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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Forty-first Meeting
Montreal, 17-19 December 2003

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: 2003 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 and 2002 tranches have been released to the World Bank, with a total disbursement of US \$5,734,380. Due to delay in setting up the project management unit (PMU), the World Bank could not submit the 2003 work programme as planned. Consistent with the Agreement, the 2003 annual work programme requests the release of US \$4,011,846 plus the associated support cost of US \$353,066. The submission consists of a progress report on the implementation of the 2002 work programme, the proposed 2003 work programme, and a report by a certified auditor on CFC imports in 2002. The table below sums up the key data of the National Phase out Plan. The 2003 annual work programme of the national CFC phase-out plan of Thailand is attached.

Country	Thailand
Project title:	Thailand ODS Phase-Out Project National CFC Phase-Out Plan (NCFCP)
Year of plan	2003
# of years completed	1
# of years remaining under the plan	7
Ceiling for 2002 ODS Consumption (in ODP tons), 2002 Annual Plan	3,066 ODP tonnes of Annex A, Group I Chemicals (CFCs) 34 ODP tonnes of TCA 7.52 ODP tonnes of CTC Total: 3,107.52 ODP tonnes
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
Total funding approved in principle for the CFC phase-out plan	\$14,728,626
Total funding released as of Oct. 2003	\$5,734,380
Level of funding requested for 2003 Annual Plan	\$4,011,846

2. The impact on implementation of the 2002 work programme reported total 2002 consumption of ODS in Thailand 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. This reduction in consumption was reported to have been achieved through a combination of early completion of projects approved prior to the national phase-out plan, aggressive action taken by the Government and weak domestic demand for products manufactured with CFC since 1997. Under the category of technical assistance, there was a description of the activities which were

carried out in 2002, ranging from development of an MDI transitional strategy, implementation of mandatory requirements for MAC inspection, train-the-trainer and certification programmes for MAC service technicians, customs training, to establishment of the project management unit. The description is supplemented by a tabular presentation of the progress of each activity, covering the objective, target group, impact and status of implementation. The financial report for 2002 provides data on the planned expenditure (US \$5,194,380) however the actual expenditure under each of the 9 activities is reported as zero. In this regard, the World Bank explained that there is a need to amend the grant agreement before funds can be disbursed to the project authorities.

Audit of ODS imports

3. The audit of imports of CFC, 1,1,1 TCA and CTC for the year 2002 was undertaken by a certified auditor authorized under the Auditor Act B.E. 2505 passed in 1962, and totally independent of the auditor-general of Thailand. This audit was in accordance with Thai Approved Standards on Auditing. Since the import/export of ODS is jointly controlled by the Department of Industrial Works (DIW) and the Custom Department, the auditor examined and compared no less than 65% of the two sets of records maintained by the two departments. The audit report consists of four chapters; chapters one and two provide the consolidated import/export data by importer, collected from the Customs and DIW. Chapter three provides a detailed description of the policy and procedure issued by the Ministry of Industry on controlling the import/export of ODS. This includes the qualification for being an authorized importer and penalty for importing without a license; the procedure for DIW to issue license; procedure for DIW to clear import/export; and procedure for custom clearance. Chapter four describes the procedure for the auditing, which includes the examination of the quotas issued to importers, verifying the two sources of data, clarifying the discrepancies and drawing conclusions. There are discrepancies in the data held by the two departments. The auditor attributes the discrepancies to incorrect coding of the chemicals imported, especially from the data of the Customs Department. The audit report concludes that the procedures employed for ODS import control are satisfactory and recommends that the Department of Customs and DIW should reconcile records on a regular basis in future. The audited import figures for ODS for 2002 are 814,4 ODP tonnes of CFC-11, 1,363 ODP tonnes of CFC-12, and 29.6 ODP tonnes of 1.1.1-TCA. There was no import of CTC in 2002.

2003 annual work programme

4. The 2003 work programme provides targets for the consumption of CFC (2,777.32 ODP tonnes), 1,1,1 TCA (34 ODP tonnes) and CTC (7.52 ODP tonnes), which are consistent with the targets provided for in the Agreement. However, these figures represent a significant increase both in the overall consumption and in each of the sectors compared to the actual consumption recorded in 2002 (please refer to the table below for details). The Government of Thailand expects the recent GDP growth in 2003 to increase the domestic demand for products manufactured with CFCs. On the other hand, there are signs that smuggled CFC-12 and sub-standard refrigerants are coming on to the local market because of the tight import quota issued in 2002. As a result the Government decided to ease up slightly on the import quota in 2003,

while still complying with the targets of the Agreement. The Government will continue to rely mainly on the Hazardous Substances Act to implement import quota system to achieve the 2003 targets. The submission provides a description of the 7 categories of technical assistance activities to be undertaken in 2003, and a tabular presentation of the objective, impact and status of such activities. The proposed budget for the 2003 annual work programme provided a breakdown of the planned expenditures over 9 items of activities for a total expected outlay of US \$4,011,846.

