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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Forty-second Meeting
Montreal, 29 March - 2 April 2004

PROJECT PROPOSAL: THAILAND

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

Phase-out

- National CFC phase-out plan: 2004 annual work programme World Bank

PROJECT DESCRIPTION

Background

1. At its 35th Meeting, the Executive Committee approved the Thailand CFC national phase-out plan and agreed, in principle, a total funding of US \$14,728,626 to be disbursed between 2001-2009 for eliminating the remaining consumption of 3,066 ODP tonnes of Annex A, Group I CFCs, 34 ODP tonnes of 1,1,1 TCA and 7.52 ODP tonnes of carbon tetrachloride. Since its approval, the 2001,2002 and 2003 tranches have been released to the World Bank, with a total disbursement of US \$9,746,226. Consistent with the Agreement, the 2004 annual work programme requests the release of US \$1,315,400 plus the associated support cost of US \$118,386. The submission consists of a preliminary report on the implementation of the 2003 work programme, and the proposed 2004 work programme. As per the Agreement, the 2004 disbursement is “conditional on satisfactory verification by the World Bank that Thailand had, at a minimum, met its consumption target for 2002”. Accordingly the World Bank submitted in advance a certified auditor’s verification report on the CFC imports in Thailand for the year 2002 to the 41st Meeting together with the 2003 annual work programme.

2. The table below sums up the key data of the national phase-out plan and the 2004 annual work programme. The 2004 annual work programme is attached and summarized in the following paragraphs.

Country	Thailand
Project title:	Thailand ODS Phase-Out Project National CFC Phase-Out Plan (NCFCP)
Year of plan	2004
# of years completed	2
# of years remaining under the plan	6
Ceiling for 2003 ODS Consumption (in ODP tons), 2003 Annual Plan	2,777 ODP tonnes of Annex A, Group I Chemicals (CFCs) 34 ODP tonnes of TCA 7.52 ODP tonnes of CTC Total: 2,818.52 ODP tonnes
Ceiling for 2004 ODS Consumption (in ODP tons), 2004 Annual Plan	2,291 ODP tonnes of Annex A, Group I Chemicals (CFCs) 34 ODP tonnes of TCA 7.52 ODP tonnes of CTC Total: 2,332.52 ODP tonnes
Total funding approved in principle for the CFC phase-out plan	\$14,728,626
Total funding released as of Dec. 2003	\$9,746,226
Level of funding requested for 2004 Annual Plan	\$1,315,400

Preliminary report on the 2003 annual work programme

3. The verification of CFC imports for 2002 showed that the actual consumption of ODS in Thailand was as follows: 2,177.33 ODP tonnes of CFCs, 2.96 ODP tonnes of 1,1,1 TCA and zero CTC. These are all below the 2002 targets set in the Agreement: 3,066 ODP tonnes for CFC, 34 ODP tonnes for 1,1,1 TCA and 7.52 ODP tonnes for CTC respectively. The preliminary results on the 2003 work programme again show lower consumption than the targets: 1,857.01 ODP tonnes of CFC, 2.39 ODP tonnes of 1,1,1-TCA, and zero for CTC against the targets of 2,777 ODP tonnes of CFC, 34 ODP tonnes of 1,1,1-TCA, and 7.52 ODP tonnes of CTC. The World Bank plans to conduct a verification of these results during 2004 for submission early in 2005.

4. These results were achieved partly by the tight controls instituted by the Government on imports of CFCs and an excise tax levied on CFCs. At the same time the Government was aware of the risk of increased illegal imports and stepped up its efforts to control the smuggling of CFC into the country. As a result the CFC-11 price in the country is higher than HCFC-141b and the price of CFC-12 has almost doubled in the past two years. This has reportedly assisted in reducing 800 ODP tonnes of CFC-11 and 500 ODP tonnes of CFC-12 from the 2001 level in the foam and servicing sectors. Due to the higher prices of CFCs, many industries which were identified as still using CFCs and other ODS in the national phase-out plan had already converted to substitutes of their own accord. Within 2002-03, a total of 64.53 ODP tonnes of CFC-113, 6.3 ODP tonnes of 1,1,1-TCA and 0.82 ODP tonnes of CTC have also been phased out.

5. The 2003 work programme has achieved the major milestones that were set. The Government has issued import quotas for all chemicals controlled by the Agreement for the period of 2002-2010, the project management unit (PMU) designed the criteria and procedure for financial support to the remaining ODS industry conversion projects, and the Government announced the policy to include MAC inspection as part of the existing annual vehicle inspection requirement starting from 2005.

6. The programme implemented a number of technical assistance activities, including the full functioning of the PMU; an effective public campaign to publicize the national phase-out plan, the policy of the government to ban the use of CFCs, CTC and 1,1,1-TCA in the manufacturing industries in 2005; preparation of the train-the-trainer programme for custom officers and MAC technicians. One of the challenges which was brought to the attention of the Government was the discovery of increased volumes of CFC refrigerant contaminated with hydrocarbon and HCFC-22, which would become an important component for technical assistance in 2004. The terms of reference for the consultancy to develop the MDI transitional strategy was finalized and work was expected to begin in January 2004.

7. By the end of 2003, of the total US \$9,746,226 received from the Multilateral Fund, US \$198,449 was disbursed and a further US \$2,515,920 committed. The World Bank expects to disburse the rest of the funds in 2004.

The 2004 work programme

8. The 2004 annual work programme proposes consumption reductions faster than those set in the Agreement:

	Agreement	2004 Work Programme
CFCs	2,291 ODP tonnes	1,706.01 ODP tonnes
1,1,1-TCA	34 ODP tonnes	2.39 ODP tonnes
CTC	7.52 ODP tonnes	0 tonne

The reduction from the actual 2003 consumption (which is lower than the target in the Agreement) is 151 ODP tonnes, broken down into 74 ODP tonnes from the manufacturing sector and 77 ODP tonnes from the servicing sector. Some of the major milestones in 2004 include the announcement of the ban on use of CFCs, 1,1,1-TCA, CTC in the manufacturing sector in 2005 and for that the Government will review the Factory Act and the Hazardous Substances Act as a possible way of enforcing the ban. The Government will work out the operating arrangement for including the MAC inspection in the annual vehicle inspection in 2005.

9. The public awareness programme will promote the certification of MAC Service Technician programme and the identification of refrigerants by using banners on certified shops, stickers on vehicles with information on refrigerant types, names of service stations, and date of last service. Work which was started in 2003 on the training of trainers for customs, MAC inspection, installation of ventilations in garment industry which have switched from 1,1,1-TCA to 1,1,2 trichloroethylene will continue in 2004. The transitional strategy for MDI is expected to be completed in 2004. All the activities which will be implemented in the year are also presented in a tabular form.

10. The World Bank has a planned cumulative expenditure target of about US \$8.6 million in 2004 out of a total of US \$11 million received from the Multilateral Fund.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

11. The preliminary report on the 2003 work programme contains fairly detailed information on the results in 2003, and the 2004 work programme contains clear targets to be achieved and the actions to be undertaken by the government and industry to reach those targets. The submission was prepared in accordance with the Guidelines for the preparation, implementation and management of performance-based sector and national ODS phase-out plans (UNEP/OzL.Pro/ExCom/38/57) approved at the 38th Meeting.

