-14	Wuxi Greenapple Chemical Co., Ltd.	Co-production	0 (2,000)	/	/	495	1139.28	Start production in 2003
CTC-15	Shandong Jinling Chemical Co., Ltd.	Co-production	0 (2,000)	/	/	148	1721.34	Start production in 2003
CTC-16	Shandong Dongyue Chemical Co., Ltd.	Co-production	0 (2,500)	/	/	/	309.8	Start production 2004
CTC-17	Jinan 3F Fluorochemical Co., Ltd.	Dedicated	4000	0	0	0	0	Dismantled in July 2004
Total (ODS tons)			95,400 (112,400)	61,332	72,365	56,231	51096.98	
Total (ODP tons)				67,465	79,602	59,860[2]	56206.68[3]	

1: The data in parenthese is the CTC capacity in 2004.

2: There are 1,994.3 ODP tonnes (1,813 MT) CTC were verified as feedstock for non-ODS chemicals in 2003.

3: There are 6,012.017 ODP tonnes (5465.47 MT) CTC were verified as feedstock for non-ODS chemicals in 2004.

Annex II

Table II-1: ODS Consumption in 25 Applications (2001-2004)

ODS	Application No.	Products	Annual consumption of ODS, t/a					
			2001	2002	2003		2004	
					Purchased	Consumed	Purchased	Consumed
CTC	C3	CR	965	933	985	920	1963.52	1209.21
	C4	Endosulfan	88	72	359	231	0	0
	C7	CSM	1119	967	1338	1017	1343.57	1649.73
	C12	CP-70	899	961	694	817	225.42	261.99
	C17	Ketotifen	26	25	6	11	0	0
	Total		3097	2958	3382	2996	3532.51	3120.93
CFC-113	C9	PTFE	53.0	59.8	21.5	21.39	13.5	13.49

Table II-2: CTC Consumption and Production Status of PA consumers (CR enterprises)

Sub-Sector No.	No	Enterprises Name	Capacity (MT/year)	CTC Consumption (MT/year)						Production (MT/year)				
				2001	2002	2003		2004		2001	2002	2003	2004	Status
						Pur	con	Pur	con					
1	CR1	Shanghai Chlor-Alkali Chem. Co Ltd	450	143	178	223	205	236.77	160.69	239	329	423	425.1	Producing
2	CR2	Haotian Chem Co Ltd.	500	174	196	200	168	240.00	265.33	141	168	190	289.04	Dismantled in Dec 2004
3	CR3	Wuxi Chem Group Co Ltd	1000	123	89	128	133	0.00	10.19	194	172	265	42.45	Dismantled in July 2004
4	CR4	Zhejiang Xin-an Chem. Group Co Ltd	500	96	129	221	221	338.25	230.64	299	360	465	477.22	Producing
5	CR5	Jiangyin Fasten Co Ltd	1000	150	162	213	193	760.50	213.75	478	523	703	704.74	Producing
6	CR6	He-nan Puyang oilfield CR Factory	500	135	33	0	0	0	0	167	91	0	0	Dismantled in Jan 2004
170	CR7	Shangyu Qimin Chemical Co., Ltd	500	144	146	0	0	0	0	427	439	0	0	Dismantled in Jan 2004
	CR8	Fujian Wantaixing Chem. Development Co. Ltd						388.00	328.61				800.25	Producing (Found in 2004 and not eligible for funds)
		Sub-total	4450	965	933	985	920	1963.52	1209.21	1945	2082	2046	2738.8	

Table II-3: CTC Consumption and Production Status of PA consumers (CP-70 enterprises)

Sub-Sector No.	No	Enterprises Name	Capacity (MT/year)	CTC Consumption (MT/year)						Production (MT/year)				Status
				2001	2002	2003		2004		2001	2002	2003	2004	
						Pur	Con	Pur	Con					
171	CP1	Huanghua City Jinghua Chem. Co., Ltd.	3000	250	200	90	106	12	29.25	1000	800	546	237.8	Dismantled in Nov 2004.
4	CP2	Zhejiang Xin-an Chem. Group Co Ltd	500	94	99	Included in its CR consumption		Included in its CR consumption		490	544	554	535.78	Dismantled in July 2005.
5	CP3	Jiangyin Fasten Co Ltd	800	Converted into water method						Substitute technology was put into operation in 2003.				
18	CP4	Shenyang Chem. Co Ltd.	1500	76	56	44	60	1.25	8.49	546	569	683	124.74	Dismantled in Oct 2004.
19		Luzhou Longmatanqu Hongyuan Chemical Co., Ltd.	Not eligible, and dismantled in 2002.							-				
20	CP5	Longchang Shouchang Chem Co Ltd	500	53	64	141	146	0	0	198	257	560	0	Dismantled in Feb 2004
21	CP6	Longchang Shenghua Chem Factory	1000	105	89	98	102	15.01	19.22	546	510	788	314.16	Dismantled in May 2004
22	CP7	Chongqing Tianyuan Chemical General Factory	500	0	0	0	0	0	0	0	0	0	0	Dismantled in Dec 2003
23	CP8	Longyou Lude Pesticide Chem Co Ltd	300	9	0	0	0	0	0	61	0	0	0	Dismantled in 2002
24	CP9	Dalian city Jiangxi Chem Ind Head Co.	3000	246	423	260	341	197.16	205.03	1866	2103	2149	2234.79	Dismantled in Nov 2004.
25	CP10	Harbin Yibin Chem Ind. Co Ltd	1000	66	30	61	62	0	0	481	803	1035	0	Dismantled in Jan 2004
45		Shanxi Fenyang Catalyst Factory	500	No longer in existence						-				
		Sub-total	12600	899	961	694	817	225.42	261.99	5732	5586	6315	3447.27	

Table II-4: CTC Consumption and Production Status of PA consumers (CSM, Ketotifen, Endo-sulphane)

Sub-sector No.	No.	Enterprise Name	Product name	Capacity (t/y)	CTC consumption (Mt/y)						Production (MT/year)				Status
					2001	2002	2003		2004		2001	2002	2003	2004	
							Pur	Con	Pur	Con					
51	CSR1	Jilin Chem. Ind. Co Ltd	CSM	3000	1119	967	1338	1017	1343.57	1649.73	2995	2727	2774	2173.6	Emission control project commissioned in 2004 and producing.
54	CSR2	Hongjiang Chem Co Ltd	CSM	300	Stopped and plant was no longer in existence						-				
55	CSR3	Jiaohe Organic Chem Factory	CSM	1000	Stopped and plant was no longer in existence						-				
59	KET1	Zhejiang Huahai Pharm Group Co Ltd	Ketotifen	3	26	25	6	11	0	0	0.13	1.25	1.4	-	Converted in 2003.
	ES1	Jiangsu Anbang Electro-Chemical Co., Ltd.	Endo-sulphan	1000	88	72	165	37.4	0	0	500	411	423	-	Dismantled in May 2005
	ES2	Jiansu Liyang Guanghua Chemical Co., Ltd.	Endo-sulphan	300	80	95	194	194	0	0	160	190	388	-	Dismantled in Jan 2005

Table II-5: CFC-113 Consumption and Production Status of PA consumers (PTFE)

Sub-sector No.	No.	Enterprise Name	Capacity (t/y)	CFC-113 consumption (Mt/y)						Production (MT/year)				Status
				2001	2002	2003		2004		2001	2002	2003	2004	
						Pur	Con	Pur	Con					
56	PTFE1a	Shanghai 3F New Materials Share Co Ltd (Plant No 2)	6500 (Include non-eligible capacity from No. 166,)	15.8	16.5	10	10	7	7	1402	1436	3202	7024.42	Producing
	PTFE1b	Shanghai 3F New Materials Share Co Ltd (Fluoro Plant)		9.4	8.7					2086	2507			
57	PTFE2	Chenguang Chem Research Institute	3000	8.0	8.1	3.5	3.39	0	0.49	1846	2239	3389	1390	producing
166		Shanghai Tianyuan Group Fluor-Chem	The plant was merged into Shanghai 3F as No. 56 PTFE1b											
167	PTFE3	Jinan 3F Chemical Co Ltd	1500	6.1	6.5	5	5	4	4.5	1474	1454	2270	2595.61	Producing
168	PTFE4	Jiangsu Meilan Chemical Co Ltd	3000	11	17	0	0	0	0	1500	1643	2268	-	Converted and producing
169	PTFE5	Fuxin Fluor-chemical Co Ltd	2000	2.7	2.9	3	3	2.5	1.5	1300	2000	1498	866.94	Under conversion

		Total		53.0	59.8	21.5	21.39	13.5	13.49	9608	11279	12627	11876.97	

Annex III

Policies implemented

No	Policy Instruments	Date of promulgation	Ministries in charge	Effective Date	Implementation Status
1	Supplementary Circular on ban of constructing production and consumption facilities using ODS (for 25 PA)	1999-9-26	SEPA	1999-9-26	Implemented effectively
2	Circular on Strictly Controlling the construction and expansion of new CTC production projects	2003-4-7	SEPA	2003-4-7	Implemented effectively
3	Circular on Implementing Carbon Tetrachloride Consumption Quota-License System	2003-5-30	SEPA	2003-5-30	Implemented effectively
4	Management Procedures on Site Supervision to CTC enterprises	2003-7-10	SEPA	2003-7-10	Implemented effectively
5	Circular on Implementing Carbon Tetrachloride Production Quota-License System	2003-11-3	FECO of SEPA	2003-11-3	Implemented effectively
6	Circular on Implementing Carbon Tetrachloride Sale-Registering System	2003-11-20	FECO of SEPA	2003-11-20	Implemented effectively

Annex IV

Talbe IV-1: CTC production phaseout contracts and reduction in 2003

Sector Plan number	Enterprise	Contract type	Production reduced (MT)	Plant status
CTC-11	Sichuan Honghe	Production reduction	2189	Producing
CTC-8	Luzhou Xinfu	Production reduction	1095	Producing
CTC-6	Chongqing Tianyuan	Production reduction	1270	Producing
CTC-4	Chonqing Tianxuan	Production reduction and closed	825	Producing
CTC-5	Chongqing Tiangsheng	No contract	31	Producing
	Total		5410	

Talbe IV-2: CTC production phaseout contracts and reduction in 2004

Sector Plan number	Enterprise	Contract type	Production reduced (MT)	Plant status
CTC-11	Sichuan Honghe	Production reduction	3,627	Producing
CTC-8	Luzhou Xinfu	Production reduction	1,314	Producing
CTC-6	Chongqing Tianyuan	Production reduction	1,524	Its production was stopped because of chlorine leakage accident on April 16, 2004.
CTC-4	Chonqing Tianxuan	Production reduction and closed	1,275	All production was phased out and Stopped in Dec 2003 and all CTC lines were dismantled in the end of 2003
CTC-5	Chongqing Tiangsheng	No contract	37	Producing
CTC-07	Taiyuan Chemical	Plant dismantling	0	Stopped since 1999 and dismantled in Nov 2004
CTC-10	Guangzhou Hoton	Plant dismantled	0	This plant had closed in 1997 and all CTC facilities had been dismantled in 2003
CTC-03	Panjiin No 3 Chemical Plant	Plant dismantling	0	Stopped since 1999 and dismantled in May 2004
CTC-17	Jinan 3F	Plant dismantling	0	Stopped since 1994 and dismantled in July 2004
	Total		7,777	

Talbe IV-3: CTC production phaseout contracts and reduction in 2005

Sector Plan number	Enterprise	Contract type	Production reduced (MT)	Plant status
CTC-11	Sichuan Honghe	Production reduction	5673	Producing
CTC-8	Luzhou Xinfu	Production reduction	3337	Producing
CTC-6	Chongqing Tianyuan	Production reduction and closed	5215	Its production was stopped because of chlorine leakage accident on April 16, 2004. All production was phased out and the plant was dismantled in the end of 2004
CTC-2	Zhejiang Quhua	Production reduction	1000	Producing
CTC-5	Chongqing Tiangsheng	No contract	95	Producing
	Total		15320	

Annex V

Contract List with PA Enterprises

Sector Plan number	Enterprise	Baseline (Ave. 1998-2000)		Nature of Contract	Year of Contract (Annual Program)			Plant Status
		ODS	MT		2003	2004	2005	
C R								
1	Shanghai Chlor Alkali	CTC	109	Reduction and closure			√	Producing
2	Haotian	CTC	218	Closure	√			Dismantled in Dec 2004
3	Jiangsu Wuxi	CTC	313	Closure	√			Dismantled in July 2004.
4	Zhejiang Xin'an	CTC	142	Closure	√			be dismantled before the end of 2005
5	Jiangyin Fasten	CTC	178	Reduction and closure			√	.Producing
6	Henan Puyang	CTC	43	Closure	√			Dismantled in Jan 2004.
170	Zhejiang Shangyu Qiming	CTC	119	Closure	√			Dismantled in Jan 2004
	Fujian Wantaixing	CTC		No contract				producing
	Subtotal		1122		5		2	
CP-70								
4	Zhejiang Xin'an	CTC	82	Closure	√			dismantled in July 2005
5	Jiangsu Jiangyin Fasten	CTC	161	Converted Retroactive Contract		√		Substitute plant was put into operation in Dec 2003.
18	Shengyang Chem.	CTC	48	Closure	√			Dismantled in Oct 2004.
19	Sichuan Luzhou Hongyuan	CTC		Not eligible for funding				Dismantled in 2002
20	Sichuan Longchang Shouchang	CTC	62	Closure	√			Dismantled in Feb 2004
21	Sichuan Longchang Shenghua	CTC	73	Closure	√			Dismantled in May 2004.
22	Chongqing Tianyuan	CTC	45	Closure	√			Dismantled in Dec 2003.
23	Zhejiang Longyou Lude	CTC	48	Closure	√			Dismantled in 2002.
24	Dalian Jiangxi	CTC	233	Closure	√			Dismantled in Nov 2004.
25	Harbin Yibin	CTC	38	Closure	√			Dismantled in Jan 2004.
45	Shangxi Fenyang	CTC	0	No longer in existence				
71	Hebei Huanghua	CTC	N/a	Closure		√		Dismantled in Nov 2004.

Sector Plan number	Enterprise	Baseline (Ave. 1998-2000)		Nature of Contract	Year of Contract (Annual Program)			Plant Status
		ODS	MT		2003	2004	2005	
	Subtotal				8	2		
CSM								
51	Jilin	CTC	878	Emission control		√		Project was commissioneded and is being under improvment
54	Hunan Hongjiang	CTC	0	No longer in existence				
55	Jilin Jiaohe	CTC	0	No longer in existence				
Ketotifen								
59	Zhejiang Huahai	CTC	13	Conversion			√	Substitute technology was put into operation in 2004.
Endo-sulphan								
	Jiangyin Anbang	CTC	24	Closure		√		Dismantled in May 2005.
	Jiansu Liyan Chemical	CTC		Closure		√		Dismantled in Jan 2005.
PTFE								
56	Shanghai 3F	CFC 113	11	Reduction/ conversion	√			Project finished and plant in production
57	Sichuan Chengguan	CFC 113	5	Reduction/ conversion	√			Project finished and plant in production
166	Shanghai Tianyuan	CFC 113			The plant had been merged into Shanghai 3F (56)			
167	Shandong Jinan 3F	CFC 113	4	Reduction/ conversion	√			Project finished and plant in production
168	Jiangsu Meilan	CFC 113	2	Conversion				Converted and plant in production
169	Liaoning Fuxin	CFC 113	1	Conversion			√	Under conversion and retroactive contract will be signed
	Subtotal				3		1	
	Total				16	5	4	

Annex VI

Table VI -1: TA Activities in 2003 Annual Program

Ref. No.	Name of TA Project	Implementing Agency	Contract Date	Completion Date Planed	Implementation status/Remarks
CTC-2003-TA-01	Extension of the MIS to include ODS Phaseout in PA and CTC Production	Asia B2B Online，Inc.	2004-9-15	2005-6-30	**On going** The system has been developed and put into test operation.
CTC-2003-TA-02	Investigation of substitute technologies for PA enterprises				**Cancelled** Because most enterprises decided just closed their production lines. Fewer enterprises investigated the substitute technologies by their own.
CTC-2003-TA-03	Investigation of Conversion of CTC to other (non-ODS) Products				**Cancelled** This was integrated with TAs in 2004.
CTC-2003-TA-04	Training of personnel involved in implementation of phaseout activities	SEPA		2003-9-30	**Completed.** Training was organized for CTC producers, consumers, dealers and auditors.
CTC-2003-TA-05	Site supervision at CTC production enterprises in 2003	SEPA		2003-6-30	**Completed.** Only the supervisor were selected and trained. The site supervision was cancelled in 2003 because of the late issuance of CTC production quota.
CTC-2003-TA-06	Study of Market Prospects for CTC Producing Enterprises	8 CTC producers: They are 1) Zhejiang Quhua 2) Shanghai Chlor-Alkali 3) Jiangsu Meilan 4) Luzhou Xinfu 5) Sichuan Honghe 6) Luzhou North 7) Chongqing Tianxuan 8) Chongqing Tianyuan	2003-12-26	2004-6-30	**Completed** All these 8 CTC producers studied the market and technology of their selected one or two products. Some producting line are under construction or to be constructed. The completed reports were submitted. It's proved to be a successful TA.
CTC-2003-TA-07	Consulting Services on CFC-113 and CTC Emission control	Three individual consultants	2003-10-23	2004-3-31	**Completed** The related 3 PTFE enterprises prepared the technical proposals on CFC-113 consumption reduction. The consultants reviewed these proposals and commented the technology feasibility and costs estimation. Three projects were successfully commissioned.