Sector	Actual Consumption Preceding Year (ODP Tonnes) 2002 (1)	Target Consumption Year of Plan (ODP Tonnes) 2003 (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	30	30	0	0		0
Foam	584.36	668	-83.64	5		-83.64
Refrigeration	97	203	-106	0		-106
Solvents	2.96	108.35	-105.39	0		-105.39
Other	0	4.01	-4.01	0		-4.01
Total	714.32	1,013.36	-299.04	5		-299.04
Servicing						
Refrigeration	1,465.97	1,805.49	-339.52	1	6	-339.52
Total	1,465.97	1,805.49	-339.52	1	6	-339.52
GRAND TOTAL	2,180.29	2,818.85	-638.56	6	6	-638.56

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

5. The progress report and the 2003 work programme were 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.

6. Due to improved performance of the Thai economy, it is estimated that CFC consumption in 2003 will increase by more than 600 ODP tonnes over the 2002 figure, although it is still within the targets of the Agreement between the Executive Committee and Thailand. The increase in supply is intended to curb increasing incidents of illegal imports of CFC into the country. The Government has introduced very stringent import quota control for CFC 2003 and the Ministry of Finance has imposed an excise tax on CFCs to discourage CFC consumption.

7. The Government of Thailand has introduced a functioning CFC import quota control system under the joint responsibility of several departments. Imports in 2002 were verified by a duly authorized auditor who examined the adequacy of the import control policies and procedures enacted by the Government and the records maintained by the relevant governments departments on the CFC imports in 2002. He was satisfied with the explanations about the discrepancies he discovered in his audit and made his conclusions and recommendations.

8. The result of the audit is a confirmation of the supply of CFC into Thailand for the year 2002 and does not include an examination of the actual uses of the CFC in the country. The Government has now included a procedure under the CFC import control system whereby the Department of Industrial Works will inspect the customers to whom the importers sold CFCs. That inspection would have provided corroboration to the import data however it was not implemented in time for the verification for the 2002 work programme

RECOMMENDATIONS

The Secretariat recommends that the Executive Committee:

1. Approve the 2003 work programme of the Thailand CFC national phase-out plan at the requested funding level of US \$4,011,846 and the associated support cost of at US \$353,066 for the World Bank.
2. Request the World Bank and the Government of Thailand to carry out an inspection of a representative sample of the CFC end-users to whom the importers sell CFCs, as part of the 2003 work programme verification, to corroborate the import data.
3. Request the World Bank to accelerate the implementation of conversions activities for the remaining CFC-consuming industries in Thailand to reduce the demand for CFC.

**THAILAND ODS PHASE-OUT PROJECT
NATIONAL CFC PHASE-OUT PLAN (NCFCP)**

2003 ANNUAL PROGRAM

PROJECT MANAGEMENT UNIT
DEPARTMENT OF INDUSTRIAL WORKS (diw)
MINISTRY OF INDUSTRY AND

THE WORLD BANK

November 23, 2003

1. DATA

Country	THAILAND
Year of plan	2003
No. of years completed	1
No. of years remaining under the plan	7
Target ODS Consumption of the preceding year (2002)	<ul style="list-style-type: none">• 3,066 ODP Tonnes of Annex A, Group I Chemicals (CFCs)• 34 ODP Tonnes of TCA• 7.52 ODP Tonnes of CTC
Total	3,107.52 ODP Tonnes
Target ODS Consumption of the year of plan (2003)	<ul style="list-style-type: none">• 2,777 ODP Tonnes of Annex A, Group I Chemicals (CFCs)• 34 ODP Tonnes of TCA• 7.52 ODP Tonnes of CTC
<u>Total ODS</u>	2,818.52 ODP Tonnes
Level of funding requested	USD 4,011,846
Lead implementing agency	The World Bank
Co-operating agency (ies)	Nil

2. TARGETS

Targets:						
Indicators		Chemicals	Preceding Year (2002)	Year of Plan (2003)	Reduction	
Supply of ODS	Import	CFCs	3,066 ODP Tonnes	2,777 ODP Tonnes	289 ODP Tonnes	
		TCA	34 ODP Tonnes	34 ODP Tonnes	0 ODP Tonnes	
		CTC	7.52 ODP Tonnes	7.52 ODP Tonnes	0 ODP Tonnes	
	Production	--	--	--	--	
	Total (1)	CFCs	3,066 ODP Tonnes	2,777 ODP Tonnes	289 ODP Tonnes	
		TCA	34 ODP Tonnes	34 ODP Tonnes	0 ODP Tonnes	
		CTC	7.52 ODP Tonnes	7.52 ODP Tonnes	0 ODP Tonnes	
	Demand of ODS	Manufacturing	CFCs	1,070 ODP Tonnes	972 ODP Tonnes	98 ODP Tonnes
			TCA	34 ODP Tonnes	34 ODP Tonnes	0 ODP Tonnes
CTC			7.52 ODP Tonnes	7.52 ODP Tonnes	0 ODP Tonnes	
Servicing		CFCs	1,996 ODP Tonnes	1,805 ODP Tonnes	191 ODP Tonnes	
Stockpiles		--	---	---	---	
Total (2)		CFCs	3,066 ODP Tonnes	2,777 ODP Tonnes	289 ODP Tonnes	
		TCA	34 ODP Tonnes	34 ODP Tonnes	0 ODP Tonnes	
		CTC	7.52 ODP Tonnes	7.52 ODP Tonnes	0 ODP Tonnes	