12. What is particularly note-worthy is the facilitating policy instituted by the Government of Thailand of levying an excise tax on CFCs as a result of which the prices of CFCs are now higher than the substitutes, thus providing an economic incentive for phasing out CFCs. That enabled Thailand to exceed the phase-out targets in the Agreements for both 2002 and 2003 although the results of 2003 have yet to be verified. The Government of Thailand and the World

Bank should be commended for the achievement in the implementation of the national phase-out plan for the past two years.

13. The 2004 work programme has again set very ambitious targets which are significantly tighter than those in the Agreement. The actions to be implemented both by the Government and industry are well planned, and some were already well under way in 2003 such as work under the MAC inspection system and the announcement of the ban on CFCs in the manufacturing sector in 2005.

14. It is hoped that fund disbursement will speed up in the year of 2004.

RECOMMENDATIONS

The Secretariat recommends that the Executive Committee approve the 2004 work programme of the Thailand CFC national phase-out plan at the requested funding level of US \$1,315,400 and the associated support cost of US \$118,386 for the World Bank.

THAILAND NATIONAL CFC PHASE-OUT
PLAN

2004 ANNUAL IMPLEMENTATION PLAN

PROJECT MANAGEMENT UNIT
DEPARTMENT OF INDUSTRIAL WORKS
(DIW)
MINISTRY OF INDUSTRY
THAILAND

WITH ASSISTANCE FROM
THE WORLD BANK

20 January 2004

**Thailand National CFC Phase-out Plan
2004 Annual Implementation Plan
Submitted to the 42nd Executive Committee Meeting
March 29 – April 3, 2004**

DATA SHEET

COUNTRY:	THAILAND
PROJECT TITLE:	National CFC Phase-out Plan
YEAR OF PLAN:	2004
NO. OF YEARS COMPLETED:	2 (2002 and 2003)
NO. OF YEARS REMAINING UNDER THE PLAN:	6 (2004 – 2009)
TARGET ODS CONSUMPTION IN 2003:	2,777 ODP tons of Annex A, Group I; 34 ODP tons of 1,1,1 – TCA; 7.52 ODP tons of CTC.
TARGET ODS CONSUMPTION IN 2004:	2,291 ODP tons of Annex A, Group I; 34 ODP tons of 1,1,1-TCA; 7.52 ODP tons of CTC.
TOTAL FUNDING APPROVED IN PRINCIPLE FOR THE CFC PHASEOUT PLAN	US\$14,728,626
TOTAL FUNDING RELEASED AS OF DEC.2003	US\$9,746,226
LEVEL OF FUNDING REQUESTED FOR 2004 ANNUAL PLAN;	US\$1,315,400
NATIONAL IMPLEMENTING AGENCY:	Department of Industrial Works Project Management Unit
LEAD IMPLEMENTING AGENCY:	The World Bank
CO-IMPLEMENTING AGENCY:	None

PROJECT SUMMARY

The National CFC Phaseout Plan will phase out the remaining consumption of 3,568 ODP tons of Annex A, Group I chemicals during the period of 2001-2010. To achieve this target, a series of investment, non-investment, technical assistance, and capacity building activities will be carried out. The National CFC Phaseout Plan will enable the Thai Government to ban the use of CFC in the manufacturing sector by 2005 and the use of CFC in the servicing sector by 2010. In addition, the proposed National CFC Phaseout Plan will also phase out 34 ODP tons of 1,1,1-TCA and 7.52 ODP tons of CTC by 2010.

IMPACT OF PROJECT ON COUNTRY'S MONTREAL PROTOCOL OBLIGATIONS The project will enable the Government of Thailand to meet all its Montreal Protocol obligations.

Part I

2003 Annual Program Accomplishments

A. Targets Met

As per the Agreement between Thailand and the Executive Committee, the annual consumption targets for 2003 include the maximum allowable CFC consumption of 2,777 ODP tons, 34 ODP tons of 1,1,1-TCA, and 7.52 ODP tons of CTC. This target represents a reduction of 289 ODP tons of CFCs from the previous year target while there was no reduction requirement for other chemicals. The actual consumption of CFCs in 2002 was 2,177 ODP tons. This level consumption has been edited and verified by an independent auditor. The auditor report was submitted for the Executive Committee's consideration at its 41st Meeting.

A significant reduction of CFC consumption achieved in 2002 was partly attributable to the proactive policies of the Government. These included DIW's policy to reduce import quotas for 2002 faster than what was originally planned in the National CFC Phase-out Plan. In addition, the Ministry of Finance, based on DIW's recommendation, started imposing an excise tax on CFCs. These policy measures had direct effects on the prices of CFC-11 and CFC-12 in the market. These two policy measures led to a large number of enterprises to convert their production processes to non-CFC alternatives and to reduce consumption of CFC-12 in the service sector.

In 2003, the actual consumption of CFCs was 1,857.01 ODP tons, 2.39 ODP tons of 1,1,1-TCA, and zero for CTC. This preliminary report indicates that Thailand has again surpassed its reduction target for CFCs in 2003. Industrial interviews in the foam sector in particular confirmed that because of the excise tax policy initiated in 2002, the price of CFC-11 has become higher than HCFC-141b. A large number of foam enterprises have already converted to non-CFC alternatives. In addition, the report from service shops participating in the ongoing MAC recovery and recycling project also confirmed that the price of CFC-12 has almost doubled during the past two years. Significant reduction of CFC consumption in these two sectors contributed about 800 ODP tons of CFC-11 reduction and 500 ODP tons of CFC-12 reduction from the respective levels in 2001.

Regarding CFC smuggling, it was reported that the Customs Department has stepped up its effort on imports of refrigerants. In 2003, there were two cases of illegal smuggle of CFC-12 into Thailand. The total amount of CFC-12 involved in these two incidents was only 10 ODP tons. However, based on the report from service shops it has become increasingly often to find CFC-12 contaminated with other chemicals mainly HCFC-22 and hydrocarbon in the market during the last two years. The widespread hydrocarbon contamination raised concerns of the Thai Government. Therefore, DIW proposes to introduce some modifications to its train-the-trainer programs for the MAC sector in order to enable service shops to identify sub-standard refrigerants in the market. Detailed plans are described in Section C Train-the-Trainer Program and Certification of MAC Service Technicians.

The import quotas for 2002 to 2010 were formalized and distributed to all importers. The criteria for investment projects to be financed by the National CFC Phase-out Plan were also

completed and distributed to CFC consuming enterprises in 2003. These activities are the two key project milestones for 2003.

Verification of the 2003 consumption data will be carried out by an independent auditor as part of the 2004 Annual Program. The 2003 verification report will be submitted to the Executive Committee, along with the 2005 Annual Program in 2005.

B. Industry Action

PMU has already informed the public of the availability of the funds provided by the Multilateral Fund to support CFC phase-out in both manufacturing and service sectors. Advertisements on major newspapers, radio programs, and pamphlets informing the public of the National CFC Phase-out Plan have already been carried out. In addition, PMU has already developed a simplified project proposal template and funding criteria in accordance with those proposed in the National CFC Phase-out Plan project document.