Table VI -2: TA Activities in 2004 Annual Program

Ref. No.	Name of TA Project	Implementing Agency	Contract Date	Completion Date Planed	Implementation status/Remarks
CTC-2004-TA-01	Training of personnel involved in implementation of phaseout activities	SEPA		2004-12-31	**Completed** Training for CTC producers, consumers, dealers and auditors is finished respectively.
CTC-2004-TA-02	Domestic Investigation and verification of new feedstock applications of CTC	4 individual consultants were recruited	2004-8[1]	2004-6-30	**Completed** The report was submitted and the CTC applications and amount as the feedstock of non-ODS chemicals were collected.
CTC-2004-TA-03	International Investigation on new feedstock applications of CTC				**Cancelled** Because no foreign companies related accepted the investigation in consideration of confidentiality.
CTC-2004-TA-04	Study on CTC incineration technologies and management	Hualu Engineering and Technology Co., Ltd	2005-6-6	2005-11-30	**On going** The service contract has been signed with bidding selected consulting firm and the investigation on domestic and international incinerating technologies is being carried out.
CTC-2004-TA-05	2004 International workshop of CTC conversion and incineration technologies	FECO/SEPA	2004-9-10	2004-9-31	**Completed**
CTC-2004-TA-06	Daily Site supervision for CTC producers	9 CTC Producers	2003-12-5	2004-12-31	**Completed.**
CTC-2004-TA-07	Performance audit for 2003 Annual Program	CNAO	2004	2004-6-30	**Completed**

[1] The contracts with consultants were signed after the project has been completed due to time limited before the survey started.

Table VI -3: TA Activities in 2005 Annual Program

Ref. No.	Name of TA Project		Implementing Agency	Contract Date	Completion Date Planed	Implementation status/Remarks
CTC-2005-TA-01	Training of personnel involved in implementation of phaseout activities	CTC producers	SEPA		2004-10-20	**Completed**
		CTC dealer	SEPA		2004-10-25	**Completed**
		PA enterprises	SEPA		2005-7-31	**TOR Completed**
CTC-2005-TA-02	Daily site supervision to CTC producers	Supervisor dispatch	9 CTC producers	2004-12-24	2005-12-31	**Ongoing**
		Experience exchanging meeting	SEPA will organize the meeting		2005-7-31	**Completed**
		Summing-up meeting	SEPA will organize the meeting		2005-12-31	**TOR cleared**
CTC-2005-TA-03	Performance audit for 2004 annual program		CNAO	2005-4-30	2005-6-30	**Completed**
CTC-2005-TA-04	New feedstock and dealers verification **(newly added)**		SEPA and consultants		2005-7-31	TOR is under clearance of World bank

THE CFC PRODUCTION SECTOR

CHINA

2006 ANNUAL PROGRAM

August, 2005

Data Sheet

Country	People's Republic of China
Project title:	Sector Plan for CFC production phase-out in China
Year of plan	2006
# of years completed	7
# of years remaining under the plan	4
Ceiling for 2005 CFC production (in ODP tonnes), 2005 Annual Plan	18,750 ODP tonnes
Ceiling for 2006 CFC Production (in ODP tonnes), 2006 Annual Plan	13,500ODP tonnes
Total funding approved in principle for the CFC sector plan	$150 million
Total MLF funding released to the Bank by September 2005	$ 98 million
Total funding disbursed from the World Bank to China by September 2005 (excluding supporting fee)	$ 78.5 million
Level of funding requested for 2006 Annual Plan	$13 million

National Implementing operating agency	State Environment Protection Administration
International implementing agency	The World Bank

TABLE OF CONTENTS

Introduction

1. According to the Executive Committee's approval of the "Agreement for the China Production Sector" (UNEP/Ozl.Pro/ExCom/27/48, Decision 27/82 and Annex IV), in order to implement the 2006 Annual Program, China is hereby requesting a release of the eight tranche of funding in the amount of US$13 million. With this funding, China's CFC production will be reduced to a maximum of 13,500 ODP tonnes by the end of 2006. The production quotas issued and together with CFC-11 import and export control system will ensure that the ceiling for the overall national CFC-11 consumption of 7,700 MT for 2006, required in the "Agreement for CFC Phase-out in the Polyurethane Foam Sector in China" (UNEP/OzL.Pro/ExCom/35/19, Annex VIII), will be met. The details of the 2006 Annual Program are provided in Section B.

2. Following the approval of the China CFC Production Sector Plan at the 27th Meeting of the ExCom in March 1999, China has been implementing the phaseout project according to the agreed phaseout plan. Through this period, China has also developed supporting policies and regulations. While there were 37 CFC production plants in China in 1999, their number has been reduced to 6 producers in 2005. CFC production has correspondingly been reduced from 50,351 ODP tonnes in 1997 to 25,284.80 ODP tonnes in 2004, and will not exceed 18,750 ODP tonnes in 2005. (See table A. 1)

3. In accordance with the phaseout schedule in Montreal Protocol about CFC-13, an ODS in Group I of Annex B, the control baseline of CFC-13 production is 26.7 ODP tonnes (average of 1998-2000). China had reduced its production from 26.7 ODP tonnes to 20.78 ODP tonnes in 2004. (See table A. 2)

4. ***China's CFC phaseout obligations.*** In Accordance with the approved "CFC Production Plan in China" in 1999 and the "CFC/CTC/Halon Accelerated Phaseout Plan in China (APP) " in 2004, China agreed to the following phaseout schedule for CFCs in Group I of Annex A and Group I of Annex B to the Montreal Protocol.:

a. The production of CFCs (included CFC - 11 , 12 , 113 , 114 , 115 , 13) in Group I of Annex A and B to the Montreal Protocol will be reduced to18,750 ODP tonnes in 2005, 7400 ODP tonnes in 2007, 550 ODP tonnes in 2008 and 2009 and "zero"[1] in 2010 from the baseline production of 44,931 ODP tonnes. Starting from July 1, 2007, CFC production will be banned except 550 ODP tonnes CFC production mainly for MDI uses allowed in 2008-2009[2] and only one producer of CFC-11 and CFC-12 will be reserved;

b. Production of CFC-113 in Group I of Annex A to the Montreal Protocol will be fully phased out since January 1, 2006 in accordance with total consumption of CFC-113 phaseout under the Agreement for ODS Phaseout in China's Solvent Sector.

In 2010, the CFCs production will be brought to zero, except for the essential uses approved by the Parties. (See Table A.1)

[1] Except for essential uses as agreed by the Parties.

[2] The production of MDI for treating asthma is growing. It is estimated the CFC consumption for this and other MDI uses will increase from 391 ODP tonnes in 2003 to 550 ODP tonnes in 2007.

Table A.1: CFC Production Phaseout Schedule[1/] and Annual Grant

Year	Annual Grant Funding	Agreed maximum production	Maximum allowed production (based on quotas issued to producers)	Actual Production (confirmed by World Bank verification team)
	(ExCom Decision 27/82, Annex IV)			
	US$ (million)	(ODP tonnes)		
1999	20	44,931	44,853	44,793
2000	13	40,000	39,998	39,991
2001	13	36,200	36,198	36,196
2002	13	32,900	32,898	32,896
2003	13	30,000	29,998	29,986
2004	13	25,300	25,298	25,284.80
2005	13	18,750	18,748	N/A[3/]
2006	13	13,500		
2007	13	7400 [4/]		
2008	13	550		
2009	13	550		
2010	0[2/]	0		

1/ The baseline year using for the CFC production sector plan is 1997. Baseline year production of CFCs (comprising CFC-11, CFC-12, CFC-113, CFC-114, CFC-115, and CFC-13) was 50,351 ODP tonnes.

2/ Savings from earlier years would be used for funding the 2010 phaseout.

3/ N/A = information not yet available

4/ Within the period from January 01 2007 to June 30 2007.

5. As can be seen from Table A.1, the CFC production was successfully maintained below the annual targets in each of the years of the program. The annual production by CFC is shown in the table A.2 below.

Table A. 2: CFC Production broken down by CFC (ODP tonnes)

Annual Program	CFC-11	CFC-12	CFC-113	CFC-114	CFC-115	CFC-13
1999	22,684	18,521	3,379	0	163	46
2000	16,113	20,411	3,300	7	132	27
2001	14,099	19,257	2,700	7	106	27
2002	15,771	14,755	2,200	29	114	27
2003	13,828	14,249	1,700	0	187	21.28
2004	10,650	13,324	1,099	0	191	20.78
2005 (Jan-June, reported)	4670	5387	549	4.8	108	10

6. Forty seven technical assistance activities have been planned, including activities to strengthen the implementation capacity and conversion capacity of closure enterprises, preparation of standards to ensure quality and reliability of CFC substitutes, CFC production monitoring, and

the international workshop on ODS substitutes, etc. Among the 47 activities, 28 have been completed, 8 are under implementation and 11 were cancelled. Details are in Annex 3.

7. Three other activities have been taken up. The first, Government is supporting the construction of a facility to produce HFC-134a. The second, the screening of alternatives to Methyl Bromide in soil fumigation was taken up to screen out effective alternatives for tested crops, and to provide references for policy-makers. The third is China Convention Compliance Center activities.

8. The detailed implementation status of the 1999 – 2005 Annual Programs is provided in Part A.

PART A

IMPLEMENTATION STATUS OF PREVIOUS YEARS' ANNUAL PROGRAMS

As of August 2005

Phaseout Target

1. Starting with a baseline production of 50,351 ODP tonnes in 1997, since 1999 China has been issuing production quotas each year that have enabled its producers to successfully meet the annual production targets specified in the agreement between China and the ExCom. The annual production in each year has been confirmed by an independent verification of production administered by the World Bank. The annual phaseout targets, production quotas issued to meet those targets, and the verified actual production for the first six years' annual programs are summarized in Table A.1 and A.2 in the previous section. In 2005, there were six remaining CFC producers, and quotas for production of 18,748 ODP tonnes have been issued to them to meet the production control target of 18,750 ODP tonnes.

Enterprise Phaseout Activities

2. Details regarding the enterprise phaseout and production activities in the 1999-2005 Annual Programs are summarized in Annex 1. Starting with the 37 identified enterprises in 1999 (36 enterprises covered under the technical audit commissioned by the ExCom and one additional enterprise identified later), The production lines of 31 enterprises have completely closed and dismantled their facilities of CFC-11, 12 and 113 under the Sector Plan, accounting for closure of 79,430 MT of CFCs production capacity. All reduction in 1999 was through closure of enterprises. Starting in 2000, the required reduction in production has been achieved through a combination of closures and quota reduction through quota buy-back. A total of six CFC producers remain in operation in 2005. Three of these enterprises are producing CFC-11 and/or CFC-12, one enterprise is producing CFC-11, CFC-12, CFC-113 and CFC-115, one enterprise is the only producer of CFC-13 in China and the last enterprise is producing CFC-114 and CFC-115.

3. The 1999 Annual Program comprised three sets of closures. *First,* China committed to close and dismantle production facilities at 14 enterprises (listed in the agreement between China and the ExCom) that were not in production in 1997 (though one of these lines did produce some CFCs in the early part of 1999, prior to the agreement). SEPA signed closure contracts with these 14 enterprises, resulting in a reduction of production capacity of 22,630 MT (Annex 1, Table 1.1). *Second,* closure contracts were signed with 3 other enterprises to close production lines that had no production in 1997, resulting in a further reduction of production capacity of 4,000 MT (Annex 1, Table 1.2). *Third,* after quota regulation and bidding for 1999 quotas, closure contracts were signed with 7 enterprises to phase out additional production capacity of 23,800 MT (Annex 1, Table 1.3). Through these closure activities, the 1999 phaseout target was achieved with 44,793 ODP tonnes actual production which was within the agreed limit of 44,931 ODP tonnes.。

4. Under the 2000 Annual Program, closure contracts were signed with 5 enterprises to enable a phase out of production capacity totaling 15,500 MT in 2000 (Annex 1, Table 1.4) and one

enterprise accepted a reduction in quota. Through this approach, 4,931 ODP tonnes phaseout target in 2000 was achieved. The actual production was 39,991 ODP tonnes, which was within the agreed limit of 40,000 ODP tonnes.

5. Under the 2001 Annual Program, the actual production of CFCs was to be reduced from 40,000 ODP tonnes to 36,200 ODP tonnes. To achieve this target, three producers were closed based on three contracts for complete closure signed in November 2000. The closures brought a total reduction in production capacity of 7,500 MT (Annex 1, Table 1.5). The actual CFC production in 2001 was 36,196 ODP tonnes, which was within the agreed limit of 36,200 ODP tonnes.

6. Under the 2002 Annual Program, the phaseout target of CFC production was 3,300 ODP tonnes and the production of CFCs was to be reduced from 36,200 ODP tonnes to 32,900 ODP tonnes. As no CFC producers bid to close their production lines, CFC production quotas were reduced by administrative measures, and quota reduction contracts were signed with 6 of the 7 CFC producers, with one enterprise's quota being retained at the previous level. The actual production in 2002 was 32,896 ODP tonnes, which was within the agreed limit of 32,900 ODP tonnes (Annex 1, Table 1.6).

7. Under the 2003 Annual Program, the production target of CFCs was reduced from 32,900 ODP tonnes to 30,000 ODP tonnes. Two kinds of contracts were signed in December 2002 to achieve the reduction. Two producers signed closure contracts with SEPA (including one who closed down two CFC-12 production lines; the enterprise continued operation of its CFC-13 production line with an adjusted production quota consistent with the CFC-13 phaseout requirements), enabling a total reduction in production capacity of 6,000 MT (Annex1, Table 1.7). Four producers signed quota reduction contracts, while one retained its production level (Annex 1, Table 1.8). Overall, six producers remained in operation in 2003. The actual CFC production in 2003 was 29,986 ODP tonnes, which was within the agreed limit of 30,000 ODP tonnes.

8. Under the 2004 Annual Program, the phaseout target of CFCs in China was 4,700 ODP tonnes, reducing produciton from 30,000 to 25,300 ODP tonnes. Because no producer was willing to close production, the target was realized by administrative measure of quota reduction according to the "Circular on Implementing the Quota System for CFC Production" issued by SEPA and the former State Administration of Petroleum and Chemical Industry (SAPCI). The quota for the 5 remaining producers was reduced by administrative measures based on their 2003 CFC-11\12\13\113 production quotas, and quota for CFC-114 and 115 unchanged for the one producer. (Annex1, Table 1.9). The actual CFC production in 2004 was 25,285 ODP tonnes, which was within the agreed limit of 25,300 ODP tonnes.

9. Under the 2005 Annual Program, the phaseout target of CFCs in China was 6,550 ODP tonnes, reducing production from 25,300 to 18,750 ODP tonnes. Similarly to 2004, the phaseout target is carried out through administrative measure. To assist meeting CFC-11 and CFC-12 consumption control target set in the Agreement of APP for 2005, annual production quotas for CFCs were issued in two batches. At the beginning of 2005, the first batch of total 14,238 ODP tones (75 percent of CFC-11\12, 100 percent of CFC-113\114\115 and 20 ODP tones of CFC-13) was issued to six producers. The remaining annual CFCs production quota (second batch) will be issued in the second half year based on the actual import and export of CFC-11\12 in the first half year and import and export applications in the second half year.

10. All closed production lines for all the years (1999 to 2004) have also been visited by a World Bank verification team as part of the verification of the annual programs, confirming that they are no longer capable of producing CFCs and their key production equipment has been fully dismantled and destroyed. The World Bank verification team has also analyzed and verified the production data recorded at each enterprise. The verification team has confirmed that the production in 2004 was within the ceiling established under the Agreement.