3. INDUSTRY ACTION

Sector	Actual Consumption Preceding Year (ODP Tonnes) 2002 ¹	Target Consumption Year of Plan (ODP Tonnes) 2003 ²	Reduction Within Year of Plan	Number of Projects Completed	Number of Servicing Related Activities	ODS Phase-out (in ODP tonnes)
	(1)	(2)	(1)-(2)			
Manufacturing						
Aerosol	30	30	0	0		0
Foam	584.36	668	-83.64	5		-83.64
Refrigeration	97	203	-106	0		-106
Solvents	2.96	108.35	-105.39	0		-105.39
Other	0	4.01	-4.01	0		-4.01
Total	714.32	1,013.36	-299.04	5		-299.04
Servicing						
Refrigeration	1,465.97	1,805.49	-339.52	1	6	-339.52
Total	1,465.97	1,805.49	-339.52	1	6	-339.52
GRAND TOTAL	2,180.29	2,818.85	-638.56	6	6³	-638.56

¹ The figure of ODS consumption shown for each sub-sector in year "2002" is lower than the respective target because of early phase-out of CFC from on-going sub-projects, the aggressive actions taken by the Government, and the weak domestic demand for products manufactured with CFCs experiencing since 1997. However, given the recent growth of GDP in 2003 which is expected to continue into 2004 - 2005, it is expected that annual production in each sub-sector will improve as the local demand for these products is rising in the coming years. Due to DIW's proactive policy, import quotas of the controlled chemicals were further reduced in 2002. In addition, the Ministry of Finance has imposed an excise tax on CFCs based on the recommendation of DIW. These two policy measures led a large number of enterprises to convert their processes to non-CFC alternatives.

² Because of the significant reduction of import quota in 2002, there were signals that smuggling of CFCs, particularly CFC-12, started to emerge. Moreover, more and more sub-standard blended refrigerants were introduced in the market. To preempt the illegal import of CFCs and sub-standard blended refrigerants to grow, DIW decided to revise its 2003 import quotas of some CFCs and made in more in line with the phase-out targets in the agreement between the Government of Thailand and the ExCom. Therefore, ODS consumption shown for each sub-sector in the year "2003" column above is set in accordance with the Agreement. However, actual consumption in 2003 cannot be determined before the year ends;

³ Six activities are (i) Chiller Replacement/Retirement, (ii) Retirement of CFC-12 Domestic Refrigerators, (iii) Retirement of CFC-12 Refrigerator Containers, (iv) New Vehicle Inspection Requirement Upgrading Capacity of Inspection Stations, (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 2002 and target consumption of CFCs, 1,1,1-TCA, and CTC in 2003

Sector	Actual Consumption Preceding Year (ODP Tonnes) 2002				Target Consumption Year of Plan (ODP Tonnes) 2003			
	CFCs	1,1,1-TCA	CTC	Total	CFCs	1,1,1-TCA	CTC	Total
Manufacturing								
Aerosol	30	-	-	30	30	-	-	30
Foam	584.36	-	-	584.36	668	-	-	668
Refrigeration	97	-	-	97	203	-	-	203
Solvents	-	2.96	-	2.96	70.4	34	3.95	108.35
Other	-	-	-	0	0.43	-	3.58	4.01
Servicing								
Refrigeration	1,465.97	-	-	1,465.97	1,805.49	0	0	1,805.49
GRAND TOTAL	2,177.33	2.96	0	2,180.29	2,777.32	34	7.52	2,818.85

With regard to 6 activities resulting in consumption reduction within year of plan (2003), the Government of Thailand recognized that certain activities in the service sector are experiencing delays. However, given flexibility provided to the Government of Thailand to manage the implementation of this plan in order to achieve the agreed target, the Government of Thailand has stepped up its implementation of the import quotas, strengthening of the enforcement of the import control system, and introducing the excise tax on CFCs.

4. TECHNICAL ASSISTANCE --- CY 2002 [*Preceding Year*]

DIW initiated formal discussions with concerned agencies in order to establish working groups to formulate appropriate policies and action plans for effectively phase-out CFC, 1,1,1-TCA and CTC. A joint workshop on implementation of National CFC Phase-out Plans was held by the Bank in late 2002. Brief description of additional sector-specific activities undertaken in 2002 is listed below.