In addition to the above activities, PMU has already implemented its outreach strategy for enterprises in the manufacturing sector. For sectors with a small number of enterprises (i.e., the aerosol and solvent sectors), PMU contacted each individual enterprise and arranged site visits to verify its consumption. PMU has already attempted to contact all enterprises in the aerosol and solvent manufacturing sectors. Most enterprises in these sectors have already phased out their consumption during 2001 to 2003 due to the higher costs of CFCs.

According to the verification carried out by PMU, it has been confirmed that the three enterprises identified in the National CFC Phase-out Plan project document have already stopped using CFCs. The two companies that produce personal care products have recently replaced CFC with hydrocarbon. PMU has identified consultant to assist these two companies to prepare proposals for retroactive financing from DIW. Due attention will be given to assess the safety measures and identify eligible component if there is a need to improve their safety equipment in order to meet the national safety standard. Project proposals of these two enterprises are expected to be submitted to PMU during the first quarter of 2004.

Another company whose CFC aerosol products include hi-temperature gold and aluminum automotive paint, automotive undercoat, penetrating oil, and crazy string, was not able to identify alternatives for CFC. An international consultant was hired by PMU to assist the enterprise to identify proper alternatives. With this assistance, the enterprise was able to prepare and submit a project proposal to PMU and the proposal is being appraised. Given that the enterprise has already stopped its production of these products in 2003, retroactive financing will be provided.

Therefore, a total of 17 ODP tons of CFC consumed in the aerosol sector has been phased out.

There are only a few enterprises in the solvent sector that still consume CFC-113, 1,1,1-TCA, or CTC. There were six CFC-113 consuming companies identified by the National CFC Phase-out Plan. A similar verification procedure has been carried out for this sector. It was found that all of them have already phased out CFC-113 as DIW did not provide any import quota for CFC-113 in 2002 and 2003. Two enterprises plan to submit their proposals for

retroactive financing to PMU in early 2004. Therefore, a total of 64.53 ODP tons of CFC-113 has already been phased out.

For 1,1,1-TCA, it was verified that two of the three enterprises identified in the National CFC Phase-out Plan had already phased out their consumption. PMU is assisting these enterprises preparing project proposals for retroactive financing from DIW. Therefore, a total of 6.9 ODP tons of 1,1,1-TCA consumed by these enterprises have already been phased out. In 2003, there remains only one enterprise consuming 1,1,1-TCA for cleaning its generator motors and ODP consumption in 2003 was about 1.3 ODP tons. The company is in the process of identifying alternatives and a proposal will be submitted to PMU in CY2004.

The total import of CTC in 2002 and 2003 was zero. PMU has verified that one company in the pharmaceutical industry has already completed its conversion. PMU is assisting the enterprise preparing a project proposal for retroactive financing from DIW. Therefore, a total CTC consumption of 0.82 ODP tons has already been phased out permanently.

The remaining two companies are still using CTC for testing quality of their products, activated carbon. The testing procedures employed by these two enterprises are based on an international standard. At present, there are no non-CTC alternative testing standards that could cover the whole range of their products. Demand of CTC of these two companies during the last two years was met by their remaining stocks in 2000 and 2001. About 3.58 ODP tons were used in 2003 and proposals will be submitted to PMU in CY2004.

PMU has established and implemented an outreach strategy to reach out a large number of enterprises in the foam sector. A foam working group representing by all polyol suppliers and DIW was set up. Advertisements and other public awareness programs have been launched as well. Foam enterprises that are interested in seeking funding from DIW can contact PMU directly or through their polyol suppliers. In addition, PMU and the foam working group have contacted all foam enterprises identified by the National CFC Phase-out Plan. Of more than 107 enterprises contacted thus far, a total number of 57 enterprises (some are listed in the National CFC Phase-out Plan and some are newly identified) have already expressed their interest for assistance from DIW. More than 50 small foam enterprises identified by the National CFC Phase-out Plan have already phased out their consumption due to the stringent import quota of CFC-11 and the high excise tax imposed on this chemical. These enterprises confirmed PMU directly and through polyol suppliers that they were not interested in any financial assistance from DIW.

At present, PMU and the polyol suppliers are assisting the 57 enterprises preparing project proposals for financial assistance from DIW. The total consumption of CFC of these enterprises in 2003 was 335 ODP tons.

C. Technical Assistance

Project Implementation and Monitoring Unit (PMU)

PMU has been fully staffed since September 1, 2003. PMU staff includes a PMU chief, two senior technical specialists, one information specialist, one financial management specialist, and one senior administration. PMU is a separate unit within the Department of Industrial Works. The PMU chief reports directly to the Director-General. PMU has full responsibility

in carrying out the implementation of the National CFC Phaseout Plan. Implementation of this Plan is being carried out in coordination with the National Ozone Unit (NOU).

In 2003, PMU carried out activities under 3 components: (i) public awareness; (ii) investment activities; and (iii) policy related activities. For the public awareness component, PMU with close cooperation with the automobile industry, MAC manufacturers in particular, organized presentation and hand-on demonstration on good practices in repairing MAC systems. The objective of this activity was to introduce the National CFC Phase-out Plan to the MAC service industry. This exhibition along with brochures introducing the technician certification program and financial assistance for service tool kits, has led a large number of service shops to submit their registration for future participation with PMU. In addition, PMU also participated and organized a booth in "Thailand Expo Exhibition" in November 2003. The objective of this participation is to disseminate information of the National CFCs Phaseout Plan and the Montreal Protocol to attendance from various industries. A poster of the Montreal Protocol was presented including brochures introducing the National CFCs Phaseout Plan and the government policy to out the use of CFCs, 1,1,1-TCA and CTC in manufacturing sector from 2005 were distributed to these participants. A series of official announcements informing the public of the phase-out dates of CFC consumption and related articles were prepared and disseminated through printed media and through radio. These include an introduction of the Government's plan to introduce a mandatory MAC inspection in 2005, and radio interviews on the National CFC Phaseout Plan and the Montreal Protocol obligations. The targeted audience is mainly end-users in the MAC and refrigeration sectors. In addition, a website for the National CFC Phase-out Plan was developed.

With regard to investment related activities, PMU provided technical assistance to foam, aerosol and solvent enterprises to prepare project proposals to seek financial assistance from DIW. PMU also assisted enterprises that need information on specific alternative technologies to identify national and international experts who can provide technology transfer that is needed for successful conversion. Costs of national and international experts were paid for from the PMU budget.

On the policy related activities, PMU played a vital role in drafting and facilitating the signing and negotiation of Memorandum of Agreement between DIW and the Land Transport Department (LTD). This MOA is the basis for the cooperation between DIW and the Land Transport Department regarding the proposed mandatory MAC inspection component. In addition, PMU on behalf of DIW worked closely with the Ministry of Finance to prepare a proposal for the Cabinet approval to grant import duty exemption for imported equipment (for example, refrigerant identifiers) to be provided to government agencies in charge of certain activities included in the National CFC Phaseout Plan. The proposal was submitted to the Cabinet in December 2003.

MDI

Terms of reference for the consultant to develop CFC MDI transition strategy was finalized in November 2003. The Thai Food and Drug Administration (FDA) of the Ministry of Public Health will participate in the development of this strategy. Drug Control Department of FDA has been appointed to supervise the preparation of this strategy.

The Allergy and Immunology Society of Thailand was selected as a body to undertake this assignment. A consultant contract was signed by DIW on December 26, 2003. The consultant will commence on January 5, 2004. The duration of this activity is 14 months.