11. To verify the production reduction achieved in 2005, the World Bank verification of the 2005 CFC production under the 2005 annual Program (plant visit) will be conducted in February of 2006 and findings reported to the first ExCom meeting in 2006.

Implementation of Policy Instruments

12. *Key instruments.* The key policy instrument of the program is the regulation promulgated for the introduction and implementation of an annual tradable quota system, entitled "Circular on Implementing the Quota System for CFC Production", by the State Environmental Protection Administration (SEPA) and State Administration of Petroleum and chemical Industry (SAPCI) on May 31, 1999. A bidding system, was also introduced together with the promulgation of the tradable production quota system and - and administrative measures. Under this regulation, some CFC producers were awarded grants through bidding in 1999 and 2000 to close their production, while a national CFC production quota within the annual target was issued to the remaining CFC producers in order to ensure that the demand for CFC was met and the national production for the year did not exceed the agreed target. Administrative measures have been used to meet the agreed target in 2002 and 2003. CFC production quotas with the remaining 7 producers were reduced in 2002. In 2003, CFC production quotas totaling 29,998 ODP tonnes were provided to 6 CFC producers, while two CFC producers dismantled their CFC-12 production lines, one of this two being closed completely, the other operating one CFC-13 line. Under the 2004 annual program, 25,298 ODP tonnes CFC production quotas were issued to enterprises on Feb. 26, 2004, the phaseout target of 4,700 ODP tonnes realized by administrative measure.

13. Notice on the Ban on the Establishment, Innovation and Expansion of ODS Facilities was issued in November 1997, which is an important control measure that minimizes the possible new ODS production capacity in the following years.

14. Due to the remaining demand for CFC in China and the potential risk of illegal production, China introduced on-site supervision arrangements on December 17, 2001 through a "Regulation on Implementing Site Supervision to CFCs Production Enterprises" with the aim of strengthen the monitoring of CFC production. From January 1, 2002, the remaining CFC-11 and CFC-12 producers have been placed under year-round site supervision by supervisors designated by SEPA. These supervisors are technical professionals located on site at production plants, and are from other CFC-11 and CFC-12 producing plants. This effectively enables the CFCs industry to help to monitor itself. The experience so far proves that it is an effective method to strictly control that CFC-11 and CFC-12 production does not exceed the CFC production quotas issued by SEPA. In 2003, 2004 and 2005, this system is adopted permanently with the aim to continue implementing it in the following years. Most of supervisors are those who have been engaged in this work for the past years.

15. *Related actions to prevent illegal CFC production in China.* CFC production has been listed in the phaseout category and published by China National Development and Reform Commission (NDRC) in 2004. As one of the most important national industry policy, it prevents any bank loans and approval of local administrative bureau to CFC production project. Production, sales and consumption management system on CTC, the main feedstock of CFC, was put into operation in 2004 under CTC/PA sector plan, strictly controlled CTC flow to the illegal consumers, especially to CFC production. Mean while, SEPA has strengthened environment supervision at both central and local level, and taken CFC illegal production as one of the most serious issue to monitor and punishment. A public reporting system is being established by environmental supervision agency to expand the monitoring on illegal ODS production to common people.

16. *Other instruments related to trade in CFCs*. A study on options for export/import management for Halons and CFCs, which would help China to monitor and control export/import in CFCs and prevent illegal CFC trade, was completed in July 1999. A "Circular on Control Mechanism of Import and Export of ODS" and a "Circular on Strengthening Management of ODS Import and Export" were promulgated on December 3, 1999 and in April 2000. The mechanism is implemented by the Management Office of ODS Import-Export Control jointly administered by SEPA, the General Administration of Customs (GAC), and, Ministry of Commerce of the PRC (MOC) and helps China to monitor trade in ODS and eliminate illegal ODS trade. Two batches of *Export/Import Control List of ODS in China* have been promulgated in January 2000 and January 2001 respectively. Imports of Carbon Tetrachloride, a key feedstock for CFC production and also a controlled substance under the Protocol, were banned on April 1, 2000, imports and exports CFC-113 used as solvent were banned on Feb.1, 2001, and imports and exports of other CFCs are regulated by a permit system administered by MOC (Ministry of Commerce).On July 8, 2003, in order to control the consumption of CFC-113, SEPA issued "Circular on issuing consumption license of CFC-113、TCA and CTC".

Technical Assistance Activities

17. Technical assistance (TA) activities are essential for successful implementation of the CFC production phase-out. Forty seven technical assistance activities have so far been planned under the annual programs, of which twenty-eight TAs have been completed, eight are still under implementation and eleven TAs were canceled. There are four TAs (one in each annual program from 1999 to 2002) for the recruitment of international consultants were not utilized and cancelled as they were found to duplicate other activities, or were not considered feasible at that point of time. Details are provided in Annex 3. The status of the 2005 technical assistance activities is as follows:

(a) *Training of Personnel Involved in Implementation of Phaseout Activities.* In order to implement the phaseout plan effectively, it is necessary to train staff in CFC production enterprises and audit agencies. The training workshop for CFC producers is planned in Dec. 2005 and the training for auditors will be held by end of April 2006. The TOR is under preparation.

(b) *Site Supervision for CFCs Production Enterprises.* Since the implementation of the Site Supervision in 2002 proved that it is effective, this activity is continually carried out this year for the purpose of strengthening the supervision of CFC production. From Jan. 1, 2005, main 4 of the 6 remaining CFCs producers have been placed under year-round site

supervision by supervisors designated by SEPA. The TOR was submitted to the World Bank for clearance and was cleared by Bank in end of 2004.

(c) *Performance Audit for 2004.* As required in Schedule 3, Section A, Paragraph 6 (b) of the ODS IV Grant Agreement between China and the World Bank, an audit has been undertaken in June 2005 to audit the implementation status of 2004 Annual Program under the CFC production Sector. Total funding available in year 2004 was US$13 million. The audit aimed to verify all Annual Program activities, with particular emphasis on the actual CFC production in China for the year 2004. The auditors have visited all CFC plants that were in production in 2004, regardless of their production volume and all Consultants who carried out the TA projects in 2004 and previous years annual programs under which the contracts have been signed.

(d) *)Legislation study of China ODS phase-out management.* This TA will focus to recommend legislation on China ODS phase-out management . The service contract has been signed with Center for Legal Assistance to Pollution Victims, China University of Political science and Law in May 2005. The project is implemented smoothly as scheduled.

(e) *Study Tour on Methods of Controlling Smuggling of ODS.* A study tour to some developed countries is being planned with the aim of exchanging information and experiences on efficient management of ODS import and export, and measures to control illegal trade in ODS. The TOR was prepared and under review by World Bank.

(f) *Development Strategy on ODS Substitutes (Phase II).* The purpose of the project is to develop the strategy and promote ODS, in particular HCFCs, substitutes technologies and production development in China until 2040 on the basis of national investigation. The project will initiate the activities to assure HCFCs production and consumption phaseout in China in compliance with the commitments under Copenhagen Amendment of the Montreal Protocol. The service contract has been signed in March 2005 with the selected consultant firm. Site investigation to enterprises has been completed.

Other activities (former Special initiatives)

18. Under the provisions of the flexibility in section (d) of the Agreement for the China Production Sector, China has undertaken the following other activities (See Annex 4).

19. ***Establishment of HFC-134a Production facility.*** As the phaseout of CFC production is proceeding, the demand for substitutes in the consumption sector is increasing rapidly. The impact of the first three years of implementation of the CFC sector plan equals a phaseout of more than 14,155 ODP tonnes of CFCs. The phaseout of CFC-11, which is the major foaming agent, has had an impact in the foam sector, and there is an urgent need to move into production of substitutes such as Cyclopentane and HCFC-141b. The use of CFC-12 as refrigerant in air-conditioners installed in all newly produced cars has been banned from January 1, 2002. It is estimated that the demand for HFC-134a, presently the only substitute of CFC-12 in the MAC sector in China, will exceed 7,500 tonnes in 2005 in this sector alone, and could reach 19,000 tonnes by 2010. China therefore envisages an urgent need to initiate other activities to produce such substitutes to ensure that there is no shortfall in their supply. Xi'an Jinzhu Jindai Chemical Industry Co., Ltd. was selected as the beneficiary for this project in December 2000. A two phase approach was selected with a final annual capacity of 10,000 tonnes and a first stage annual capacity of 5,000 tonnes.

20. The first stage of the project has physically been completed by the end of 2003 and total 3,400 MT of HFC-134a were produced in 2004, 3,000 MT were produced from January to August 2005. On June 5, 2004, SEPA organized an expert group, including relevant officials from state administrative departments and experts from industry associations, to review the implementation of the project and commission it. Based on the analysis on the status of domestic HFC-134a production and the market demands, SEPA decided to finance the second phase increasing the production capacity from 5,000 tonnes to 10,000 tonnes of HFC-134a using the funds of CFC Production Sector Plan. The second phase construction contract was signed on May 16, 2005 and will be completed by end of 2006.

21. ***Screening of alternatives to Methyl Bromide in soil fumigation in China.*** The Institute of Plant Protection, Chinese Academy of Agricultural Sciences, was selected as the beneficiary for this project in April 2002. The purpose of this project is to screen out one or two economical, effective and simple alternatives for each crop tested, to confirm their acceptance by Chinese farmers and to provide references for policy-makers. Five sites were defined for testing of tobacco, strawberry, tomato, cucumber and hot pepper. This project has been completed, the final report has been submitted to WB during it's April mission in 2004.

22. ***China Convention Compliance Center Activities.*** A new program is being introduced by China in 2003 with implementation to begin as soon as the legal arrangements can be made operational. As China approaches the second major obligation milestone under the Montreal Protocol in 2005, it is foreseen that the drastic required reductions in production and consumption of ODS will require rigorous compliance and enforcement measures, especially to prevent illegal activity in this regard. China therefore proposes to establish the China Convention Compliance Center (CCCC) in 2003. The CCCC will be the central management unit for the ODS program when it is established, and will be responsible for all management and enforcement activities on ODS phaseout actions under the Program. The main purpose of CCCC is aim to strengthening China compliance capacity with the support from some unallocated balances of previous annual program of CFC Production Sector Plan and bilateral contributions to China, to enforce: (a) the project development and management capacity on ODS phaseout activities; (b) training capacity on personnel of local EPBs, line ministries, enterprises and related parties so as to reach and maintain the achievements of ODS phaseout; (c) establishment of policies and regulations on ODS phaseout actions and put forward to legislation and national law; (d) capacity building on monitoring and enforcement of policy implementation; (e) public awareness and encouragement of common participation; and etc..

Plants producing HCFC-22 in China

23. As required by the agreement on the production sector, China has provided an updated list of the plants producing HCFC-22 in China, attached in Annex 2. China confirms that none of these produce CFCs.

PART B

2006 ANNUAL PROGRAM

1. *Phaseout Objectives* The phaseout objective of the 2006 Annual Program is to ensure that CFC production in the year does not exceed 13,500 ODP tonnes. China is requesting the release of the eighth annual tranche in the amount of US$13 million as agreed in the overall CFC Production Sector Phaseout Plan to achieve this objective. It is envisaged that the US$13 million will be allocated for (i) policy and enterprise activities aimed at closing CFC production lines and/or reducing production levels in some CFC enterprises that received production quota in 2005, (ii) Technical Assistance activities, and (iii) other activities.

Program Activities during the Year

2. *Policy actions.* In 2006, the following policies and measures will continue to be implemented by the Government. These policies are considered necessary for the success of total CFC production phaseout in China.

(a) *Tradable production quota system.* The regulation has been under implementation since 1999, and will continue. Six years implementation experience of this system confirmed that this is the most important measure to effectively and successfully realize annual phaseout target.

(b) *Export and import control mechanism*. The Management Regulation on Export/Import Control of ODS, promulgated in December 1999 by SEPA in collaboration with Ministry of Foreign Trade and Economic Cooperation (MFTEC) (now Ministry of Commerce of the PRC – MOC) and General Administration of Customs (GAC), covers all ODS as well as related equipment and facilities that produce or consume ODS. The ODS export/import quota and permit systems have been adopted, and all enterprises wishing to export or import ODS must hold both a quota issued by SEPA and MOC, as well as specific export/import permits. GAC supervises exports and imports of ODS. China has also promulgated the Export/Import Control List of ODS in China, with the First Group (including CTC import, CFCs and Halon) promulgated in January 2000, and the Second Group (including CTC export and TCA) in January 2001, and the Third Group (including HCFC) in 2004. Under this regulation, China has banned import of CTC, import and export of CFC-113 used as solvent and introduced quota and permit requirements export of CTC, import and export of CFCs, Halon, TCA and HCFC. The list will be updated to include all CFC containing blends as refrigerants in 2006. Beside, at a World Bank Regional ODS program workshop held in September 2005 on implementation of national phase-out plans, a mechanism for export/import cooperation helping the countries controlling import was agreed.

(c) *Sales permit system.* To prevent illegal transaction of CFCs, the Management Regulation on Sales Control of CFC-113 has been implemented for 2 years. Under this system, all producers and sellers of CFC-113 must hold CFC-113 selling permit license. Those violating the regulation are subject to penalties.

3. *Enterprise activities*. Through a combination of bidding, allocation of production quota and administrative measures, plant would be granted funds for full or partial closure. All CFC reduction

or closure contracts are expected to be signed by the end of November, but in any case will be signed no later than the end of 2005. Closure projects are expected to take effect from January 1, 2006 and are to be completed by the end of June 2006. Key equipment should be dismantled and destroyed by the end of January 2006. The reduction contracts will be implemented from January 1, 2006 to December 31, 2006 through the production quota system.

4. *Technical assistance* (TA) activities. The following TA activities are proposed for 2006:

(a) *Training of personnel involved in implementation of phaseout activities.* To implement the phaseout plan effectively, it is necessary to train staff of the CFC production enterprises and audit agencies. Training is also needed for enterprises to understand the closure regulations. Training in 2006 will consist of two workshops: one for CFC production enterprises and the other one for auditors.

(b) *Daily Site Supervision of CFCs Production Enterprises.* This TA will continue in 2006. This activity was added to the program in 2002 for the purpose of strengthening the supervision of CFC production. From January 1, 2002 up to now the main remaining CFCs producers had been placed under year-round site supervision by supervisors designated by SEPA. These supervisors are technical professionals located on site at production plants, and come from other CFCs producing plants. This arrangement effectively enables the CFCs industry to help to monitor itself.

(c) *Performance Audit.* A performance audit is required under the CFC sector plan. A TOR for the 2005 performance audit will be agreed between the Bank and SEPA for this purpose by November 2005, and the audit is expected to be completed by June 30, 2006.

5. Other TA activities that are necessary for effective phaseout may be developed during the year. The above policy initiatives, enterprise-level and technical assistance activities are summarized in Table B.1 below.

Table B.1: 2006 Annual Program

CFC production phaseout targets						
	Funding (US$ mill.)	2005 Production Limit[3]	Phaseout in 2006	Allowed Production in 2006[4]	Performance Indicators	Key Dates
CFC (ODP tonnes)	13	18,750	5,250	13,500	1. Closures of some current producers and reduction in production in remaining producers 2. Implementation of TA activities to help phaseout. 3. Production level not to exceed 13,500 ODP tonnes	1. Dec. 2005-June 2006 2. Jan. 2006-Dec. 2006 3. Dec.31, 2005
Policy Initiatives						
Initiatives	Funding	Performance Indicators				Key Dates
1. Administrative measures	Incl .in TA n.a. incl. in TA	1. Training remaining enterprises for closing in 2005 and sign closure or partial closure contracts with CFC production enterprises 2. Implement closure or partial closure contracts in 2006 3. Train enterprises for closing preparation for 2007 reduction target				1. Dec. 2005 2. Dec. 2005-June 2006 3. Sep. 2006
2.To issue tradable Production quota to CFC producers	n.a.	1. Establish 2006 annual CFC production quota 2. Issue annual production quota to CFC producers for 2006				1. Dec. 2005 2. Mar. 2006
3. Import/export trade management	n.a.	1. Implement the import/export trade management mechanism.				1. January 2006-December 2006
Enterprise activities						
	Funding (US$ million)	Existing enterprises	Enterprises at end of 2006	Performance Indicators		Key Dates
Closure or partial closure of CFC11/12 production lines	12.00	6	5 or 6	1. Training enterprises, selecting closing plants (if any) and signing contracts. 2. Facilities' dismantling completed of closure contracts		1. Sept. – Dec. 2005 2. No later than June 2006

[3] Per Agreement

[4] Maximum production quota that can be allocated for calendar 2006.