MDI: A series of discussions with Food and Drug Administration (FDA) on the need to develop a MDI transition strategy and action plans were held. Among others, DIW launched a workshop on CFC MDI Transition Strategy in October 2002. An expert from a MDI manufacturer and representatives from relevant agencies such as FDA, the Allergy and Immunology Society of Thailand, MDI importers participated in this workshop. The workshop agreed on the scope of the strategy. The outcome of this workshop is being used as a basis for development of a detailed TOR for developing the strategy.

Technical Assistance for Textile and Garment Industry: DIW discussed with Thailand Textile Institute (TTI) on implementation strategies for relevant measures to ensure the phase-out of 1,1,1-TCA be sustainable, environmental friendly and without comprising human safety. TTI showed its interest in taking the lead in managing the environmentally sound and safe phase-out of 1,1,1-TCA in the textile and garment industry. In addition, DIW also developed a detailed terms of reference describing the objectives and scope of work for this activity.

Mandatory Requirement for MAC Inspection: Consultation with the Land Transportation Department (LTD) on action regarding regulatory requirements and scope of works was held in 2002. As a result, a Steering Committee comprising of representatives from LTD and DIW was established in late 2002. The mandate of this Steering Committee is to provide guidance and required supervision to ensure successful implementation of this component of the National CFC Phase-out Plan. In addition, a draft Memorandum of Agreement between DIW and LTD was developed in order to formalize the cooperation of the two agencies in jointly implementing this most critical component of the Plan.

Train-the-Trainer Program for MAC Service Technicians and Certification of MAC Service Technicians: As a follow-up to the National CFC Phase-out Workshop held in December 2001, a series of consultations were held to define the role and responsibility of the Department of Skill Development (DSD) in relation to this component of the Plan. In this regard, DSD agreed to use its existing network of training institutes and training centers across the country as authorized training centers for training and certifying MAC service technicians. In August 2002, a MOA stipulating the cooperation framework between DIW and DSD was signed.

Customs Training: Discussions with the Customs Department on project implementation and scope of works were held in 2002 as part of DIW's follow-up from its National CFC Phase-out Plan workshop in 2001. The Steering Committee comprising of representatives from the Customs Department and DIW was established in mid 2002. The tasks of this Committee, among others, are to define the scope of the cooperation between the two agencies. A number of technical discussions pertaining to inspection techniques and procedures were held. A MOA between the Customs Department and DIW was signed in December 2002. In addition, a representative of the Customs Department also attended a workshop on the National CFC Phase-out Plan held by the Bank in December 2002.

Project Management Unit: DIW completed the design of the structure of the Project Management Unit (PMU). DIW emphasized the need for giving full autonomy for PMU to undertake all activities proposed by the Plan. This is to ensure that PMU will be able to function in an efficient and expeditious manner. Based on the agreed structure, PMU will be manned by 6 members: one Chief of Project Management Unit, two Technical Officers, one Public Outreach Officer, one Financial Officer, and one General Administrative staff. TORs for these staffs were finalized in 2002. It was agreed that the position of a Chief of PMU should be filled first and the Chief of PMU would then select remaining staffs by himself. The Chief of PMU is fully responsible for the performance of his unit. In late 2002, the selection process of the Chief of Project Management Unit was completed. DIW submitted its request for Bank's clearance on the selection process of the Chief of PMU to the Bank before the end of 2002.

With regard to public awareness activities, DIW organized an International Ozone Day Ceremony aiming to disseminate information on the Montreal protocol, the NCFCP strategies and the government policy to relevant stakeholders in the government sector and the general public. In addition, DIW participated in a number of training and/or workshops in the country to disseminate information regarding the NCFCP.

Technical assistance carried out in CY 2002 is summarized below:

No.	Proposed Activity	Objective	Target Group	Impact	Status/Remarks
	Technical Assistance for MDI Sector	To increase awareness on CFC MDI transition plan	Pharmaceutical Association, Doctors, MDI Importers, and Patients	To promote the use of non-CFC MDI	
1	Selection of consultant				* Selection of consultant was delayed due to the lack of PMU in 2002. * However, draft TOR for the consultant was prepared. * Final TOR for consultant would be finalized in 2003.
2	Consultation process				* Consultation process by the consultant did not take place as the consultant was not on board. * Internal consultation process among relevant agencies was carried out by DIW in October 2002 through a MDI workshop.
	Technical Assistance for Textile and Garment Industry	To develop local exposure limit and proper ventilation system, and	1,400 Garment and Textile factories	Reduction of 1,1,1-TCA in Textile and Garment Industry	