Textile and Garment Industry

Due to the change in the top management of the Thailand Textile Industry (THTI), the beneficiary of the 1,1,1-TCA phase-out component under the National CFC Phase-out Plan, confirmation to undertake this activity was made available to DIW only in September 2003. The target group of this activity is all textile and garment factories that have already replaced 1,1,1-TCA to 1,1,2-TCE for spot cleaning. It was confirmed that all textile and garment factories had already phased out the use of 1,1,1-TCA. However, many of them are not familiar with proper procedures for handling 1,1,2-TCE. There are about 1,100 factories to be covered by this activity. The initial project proposal from THTI, which focuses mainly on the technical assistance component, was reviewed by PMU and THTI's new management and it was agreed that the project approach, particularly coordination between technical assistance and investment components, be combined. THTI will submit the revised proposal to PMU within the first quarter of 2004.

Mandatory Requirement for MAC Inspection

A Memorandum of Agreement between the Land Transport Department (LTD) and DIW was signed on December 29, 2003. This Memorandum of Agreement established a framework for cooperation between the two agencies regarding the implementation of the mandatory MAC inspection program and development of a legal framework to support sustainable phase-out of CFC in the MAC sector. LTD and PMU on behalf of DIW have developed and finalized the action plans for implementation of this project component in November 2003. It was proposed that the program will start off with a small demonstration phase whereby ten refrigerant identifiers will be procured and distributed to only inspection stations owned by LTD. Experience gained from this demonstration phase will be used for development of a MAC refrigerant inspection manual and training courses for other inspection technicians.

Specification of this instrument has been finalized. Since the Cabinet just approved the import duty exemption for refrigerant identifiers and other equipment for government agencies participating in the National CFC Phase-out Plan in January 2004, procurement of the first ten refrigerant identifiers is underway. It is expected that these refrigerant identifiers will be delivered in the first quarter of 2004. Other activities including development of an inspection manual, procurement of about additional 670 refrigerant identifiers and training of inspection technicians will be carried out in 2004 (see technical assistance component of Part II for activities milestone).

For the legal framework to support the mandatory MAC inspection program, LTD has already started its review process of the Transportation Act and the Vehicle Act to determine the right legal instrument to include refrigerant inspection of all vehicles (passenger cars, trucks, and etc.) that have MAC systems, as part of the current annual vehicle inspection requirement. It is expected that this activity will be completed in 2004.

Train-the-Trainer Program and Certification of MAC Service Technicians

The Department of Skill Development (DSD) is committed to be the training centers for MAC service technicians and 31 training centers have been identified. Based on recommendations of PMU, DSD has established a technical working group represented by experts from DIW, DSD, MAC manufacturers, and UNEP Regional Network Coordinator, in September 2003. The responsibility of this working group is to develop a training course for the train-the-trainer program. The training course and manual were developed and completed in December 2003. The two train-the-trainer workshops that would cover trainers of 31 DSD training centers and institutes, are scheduled for the first quarter of 2004.

To address the issue related to contamination of CFC-12 in MAC servicing shops, the working group has decided to also provide refrigerant identifiers to the DSD's training centers. Given that some of the DSD's training centers have R&R machine, procurement of less than 60 units of R&R machines is expected and saving will be used for funding of the refrigerant identifiers. Actual number of equipment will be reported in CY2005 work plan.

About 2,000 brochures with information targeting at service shops were distributed. This activity was carried out as part of the public awareness activities of PMU. Specification for each equipment item to be provided to service shops after their technicians have been certified has been finalized in 2003. PMU is in the process of selecting qualified suppliers to participate in this program. Selection of qualified suppliers will be completed by the first quarter of 2004.

In addition, PMU has already started a selection process for a consultant to coordinate the procurement and delivery of equipment mentioned above. The consultant will be responsible for coordinating implementation of a voucher system, which will be used as a means for distributing equipment from suppliers to service shops. The selection process will be completed by the first quarter of 2004.

Customs Training

PMU and the Customs Department have jointly developed and finalized the scope of the training course. This scope of training course was endorsed by the Steering Committee representing by DIW, the Customs Department and the Excise Tax Department. A consulting team was appointed in November 2003 to develop a customs training manual. The draft training manual will be completed in February 2004. Specification of refrigerant identifiers that are required under this project component, has been finalized. Procurement of this equipment item will be carried out in the first quarter of 2004.

Train-the-trainer workshops could be not carried out in 2003 due to the delay in the development of the customs training manual and procurement of refrigerant identifiers. The factor delaying the procurement of refrigerant identifiers (i.e. import duty) has been removed in early 2004. There are a total number of 30 customs trainers to be trained under this project component. These customs trainers are from the major port/entry points across the country and the training institute of the Customs Department. These customs trainers would then provide to other customs officers of their port/entry points.

Status of the technical assistance activities are summarized in the table below.

Summary of Technical Assistance Activities Carried Out in CY03

No.	Proposed Activity	Objective	Target Group	Impact	Status
Project Management Unit					
1	Set up of PMU	To provide Government with necessary support to carry out all activities proposed under the NCFCP	DIW	Strengthen capacity of Government to carry out the NCFCP to ensure timely and effective preparation and execution of the project activities	6 PMU staffs have been recruited and PMU office is fully operational. PMU also participated in the finalization of necessary documents related to the National CFC Phase-out Plan (NCFCP).
2	Conduct public Awareness Activities				PMU conducted a number of activities to disseminate information on the NCFCP to other agencies, the private sector, and general public. Main activities included organizing presentation and hand-on demonstration on good practices in repairing MAC system in exhibition for automobile industry, organizing a booth for NCFCP and the Montreal Protocol in the Thailand Expo Exhibition, distributing brochures describing the government policies in relation to the NCFCP and the proposed activities in the MAC service sector, participating in the Ozone Day celebration, conducting a series of official announcements of the phase-out dates of CFC consumption and related articles through printed media and radio broadcast, announcing the signing of MOA between DIW and LTD through radio, television, newspaper, and press releases, developing a website for the NCFCP and information of the Montreal Protocol.
3	Identify/prepare investment activities				PMU has also contacted the enterprises in all manufacturing sectors and confirmed their interests and eligibility. PMU hires national and international consultants to assist the enterprises in the preparation of proposals in aerosol, solvent, and foam sectors.