Table B.1: 2006 Annual Program (continued)

(Amount in US$ million)

Technical assistance activities			
Activities	Funding [1/] (US$ Million)	Performance Indicators	Key Dates (please change the following date for the 2006 AP)
CFC-06-TA-01 Training of personnel involved in implementation of phaseout activities.	0.1	1. TOR to be agreed with the Bank 2. Training on supervision and evaluation of CFC production, management of CFC production quota system, and CFC Project Implementation Manual 3. Signing 2007 phaseout contracts	1. June, 2006 2. Completed December 2006. Specific schedules to be detailed in TORs
CFC-06-TA-02 Implementing Site Supervision to CFCs Production Enterprise	0.3	1. TOR to be agreed with World Bank 2. Implementation.	1. November, 2005 2. January 1-December 31, 2006.
CFC-06-TA-03 2005 Performance audit	0.2	1. TOR to be agreed with the Bank 2. Audit implementation. 3. Audit is completed.	1. November, 2005 2. April, 2006 3. By June 30, 2006
Others activities to be identified	0.4		
Subtotal	1.0		
TOTAL for phaseout activities	**13.00**		

[1/] These are estimated costs. After bidding for TA contractors, these costs will be adjusted to reflect contractual amounts for each TA. All TA activities are expected to be completed on schedule.

Annex 1
Status of Plants Producing CFC in the 1999-2005 Annual Programs

Table 1.1: CFC plants closed as part of ExCom approval conditions - April and May 1999

Sl.	SRI No.	Enterprise Name	Capacity (MT/year)	CFC type	CFC Production (ODP tonnes)	Status
					1999	
1	A3	Shangdong Dongyue Chemical Co. Ltd.	5,000	CFC-12	1042	Closure verified August 1999
2	C2	Hunan Yiyang Chlor-Alkali Chemical Co. Ltd.	1,000	CFC-12	0	Closure verified August 1999
3	C5	Inner Mongolia Baotou Chemical Plant #1.	700	CFC-12	0	Closure verified August 1999
4	C1	Jiansu Jianhu Phosphate Fertilizer Plant	500	CFC-12	0	Closure verified August 1999
5	B4	Sichuan Zigong Fujiang Chemical Plant	1,500	CFC-11	0	Closure verified August 1999
			1,000	CFC-12	0	
6	B9	Zhejiang Linhai Jianxin Chemical Plant	800	CFC-12	0	Closure verified August 1999
7	A14	Guangdong Huiyang Chemical Plant	1,000	CFC-11	0	Closure verified August 1999
			3,000	CFC-12	0	
8	A1	Henan Hebi Chemical Plant #1	1,500	CFC-12	0	Closure verified August 1999
9	C3	Hebei Longwei Fluorochemical Plant #1	1,080	CFC-12	0	Closure verified August 1999
10	C4	Guizhou Wuling Chemical Plant	1,500	CFC-12	0	Closure verified August 1999
			50	CFC-13	19	
11	A15	Guangdong Zhaoqing Chemical Plant	500	CFC-12	0	Closure verified August 1999
12	C6	Shanxi Shangzhou Chemical Plant	2,000	CFC-12	0	Closure verified August 1999
13	B10	Zhejiang Linhai Shuiyang Chemical Plant	500	CFC-12	0	Closure verified August 1999
14	A12	Shanghai Shuguang Chem. Plant	1,000	CFC-113	0	Closure verified August 1999
Subtotal			22,630		1061	

Table 1.2: Additional CFC plant closures in 1999 -contracts of April and May 1999

SI	SRI	Name of enterprise	Capacity (MT/year)	CFC type	CFC Production (ODP tonnes)	Status
					1999	
15*	A2	Shangdong Jinan 3F Chemical Co. Ltd.	1,500	CFC-11	0	Closure verified August 1999
16	No SRI audit	Liaohe Chemical Group Chlor-Alkali Plant	1,000	CFC-12	0	Closure verified March 2000
17**	B15	Fujian Shaowu Floro-chem. Plant	1,500	CFC-11	0	Closure verified March 2000
Subtotal			4,000		0	

Table 1.3: CFC plants closed as part of 1999 Annual Program - contracts of June 1999

SI	SRI	Name of enterprise	Capacity (MT/year)	CFC type	CFC Production (ODP tonnes)		Status
					1999	2000	
18	B2	Chongqing Tianyuan Chemical Plant.	500	CFC11/ 12	14	0	Closure verified January 2000
19	B5	Hubei Wuhan Changjiang Chemical Plant	1,500	CFC-11	0	0	Closure verified January 2000
			4,500	CFC-12	0	0	
20	A5	Jiangsu Wuxian Juxing Chemical Plant	2,000	CFC-11	0	0	Closure verified January 2000
21	A6	Jiangsu Wuxian Union (City Link) Chemical Plant	1,800	CFC-11	0	0	Closure verified January 2000
22	B1	Jiangxi De'an Refrigeration Plant	3,000	CFC-12	0	0	Closure verified January 2000
15*	A2	Shangdong Jinan 3F Chemical Co. Ltd.	3,500	CFC-12	0	0	Closure verified January 2000
23	B6	Shanghai Chlor-Alkali Chemical Plant Co. Ltd.	7,000	CFC-12	687	0	Closure verified January 2000
Subtotal			23,800		701	0	

Table 1.4: CFC plant closed as part of 2000 Annual Program - contracts of December 1999

SI	SRI	Name of enterprise	Capacity (MT/year)	CFC type	CFC Production (ODP tonnes)		Status
					1999	2000	
24	A9	Jiangsu Wuxi Hushan Refrigeration Plant	4,000	CFC-11	560	0	Closure verified September 2000
25	B3	Sichuan Zigong Refrigerant Plant	1,500	CFC-11	198	0	Closure verified September 2000
			1,500	CFC-12		0	
26	B13	Zhejiang Lanxi Refrigeration Plant	2,500	CFC-11	785	0	Closure verified September 2000
27	B7	Zhejiang Rui'an Haitian Chem. Co. Ltd.	5,000	CFC-11	617	0	Closure verified September 2000
28	A4	Shandong Xuecheng Xinxing Chemical Plant	1,000	CFC-12	0	0	Closure verified September 2000
Subtotal			15,500		2160	0	

Table 1.5: CFC plants closed as part of 2001 Annual Program – contracts of November 2000

SI	SRI	Name of enterprise	Capacity (MT/year)	CFC type	CFC Production (ODP tonnes)			Status
					1999	2000	2001	
17**	B15	Fujian Shaowu Floro-chem. Plant	3,500	CFC-12	979	1,159	0	Closure verified June 2001
29	A7	Suzhou Xinye Chemical Co. Ltd.	3,000	CFC-11	7408	2,532	0	Closure verified June 2001
30	A11	Jiangsu Changsu Yudong Chem. Plant	1,000	CFC-113	545	545	0	Closure verified June 2001
Subtotal			7,500		8932	4236	0	

Table 1.6: CFC plants reducing production as part of 2002 Annual Program – contracts of December 2001

SI	SRI	Name of enterprise	Capacity (MT/year)	CFC type	CFC Production (ODP tonnes)				Status
					1999	2000	2001	2002	
31	A8	Jiangsu Meilan Electric Chem. Plant	3,000	CFC-11	1766	1,050	1,050	1,050	Data verified in February 2003
			3,000	CFC-12	1866	1,793	1,793	1,315	
32	B14	Zhejiang Juhua Florochem. Com. Ltd.	4,000	CFC-11	3376	4,339	4,827	4,489	Data verified in February 2003
			8,000	CFC-12	6325	7,759	7,706	7,157	
33	A10	Jiangsu Changsu Refrig. Plant (Changsu 3F)	10,000	CFC-11	7960	8,192	8,222	10,232	Data verified in February 2003
			5,000	CFC-12	2780	5,019	5,075	3,035	
			4,000	CFC-113	2834	2,756	2,700	2,200	
			400	CFC-115	90	60	30	60	
34***	B8	Zhejiang Linhai Limin Chem. Plant	50	CFC-13	27	27	27	27	Data verified in February 2003
			3,000	CFC-12	1188	1365	1365	887	
35	B12	Zhejiang Dongyang Chem. Plant	5,000	CFC-12	2053	2,219	2,219	1,741	Data verified in February 2003
36	A13	Guangdong Xiangsheng Chem. Co. Ltd.	3,000	CFC-12	1,601	1,098	1,099	621	Data verified in February 2003
Subtotal			45,450		31866	35677	36113	32814	

Table 1.7: CFC plants closed as part of 2003 Annual Program – contracts of December 2002

SI	SRI	Name of enterprise	Capacity (MT/year)	CFC type	CFC Production (ODP tonnes)					Status
					1999	2000	2001	2002	2003	
34	B8	Zhejiang Linhai Limin Chem. Plant	3,000	CFC-12	1,188	1,365	1,365	887	0	Closure verified January 2003
36	A13	Guangdong Xiangsheng Chem. Co. Ltd.	3,000	CFC-12	1,601	1,098	1,099	621	0	Closure verified January 2003
Subtotal			6,000		2789	2463	2464	1508	0	

Table 1.8: CFC plants reducing production as part of 2003 Annual Program – contracts of December 2002

SI	SRI	Name of enterprise	Capacity (MT/year)	CFC type	CFC Production (ODP tonnes)					Status
					1999	2000	2001	2002	2003	
31	A8	Jiangsu Meilan Electric Chem. Plant	3,000	CFC-11	1766	1,050	1,050	1,050	997	Data verified in February 2004
			3,000	CFC-12	1866	1,793	1,793	1,315	1,066	
32	B14	Zhejiang Juhua Florochem. Com. Ltd.	4,000	CFC-11	3376	4,339	4,827	4,489	3947	Data verified in February 2004
			8,000	CFC-12	6325	7,759	7,706	7,157	7,406	
33	A10	Jiangsu Changsu Refrig. Plant (Changsu 3F)	10,000	CFC-11	7960	8,192	8,222	10,232	8884	Data verified in February 2004
			5,000	CFC-12	2780	5,019	5,075	3,035	4335	
			4,000	CFC-113	2834	2,756	2,700	2,200	1700	
			400	CFC-115	90	60	30	60	108	
35	B12	Zhejiang Dongyang Chem. Plant	5,000	CFC-12	2053	2,219	2,219	1,741	1,442	Data verified in February 2004
Subtotal			42,400		29050	33187	33622	31279	29885	

Table 1.9: CFC plants reducing production as part of 2004 Annual Program– contracts of December 2003

SI	SRI	Name of enterprise	Capacity (MT/year)	CFC type	CFC Production (ODP tonnes)						Status
					1999	2000	2001	2002	2003	2004	
31	A8	Jiangsu Meilan Electric Chem. Plant	3,000	CFC-11	1,766	1,050	1,050	1,050	997	643	Data verified in February 2005
			3,000	CFC-12	1,866	1,793	1,793	1,315	1,066	1,239	
32	B14	Zhejiang Juhua Florochem. Com. Ltd.	4,000	CFC-11	3,376	4,339	4,827	4,489	3,947	3,325	Data verified in February 2005
			8,000	CFC-12	6,325	7,759	7,706	7,157	7,406	6,233	
33	A10	Jiangsu Changsu Refrig. Plant (Changsu 3F)	10,000	CFC-11	7,960	8,192	8,222	10,232	8,884	6,682	Data verified in February 2005
			5,000	CFC-12	2,780	5,019	5,075	3,035	4,335	4,639	
			4,000	CFC-113	2,834	2,756	2,700	2,200	1,700	1,099	
			400	CFC-115	90	60	30	60	108	108	
34***	B8	Zhejiang Linhai Limin Chem. Plant	50	CFC-13	27	27	27	27	21	21	Data verified in February 2005 (Production quota is 27 MT in 2003 and reduced to 21 MT in 2004)
35	B12	Zhejiang Dongyang Chem. Plant	5,000	CFC-12	2,053	2,219	2,219	1,741	1,442	1,213	Data verified in February 2005
Subtotal			**42,650**		**44,793**	**39,991**	**36,196**	**32,896**	**29,986**	**25,285**	Data verified in February 2005

Table 2.0: Remaining CFC producers by January 2005

SI	SRI	Name of enterprise	Capacity (MT/year)	CFC type	CFC Production (ODP tonnes)							Status
					1999	2000	2001	2002	2003	2004	2005	
31	A8	Jiangsu Meilan Electric Chem. Plant	3,000	CFC-11	1,766	1,050	1,050	1,050	997	643	429	First half year of 2005 reported
			3,000	CFC-12	1,866	1,793	1,793	1,315	1,066	1,239	213	
32	B14	Zhejiang Juhua Florochem. Com. Ltd.	4,000	CFC-11	3,376	4,339	4,827	4,489	3,947	3,325	1,257	First half year of 2005 reported
			8,000	CFC-12	6,325	7,759	7,706	7,157	7,406	6,233	2,264	
33	A10	Jiangsu Changsu Refrig. Plant (Changsu 3F)	10,000	CFC-11	7,960	8,192	8,222	10,232	8,884	6,826	2,985	First half year of 2005 reported
			5,000	CFC-12	2,780	5,019	5,075	3,035	4,335	4,639	2,336	
			4,000	CFC-113	2,834	2,756	2,700	2,200	1,700	1,099	550	
			400	CFC-115	90	60	30	60	108	108	60	
34***	B8	Zhejiang Linhai Limin Chem. Plant	50	CFC-13	27	27	27	27	21	21	10	First half year of 2005 reported
35	B12	Zhejiang Dongyang Chem. Plant	5,000	CFC-12	2,053	2,219	2,219	1,741	1,442	1,213	575	First half year of 2005 reported
37	B11	Zhejiang Chemical Research Institute	100	CFC-114	0	7	7	29	0	0	5	First half year of 2005 reported
			100	CFC-115	72	72	76	54	79	83	48	
Subtotal			**42,650**		**44,793**	**39,991**	**36,196**	**32,896**	**29,986**	**25,285**		

*: Separate lines closed at different times at this enterprise; it therefore appears twice in this table.
**: Separate lines closed at different times at this enterprise; it therefore appears twice in this table.
***: Separate lines closed at different times at this enterprise; it therefore appears twice in this table.

Annex 2

Updated List of HCFC-22 producing plants in China

Sl.	Name of Company
1.	Hunan Zhuzhou Chemical Corporation (Group) (Hunan Zhuzhou Chemical Group Co., Ltd.)
2.	Zhonghao New Chemical Materials Co., Ltd.
3.	Jiangsu Changshu Elf Atochem 3F Co., Ltd. (ATOFINA (China) Investment CO., Ltd.
4.	Jiangsu Meilan Electric Chemical Plant (Jiangsu Meilan Chemical Co., Ltd.)
5.	Liaoning Fuxin Fluoro-chemical Plant)
6.	Sichuan Chenguang Chemical Research Institute Plant No.2 (Zhonghao Chenguang Research Institute of Chemical Industry)
7.	Shandong Jinan 3F Chemical Co., Ltd. (Jinan 3F Fluoro-Chemical Co., Ltd.)
8.	Shandong Dongyue Chemical Co., Ltd.
9.	Sichuan Zigong Fujiang Chemical Plant
10.	Zhejiang Juhua Fluoro-chemical Co., Ltd.
11.	Zhejiang Dongyang Chemical Plant (Zhejiang Fluorescence Chemical Co., Ltd.)
12.	Zhejiang Linhai Limin Chemical Plant (Zhejiang Linghai Limin Chemical Co., Ltd.)
13.	Zhejiang Yingpeng Chemical Co., Ltd. (China Yingpeng Chemical Co., Ltd.)
14.	Wuhan Changjiang Chemical Plant
15.	Zhejiang San Mei Chemical Co., Ltd.
16	Zhejiang Jusheng Fluoro Chemical Co,Ltd
17	Sichuan Honghe Fine Chemical Co.,ltd
18	Zhejiang Pengyou Chemical Co Plant

Notes:

1. The enterprise names in the brackets are the current name of the enterprise (as established by CFC-01-TA-06, the 2001 TA on Verification of HCFC-22 Producers).