		carry out information dissemination			
1	Appointment of the Consultant				<p>* DIW initiated discussion with Thailand Textile Industry (TTI).</p> <p>* TTI was willing to carry out the program. Preparation of a detailed project proposal for this assignment was being developed.</p> <p>* Project proposal will be completed in 2003.</p>
2	Development of Local Exposure Limit				* Activity will be proceeded soon after consultant is on board.
3	Development of Guidelines for Proper Ventilation System				* Activity will proceed when the consultant is on board in 2003.
4	Information Dissemination				* DIW launched information dissemination program through its 2002 public awareness campaign.
	Mandatory Requirement for MAC Inspection	To prevent HFC MAC system from any backward retrofit that will be used with 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	
1	Development of a Standard Inspection Manual				<p>* Selection of consultant to develop the manual was delayed due to lack of PMU in 2002.</p> <p>* However, the Steering Committee comprising of representatives from DIW and LTD was established in late 2002.</p> <p>* Development of a Standard Inspection Manual will be initiated in 2003.</p> <p>* Actions regarding regulatory requirements with Land Transportation Department (LTD) were discussed. A draft MOA established formal cooperation between DIW and LTD on the</p>

					implementation of the activities in the NCFCP and the cooperation in development of a regulatory framework to support sustainable phase-out of CFC in the MAC sector, was finalized.
	Train-the-Trainer Program for MAC Service Technicians and Certification of MAC Service Technicians	Strengthen 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	
1	Train-the-Trainer programme				<ul style="list-style-type: none"> * DIW initiated discussion with Department of Skill Development (DSD) to act as authorized training centers. * Scope of works for the authorized training centers was discussed and agreed between DIW and DSD. * DSD agreed to act as authorized training centers and was in process of seeking endorsement from its Director General. * MOA between DIW and DSD was signed in August 2002.
	Customs Training Program	Strengthen capacity of the Customs Department to inspect import of controlled substances	Customs Department ' officials	Increase effectiveness of import control system of controlled substances	
1	Development of a Training Course				<ul style="list-style-type: none"> * Selection of consultant to develop the Customs Training Manual was delayed due to lack of PMU in 2002. * However, discussion with the Customs Department was initiated and the Steering Committee comprising of representatives from the Customs Department and DIW was established in mid 2002. A MOA between the two agencies was signed in December 2002.

					<p>* Scope of works for the training course was agreed between DIW and the Customs Department.</p> <p>* Draft TOR for the consultant to develop Customs Training Manual was developed.</p>
	Project Management Unit	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	
1	Set up of PMU				<p>* Structure of PMU was finalized. The PMU will be manned by one Chief of PMU, two Technical Officers, one Public Outreach officer, one Financial Officer, and one General Administrative staff member.</p> <p>* TORs for these staffs were finalized.</p> <p>* Selection of Chief of PMU was in the process of seeking the Bank no objection.</p> <p>* It was planed that selection of other staffs members would be carried out in 2003 after the Chief of PMU was appointed.</p>
2	Implementation Assistance				<p>* DIW proceeded with preparation of foam, aerosol, and solvent sub-project.</p> <p>* For the foam sector, a series of meetings with polyol suppliers were held. The objective of these meetings was to finalize an implementation framework for phasing out CFCs in large and small foam enterprises. The implementation framework was concluded in</p>

					2002. * For the aerosol and solvent sectors, DIW already contacted enterprises to confirm as to whether they would like to participate in the project and to collect additional and updated baseline information necessary for preparation of project proposals.
3	Public Awareness Activities				* DIW organized an International Ozone Day Ceremony aiming to disseminate information on the Montreal protocol, the NCFCP strategies and the Government policy to relevant stakeholders in the government sector and the general public. * In addition, DIW also participated in a number of training and/or workshops in the country to disseminate information regarding the NCFCP.
4	Regulatory Support				Actions regarding regulatory requirements were discussed among relevant agencies.

4. TECHNICAL ASSISTANCE ---CY 2003 [Year of Annual Work Program] – as of October 10, 2003

MDI: TOR for the consultant to develop CFC MDI transition strategy will be finalized in 2003. The Allergy and Immunology Society of Thailand has confirmed its interest to undertake the assignment. DIW sent the final TOR to the Allergy and Immunology Society of Thailand and request it to prepare a project proposal. It is anticipated that the project proposal will be submitted to DIW by no later than the end of 2003. DIW will secure no objection from the Bank to appoint the Allergy and Immunology Society of Thailand as the consultant for this activity by the end of 2003 in order to allow the appointment of the consultant to begin in early January 2004.

Technical Assistance for Textile and Garment Industry: The Thailand Textile Industry has submitted project proposal for DIW for consideration in April 2003. However, due to a change of its Director in Mid 2003, implementation of activities was postponed because it is essential to seek endorsement from its new Director. From the discussion with the TTI, the TTI has confirmed its interest to perform the assignment as proposed in the proposal and also interested in undertaking the roles of coordinator for the investment component for acquisition of proper ventilation systems. The TTI is modifying project proposal to cover

investment component and will submit to DIW in order to secure no objection from the Bank. Contract signing is expected by the end of December 2003.