4	Coordinate with other agencies responsible for policy activities				PMU has initiated connection with concerned agencies. This included drafting and facilitating the signing and negotiation of a MOA between DIW and the LTD and preparing a proposal for the Cabinet approval to grant import duty exemption for imported equipment to be provided to government agencies. The proposal was submitted to the Cabinet in December 2003
Technical Assistance for MDI Sector					
1	Confirm Cooperation with concerned agencies i.e. the Thai Food and Drug Administration (FDA) of the Ministry of Public Health.	To increase awareness on CFC MDI transition plan	Pharmaceutical Association, Doctors, MDI Importers, and Patients	To promote the use of non-CFC MDI	A TOR for the preparation of the strategy was prepared in consultation with FDA.
2	Appointment of consultant				The Allergy and Immunology Society of Thailand has been selected as the consultant and a 14-months contract was signed on December 23, 2003. Data collection will take about 6 months starting January 5, 2004. Strategy formulation and an outreach program (to the medical professional and public) will be completed after.
Technical Assistance for Textile and Garment Industry					
1	Appointment of the Thailand Textile Industry (THTI) to provide technical assistance During the preparation and installation of safety equipment to the enterprises	To develop local exposure limit and proper ventilation system, and carry out information dissemination and facilitating the conversion	1,000 - 1,400 Garment and Textile factories	Reduction of 1,1,1-TCA in Textile and Garment Industry	THTI confirmed its interests to provide technical assistance to the enterprises and will submit the revised proposal to PMU within the first quarter of 2004. It is expected that a contract between THTI and the Government Savings Bank will be signed by the end of March 2004. THTI will also develop a local safety exposure limit and guidelines for proper ventilation system and carry out safety audit of the enterprises. THTI Processing of Applications from Garment Factories

Mandatory Requirement for MAC Inspection					
1	Confirm cooperation with the Land Transport Department (LTD) of Ministry of Transport.	To prevent HFC MAC system from being reverse-retrofitted to CFC-12	LTD's vehicle inspection stations and private vehicle inspection stations	Reduction of CFC-12 consumption in MAC service sector and increase awareness of vehicle's owners	MOA between DIW and LTD was signed on December 29, 2003. An action plan has been finalized and the activities will be conducted in 2 phases.
2	Training for Vehicle Inspection Technician				Specification of refrigerant identifier has been established. Ten units of refrigerant identifiers are being procured and the equipment will be provided to the inspection stations owned by LTD by the first quarter of 2004. LTD (assisted by consultant if needed) will develop a training manual and provide training to LTD officers. Procurement of additional 670 refrigerant identifiers for other inspection stations owned by LTD and the private vehicle inspection stations will be carried out after completion of demonstration phase.
3	Legal Framework				LTD has started its review process of the Transportation Act and the Vehicle Act to include refrigerant inspection of all vehicles that have MAC systems, as part of the current annual vehicle inspection requirement.
Train-the-Trainer Program and Certification of MAC Service Technicians					
1	Confirmed cooperation of the Department of Skill Development (DSD) of Ministry of Labor	Increase technical capacity of the MAC service shops	Authorized Training centers and MAC service shops	Reduction of CFC-12 consumption	MOA between DIW and DSD was signed in August 2002. The training course and manual were developed and completed in December 2003. A list of 31 training institutes and training centers across the country, was finalized. Two Train-the-Trainer workshops are schedule on the first quarter of 2004. Procurement of basic equipment for training will be initiated in 2004.

2	Certification of Service Technicians			in MAC service from repairing MAC system properly	<p>PMU conducted public outreach program. 2,000 brochures for the program have been distributed to MAC service shops and a number of MAC service shops returned information to register in the program.</p> <p>PMU has started a selection process for a consultant to perform the function of Group Coordinator (GC) to facilitate the training and procurement/delivery of equipment to MAC service shops. The selection process will be completed by the first quarter of 2004.</p> <p>Activities will start after the train-the-trainer program is completed.</p>
Customs Training Program					
1	Confirmed cooperation of the Customs Department and the Excise Tax Department of the Ministry of Finance	Build technical capacity of custom officials to inspect the import chemicals	Customs Officials	Strengthen effectiveness of import control system of CFC	MOA between DIW and the Customs Department was signed in December 2002. A TOR for development of training manual and scope of the training course has been developed and endorsed by the Steering Committee represented by DIW, the Customs Department, and the Excise Tax Department. A consultant was selected and a contract was signed in November 2003. A training manual will be available in March 2004.

D. Summary of Government Actions Taken

DIW issued the import quotas of all chemicals controlled by the Agreement of the National CFC Phase-out Plan for the period of 2002 – 2010 to all chemical importers. The Factory Control Bureau of DIW was informed of DIW's policy not to issue or renew any factory licenses to enterprises in the refrigeration manufacturing industry, aerosol industry, foam industry, electronic industry, and other potential ODS consuming industry if CFCs, 1,1,1-TCA, and CTC are used for manufacturing of products unless a phase-out plan in line with the National CFC Phase-out Plan is provided. Chemical importers were informed of this policy as well.

The Land Transport Department and DIW announced their policy to include a MAC inspection requirement as part of the existing vehicle inspection requirement. The legal department of the Land Transport Department is in the process of reviewing relevant regulations and its current inspection procedures to accommodate this additional MAC inspection requirement.

The Ministry of Finance and DIW submitted a request for an approval of the Cabinet for import duty exemption for all equipment items to be procured for relevant government agencies participating in the National CFC Phase-out Plan.

The Cabinet approved a request from the Government Savings Bank (GSB) to undertake a financial intermediary role for the National CFC Phase-out Plan. A Memorandum of Agreement (MOA) between GSB and the Ministry of Finance and a MOA between GSB and DIW were signed in 2003. GSB, which has extensive experience in financing small and micro projects, will be in a very good position to outreach to small service shops and small foam enterprises covered by the National CFC Phase-out Plan.

DIW developed a verification protocol for verifying the amount of CFCs and other chemicals covered by the National CFC Phase-out Plan Agreement. The verification protocol was designed on a basis of the established national accounting practice. The verification report for 2002 import of CFCs, 1,1,1-TCA and CTC was submitted to the Executive Committee at its 41st Meeting. The report confirmed that Thailand met all targets for 2002.

Key activities for the Government actions in 2003 are summarized in table below.

NO.	POLICY/ACTIVITY PLANNED	SCHEDULE OF IMPLEMENTATION	STATUS
1.	Announcement of Import Quotas for CFCs from 2002-2010 ¹	September 2003	Import quotas from 2002 – 2010 for CFCs, 1,1,1-TCA and CTC were distributed to all chemical importers.
2.	Verification of CFCs, 1,1,1-TCA, and CTC consumption for CY 2002	March-September 2003	Completed. The Executive Committee took note of this report at its 41 st Meeting.
3.	Control import quotas for CY2003	January-December 2003	Preliminary information indicates that the total amounts of CFCs, 1,1,1-TCA

¹ 2003 Performance Target

			and CTC imported in 2003 are within respective targets stipulated in the Agreement.
4.	Announcement of ban on the use of CFCs, 1,1,1-TCA, and CTC in manufacturing sector	September-November 2003	Announcement of ban was re-informed to importers in 2003 and brochures describing the government policy to ban the use of CFCs, 1,1,1-TCA and CTC in manufacturing sector from 2005 were distributed to related industries.
5.	Announcement of ban on the use of CFCs in aerosol, foam, solvent, and commercial refrigeration manufacturing sector ²	June - September 2003	All polyol suppliers that are members of the foam sector working group informed all of their customers of DIW's policy to ban the use of CFC in 2005. The Factory Control Bureau stopped issuance new licenses to manufacturers that plan to use CFCs, 1,1,1-TCA or CTC in their production.
6.	Criteria and procedures for financial support for investment projects ¹	June-September 2003	Completed
7.	Announcement of MAC Inspection Program ²	January-December 2003	Public awareness programs to inform public of this policy were carried out. LTD and DIW entered into an agreement to set up a network of inspection centers in 2004.
9.	Information dissemination on CFC Replacement program and advantage from replacement	January-December 2003	Completed
10.	Establishment of Project Management Unit (PMU)	January–August 2003	Completed and PMU is fully operational
11.	Import Duty Exemption	August-December 2003	Request submitted to Cabinet in December 2003. Approval was granted on 13 January 2004.
12.	Follow-up and Monitoring completed sub-projects	January-December 2003	Completed
13.	International Ozone Day Ceremony	16 September 2003	Completed