2. Three HCFC-22 plants have been deleted from the 2003 Annual Program list. The production line of Guangdong Huiyang Chemical Plant (Sl. No.1) has closed down and the falicities had been dismantled on June 16th, 2003; Shandong Fire Extinguishing Agent Plant Shouguang Division (The Fire Extinguishing Agent Factory Under Shandong Haihua Group Co., Ltd.) (Sl. No.12) completely dismantled its production line on Nov. 30, 2002, and (Sl. No.8) Sichuan Zigong Refrigeration Plant has closed down and had dismantled its production facilities in February 2003.
3. In 2004, the above table has three changes: (a) SI 3, name changed; (b) SI 6, Shanghai Chlor-Alkali Chemical Co. Ltd., its HCFC-22 production unit has been closed and dismantled. So, SI 6 was deleted from the table; (c) SI 16 is added into the table, a new HCFC-22 production facility has been built and has begin operation in June, 2004.
4. In 2005, three new HCFC-22 producers are added to the above table as Sl. 16, 17 and 18. (a) Sl. 16- Zhejiang Jusheng Fluoro Chemical Co,Ltd: All its HCFC-22 is used itself and not saled on the market. The enterprise was not included in previous list and newly added; (b) Sl. 17-Sichuan Honghe Fine Chemical Co Ltd: Started HCFC-22 production in April 2005. (c) Sl. 18- Zhejiang Pengyou Chemical Co Plant: Will start its HCFC-22 production in November 2005.

Annex 3

Technical Assistance Activities, 1999-2005

Table 3.1: Implementation of Technical Assistance Activities in the 1999 Annual Program

Ref. No.	Name of TA Project	Implementing Agency	Contract Date	Completion Date Planed	Implementation status/Remarks
CFC-99-TA-01	Production of an ODS Phaseout Video	Promulgation and Education Center for Environmental Protection	July 12, 1999	December 1999.	**Completed.** An ODS Phaseout video was prepared and broadcast for public information during the 11th meeting of the Parties in Beijing in November 1999. The video, as well as six TV advertisements prepared under the activity, were broadcast on national TV to raise awareness of the general public and authorities in China concerning the necessity for ODS phaseout and the urgency of phaseout activities.
CFC-99-TA-02	Development of a Management Information System	Haitong Chuangye Company and Beifang Silu Information Tech. Company of Tsinghua University	September 13, 1999	December 1, 2000	**Completed.** An MIS was established to monitor and generate final production data and program progress reports
CFC-99-TA-03	Development of Substitute Strategy	Center of Environmental Science, Peking University and Zhejiang Chemical Research Institute	June 26, 2000	June 30, 2002	**Completed.** A report was finalized by the end of June 2002. The strategy provides very useful guidelines for developing and investing in ODS substitutes Copies of the strategy document will be distributed to relevant administrations and associations for reference and guidance.
CFC-99-TA-04	Formulation of Standards for Cyclopentane, HCFC 141b, and HFC 134a	Shanghai Institute of Organic Fluorine Materials	April 28, 2000	March 23, 2001	**Completed.** After preliminary sampling of HCFC-141b and HFC-134a, the preliminary content and standards parameters were confirmed with the Government's administrative unit for standards. The draft standards report was completed in June, 2001..The standards were issued by the Standardization Committee of the State Bureau of Quality Supervision, Quarantine and Inspection on Sep. 6, 2002 and have gone into force on Apr.1, 2003.

Ref. No.	Name of TA Project	Implementing Agency	Contract Date	Completion Date Planed	Implementation status/Remarks
CFC-99-TA-05	Training of Personnel involved in Phaseout Implementation Activities	SEPA		May 16, 2000	**Completed.** Training was organized for local officials, CFC producers and auditors.
CFC-99-TA-06	Supervision and Management of Export/Import of ODS				**Cancelled**. Objective covered through a similar TA project in the Halon Sector
CFC-99-TA-07	Studies on Market Prospects for Closure Enterprises	SEPA		October 9, 2000	**Completed.** Eight enterprises were funded for exploring alternative economic options to CFC production.
CFC-99-TA-08	National Workshop	SEPA		June 5, 2000	**Completed.** This workshop included introductions by domestic research institutes of research topics relating to nine categories of CFC substitutes, fine fluorine chemicals, electrical fluorinated chemicals, electronic pure chemical reagents, special fluorine-containing drugs and agrochemicals (herbicide, insecticide etc.), production of these chemicals, and their potential market prospects. Many sector plan enterprises attended.
CFC-99-TA-09	Bidding Evaluation for HFC-134a Feasibility Study	CNCCC	January 28, 2000	January 14, 2001	**Completed.** Four proposals for undertaking a feasibility study for the construction of a HFC 134a production facility were evaluated, and a contract was signed with the winner.
CFC-99-TA-10	Survey on the ODS Application as Chemical Process Agents in China	Beijing University of Chemical Technology	December 10, 1999	January 12, 2000	**Completed.** This project provided a Report of Preliminary Survey on the ODS Application as Chemical Process Agents in China, and was used as the basis for further preparations on the proposed preparation of the Process Agent Sector Phaseout Plan in China.
CFC-99-TA-11	Recruitment of international technical consultants				**Cancelled**. No technical consultants were recruited internationally for TA activities in the year.

Table 3.2: Implementation of Technical Assistance Activities in the 2000 Annual Program

Ref. No.	Name of TA Project	Implementing Agency	Contract Date	Completion Date Planed	Implementation status/Remarks
CFC-00-TA-01	Formulation of Standards for HFC-152a, and Isobutane	Zhejiang Chemical Research Institute	June 15, 2001	July 2002	**Completed.** The project completion report, summary report and the final standards report were submitted in April 2003. The acceptance meeting was held on July 10, 2003. The standers report was submitted to the Standardization Committee of the State Bureau of Quality Supervision, Quarantine and Inspection in January 2003 waiting for approval.
CFC-00-TA-02	Studies of Market Prospects for Closure Enterprises	SEPA	March 3, 2001	December 31, 2001	**Completed.** Six enterprises were supported to find production alternatives under this program.
CFC-00-TA-03	Training of Personnel Involved in Implementation of Phaseout Activities	SEPA	N/A	March 11, 2001	**Completed.** Training was organized for Audit staff, CFC producers and auditors.
CFC-00-TA-04	Performance Audit for 1999	China National Accounts Office	May 10, 2000	June 30, 2000	**Completed.**
CFC-00-TA-05	Verification of HCFC-22 Producers	Chinese Industrial Association of Organo-Fluorine Silicone Materials	June 4, 2002	September 20, 2002	**Completed.** This project was commenced in 2001 AP, The final report has been submitted to SEPA in March, 2003. In Nov. 2003, the consultant submitted the revised final report to SEPA.
CFC-00-TA-06	Recruitment of international technical consultants				**Cancelled.** No technical consultants were recruited internationally for TA activities in the year.

Table 3.3: Implementation of Technical Assistance Activities in the 2001 Annual Program

Ref. No.	Name of TA Project	Implementing Agency	Contract Date	Completion Date Planed	Implementation status/Remarks
CFC-01-TA-01	Feasibility study of industrialized technology for CTC conversion to chloro-hydrocarbons other than CTC				**Canceled:** The CFC team concluded after field visits and a workshop that the technology was still under development.
CFC-01-TA-02	Training of Personnel involved in Phaseout Impl. Activities	SEPA	N/A	March 19, 2002	**Completed.** Training was organized for Customs staff, CFC producers and auditors.
CFC-01-TA-03	Assessment and Risk Analysis of Implementing Montreal in china	Institute of Environmental Economics Renmin University of China	August 15, 2001	October 15, 2002	**Under implementation:** The report consists of 6 sub-reports and a general report. The final report is reviewing by SEPA.??
CFC-01-TA-04	Studies of Market Prospects for Closure Enterprises				**Canceled.** As two of the three enterprises being closed in the year had already been covered under the 2000 Annual program, the third enterprise reduced its production quota only and did therefore not require any support. None of the remaining plants were to close in 2002.
CFC-01-TA-05	Recruitment of international technical consultants				**Cancelled**. No technical consultants were recruited internationally for TA activities in the year.
CFC-01-TA-06	Significant New Alternative Processes (SNAP)				**Cancelled.** As it was found that more preparatory work was necessary, including identification of key experts, before taking it up. It will be brought up in a later annual program.

Table 3.4: Implementation of Technical Assistance Activities in the 2002 Annual Program

Ref. No.	Name of TA Project	Implementing Agency	Contract Date	Completion Date Planed	Implementation status/Remarks
CFC-02-TA-01	Training of Personnel involved in Phaseout Impl. Activities	SEPA	N/A	March 19, 2002	**Completed.** Training was organized for Customs staff, CFC producers and auditors.
CFC-02-TA-02	Performance Audit for 2001	China National Accounts Office	March 2002	June 30, 2002	**Completed.**
CFC-02-TA-03	Study Tour on Methods of Controlling Smuggling of ODS	SEPA			**Canceled.** (Transferred to the 2005 AP)
CFC-02-TA-04	Integration of ODS MIS into electric monitoring system at the border	SEPA	April 20,2004	May 31, 2005	**Ongoing.** Through biding procedure, the consultant has been selected in April 2004. It is under implementation now.
CFC-02-TA-05	Recruitment of international technical consultants				**Cancelled**. No technical consultants were recruited internationally for TA activities in the year.
CFC-02-TA-06	Site supervision for ODS Producing Enterprises	SEPA	Nov. 5, 2002	December 31, 2002	**Completed.** Submitted production data from Jan. to Dec. 2002 of enterprises. The communication meeting was held on Nov. 11 to 12, 2002.
CFC-02-TA-07	Investigation of CTC/TCA production status in China	SEPA	Sept.15, 2002	October 15, 2002	**Completed.** Submitted Report on CTC/TCA Production Survey.
CFC-02-TA-08	Study Tour of Performance Audit	The China National Accounting Office			**Completed.** The overseas training has been finished on July 24, 2003. The study report was submitted to SEPA at the end of October 2003.

Table 3.5: Implementation of Technical Assistance Activities in the 2003 Annual Program

Ref. No.	Name of TA Project	Implementing Agency	Contract Date	Completion Date Planed	Implementation status/Remarks
CFC-03-TA-01	Training of Personnel involved in Phaseout Implementation Activities	SEPA			**Completed**. The Enterprises Workshop has been held in Dec. 2003 and the Auditors Workshop in April 2004.
CFC-03-TA-02	Site supervision for ODS Producing Enterprises	SEPA	Oct. 24, 2003	Dec. 31, 2003	**Completed.** Supervisors **s**ubmitted CFCs production data of enterprises from Jan. to Dec. 2003. The workshop was held in Sep. 2003..
CFC-03-TA-03	Policy training managed by UNEP.	UNEP		Early in 2006	**Ongoing.** 10 workshops have been held in 2004, totally 864 people from local EPBs and customs attended the workshops. 9 workshops are planed in 2005.
CFC-03-TA-04	China Country Compliance Plan (CCCP)	SEPA			**Canceled.**
CFC-03-TA-05	Performance Audit for 2002	China National Audit Office	March 2003	June 30, 2003	**Completed.**

Table 3.6: Implementation of Technical Assistance Activities in the 2004 Annual Program

Ref. No.	Name of TA Project	Implementing Agency	Contract Date	Completion Date Planed	Implementation status/Remarks
CFC-04-TA-01	Training of Personnel involved in Phaseout Implementation Activities	SEPA		March 31, 2005	**Completed**. TOR was cleared by the Bank on June 19, 2004. One workshop was held in October 2004, and the other in April 2005.
CFC-04-TA-02	Site supervision for ODS Producing Enterprises	SEPA	August, 2004	Dec. 31, 2004	**Completed.** TOR was cleared by the Bank on June 19, 2004. Contracts have been signed in August 2004. Final supervision reports have been reported to SEPA by supervisors.
CFC-04-TA-03	Performance Audit for 2003	China National Accounts Office		June 30, 2004	**Completed.** The audit report has been submitted to World Bank in July 2004 reviewed and accepted by the Bank.
CFC-04-TA-04	2004 International Symposium of ODS substitute	SEPA		September, 2004	**Completed.** The symposium has held in Xi'an during the Ozone Day of 2004.

	technologies				

Table 3.7: Implementation of Technical Assistance Activities in the 2005 Annual Program

Ref. No.	Name of TA Project	Implementing Agency	Contract Date	Completion Date Planed	Implementation status/Remarks
CFC-05-TA-01	Training of Personnel involved in Phaseout Implementation Activities	SEPA		March 31, 2006	TOR is under preparation.
CFC-05-TA-02	Site supervision for ODS Producing Enterprises	SEPA	August, 2005	Dec. 31, 2005	**Ongoing.** Continuously implemented based on the successful experiences of previous year since Jan. 1, 2005
CFC-05-TA-03	Performance Audit for 2004	China National Accounts Office		June 30, 2005	**Completed**
CFC-05-TA-04	Verification of CFC-113a feedstock uses				**Canceled.**
CFC-05-TA-05	Study tour on methods of controlling smuggling of ODS		May, 2005		TOR is under preparation.
CFC-05-TA-06	The legislation study of China ODS phase-out management				**Ongoing.** The consultant firm was selected through bidding process and contract signed in May 2005
CFC-05-TA-07	The Development Strategy on ODS Substitutes (Phase II) in China				**Ongoing.** The consultant firm was selected through bidding process and contract signed in March 2005

Annex 4

Other Activities, 1999-2005

Other Activities	Name of the manufacturer	Project starting date	Implementation status	Planed completion date	Remarks
Establishment of HFC-134a Production facility	Xi'an Jinzhu Jindai Chemical Industry Co., Ltd.	January 2001	The first phase of the project was commissioned by SEPA on June 5, 2004. The second phase construction contract was signed with SEPA on May 16, 2005 and ongoing.	First phase: July 2003 Second phase: end of 2006	Ongoing
Screening of alternatives to Methyl Bromide in soil fumigation in China	Chinese Academy of Agricultural Sciences	April 2002	Commissioned in November 2003.	July 2003	Completed.
China Convention Compliance Center Activities (CCCC)					Under preparation.

Annex 5
Status of CFC producing plants under the CFC Sector Plan as of August 2005

SI	SRI	Name of enterprise	Status
8	A1	Henan Hebei Chemical Plant #1. 1 CFC-12 production line.	Closed and dismantled
15	A2	Shangdong Jinan 3F Chemical Co. Ltd. 1 CFC-11 production line and 1 CFC-12 production line	Closed and dismantled
1	A3	Shangdong Dongyue Chemical Co. Ltd. 1 CFC-12 line	Closed and dismantled
28	A4	Shandong Xuecheng Xinxing Chemical Plant 1 CFC-12 production line	Closed and dismantled
20	A5	Jiangsu Wuxian Juxing Chemical Plant 1 CFC-11 production line	Closed and dismantled
21	A6	Jiangsu Wuxian Union (City Link) Chemical Plant. 1 CFC-11 production line	Closed and dismantled
29	A7	Suzhou Xinye Chemical Co. Ltd. 2 CFC-11 production lines	Closed and dismantled
31	A8	Jiangsu Meilan Electric Chem. Plant 1 CFC-11 line and 1 CFC-12 line	**In production**
24	A9	Jiangsu Wuxi Hushan Refrigeration Plant 1 CFC-11 production line	Closed and dismantled
33	A10	Jiangsu Changshu Ref. Plant (Changshu 3F) 1 CFC-11 production line, 1 CFC-12 production line, 1 CFC-113 production line and 1 CFC-115 production line	**In production**
30	A11	Jiangsu Changsu Yudong Chem. Plant 2 CFC-113 production lines	Closed and dismantled
14	A12	Shanghai Shuguang Chem. Plant 2 CFC-113 production lines.	Closed and dismantled
26	A13	Guangdong Xiangsheng Chem. Co. Ltd. 1 CFC-12 production line	Closed and dismantled
7	A14	Guangdong Huiyang Chemical Plant 1 CFC-11 production line and 1 CFC-12 production line.	Closed and dismantled
11	A15	Guangdong Zhaoqing Chemical Plant. 1 CFC-12 production line.	Closed and dismantled
22	B1	Jiangxi De'an Refrigeration Plant 1 CFC-12 production line	Closed and dismantled
18	B2	Chongqing Tianyuan Chemical Plant. 1 CFC-11 production line, 1 CFC-12 production line	Closed and dismantled
25	B3	Sichuan Zigong Refrigerant Plant 1 CFC-11 production line, 1 CFC-12 production line	Closed and dismantled
5	B4	Sichuan Zigong Fujiang Chemical Plant 1 CFC-11 production line and 1 CFC-12 production line.	Closed and dismantled
19	B5	Hubei Wuhan Changjiang Chemical Plant 1 CFC-11 production line,1 CFC-12 production line	Closed and dismantled

SI	SRI	Name of enterprise	Status
23	B6	Shanghai Chlor-Alkali Chemical Plant Co. Ltd. 1 CFC-12 production line	Closed and dismantled
27	B7	Zhejiang Rui'an Haitian Chem. Co. Ltd. 1 CFC-11 production line	Closed and dismantled
34	B8	Zhejiang Linhai Limin Chem. Plant 1 CFC-13 production line	**In production**
		Zhejiang Linhai Limin Chem Plant 2 CFC-12 production lines	Closed and dismantled
6	B9	Zhejiang Linhai Jianxin Chemical Plant 1 CFC-12 production line.	Closed and dismantled
13	B10	Zhejiang Linhai Shuiyang Chemical Plant 1 CFC-12 production line.	Closed and dismantled
37	B11	Zhejiang Chemical Research Institute 1 production line to produce CFC-114 and CFC-115	**In production**
35	B12	Zhejiang Dongyang Chem. Plant 1 CFC-12 production line	**In production**
26	B13	Zhejiang Lanxi Refrigeration Plant 1 CFC-11 production line	Closed and dismantled
32	B14	Zhejiang Juhua Florochem. Com. Ltd. Produce CFC-11 and CFC-12 in 1 production line	**In production**
17	B15	Fujian Shaowu Flouro-Chemical Plant 1 CFC-11 production line and 1 CFC-12 production line	Closed and dismantled
4	C1	Jiansu Jianhu Phosphate Fertilizer Plant 1 CFC-12 production line.	Closed and dismantled
2	C2	Hunan Yiyang Chlor-Alkali Chemical Co. Ltd. 1 CFC 12 production line.	Closed and dismantled
9	C3	Hebei Longwei Fluorochemical Plant #1 2 CFC-12 production lines.	Closed and dismantled
10	C4	Guizhou Wuling Chemical Plant. 1 CFC-12 production line and 1 CFC-13 production line.	Closed and dismantled
3	C5	Inner Mongolia Baotou Chemical Plant #1. 1 CFC-12 production line.	Closed and dismantled
12	C6	Shanxi Shangzhou Chemical Plant 1 CFC-12 production line	Closed and dismantled
16	Not SRI	Liaohe Chemical Group Chlor-Alkali Plant. 1 CFC-12 production line.	Closed and dismantled.