Mandatory Requirement for MAC Inspection: Discussion with the Land Transportation Department (LTD) to include MAC inspection as part of vehicle inspection is in progress. The LTD agreed to have MAC inspection requirement as a part of vehicle inspections. It was agreed that MAC inspection requirements will be introduced initially in the inspection stations owned by LTD, which are located throughout the country. The coverage of the inspection stations will include the private vehicle inspection stations after the effectiveness of the inspection program is confirmed. Results from the initial MAC inspection program will be used as supporting information to issue necessary regulations. Specification of refrigerant identifiers and TOR for consultant are being drafted.

Train-the-Trainer Program for MAC Service Technicians and Certification of MAC Service Technicians: The Department of Skill Development has proceeded with the implementation by sending program details to all training centers located throughout the country. In mid 2003, representatives from DIW and the Bank participated in a meeting established by DSD. The objective of this project was to provide clarifications with regard to project implementation to Directors of these training centers. It was agreed in the meeting that a technical working group would be established in order to develop a training course for the train-the-trainer program. As of September 2003, the technical working group comprising of representatives from DIW, DSD, MAC manufacturers, and UNEP has been established by the DSD. The Scope of the training course has been developed and is reviewed by the technical working group. The development of the training course and the training manual will be completed by the end of 2003. The train-the-trainer program will start in early 2004.

With regard to training equipment for authorized training centers, equipment specifications have been developed. In the meantime, DIW has coordinated with MAC manufacturers to include this training program as part of MAC manufacturers' routine training programs for their customers. It was found that one MAC manufacturer is currently launching series of 16 training workshops. The scope of the training being offered is similar to the training course developed by DSD. Therefore, DIW will participate in these workshops in order to use the network of this MAC manufacturer to distribute service tools to the MAC service shops.

In addition, with regard to provision of financial incentives for certified MAC service shops under the program to procure servicing tools and recovery and recycling machines, procurement of these equipment items will be carried out through a voucher scheme. Qualification of equipment suppliers and technical specifications of equipment being sought under the program were developed. DIW is now undertaking selection of qualified equipment suppliers that will be listed in the voucher.

Customs Training: Scope of training course has been prepared and endorsed by the Steering Committee. In the meantime, DIW carried out the selection process to appoint a consultant to assist in developing the Customs training manual. A consultant has already been selected and it is anticipated that the contract will be signed by end of October 2003. It is expected that development of training manual will be completed by the end of January 2004 so the train-the-trainer program could be carried out immediately.

Project Implementation and Monitoring: The Chief of PMU was appointed on May 1, 2003. For other staff members, they have joined the unit since July 2003 and the last position was

filled on September 1, 2003. PMU is now fully functional and has proceeded with the implementation of the activities as proposed in the NCFCP.

For public awareness activities, DIW participated in an exhibition established for automobile industry in early September 2003. At the exhibition, DIW in close cooperation with MAC manufacturers conducted a theoretical presentation and a hand-on demonstration on how to repair MAC system properly. A number of brochures describing the government policies in relation to the NCFCP and the proposed activities in the MAC service sector have been distributed to participants. In addition, on an International Ozone Day, DIW undertook a workshop aiming to disseminate the Montreal Protocol and the NCFCP to government agencies and the private sector.

DIW is in the process of requesting the Ministry of Finance to exempt import duties of equipment that will be procured and provide to related government agencies such as (i) refrigerant identifiers for the Customs Department and LTD, and (ii) service tools and recovery & recycling machines for DSD. Decisions on tax exemption are expected to be made by the end of November 2003 so DIW could proceed with procurement of these equipment items shortly.

No.	Proposed Activity	Objective	Target Group	Impact	Status
	Technical Assistance for MDI Sector	To increase awareness on CFC MDI transition plan	Pharmaceutical Association, Doctors, MDI Importers, and Patients	To promote the use of non-CFC MDI	
1	Selection of consultant				* TOR for a consultant has been finalized. * The Allergy and Immunology Society of Thailand is preparing project proposal for the assignment and will submit to DIW by the end of 2003. * Contract signing is expected by the end of November 2003.
2	Consultation process				* Will proceed after contract signing.
3	Development of MDI Strategy				*Development of CFC MDI Transition strategy will be completed by the end of 2004.
	Technical Assistance for Textile and Garment Industry	To develop local exposure limit and proper ventilation system, and carry out	1,400 Garment and Textile factories	Reduction of 1,1,1-TCA in Textile and Garment Industry	