¹ 2003 Performance Target

² 2004 Performance Target

E. 2003 Budget and Financial Performance

	Description	Funding Approved by ExCom (\$US)			Funding Disbursed (\$US)			Obligated Expenditure in CY 2003(\$US)
		Cumulative Funding Approved as of December 2002	Funding Approved in CY 2003	Total Funding Approved as of December 2003	Cumulative Actual Expenditure Disbursed as of December 2002	Actual Expenditure Disbursed in CY 2003	Total Actual Expenditure Disbursed as of December 2003	
1	Investment Projects – Aerosols	102,960		102,960	0	0	0	0
2	TA for MDIs	57,200		57,200	0	0	0	52,869
3	Investment Projects - CFC-113	965,120		965,120	0	0	0	0
4	Investment Projects - 1,1,1-TCA	440,500	440,500	881,000	0	0	0	0
5	TA for contact cleaners		23,100	23,100	0	0	0	0
6	Technical Assistance: Garment	166,100		166,100	0	0	0	0
7	Investment Projects – Foam	2,200,000	1,419,846	3,619,846	0	0	0	0
8	MAC Inspection Program	800,000	437,500	1,237,500	0	0	0	1,237,500
9	Train-the-Trainer – MAC	180,000	139,000	319,000	0	0	0	319,000
10	Financial Subsidy for Purchasing MAC Servicing Equipment		990,000	990,000	0	0	0	0
11	Financial Subsidy for Purchasing MAC R&R Machines		279,400	279,400	0	0	0	0
12	Project Management Unit	740,000	200,000	940,000	0	196,938	196,938	743,062
13	Custom Training	82,500	82,500	165,000	0	1,511	1,511	163,489
	TOTAL	5,734,380	4,011,846	9,746,226	0	198,449	198,449	2,515,920

Remarks: Disbursement of funding that has not been utilized in 2002 and 2003 will be made in CY 2004.

Part II
2004 Annual Program

F. Actual consumption in 2003 and target consumption in 2004

Indicators		Chemicals	Preceding Year ¹ (2003)	Year of Plan ² (2004)	Reduction	
Supply of ODS	Import	CFCs	1,857.01 ODP Tons	1,706.01 ODP Tons	151 ODP Tons	
		TCA	2.39 ODP Tons	2.39 ODP Tons	0 ODP Tons	
		CTC	0 ODP Tons	0 ODP Tons	0 ODP Tons	
	Production	--	--	--	--	
	Total (1)	CFCs	1,857.01 ODP Tons	1,706.01 ODP Tons	151 ODP Tons	
		TCA	2.39 ODP Tons	2.39 ODP Tons	0 ODP Tons	
		CTC	0 ODP Tons	0 ODP Tons	0 ODP Tons	
	Demand of ODS	Manufacturing	CFCs	392.44 ODP Tons	318.44 ODP Tons	74 ODP Tons
			TCA	2.39 ODP Tons	2.39 ODP Tons	0 ODP Tons
CTC			0 ODP Tons	0 ODP Tons	0 ODP Tons	
Servicing		CFCs	1,464.57 ODP Tons	1,387.57 ODP Tons	77 ODP Tons	
Stockpiles		--	---	---	---	
Total (2)		CFCs	1,857.01 ODP Tons	1,706.01 ODP Tons	151 ODP Tons	
		TCA	2.39 ODP Tons	2.39 ODP Tons	0 ODP Tons	
		CTC	0 ODP Tons	0 ODP Tons	0 ODP Tons	

¹ Actual amount of reported chemicals imported to Thailand in 2003.

² Target amount of reported chemicals in 2004.

G. Industry Action

PMU will continue its outreach program to create awareness of the available financial assistance for eligible enterprises, and more importantly, the Government's policy to ban the use of these chemicals in the manufacturing sector by the end of 2004. PMU will increase its effort to ensure that remaining enterprises, if any, will come forward in 2004 to participate in the National CFC Phase-out Plan. The annual program for 2004 of the PMU will continue to build on the progress made in 2003. That is, PMU will provide necessary assistance to facilitate the preparation and submission of about 50 proposals from the aerosol, solvent, and foam sectors.

In addition, PMU will work closely with the NOU to ensure that other approved projects outside of the National CFC Phase-out Plan will be completed on a timely manner. ODP to be phased out from those projects has direct bearing on the achievement of the targets stipulated in the Agreement of the National CFC Phase-out Plan.

As a number of enterprises contacted by PMU during the previous calendar year have already confirmed their decision not to seek funding from DIW to support costs of conversion that they have already incurred. For other activities such as the certification program for service technicians and the associated train-the-trainer activities, it appears that the original provisions provided in the National CFC Phase-out Plan may not be sufficient. In this regard, PMU will examine this issue in 2004 and, if need be, will use the flexibility provided in the Agreement to reallocate savings from the manufacturing sector to the service sector. The actual transfer of these savings will be reported to the Executive Committee in the 2005 Annual Program.

Sector	Actual Consumption Preceding Year (ODP Tons) 2003 ¹	Target Consumption Year of Plan (ODP Tons) 2004	Reduction Within Year of Plan	Number of Projects Completed	Number of Servicing Related Activities	ODS Phase-out (in ODP tons)
	(1)	(2)	(1)-(2)			
Manufacturing						
Aerosol	0	0	0	0		0
Foam	335.44	281.44	54	N/A		54
Refrigeration	57	37	20	1		20
Solvents	2.39	2.39	0	N/A		0
Other	0	0	0	0		0
Total	394.83	320.83	74	1		74
Servicing						
Refrigeration	1,464.57	1,387.57	77	0	6	77
Total	1,464.57	1,387.37	77	0	6	77
GRAND TOTAL	1,859.40	1,708.40	151	1	6²	151

¹ The figure of ODS consumption shown for each sub-sector in year “2003” is lower than the respective target because of early phase-out of CFC from on-going sub-projects from the aggressive actions taken by the Government and because the Ministry of Finance has imposed an excise tax on CFCs based on the recommendation of DIW, which led a large number of enterprises to early convert their processes to non-CFC alternatives.

² Six activities are (i) Chiller Replacement/Retirement, (ii) Retirement of CFC-12 Domestic Refrigerators, (iii) Retirement of CFC-12 commercial refrigerator, (iv) Retirement of CFC-12 Refrigerator Containers, (v) Train-the-Trainer Program and Certification of MAC Service Technicians, and (vi) Financial Subsidy for R&R Machines.