2004-2005 PROGRESS REPORT

FOR THE ACCELERATION

OF PHASEOUT OF CFCs AND HALONs IN CHINA

Submitted by US EPA

Prepared by SEPA

In cooperation with the World Bank

September 2005

Table of Content

1. INTRODUCTION

1. At its 44th meeting in November 2004, the Executive Committee of the Multilateral Fund approved the United States and China bilateral project for accelerating the phase-out of CFC and halon production and consumption. The "Agreement for the CFCS/CTC/HALON Accelerated Phase-out Plan in China (APP)" (UNEP/OzL.Pro/ExCom/44/73, Decision 44/59, Annex XVII) provide the detailed agreement and revised phaseout schedule to be achieved with the additional funding of USD 10 million from United States. The World Bank has been appointed by China and US as the international implementing agency.

2. While the APP is a six years program from 2004 to 2009, the main phase-out impact will be in 2006 for halon 1301 and 2007 for CFCs. Accordingly the funding is front loaded. The first tranche of US$ 5 million was released for the 2004 and 2005 activities. The second tranche of US$ 5 million is requested for implementation of the APP in 2006 ~2007 and continued monitoring in 2008 and 2009.

3. The Progress Report provides (1) an overview on the implementation progress of APP in 2004 and 2005; (2) 2006 annual program of APP; (3) ODS production and consumption for 2004, and (4) an implementation summary of all sector plans involved. The ODS production and consumption is from the verification results conducted by cooperating implementing agencies who implement sector plans and includes the verified import and export data on CFCs. Detailed implementation status of previous annual programs and planned activities in 2006 are provided in the 2006 annual programs for each individual sector plan.

4. Within the APP, China agreed to the control targets listed in Table 1 below for (1) total CFC production and consumption, (2) CFC-11 consumption limit in the PU foam sector, (3) net CFC exports, (4) total CTC production, (5) CTC as CFC feedstock, (6) Halon 1301 production, and (7) Halon 1301 consumption and export. In addition, the Table 2 lists all the sector plans involved with verification obligations in the APP.

Table 1: ODS Phase-out Targets within the APP Agreement (ODP tons)

	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
1. Max allowable CFCs production	25300	18750	13500	7400	550	550	0
2.Max allowable CFCs total consumption	25300	18750	13500	7400	550	550	0
3.Max allowable CFC-11 consumption limit in PU Foam	10500	9000	7000	400	0		

Sector							
4. Max allowable net CFC exports	NL*	NL*	400	200	100	50	0
5. Max allowable sum of production and imports of CTC	54857	38686	32044	22724	12768	13415	12217
6. Max allowable CTC as CFC feedstock	39306	28446	21276	11396	847	847	0
7.Max allowable halon 1301 production	2000	2000	1000	1000	1000	1000	0
8. Max allowable halon 1301 consumption and export	1500	1500	1000	1000	1000	1000	0
9. Max. allowable net halon 1301 export	NL*	NL*	200	200	100	100	0

*Not Limited

Table 2: Ongoing Sector Plans with Verification Obligations

Sector Plans in China	Implementing Agency
1. CFC Production Sector Plan	World Bank
2. Halon Sector Plan	World Bank
3. Foam Sector Plan (CFC-11)	World Bank
4. CTC and PA Sector Plan (Phase I)	World Bank
5. TCA Production Sector Plan	World Bank
6. Tobacco Sector Plan (CFC-11)	UNIDO
7. Refrigeration Servicing Sector Plan(CFC)	UNIDO
8. Solvent Sector Plan (CFC-11)	UNDP
9. CTC and PA Sector Plan(Phase II) (under preparation)	World Bank
10. Pharmaceutical Aerosol Sector Plan (under preparation)	World Bank
11. MDI Sector Plan(under preparation)	UNIDO

2. OVERVIEW ON THE IMPLEMENTATION PROGRESS OF THE APP IN 2004 AND 2005

CFC PRODUCTION SECTOR

5. In accordance with the APP agreement, CFC production will be reduced to 550 tons by July 1, 2007 and five of the remaining six CFC production facilities will be closed down. The additional ODP phase out impact of the APP is 11,700 ODP tons (see table 3 below). Only one producer will remain in production, with a production limit of 550 ODP tons for MDI use only.

Table 3: CFC Production Phase-out Targets (ODP tons)

	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**Total**
Montreal Protocol Reduction Schedule(Production)	47004	23502	23502	7050.6	7050.6	7050.6	0	
Max allowable CFCs production in original agreement	25300	18750	13500	9600	7400	3200	0	
Max allowable CFCs production in APP agreement	25300	18750	13500	7400	550	550	0	
Additional phase-out by the APP				2200	6850	2650	0	11700

6. By 2004, only six of the original 36 CFC producers remain in production. Of the six producers, one produces only CFC-114 and CFC-115 and another only produces CFC-13. The remaining four produces mainly CFC-11, CFC-12, CFC-113 and CFC-115. The CFC production in 2004 was 25,285 ODP tons and the allowed production in 2005 is limited to 18,750 ODP tons, which, based on reported production in the first 6 month of 2005 and the quota system in place, most likely will be met. For further details, please see the 2005 Annual Plan for the CFC Production Sector Plan.

PU FOAM SECTOR

Because of the APP, the implementation of the PU foam sector has to be accelerated with an additional aggregate consumption reduction of 9,052 ODP tons (CFC-11) compared to the original CFC-11 consumption in the agreement for the PU foam sector (see table 4 below).

Table 4: CFC-11 Consumption Target in PU foam sector (ODP tons)

	2004	2005	2006	2007	2008	2009	2010	Total
Max allowable CFC-11 consumption limit in PU foam sector in original agreement	11666	9646	7164	3821	3553	102	0	
Max allowable CFC-11 consumption limit in PU foam sector in APP	10500	9000	7000	400	0	0	0	
Additional phase-out in APP	1166	646	164	3421	3553	102	0	9052

7. The CFC production quota system and the import quota system are the main tools for control the consumption of CFC-11 in PU foam sector. Considering CFC-11 will be consumed not only in PU foam Sector, but also in Aerosol, Refrigeration, Tobacco sectors, SEPA will adjust the quota of the current year according to the actual situation before the end of year. The total production quotas of CFC-11 issued to the producers at the beginning of 2004 was 12,200 ODP tons. The actual consumption of CFC-11 in PU foam sector in 2004 was 8,418 ODP tons which was below the control limit of 10,500 tons required by the APP agreement. The production quotas of 8,300 ODP tons of CFC-11 has been issued in 2005. The net import of CFC-11 will be controlled through the import/export license system to a maximum of 600 ODP tons. Therefore, the actual consumption of CFC-11 in PU foam sector in 2005 is expected to be within the limits of 9,000 ODP tons as required by the APP agreement.

8. Under the PU Foam Sector Plan, contracts have been signed with a total of 14 group companies covering a total of about 150 smaller PU foam companies with CFC-11 phaseout contracts capturing a total 8,340 ODP tons. Five of the 14 contracts were signed with group companies in 2004 and three of the 14 have been signed so far in 2005. The other six contracts were signed in 2002 and 2003. The independent verification carried by the Bank confirmed that the 2004 obligation in the agreement have been met. For more detail, please see the 2006 Annual Program for the PU Foam Sector.

HALON 1301 PRODUCTION AND CONSUMPTION

9. The APP will reduce the halon1301 production with an additional 10,000 ODP tons halon1301 and consumption by 4,000 ODP tons compared to original agreed phase out schedule (see table 5 below). In addition, the allowed halon 1301 export will be

limited to 200 ODP tons of halon 1301.

Table 5: Halon 1301 production Phase-out target (ODP tons)

	2004	2005	2006	2007	2008	2009	2010	Total
Montreal Protocol Reduction Schedule	40993	20497	20497	20497	20497	20497	0	
Max allowable halon 1301 production in original agreement	6000	6000	1500	1500	1500	1500	0	
Max allowable halon 1301 production in APP	2000	2000	1000	1000	1000	1000	0	
Additional phase-out tons in APP	4000	4000	500	500	500	500	0	10000

10. The quota system continued to be the main tool for the implementing the halon phase-out and is supported fully by the Ministry of Public Security. The quotas issued in 2004 and 2005 are 1,500 ODP tons each year, which is below the control target of 2,000 ODP tons required by the APP agreement. The quotas are issued to the only halon 1301 producer in China. The halon 1301 production and consumption for 2004 have been below what is allowed under the agreement for the Halon Sector Plan for both production and consumption. It should be noted that the export of halon 1301 remains very low and mainly from stock built up during the past years.

11. The 2004 halon production and consumption has been independently verified by the Bank and confirmed that the 2004 target has been met. For more details, see the Halon 2006 Annual Program.

CTC PRODUCTION

12. The impact of the APP on the allowed CTC production as feedstock for CFC production will result in an additional 18,725 ODP tons reduction of allowed CTC production (see Table 6 below). As the CTC is used as feedstock for CFC production, it will not have any direct ODP impact, however, as CTC is unavoidably co-produced with chloroform, it has a significant cost impact to either reconverted back to a non-ODS chemical or incinerate it. Based on the WB verification, the 2004 target has been met. For further details, see the CTC/PA (I) 2006 annual program.

Table 6: CTC Production Phase-out Target (ODP tones)

	2004	2005	2006	2007	2008	2009	2010	Total
Montreal Protocol Reduction Schedule(Production)		4405	4405	4405	4405	4405	0	
Max allowable sum of production and imports of CTC in original agreement	54857	38686	32044	26457	23583	17592		
Max allowable sum of production and imports of CTC in APP agreement	54857	38686	32044	22724	12768	13415		
Additional phase-out in APP	0	0	0	3733	10815	4177		18725
Max allowable CTC as CFC feedstock in APP agreement	39306	28446	21276	11396	847	847	0	

NEW INITIATIVE UNDER THE APP

13. **Acceleration of CFCs and Halon Phaseout in a Number of Provinces and Cities.** SEPA initiated accelerating phase-out activities of CFCs and Halon in cities in 2005. Shenzhen, a city of China famous with its higher economic level, raised a proposal to phase out CFCs and Halon before June 30, 2006 in Shenzhen, one year earlier than the APP schedule. By promoting to Shenzhen's proposal, a number of provinces and cities decided to participate in this accelerating phase-out action. By September 2005, the provinces and the cities who are voluntary to earlier phase out CFCs and Halon include two municipalities-Beijing and Tianjin; three provinces-Jilin, Shandong, and Haina; and eight cities-Wuhan, Xi'an, Shenzhen, Suzhou, Taizhou, Nantong, Changzhou and Langfang.

14. SEPA co-organized with the implementing agencies propagandized the accelerating phase-out action taken by the local government of China in the Ozone Day Celebration Ceremony held in Shenzhen in September 16-17, 2005. The main theme of 2005 International Ozone Day celebration activities was "Accelerating Phase-out of ODS". Representatives of the local governments who will phase-out CFC and halon before June 30, 2006 announced their action declaration in the ceremony and advocated other local governments to join in this acceleration activities. An international workshop on establishing Ozone Layer Friendly City had been conduced during the celebration. The participants of the Ozone Day Celebration of China are from Ozone Secretariat, Multilateral Fund Secretariat, members of Ex.Com, parties of MP, UNEP, UNDP, UNIDO, World Bank, the members of China' country leader team of Ozone Layer

protection, local governments, related associations, experts and about twenty medias.

15. The actions adopted by the local governments will include:

a. to promulgate the bans on ODS production, trade, and consumption (with the exception of servicing and essential use);

b. to establish the execution and supervision system, to severely punish activities of illegal ODS production, illegal ODS trade, and illegal ODS consumption;

c. to actively encourage the supervision of stake holders and set up hot lines for reporting;

d. to prohibit the use of ODS products and products containing ODS in the construction project;

e. to deny products containing ODS and products produced with ODS in government procurement;

f. to establish a system of registration for the in-use ODS equipments and their servicing at workshops with the quantification and CFC recycle equipments; and

g. to consider providing favorable policies to ODS substitute production enterprises within the jurisdiction.

16. SEPA would like to take this action to demonstrate the overall implementation of the APP in the country by 2007. Some unallocated balance of Solvent Sector Plan implemented by UNDP will be used for supporting the accelerating phase-out activities in above provinces and the cities.

POLICY FRAMEWORK

17. **Policies Issued before 2003.** The provisions regarding the ODS phaseout was added into the Air Pollution Prevention and Control Law when it was modified in 2000, which is the basis for the ODS regulatory system in China. China has issued a number of national and sector policies for ODS phaseout based on the ODS phaseout progress during the past ten years. The key policies issued before 2003 include:

a. Circular on the ban of new facilities producing or consuming ODSs;
b. Circular on the CFC, CTC, TCA, Halon and MeBr production quota license system;
c. Management measures on import and export of ODSs;
d. Circular on the CFCs, CTC, TCA consumption quota license system in the Solvent, Tobacco, CTC consumption Sectors;
e. Circular on the CTC sale registration system; and

f. Bans. China has issued bans on ODS production, import & export, and consumption in different sectors with the progress of phase-out projects. The bans issued before 2004 were as follows:

i. Circular on the ban of CFCs in Aerosol sector excepting pharmaceutical consumptions (issued in June 5, 1997 and effective in December 31, 1997);

ii. Circular on the ban of CFC-12 automobile air conditioners in newly-produced Cars in China's automobile industry (issued in November 26, 1999 and effective in January 1,2002)

iii. Public notice on the ban of the use of CTC as solvent.(issued in Mar, 2003 and effective in June 1,2003)

18. New Policies Issued in 2004 and 2005.

a. **Bans.** Two bans were issued by SEPA in 2004 and 2005.

i. Public notice on the ban of the use of CFC-113 as solvent .(issued in December, 2004 and effective in January 1, 2006);

ii. Public notice on the ban of the production and selling of compressors and related products using CFCs as the refrigerant in the industrial and commercial refrigeration sector(issued in December 8,2004 and effective in July 1,2005);

b. **New national regulation**. A new national regulation on ODS phase-out aimed at upgrading the force effect of the existing ODS policies and to strengthen the penalty provisions for the illegal activities is under development. A penalty system will be set up, which constitutes a significant penalty, e.g. confiscation of any sales value in any illegal ODS production activity and a penalty several times of its sales value. The new regulation is expected to be issued by the State Council in 2006 or 2007.

c. **Economic policies**. China National Development and Reform Commission (NDRC) issued an industrial catalog approved by the State Council, which groups industries into three categories: encouraged industry, restricted industry, and phase-out industry. The ODS production technology and the technology using ODS in the production will be listed into the restricted catalog and phase-out catalog with the phase-out progress of ODS. The substitute production of ODS will be listed into the encouraged catalog. The government enforces different policies to the industries in these three categories.

i. <u>Encouraged industry</u>: It includes the industries that are accordant with

the sustainable development policy of China, friendly to the environment and resource. The government supplies favorable policies to the encouraged industry, such as reducing tax, providing loans. The technology conversing CTC to non-ODS substance was listed into the encouraged group in 2005.

ii. Restricted industry: It includes the industries using behindhand technology, damaging environment, wasting resource and energy. There are some limited policies to this type of industries. Commercial banks are not allowed to provide loans to them. Local EPB will not approve the environmental impact assessment reports of the new project belong to this type. Commercial and industrial department, quality control department of local government will not commission such projects. The electric price will be charged higher than the normal industry. For restricting the expansion of CMs industry, the CMs production facilities with capacity less than 80,000 tons per year was added into the restricted catalog. To the projects with capacity over 80,000 tons per year, the enterprises have to establish the disposal facility according to the circular of SEPA on it.

iii. Phase-out industry: It includes the industries harming people's health and polluting environment seriously. Exports and sales of the products using the phase-out technical are forbidden. The production should be closed on schedule and the equipments were forbidden to move to other regions. The electric price will be charged higher than the normal industry.