		information dissemination			
1	Appointment of the Consultant				<p>* Project proposal was submitted to DIW in April 2003.</p> <p>* Change of the top management of the Thailand Textile Institutes resulted in project implementation delays as DIW had to seek reconfirmation from the TTI.</p> <p>* TTI has confirmed its interest to act as the consultant and also interested in undertaking the role of a coordinator for the investment component for acquisition of proper ventilation systems.</p> <p>* TTI is modifying project proposal to cover investment component and will submit to DIW to secure Bank no objection.</p> <p>* Contract signing is expected by the end of December 2003.</p>
2	Development of Local Exposure Limit				* Activity will proceed when the consultant is appointed.
3	Development of Guidelines for Proper Ventilation System				* Activity will proceed in 2004.
4	Information Dissemination				* DIW has launched information dissemination program through its 2003 public awareness campaign.
5	Processing of Applications from Garment Factories				* Activity will start in 2004.
6	Safety Audit				* Activity will start and complete in 2004.
	Mandatory Requirement for MAC Inspection	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	
1	Development of a Standard Inspection Manual				<p>*TOR for consultant will be finalized in 2003.</p> <p>* DIW and the Land</p>

					<p>Transportation Department will work closely with the relevant industry in determining a standard for a minimum content of R-12 in R-134a MAC systems.</p> <p>* Inspection manual is expected to be completed in early 2004.</p>
2	Training for Vehicle Inspection Technician				* Training will be carried out in 2004
3	Procurement of Equipment				<p>* Specification of refrigerant identifiers is being prepared.</p> <p>* DIW is requesting the Ministry of Finance to exempt import duty of refrigerant identifiers. Final conclusion for tax exemption is expected by the end of November 2003 so DIW can proceed with procurement of this equipment in 2004.</p>
4	Equipment Delivered				* 2004
	Train-the-Trainer Program for MAC Service Technicians and Certification of MAC 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	
1	Train-the-Trainer programme				<p>* Scope of Training Course was developed. The Steering Committee established by the Department of Skill Development (DSD) is reviewing scope of training.</p> <p>* Development of a training manual will be completed by the end of 2003.</p> <p>* Training of the trainers will be carried out in early 2004.</p> <p>* Specification of equipment for authorized training centers has been developed. Procurement process will start in 2003.</p>
2	Certification of Service Technicians				<p>* Will be implemented in 2004 after the train-the-trainer program is completed.</p> <p>* However, in the mean time,</p>

					DIW will participate in 16 training workshops organized by one of the MAC component manufacturer to launch this activity.
3	Procurement of MAC Service Tools				<ul style="list-style-type: none"> * To be executed through a voucher scheme. * Specification of equipment has been developed. * Selection of qualified suppliers to be listed in the voucher is in the process and will be completed by November 2003.
4	Procurement of MAC R&R Machines				<ul style="list-style-type: none"> * To be executed through voucher scheme. * Specification of equipment has been developed. * Selection of qualified suppliers to be listed in voucher is in the process and will be completed by November 2003.
	Customs Training Program	Build technical capacity of custom officials to inspect the import chemicals	Customs Officials	Strengthen effectiveness of import control system of CFC	
1	Development of a Training Course				<ul style="list-style-type: none"> * A representative from Thailand participated in the Customs workshop in the Philippines in February 2003. * Scope of the training course has been developed and endorsed by the Steering Committee. * Consultant to develop a training manual has been selected and contract will be signed in end of October 2003. * Development of a training manual will be completed by the end of January 2004.
2	Train-the-trainer Program				<ul style="list-style-type: none"> * Training for the trainer will be implemented in early 2004.

3	Procurement of Equipment				<p>* Specification of refrigerant identifier is being prepared.</p> <p>* DIW is requesting the Ministry of Finance to exempt import duty of refrigerant identifiers. Final conclusion for tax exemption is expected by the end of November 2003 so DIW can proceed with procurement of this equipment item immediately.</p>
	Project Management Unit	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	
1	Set up of PMU				* Appointment of 6 PMU staffs was completed and PMU is fully operational.
2	Implementation Assistance				<p>* Consultant for preparation of project proposals in the aerosol will be on board by the end of November 2003.</p> <p>* The Working Group for project preparation in foam sector has been established.</p> <p>* DIW obtains additional and updated baseline information of foam enterprises from polyol suppliers. Classification of large and small scale enterprises was completed.</p> <p>* First batch of project proposals for foam sector will be submitted to the Bank by the end of November of 2003.</p> <p>* 2 of the remaining 3 aerosol enterprises have converted to alternative technology. Project proposals for the aerosol sector will be completed by the end of</p>