Breakdown of actual consumption of CFCs, 1,1,1-TCA, and CTC in 2003 and target consumption of CFCs, 1,1,1-TCA, and CTC in 2004

Sector	Actual Consumption Preceding Year (ODP Tons) 2003				Target Consumption Year of Plan (ODP Tons) 2004			
	CFCs	1,1,1-TCA	CTC	Total	CFCs	1,1,1-TCA	CTC	Total
Manufacturing								
Aerosol	-	-	-	-	-	-	-	-
Foam	335.44	-	-	335.44	281.44	-	-	281.44
Refrigeration	57	-	-	57	37	-	-	37
Solvents	-	2.39	-	2.39	-	2.39	-	2.39
Other	-	-	-	-	-	-	-	-
Servicing								
Refrigeration	1,464.57	-	-	1,464.57	1,387.57	0	0	1,387.57
GRAND TOTAL	1,857.01	2.39	0	1,859.40	1,706.01	2.39	0	1,708.40

H. Technical Assistance

Project Implementation and Monitoring (PMU)

PMU is in the process of appointing an auditor to perform the required verification of import of CFCs, 1,1,1-TCA, and CTC in 2003. The verification report for 2003 import of chemicals covered by the National CFCs Phaseout Plan will be completed by the second quarter of 2004. This verification report will be submitted along with the 2005 Annual Work Program in 2005.

With regard to the public awareness component, PMU plans to launch a number of activities in 2004. Key activities comprise of the followings:

- Update website of PMU: To include list of MAC service shops participating in the certification of MAC service technician program, information on potential hazard of blending refrigerants, importance of using proper refrigerant, and MAC inspection requirement;
- MAC Program Advertisement: To made announcement to invite car owners to use proper refrigerant with their MAC systems, and to have their MAC systems serviced by MAC service shops certified under the Certification of MAC Service Technician Program. In addition, PMU in close cooperation with DSD will outreach to service technicians in order to get them enroll in the Certification program;
- Banner: To distribute banners to certified MAC service shops. The objective of this banner is to attract car owners to get their MAC service from these shops;
- Sticker: To distribute stickers containing information on refrigerant types, names of service shops, and date last serviced to the certified MAC service shops. The sticker will be attached to the MAC system by the service shops;
- Press Conference: DIW and DSD will jointly made an announcement to start launching of the Certification of MAC Service Technician Program by the first quarter of 2004 through a press conference. In addition, signing ceremony of contract between DIW and the THTI is scheduled for the first quarter of 2004. This will help disseminating the Government's policy regarding the phaseout of 1,1,1-TCA in textile and garment industry including the availability of assistance to be provided to these industries.

On the policy related activities, DIW has recently obtained an approval of the Cabinet for import duty exemption for imported equipment to be provided to related government agencies on January 13, 2004. With this exemption, procurement of equipment items for DSD and LTD will be completed in 2004.

MDI

Development of the MDI strategy starts on January 5, 2004. This activity will be completed by February 4, 2005. The Allergy and Immunology Society of Thailand will conduct a series of interviews with doctors, patients, MDI suppliers and other stakeholders, to identify key areas that should be addressed by the strategy. This undertaking will be supervised by FDA.

Technical Assistance for Textile and Garment Industry

Implementation of this activity will start in the second quarter of 2004. THTI is responsible to undertake this activity. It will work closely with relevant government agencies to develop an exposure limit for 1,1,2 trichloroethylene. THTI will also coordinate and monitor distribution of ventilation systems. Project duration is about 18 months.

Mandatory Requirement for MAC Inspection

LTD is reviewing the Transportation Act and the Vehicle Act to determine the right legal instrument for introducing a mandatory MAC inspection requirement for all vehicles (passenger cars, trucks, and etc.) that have MAC systems, as part of the existing annual vehicle inspection requirement. This activity will be completed in 2004.

With regard to implementation of activities as proposed in the action plan finalized by PMU and LTD, the first ten refrigerant identifiers will be procured by PMU and delivered to LTD during the first quarter of 2004. Inspection stations owned by LTD will use these refrigerant identifiers on a trial basis for about two months.

Procurement of additional refrigerant identifiers for the rest of inspection stations owned by LTD and the private vehicle inspection stations will be carried out after an evaluation is completed. In addition, development of a MAC inspection manual and training course will proceed in parallel with procurement of the rest of refrigerant identifiers. These two activities will be completed by the third quarter of 2004.

The last activity is to organize a series of workshops for vehicle inspection technicians. It is expected that 12 workshops will be launched across the country and the first one will start at the beginning of the last quarter of 2004.

MAC inspection will be introduced as part of vehicle inspection requirement starting from 2005.

Train-the-Trainer Program and Certification of MAC Service Technicians

The first train-the-trainer workshop was organized during 12-16 January 2004 at Chonburi Training Institute. Representatives from participating training institutes and training centers attended this workshop. The content covered by this workshop includes good practice for servicing passenger cars and buses as well as procedures for retrofitting CFC-12 MAC to HFC-134a systems. The second train-the-trainer workshop will be organized during 16-20 February 2004.

With regard to procurement of basic tools for training institutes and centers, specification of equipment was developed in 2003. Procurement of basic tools is planned to carry out by the end of March 2004.

The technical working group established by DSD has completed development of scope of the 2-days training course for the Certification of MAC Service Technician Program. This standard 2-days training course will be used by all participating training institutes and centers.

DSD and PMU are preparing a training schedule for Certification of MAC Service Technician Program throughout the country. In the meantime, the 31 training institutes and centers are identifying and preparing a list of MAC service shops expressing their interest for the program. It is anticipated that Certification of MAC Service Technician Program across the country will start from the beginning of March 2004. It is anticipated that at least 600 MAC service technicians will participate in this program within 2004.

Customs Training

The consultant has completed development of a Customs training manual and is in the final review process before submitting to PMU in early February 2004. Production of the Customs training manuals will be finished by mid of April 2004.

In the meantime, PMU is discussing with the Customs Department with regard to procurement of refrigerant identifiers and arrangement of the train-the-trainer workshops. Procurement of 60 refrigerant identifiers to the port/entry points across the country and the training institute of the Custom Department will be carried out during the first quarter of 2004.

Upon delivery of refrigerant identifiers, PMU will coordinate with the Customs Department to organize a train-the-trainer workshop for Customs Officers. It is expected that train-the-trainer workshop will be organized during the second quarter of 2004.

Summary of Technical Assistance Activities to be Carried Out in CY2004

No.	Proposed Activity	Objective	Target Group	Impact	Status
	PMU				
1	PMU Operations	To provide Government with necessary support to carry out all activities proposed under this plan	DIW	Strengthen capacity of Government to carry out the NCFCP to ensure timely and effective preparation and execution of the project activities	PMU operations will be continued.
2	Public Awareness Activities				PMU will hire consultant to assist in the planning and implementation of a more comprehensive program for public awareness and outreach activities.
3	Prepare and supervise investment Activities				PMU will continue to discuss and assist the enterprises during the preparation of proposals.
4	Coordinate with other agencies related to policy and regulations				PMU also assist other agencies to implement the National CFC Phase-out plan, including procurement of equipment as needed. PMU has been successful in securing the cabinet approval on import duty exemption for imported equipment to be provided to related government agencies on January 13, 2004. PMU will work closely with related units within DIW and other agencies such as LTD regarding legal framework to ban the use of CFCs, 1,1,1-TCA and CTC in manufacturing sector in 2005 and include MAC inspection as part of annual vehicle inspection requirement.
Technical Assistance for MDI Sector					
1	Formulation of Strategic plan, including consultation and information dissemination	To increase awareness on CFC MDI transition plan	Pharmaceutical Association, Doctors, MDI Importers, and Patients	To promote the use of non-CFC MDI	The consultant will collect and analyze information obtained from the Drug Control Department and Pharmaceutical companies over a 4 month period. This is to establish present status and forecast future trend. 500 questionnaires will be sent to physicians and asthma patients. Results will be used in the formulation of the strategy. The findings and the strategy will be disseminated medical professionals, pharmaceutical companies, FDA, and public