19. **Capacity Building and Policy Enforcement.** A number of actions was initiated in 2004 and will continue the implementation until 2009 under the APP to improve the capacity of the government for implementing the polices of ODS phase-out and compliance of the Montreal Protocol. The actions include:

a. **Establishment of China Convention Compliance Center (CCCC).** As China approaches the second major obligation milestone under the Montreal Protocol in 2005, it is foreseen that the drastic required reductions in production and consumption of ODS will require rigorous compliance and enforcement measures, especially to prevent illegal activity in this regard. China therefore proposes to establish the China Convention Compliance Center (CCCC) in 2003. The CCCC will be the central management unit for the ODS program when it is established, and will be responsible for all management and enforcement activities under the Program. The CCCC will be located in a new building that will be procured for the purpose. In addition to the APP, the CCCC project is also supported by other bilateral contribution.

b. **ODS Policy Training for the Local Government.** SEPA has been organizing

ODS policy training workshops for local officials especially for local EPBs and Customs every year to improve their capacities. From the beginning of 2005 to August, five training workshops to local EPB with total 790 local officers including directors and inspectors have been conducted. Another five workshops will be organized by the end of 2005 including two for directors of local EPB, two for inspectors of local EPB especially focusing on executive practice on site, and one for the staffs of National Ozone Unit. The training contents include the scientific knowledge of Ozone layer, Vienna Convention and Montreal Protocol, ODS phase-out strategy and management organization of China, ODS phase-out policies, phase-out schedule of each sector, substitute technology and substitutions of ODS, characteristic of illegal activities, procedure of deal with the illegal activities and so on. The new phase-out schedule required in APP agreement had been added into the training course.

c. **Prevention and Control of Illegal ODS Activities.** Measures have been taken for control of ODS illegal activities and will be continued. These measures include the following:

   i. Establishment of quick response system to illegal behaviors. SEPA has publicized a hot line for reporting the illegal activities and appointed responsible persons in each provinces.

   ii. Strengthening supervision to ODS producers. The Environmental Supervision Bereau (ESB) of SEPA has added ODS producers into the list of national serious polluting enterprises that will be inspected as the key object. Local ESB supervises and inspects the ODS producers regularly and randomly. In May of 2005, after getting prosecution that an illegal CTC production line was being built in Sichuan provinces, SEPA sent out the inspectors and destroyed the production line in time.

   iii. For preventing the illegal trade of CFCs, the ODS import & export management office of China is making efforts to strengthen the exchange of information with other parties before they issue the license of export. For example, the import and export office will check the importer's eligibility provided by the import countries when they receive the export request from the exporters. In additional, the smuggling department of China Custom is strengthening the supervision to the illegal trade of ODS.

d. **Site Supervision of CFCs/CTC Production.** The site supervision mechanism was established in 2002. It has been proved to be effective during the last three

years. This activity will be lasted to 2010. And the supervision will be strengthened so as to implementing APP for CFCs and CTC production.

3. WORK PROGRAM OF THE APP IN 2006

20. **Accelerated Reduction of Halon 1301 Production.** The quota system continued to be the main tool for the implementing the Halon phase-out in 2006 and is supported fully by the Ministry of Public Security. The production quotas issued at the beginning of 2006 will not exceed 1,000 ODP according to the requirement of APP agreement.

21. **Accelerated Reduction of CFC Consumption in PU foam sector.** The consumption of CFC-11 in PU foam sector in 2006 will be controlled below the limit of 7,000 ODP tons required in the APP agreement by controlling the production and import quotas. All the remaining conversion contracts in PU foam sector will be signed in 2006. China and the World Bank are considering to simply the implementation method of the last batch projects.

22. **Control of the Import and Export of CFCs and Halon.** In accordance with the agreement of APP, the net export of CFCs and Halon 1301 in 2006 will be controlled below 400 ODP tons and 200 ODP tons by import and export quotas license.

23. **Storage of CFCs.** About 1,000 ODP tons CFCs will be stockpiled in 2006 to cover future demand in the servicing sector after the CFC production closure in 2007 as per the APP agreement.

24. **Preparation of the Close Contracts with the Producers of CFCs.** All the contracts closing the production of CFCs before July 1, 2007 with the producers will be prepared in 2006 and signed before the end of the 2006.

25. **Establishment of the Conversion Facilities of CTC.** In order to deal with excessive and unavoidable CTC production and the huge reduction of CTC uses of CTC as feedstock for CFC in 2007, all CMs enterprises might be required to establish conversion facilities for disposal of CTC co-production before July 1, 2007.

26. **Accelerated Phase-out Action Taken by the Local Government.** The accelerated phase-out activities in some provinces and cities initiated in 2005 will continue. The policy on ODS accelerated phase-out will be formulated and enforced by the local governments. Training to the officers from different departments of local government related to the policy enforcement will be carried out. The market will be

monitored to prevent the products from using CFC and Halon by the commercial and industrial bureau of local government. The public awareness will be improved by the propaganda activities. For assistance, SEPA will send the experts and staffs of PMO to help the local government in the formulation of policies, work plans and training, as well as organizing workshops for experience and information exchange between regions. After June 30, 2006, SEPA will carry out the assessment of the activities conducted by the local governments. The outstanding governments will be awarded on the Ozone Day Celebration in 2006. The successful experience will be promoted to the national scope.

27. **Policy Issuance.** A number of bans will be issued in 2006, which includes:

a. The ban on the consumption of CFCs in the production of new domestic refrigerators (effective in January 1,2007);

b. The ban on the consumption of CFC-11 in Tobacco Sector (effective in January 1,2007);

c. The ban on the production of CFCs except the MDIs (effective in July 1,2007); and

d. The ban on the consumption of CFCs in Foam Sector (effective in January 1,2008).

28. **Continuation of the Development the National ODS Regulation.** The draft of the national regulation will be discussed and revised through several workshops with related departments, authorities of legal system and hearing witnesses meeting. SEPA will request the State Council to issue the regulation if the draft is accepted by all sides.

29. **Policy Enforcement and Capacity Building.** SEPA will continue to strengthen the policy enforcement by improving the capacity of central and local government.

a. China Convention Compliance Center (CCCC). The detailed design of the CCCC building will be completed in early 2007; then the developer will begin the construction of the building.

b. ODS policy training for the local government. Training to the officers of local government will be continued. Except for the training carried out in the demonstration provinces and cities, about 10 workshops will be conducted by SEPA under the assistance of UNEP. The training course will be updated by adding new policies. The deadline of production and consumption of ODS in different sectors will be emphasized in the training. The on-line training system will launch at the website by the end of 2005 and will be used for the training

from 2006.

c. Capacity building for local governments. Part of the APP funds will be used for strengthening the capacity of ODS phaseout for the local governments. The highest priority will be given to the province, which has the producer of CTC, CFC and Halon. This will help them in enforcing ODS policies, carrying out the training to related officers of the local government, supervising the production within the quotas; supervising the producers to dismantle the facilities according to the schedule of APP; and monitoring the market to identify the illegal behavior.

30. **Public Awareness**. SEPA will improve the public awareness by website, periodical of Ozone Action, and all kinds of media. Local governments are encouraged to carry out public awareness activities. SEPA will continue to organize the Ozone Day Celebration in 2006 to promote the progress of ODS phase-out activities.

4. ODS PRODUCTION AND CONSUMPTION BY THE END OF 2004

31. The annual production of CFCs/CTC/Halon/TCA, annual consumption of CTC/CFC-113 as the 25 PA applications, and import & export of CFCs in 2004 was verified by the Bank. It concludes that CFCs/CTC/Halon/TCA production and consumption in China for the previous years and 2004 were controlled within the limits set forth in the individual Agreements for each sector and the newly approved APP Agreement. The Table 7 to 10 below provides an overall summary. The sources of information are also provided in the verification reports that are submitted separately for each sector plan.

Table 7: CFC Production/Consumption and Import & Export Overview (ODP)

Year	Agreed Max Allowable CFCs production	Agreed Max Allowable CFCs Consumption	Verified CFCs Production	Verified CFCs Import	Verified CFCs Export	Actual CFCs Consumption [1]
1999	44,931		44,793	3,892	5,652	
2000	40,000		39,991	2,596	3,449	
2001	36,200		36,196	1,534	3,785	
2002	32,900		32,896	1,798.11	3,649.26	
2003	30,000		29,986	686.48	7,850.96	
2004	25,300	25,300	25,284.80	732.33	8,096.92	17,920.21
2005	18,750	18,750	N/A			
2006	13,500	13,500				

2007	7400	7400				
2008	550	550				
2009	550	550				
2010	0 [2]	0				

Note:

1. Using the definition of the Montreal Protocol on production and consumption, the actual consumption = production + imports – exports;
2. Except for essential uses as agreed by the Parties;
3. Import & export data from 1999 to 2003 were not verified.

Table 8: CTC Production/Consumption Overview (ODP)

Year	Max allowable sum of production and imports of CTC		Max allowable CTC consumption in PA Sector (25 applications)		Max allowable CFC-113 consumption in the PA Sector (25 applications)		Max allowable CTC as CFC feedstock	
	Allowed	Verified	Allowed	Verified	Allowed	Verified	Allowed	Verified
Baseline [1]	86,280	N/A	3,825	N/A	17.2	N/A	N/A	
2001 [2]	64,152	N/A	4,347	N/A	17.2	N/A	55,319	
2002 [2]	64,152	N/A	5,049	N/A	17.2	N/A	45,400	
2003	61,514	59,860 [3]	5,049	3,507 [4]	17.2	17.2 [4]	45,333	39,839.31
2004	54,857	50,195 [5]	5,049	3,886	14	10.8	39,306	34,167.89
2005	38,686		493		14		28,446	
2006	32,044		493		10.8		21,276	
2007	22,724		493		8.4		11,396	
2008	12,768		493		0		847 [7]	
2009	13,415		493		0		847 [7]	
2010	12,217 [6]		220		0		0 [8]	

Notes:

1. For consumption, average of 1998-2000; for CTC Production, 2000 data.
2. The sector plan was approved in November 2002 and the first control year is 2003.
3. Total CTC production in 2003 was 56,230.87 MT, of which 1,813.08 MT was used for non-ODS feedstock applications. Therefore, the verified 2003 CTC production was 54417.79 MT (59,859.57 ODP tons).
4. This is the purchased amount in 2003. The actual consumption is 3,080 ODP tons for CTC and 17.1 ODP tons for CFC-113.
5. Total CTC production in 2004 was 51,096.98 MT, of which 5,465.47 MT was used for non-ODS feedstock applications. Therefore, the verified 2004 CTC production was 45,631.51 MT (50,194.67 ODP tons).
6. 12,217 equals 11,997 (Row 2) plus 220 (Row 4) in the original agreement for CTC/PA phaseout (Phase I).
7. Estimated CTC production (770MT) used as CFC production (550MT CFCs) to meet MDI consumption. In case of import of MDI quality CFC, the national production of CFC and CTC will reduce accordingly to ensure that the national consumption for CFC and CTC stay within the agreed consumption levels.
8. Not including CTC as CFC feedstock for CFC production for essential use.

Table 9: Halon Production/Consumption Overview (ODS)

Year	Halon 1211				Halon 1301			
	Production		Consumption		Production		Consumption	
	Allowed	Verified	Allowed	Verified	Allowed	Verified	Allowed	Verified
1997 Baseline year)	9,950	11,644	NA	10,849	618	618	NA	NA
1998	7,960	7,842	7,160	7218	618	450	300	-152 [1]
1999	5,970	5,965	5,370	5280	618	484	300	304
2000	3,980	3,978	3,580	3650 [2]	618	428	300	377 [2/]
2001	3,317	3,117	3,117	2,832	618	213	300	180
2002	2,654	2,469	2,654	2,284	600	0	150	-36
2003	1,990	1,884	1,890	1,692	600	0	150	-26
2004	1,990	1,068	1,890	895	600	21.987	150	-26.013
2005	1,990		1,890		200		150	
2006	0	0	0		100		100	
2007	0	0	0		100		100	
2008	0	0	0		100		100	
2009	0	0	0		100		100	
2010	0	0	0		0			

Notes:

1. The negative consumption of Halon 1301 in 1998 (–152 MT) reflects the export of 602 MT, which included part of the stock (328MT) from the previous year's production. Therefore, the total consumption in 1998 (Consumption=Production +Import - Export) is negative.
2. Remedial action for the excess consumption in 2000 was taken by appropriately reducing consumption quota in 2001.

Table 10: TCA Production Overview (ODP)

Year	2004	2005	2006	2007	2008	2009	2010-2014
Max allowable total production of TCA	113	79	79	79	79	79	0
Verified TCA production	105.6						

5. IMPLEMENTATION SUMMARY OF ONGOING SECTORS

CFCs PRODUCTION SECTOR

32. In accordance with the Executive Committee's approval of "The Sector Plan for CFC Production Phase-out"(UNEP/Ozl.Pro/ExCom/27/45/Corr.2), at the 27th meeting of the Ex.Com in March 1999, China's production has been reduced from 44,793 ODP tons in 1999 to 25,284.8 ODP tons in 2004 and will not exceed 18,750 ODP tons in 2005. The number of the CFC producers has been reduced from 37 to six (6). The verification report confirming the 2005 performance target will be submitted to the first meeting in 2006.

33. An overview on the status of implementation of the 2005 annual program includes: a) the production quotas of 2005 will be issued by two batches. The first batch of 75% was issued in April 2005. The second batch will be issued in the latter half of the year matching with the import and export of CFCs, so as to ensure that the total CFCs consumption of 18,750 ODP tons; b) quota reduction contracts were signed with all producers based on a prorated reductions of the quota for each of the CFC producers; c) the CFC-113 production lines will be destroyed by the end of this year; and d) the contrasts for TA activities have been signed and initiated. Two additional TA activities were added.

CFCs CONSUMPTION SECTORS

34. CFC consumption in China has also been reduced from 51,056 ODP tons in 1999 to 17,772.293 ODP tons in 2004 through implementing the seven sector plans, including Foam, Domestic Refrigeration, Industry and Commercial Refrigeration, MAC, Solvent, Tobacco sectors, and Refrigeration Servicing Sectors. The refrigeration servicing sector plan was approved by the Ex.Com at its 45th meeting in November 2004. The CFC phase-out plan in the MAC sector had been completed in 2002. In addition, the CFC phase-out plans in the Pharmaceutical Aerosol Sector and the MDI sector are under preparation.

PU Foam Sector

35. In accordance with the Executive Committee's approval of "Agreement for CFC Phase-out in the Polyurethane Foam Sector in China" (UNEP/Ozl.Pro/ExCom/35/19/Annex VIII), at the 35th Meeting of the Ex.Com in

December 2001, and the Agreement of CFCs/CTC/Halon APP (UNEP/Ozl.Pro/ExCom/44/73/Annex XVII), at the 44th Meeting of the Excom in December 2004, China's CFC consumption in the polyurethane foam sector has been reduced from 14,143 ODP tons in 2002 to 8,418 ODP tons in 2004 and will not exceed 9000 tons in 2005. The World Bank will also submit the verification report confirming the 2005 performance target to this meeting separately.

36. The 2006 annual program covering details on status of the previous years activities and the planned activities in 2006 has been submitted for this meeting for approval. The main activities of the 2006 program will include a) implementation of the conversion projects signed in 2005, b) continued promulgation and execution of the existing policies on ODS phaseout, and c) five TA activities. The TA activities cover the following items i) training of personnel in implementation of phase-out activities; ii) PU foam products standard formulation and revision (Phase IV); iii) the 2005 performance audit; iv) public awareness of the outcomes of TA projects conducted in the previous year; and v) consultant services.