Technical Assistance for Textile and Garment Industry					
1	Technical assistance to THTI	To develop local exposure limit and proper ventilation system, and carry out information dissemination	11,00 - 1,400 Garment and Textile factories	Reduction of 1,1,1-TCA in Textile and Garment Industry	Scope of work will be finalized and a contract between THTI and the Government Savings Bank by end of March 2004.
2	Installation of safety equipment				THTI will develop local safety standard, conduct safety audit, identify the beneficiaries, design the safety equipment, monitoring the implementation, and provide technical assistance to the enterprises as needed.
Mandatory Requirement for MAC Inspection					
1	Establishment of regulation	To prevent HFC MAC system from being reverse-retrofitted to CFC-12	LTD's vehicle inspection stations and private vehicle inspection stations	Reduction of CFC-12 consumption in MAC service sector and increase awareness of vehicle's owners	The Transportation Act and the Vehicle Act are being reviewed and mandatory MAC inspection will be introduced as a part of vehicle inspection from January 2005. This activity will be completed at the end of CY04
2	Training of LTD staff				Development of MAC inspection manual will be carried out after LTD has received some experience in using refrigerant identifiers. PMU is procuring about 10 refrigerant identifiers for demonstration purpose. Procurement of additional 670 refrigerant identifiers will be carried out after completion of demonstration phase and will be completed by the third quarter of 2004. *These activities will be completed by the third quarter of 2004.
3	Training for Vehicle Inspection Technician				* Training for Vehicle Inspection Technician would be carried out after distribution of additional 670 refrigerant identifiers to other inspection stations owned by LTD and private vehicle inspection centers. * Activity will start at the beginning of the last quarter of 2004.

Train-the-Trainer Program and Certification of MAC Service Technicians					
1	Train-the-Trainer program				<p>The first training workshop was organized during 12-16 January 2004 at Chonburi Training Institute of DSD. The second workshop will be organized during 16-20 February 2004. The equipment (basic tools, R&R machine, and Refrigerant identifiers) will be distributed to the training centers using a voucher scheme. Specifications of these equipment have been prepared and qualified suppliers are being identified. The activities will be completed by the end of March 2004.</p> <p>A 2-day training program for Certification of MAC Service Technician Program has been developed. The first training will be provided in March 2004. At least 900 MAC service shops across the country would be trained in 2004. Consultants will be hired as the Group Coordinator (GC) and they will be responsible for developing of data base and monitoring of the certification program.</p>
2	Certification of Service Technicians	Increase technical capacity of the MAC service shops	Authorized Training centers and MAC service shops	Reduction of CFC-12 consumption in MAC service from repairing MAC system properly	
Customs Training Program					
1	Development of a Training Course	Build technical capacity of custom officials to inspect the import chemicals	Customs Officials	Strengthen effectiveness of import control system of CFC	Draft customs training manual will be submitted to DIW and Customs in early February 2004 and the final report will be completed in mid April 2004. PMU will procure about 60 units of refrigerant identifiers for the Customs. Training will be carried out by mid 2004.
2	Train-the-Trainer Program				

I. Planned Government Actions

DIW will proceed its review process of the Factory Act and the Hazardous Substances Act framework to ban the use of CFCs, 1,1,1-TCA and CTC in manufacturing sector in 2005. In addition, DIW will work closely with LTD to assist and provide information to determine instrument to include MAC inspection as part of annual vehicle inspection requirement.

On January 13, 2004, the Cabinet has endorsed DIW's request to exempt import duties of equipment that will be procured and provide to related government agencies.

DIW will appoint auditor to perform verification of import of CFCs, 1,1,1-TCA, and CTC in 2003, which will be submitted along with the 2005 Annual Work Program

DIW will develop its database to include a list of MAC service shops certified under the MAC service technician certification program. Information in database will comprise of names of MAC service shops, address, and contact information. The general public will have access to the database through DIW/PMU website.

Key activities for the Government actions to be executed in 2004 are summarized in table below.

NO.	POLICY/ACTIVITY PLANNED	EXPECTED SCHEDULE OF IMPLEMENTATION	STATUS
1.	Control import quota for CY2004.	January-December 2004	Quota for CFC-11 and CFC-12 was issued in December 2003 and total amount is within the respective target stipulated in the Agreement.
2.	Verification of CFCs, 1,1,1-TCA, and CTC consumption for CY 2003	January-June 2004	Appointment of auditor has been initiated.
3.	Announcement of ban on the use of CFCs, 1,1,1-TCA, and CTC in manufacturing sector	January-December 2004	Announcement of ban will be put in brochures, poster, which will be distributed to industries and public and included in website.
4.	Announcement of ban on the use of CFCs in aerosol, foam, solvent, and commercial refrigeration manufacturing sector ¹		Announcement of ban will be put in brochures, poster, which will be distributed to industries and public and included in website.
5.	Announcement of MAC Inspection Program ¹	January-December 2004	Announcement will be made through public awareness campaign jointly carried out by DIW and LTD
6.	Database of trained technicians in the MAC sector ²	March-December 2004	Will be included in website

¹ 2004 Performance Target

¹ 2004 Performance Target

7.	Public Awareness Activities	January-December 2004	-
8.	Follow-up and Monitoring completed sub-projects	January-December 2004	-
9.	International Ozone Day Ceremony	September 2004	-

² 2005 Performance Target

J. 2004 Budget and Planned Disbursement

	Description	Funding Approved by ExCom (\$US)			Funding Disbursed/Obligated (\$US)	
		Cumulative Funding Approved as of December 2003	Funding Approved in CY 2004	Total Funding Approved (including CY 2004)	Cumulative Actual Expenditure Disbursed as of December 2003	Planned Expenditure in CY 2004
1	Investment Projects – Aerosols	102,960		102,960	0	72,160
2	TA for MDIs	57,200		57,200	0	52,869
3	Investment Projects - CFC-113 ¹	965,120		965,120	0	904,800
4	Investment Projects - 1,1,1-TCA	881,000		881,000	0	881,000
5	TA for contact cleaners	23,100		23,100	0	23,100
6	Technical Assistance: Garment	166,100		166,100	0	166,100
7	Investment Projects - Foam ²	3,619,846		3,619,846	0	1,700,000
8	MAC Inspection Program	1,237,500		1,237,500	0	1,237,500
9	Train-the-Trainer – MAC	319,000		319,000	0	319,000
10	Financial Subsidy for Purchasing MAC Servicing Equipment	990,000	880,000	1,870,000	0	1,870,000
11	Financial Subsidy for Purchasing MAC R&R Machines	279,400	235,400	514,800	0	514,800
12	Project Management Unit	940,000	200,000	1,140,000	196,938	685,384
13	Custom Training	165,000		165,000	1,511	163,489
	TOTAL	9,746,226	1,315,400	11,061,626	198,449	8,590,201

Remarks: 1= Intergold Optical Manufacturing denied officially to participate and possess budget value of USD 60,320

2=The rest will be disbursed in CY 2005