37. An overview on the status of implementation of the 2005 annual program include a) the total of 6 phase-out contracts will be signed in 2005 to meet the phaseout target of 2500 ODP tons (three of the 6 contracts have been signed with CFC-11 phase-out amount of 1,016.8 ODP tons); and b) five TA activities have been planned (of which one is completed, one is ongoing, the other three are under the consultant selection procedure).

38. Based on Decision 41/42, the Bank has reviewed the options to put in place a system that could constitute a reasonable verification of the targets set in the agreement for the CFC-11 phase-out in the PU foam sector in China. The table 11 below provides an overall summary. The national CFC-11 consumption was verified through verified CFC-11 production, import and export, and the CFC-11 consumption in the foam sector through verified CFC-11 consumption in the solvent and tobacco sectors, and not-verified CFC-11 consumption in servicing sector and aerosol sector. Detailed data resources are provided in the submitted 2006 annual program of the foam sector with verification results of CFCs import and export.

Table 11: Actual CFC-11 Consumption at the National and the PU Foam Sector level (ODP tons)

	National CFC-11 consumption limits		CFC-11 consumption in the PU foam sector*		Annual CFC Phase-out target in the PU foam sector	
	Agreement	Actual	Agreement	Actual	Agreement	Actual

2002	17,200	17,187	14,143	14,100	2,000	2,354
2003	15,500	13,994	13,830	11,423	2,500	2,677
2004	13,100	10,364	11,666	8,418	2,500	2,288
2005	10,400		9,000		2,500	2,500 [1]
2006	7,700		7,000		600	832 [1]
2007	4,130		400		551	
2008	3,800		0		0	
2009	300				0	
2010	0				0	

Note:

The actual phaseout targets will be updated based on the actual contracts to be signed in 2005 and 2006.

Solvent Sector

39. In accordance with the Executive Committee's approval of "Agreement for CFC Phase-out in China's solvent sector"(UNEP/Ozl.Pro/ExCom/30,Annex III), at the 30th Meeting of the Ex.Com in March 2000, China's consumption of CFC-113, TCA and CTC used as solvents have been reduced to 960, 370 and 0 ODP tons respectively in 2004. The verification report confirming the performance target was submitted to this ExCom meeting by UNDP.

40. **CTC consumption**. In accordance with the Agreement, the consumption of CTC used as solvent should be reduced from 110 ODP tons in 2000 to zero in 2004. By implementing the annual programs for five years since 2000, CTC phaseout contracts with total 26.828 MT (29.5 ODP tons) were signed and completed. The rest CTC consumption as solvent were phased out by the enterprise's own cost. The Ban for CTC import was issued in 2000 jointly by SEPA, The General Custom and the Ministry of Commerce. The ban for CTC as solvent production and consumption was issued by SEPA on June of 2003 and was effective on January 1, 2004.

41. **CFC-113 consumption**. According to the Agreement, the consumption of CFC-113 as solvent agent should be zero in 2006. By the end of 2005, a total of 3,796 MT (3037 ODP tons) CFC-113 will have been phased out by the phase-out contracts, voucher system and the reimbursement system. The ban for CFC-113 import and export as solvent was issued jointly by SEPA, the General Custom and the Ministry of Commerce in January 2001 and effective on Feb 1, 2002. The ban for CFC-113 production and consumption was issued by SEPA in December 2004 and will become effective on January 1, 2006. As indicated in the part of CFC production sector, the only left CFC-113 production line in China will be dismantled by the end of 2005.

42. **TCA consumption.** As of June 2005, a total of 1519.3 MT (151.93 ODP tons) TCA have been phased out by the phase-out contracts, voucher system and reimbursement system.

43. The 2006 annual program covering details on status of the previous year's activities and the planned activities in 2006 has been submitted for this meeting for approval. The main activities of 2006 annual program would focus on phaseout of TCA. Most of the remaining enterprises are SMEs. The phase-out activities will be carried out mostly through voucher system.

44. An overview on phaseout targets signed for the three ODSs under the previous annual program is summarized in Table 12:

Table 12: The Phaseout target signed under the previous annual programs (MT)

	2000	**2001**	**2002**	**2003**	**2004**	**2005**	**Total**
CFC-113	473.169	676.978	669.776	522.0988	922.1975	531.91	3796.1293
TCA	101.6	105.973	431.895	191.285	539.68	148.77	1519.203
CTC	7.6		16.308		2.92		26.828

45. **Verification of CFC-113, TCA and CTC consumption**. The CFC-113, TCA and CTC consumption in enterprise level was verified by an independent account office each year. The data of country level is verified by the production sector since almost CFC-113 and all TCA are used for solvent sector only.

Table 13: Verified Consumption of CFC-113, TCA and CTC in the Solvent Sector (ODP)

	2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
Max Allowable CFC-113 consumption	3300	2700	2200	1700	1100	550	0				
Verified Consumption of CFC-113	3245.6	2674.4	2115.6	1659.6	1088						
Max Allowable consumption of TCA	621	613	605	580	502	424	339	254	169	85	0
Verified Consumption of TCA	571.3	399.1	380.68	336.83	370						
Max Allowable consumption of CTC	110	110	110	55	0						
Verified consumption of	90.9	90.9	0	4.57	0						

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
CTC											

Tobacco Sector

46. The ExCom approved a total of US $11 million for the implementation of the tobacco sector plan for CFC-11 phase out in China at its 30 meeting in March 2000. By this approval, China commits that the consumption of CFC-11 in the tobacco industry will be completely phased out by January 1, 2007. The consumption of CFC-11 in this sector had been reduced from 1,000 ODP tons in 2001 to 463 ODP tons in 2004 by the implementation of five annual programs. The annual program of 2006 will be submitted to the first meeting of 2006 of the Ex.Com by UNIDO.

47. The consumption quotas of CFC-11 are issued to the enterprises in the tobacco sector each year by SEPA and the State Tobacco Monopoly Administration to ensure that the CFC-11 consumption limits in this sector is not exceeded. The enterprises listed in the concerned annual program dismantled their tobacco expansion equipments under the supervision of the provincial Tobacco Administration, the local Environmental Protection Bureau, as well as people from the local notary office. As of July 2005, 52 of the total 73 sets of expansion equipments in China have been dismantled, and 8 more sets will be destroyed by the end of 2005. Under the 206 annual program, CFC-11 consumption will be limited to the maximum 150 ODP tons, and all the remaining 13 sets of expansion equipments will be dismantled by the end of 2006. The ban for CFC-11 consumption in the Tobacco sector will be issued in 2006 and become effective on January 1, 2007.

48. The Table 14 shows the consumption targets and verified CFC-11 consumption in previous years in the tobacco sector.

Table 14: The Control Targets and Verified Consumption of CFC-11 in Tobacco Sector

	2001	2002	2003	2004	2005	2006	2007
Consumption limit of CFC-11	1000	880	700	500	300	150	0
Verified consumption of CFC-11	1000	711	620	463			

Refrigeration Servicing Sector

49. In accordance with the Executive Committee's approval of "the agreement for

phase-out CFCs in the refrigeration servicing sector", at the 44th meeting of the Ex.Com in December 2004, the total CFC consumption in the refrigeration-servicing sector will be reduced gradually from 5,083 ODP tonnes in 2004 to 1,181 ODP tonnes in 2010. Service tail requirement will be covered from stockpile. The max allowable total national consumption of CFC-12 was also set as the performance indicator of this sector plan in the agreement. The max allowable total National consumption of CFC-12 and total consumption of CFCs in Refrigeration Sector is 5713 and 4572 ODP tons in 2005.

50. At the beginning of 2005, SEPA issued the first batch of CFC-12 production quota (75%), and will issued the second batch in the latter half of 2005 depending on the amount of net exports of CFC-12. This is to limit CFC-12 consumption within the control targets set up in the Agreement.

51. The 2006 annual program has been submitted for this meeting for approval. The main activities in the 2006 annual programs will include a) development of a new policy for storage, management and sale of CFC-12 recovered from retired vehicles; b) procurement of servicing equipment; c) training activities on the servicing enterprises and automobile dismantle enterprise; d) launching on-line training course regarding to the servicing policies and technology on the website; and e) four TA activities. These TA activities will cover the following items: (1) distribution of the practice codes; (2) selection of regional training centers; (3) collection and report of CFC-12 recovery data; and (4) public awareness activities. Besides, the relative policies on encouraging the enterprises in the Industrial and Commercial Refrigeration Sector and the Chiller Sector to replace or reclaim the CFC-based refrigeration equipment are under development and will be tried out in several provinces in the second half of 2005.

52. An overview of the implementation of the 2005 annual programs included a) the development of relevant policies such as the vehicle dismantling specifications and management measures for vehicle disposal; b) the survey on the vehicle disposal stations; c) selection of the MIS maintenance station; d) public awareness activities; e) preparation of the training materials and the practice codes of recycle procedure; and f) recycle equipment procurement.

53. The national production, import and export data of CFC-12 has been verified by the Bank. The verified national consumption of CFC-12 is calculated by the MP definition (see table 15 below).

Table 15: Verified Consumption of CFCs in the Servicing Sector (ODP)

	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**

Max allowable total national consumption of CFC-12	6934	5713	5637	5805	406	406	0
Verified national Consumption of CFC-12	6246						
Max allowable consumption of CFCs in the refrigeration servicing sector (ODP tons)	5083	4572	3790	2997	2317	1786	1181
Actual consumption of CFCs in refrigeration servicing sector (not verified)	5079						

CTC AND PROCESS AGENT SECTOR PLAN (PHASE I)

54. In accordance with the "Agreement with the People's Republic of China to Phase-out CTC and Process Agents (Phase I)" (UNEP/Ozl.Pro/ExCom/38/70, Annex XIII) at the 38th Executive Committee Meeting in November 2002, China's CTC production has been reduced to 50,194 ODP tons in 2004 and will be limit to the maximum of 38,686 ODP tons in 2005. The verification reports on CTC production submitted to the 47th meeting of the Ex.Com by the World Bank confirmed that the performance target of 2004 have been met.

55. **CTC Production.** The limit target for CTC Production Sector, set up in the Agreement for Phase-out CTC and Process Agents (Phase I), was modified in the Agreement of the CFC/CTC/Halon APP due to the accelerated phaseout of CFC production, and will be modified further in the Agreement for CTC and Process Agents (Phase II) Sector Plan. The sector plan (phase II) has been submitted to this meeting for approval by the World Bank.

56. There are 13 CTC producers identified in 2001 as the baseline for the sector plan (phase I) and one identified during the implementation of the Sector Plan. Three of them with idling equipment dismantled their CTC production lines in 2004. Two dedicated CTC producers dismantled their production lines in 2004 and 2005 respectively, and the other two will destroy their equipment by the end of 2006. There are two distillers of CTC, whose production will be reduced with the reduction of CTC residue supply. The remaining five are methylene chloride and chloroform (MC/CF) producers with CTC as by-products. They will reduce their CTC production gradually by adjusting the by-products output rate and improving the technology.

57. **CTC Consumption.**

a. **CTC as feedstock for CFC production**. CTC is mainly produced as feedstock for CFC production in China. Therefore, with CFC production phase-out, CTC production as CFC feedstock is being decreased year by year. The Agreement of the APP set up the target of max allowable CTC as CFC feedstock due to the acceleration phase-out of CFCs. Since 2003, SEPA has issued the CTC consumption quotas to CFC producers. CTC used as CFC feedstock was reduced from 65,000 MT in 1997 to 31,061 MT in 2004 and will not exceed 28,446 ODP tons in 2005. CTC used as CFC feedstock in 2004 was verified by the experts of the World Bank and China National Audit Office (see data in Table 8).

b. **CTC as process agent (25 applications).** Since Ex.Com approved the Process Agent Sector Plan (Phase I) (UNEP/Ozl.Pro/ExCom/38/70, Annex XIII) at its 38th Executive Committee Meeting in November 2002, CTC consumption for the 25 process agent applications has been reduced to ODP tons in 2004 and will not exceed 493 ODP tons in 2005. The verification reports on CTC production and Process Agent Sector Plan submitted to the 47th meeting of the Ex.Com by the World Bank confirmed that the performance target of Process Agent of 2004 has been met (see data in Table 8).

c. There are total 25 enterprises using CTC as Process Agent (25 applications) in China in 2002. By implementing the annual programs of the CTC and Process Agent Sector Plan, only 11 enterprises still consumes CTC by June 2005, and others have dismantled their equipment or transferred to use other chemicals as process agent. A total of 443 ODP tons CTC consumption quotas will be issued to the 11 enterprises in 2005 to ensure the max allowable target of 493 ODP tons in 2005 to be met.

d. **CTC as new process agent.** The CTC and Process Agent Sector Plan (Phase II) has been submitted to this meeting for approval. The new process agent defined in the decision of 15th MOP would be phased out by 2010 according to this sector plan.

e. **CTC as feedstock for non-ODS.** CTC used as feedstock for non-ODS will not be phased out. SEPA has issued the consumption quotas to these enterprises. The CTC purchased by these enterprises are not allowed to resell or to be used as other usage.

58. The 2006 annual program of CTC and Process Agent Sector Plan (phase I) has been submitted to this meeting for approval. The activities for CTC production reduction under the 2006 annual program will include a) reduction of CTC production by 6,642

ODP tons to a maximum of 32,044 ODP tons, b) CTC and CFC-113 consumption in PA sector (25 applications) will not exceed 493 ODP tons and 10.8 ODP tons respectively, c) revision of policies on CTC sales management and consumption, and new policy on CFC-113 consumed as process agent. Four TA activities cover the following items (1) training of personnel involved in implementation of phaseout activities, (2) daily site supervision to CTC production, (3) performance audit on CTC production and CTC/CFC-113 consumption in PA sector, (4) verification on non-ODS feedstock applications of CTC and CTC dealers.

59. An overview over the status of implementation of the 2005 Annual Program is as follows: a) quotas limiting the total production to 37,207 ODP tons were issued in the beginning of the year and 3 quota reduction contracts were signed with 3 dedicated CTC producers, b) total of 12 ODP tons of CFC-113 procurement quotas were issued to 3 PTFE producers and one conversion contract will be signed with one enterprise, c) 443 MT of CTC procurement quotas will be issued to 4 enterprises and 1 conversion contract and 2 consumption reduction contracts will be signed with 3 plants, and d) the 3 planned TA activities has been initiated and contracts signed. One additional TA activity was added and initiated.

HALON PRODUCTION AND CONSUMPTION

60. Since the Executive Committee approved “The Sector Plan for Halon Phase-out in China” (UNEP/Ozl.Pro/ExCom/23/68), at the 23rd Meeting of the Ex.Com in November 1997, Halon production and consumption has been phased out successfully according to the agreement between China and the Ex.Com.

61. The number of the Halon producers has been reduced from 14 to 3 in 2005 and the total Halon production from 45,196 ODP tonnes in 1997 to 5,652 ODP tonnes in 2004. The production and consumption of halon 1211 will not exceed 5970 and 5,670 ODP tons respectively in 2005. The production and consumption of Halon 1301 had been reduced to 219.87 and 0 ODP tons in 2004, and will not exceed 2000 and 1500 ODP tons respectively in 2005 according to the agreement of APP.

62. The quotas limiting the total production of Halon 1211 and 1301 to the maximum target of this year were issued to the producers in the beginning of 2005. By June 2005, three contracts for expansion of production of CO2 extinguisher were signed. The production and consumption of Halon 1211 will be reduced to zero and the production line will be dismantled by the end of 2005.The conversion of 5~10 Halon 1301 manufacturers will be carried out in 2006. For further details on status of previous

years' activities and the planned activities for 2006 are provide in the 2006 Annual Program for Halon Sector Plan submitted to this meeting. The verified Halon production and consumption data are provided in Section 4.

TCA PRODUCTION SECTOR

63. In accordance with the Executive Committee's approval of "The Sector Plan for Phase-out TCA Production in China", (UNEP/Ozl.Pro/ExCom/43/61), at the 43rd Meeting of the Ex.Com in July, 2004, China's TCA production should be reduced to a maximum of 790 MT in 2005 and kept at the same level from 2005 to 2009. The First-stage Implementation Program covering all the activities from 2004 to 2008 was also approved at the same meeting of Ex.Com. The verification report confirming the performance target will be submitted to the first meeting in 2006.

64. Quota limiting the total production to 780 ODP tons was issued to the three TCA producers in the beginning of 2005. Two of the three TCA producers have signed the closure contracts with SEPA in December 2004 and completed the dismantling with the supervision of SEPA and local EPBs by the end of 2004. The remaining one producer has signed the TCA production reduction contract with SEPA.

65. The main activities in 2006 will include a) control of TCA production at a maximum of 79 ODP tons and b) enforcement of the policies and monitoring mechanisms.