					<p>December 2003.</p> <p>* 3 of the 4 remaining enterprises in the solvent sector have converted to alternative technology. Project proposals for the solvent sector (CFC-113) will be completed by the end of December 2003.</p> <p>* Summit Footwear & Seat has stopped using 1,1,1-TCA and convert to 1,1,2-TCE. Project will be implemented retroactively. A sub-grant will be signed by the end of 2003.</p> <p>* DIW has approached the Electrical Government Authority of Thailand (EGAT) with regard to the phase-out of its use of 1,1,1-TCA as a cleaning solvent. EGAT is developing a phase-out strategy and will revert to PMU in 2003.</p> <p>* DIW has approached the Government Pharmaceutical Organization (GPO). A project proposal will be submitted to PMU by the end of 2003.</p>
3	Public Awareness Activities				<p>* DIW participated in exhibition for automobile industry to demonstrate the hand-on implementation of the code of good practice for MAC servicing. A number of brochures regarding NCFCP and MAC service sector were distributed to participants in the exhibition.</p> <p>* DIW organized a workshop on International Ozone Day to disseminate information regarding Montreal Protocol and NCFCP to government agencies and private sectors.</p> <p>* Series of official announcements and/or public relations to inform the public and end-users of NCFCP have already been carried out.</p>

4	Regulatory Support				*Discussion on actions regarding regulatory requirements among relevant agencies has started.
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5. GOVERNMENT ACTION

CY 2002 [Preceding Year]

Based on the National CFC Phase-out proposal, the Government proposes to undertake a number of regulatory actions as part of the NCFCP. These actions include (a) control of CFCs, 1,1,1-TCA, and CTC consumption as stipulated in the Agreement of NCFCP; (b) monitoring compliance of those enterprises that previously received funding from MLF in all the sectors (aerosol, foam, refrigeration, solvent, MAC), (c) prohibit the use of CFC in the foam and aerosol sectors from 2005 onwards, and (d) prohibit the use of 111-TCA and CTC in the solvent sector from 2005.

Procedures for monitoring and enforcement will be established and training workshops will be provided to Government officials to carry out the tasks. The activities carried out in CY02 are summarized below.

NO.	POLICY/ACTIVITY PLANNED	SCHEDULE OF IMPLEMENTATION	STATUS
1.	Control of import/export quota through Hazardous Substances Act ¹	January -December 2002	Import/export control policy in place and in operation
2.	Workshop on NCFCP	December 2001	Completed
3.	Announcement of Import Quotas for CFCs from 2002-2010 ²	December 2001	Announcement of import quotas for 2002 was done through the workshop in December 2001
4.	Criteria and procedures for financial support for investment projects ²	January-December 2002	Completed for aerosol and solvent sector
5.	Information dissemination on CFC Replacement program and advantage from replacement	January-December 2002	Completed in 2002 and to be continued in 2003
6.	Implementation of Halon Management and Banking Program	January-December 2002	On-going
7.	Follow-up and Monitoring completed sub-projects	January-December 2002	Completed in 2002 and to be continued in 2003
8.	International Ozone Day Ceremony	16 September 2002	Completed

¹ 2002 Performance Target

² 2003 Performance Target

5. GOVERNMENT ACTION – (as of 30 September 2003)

CY 2003 [Year of Annual Work Program]

Verification of the consumption level. The Government has taken initiatives in the preparation of a consumption verification arrangement for CY 2002. The exercise was carried out during March to September 2003. A verification report for CY 2002 along with the 2003 Annual Work Plan was submitted to the Bank in October 2003. In addition, to facilitate the verification process in the future, DIW and the Customs Department have also discussed recommendations made by the independent auditor to improve the data collection process.

Other Activities. With regard to achievement of phaseout activities, DIW was informed that universities have decided to remove sugar coating manufacturing technology for medicine tablets, which requires CTC in the process, from their curriculum. In addition, regulatory to ban the use of CFCs, 1,1,1-TCA and CTC in manufacturing sector has been re-announced to importers of these chemicals in the September 2003 meeting. In addition, the regulatory to ban the use of CFCs in foam manufacturing sector has been announced again to all polyol suppliers.

DIW also plans to carry out a number of regulatory actions related to ODS and to carry out public awareness activities. This is to increase knowledge and awareness of the enterprises and the public of the government policies pertaining to complete phaseout of CFCs, TCA, and CTC as per the Agreement of the NCFCP between the Government of Thailand and the Executive Committee.

In addition, DIW is in a process of requesting the Ministry of Finance to exempt import duties of equipment that will be procured and provide to related government agencies such as (i) refrigerant identifiers for the Customs Department and LTD, and (ii) service tools and recovery & recycling machines for DSD. Decisions on tax exemption are expected by the end of November 2003.

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

NO.	POLICY/ACTIVITY PLANNED	SCHEDULE OF IMPLEMENTATION	STATUS
1.	Control import quota for CY2003 through Hazardous Substances Act ¹	January-December 2003	Import control policy in place and in operation and quota was issued in December 2002
2.	Verification of CFCs, 1,1,1-TCA, and CTC consumption for CY 2002	March-September 2003	Completed
3.	Announcement of Import Quotas for CFCs from 2002-2010 ²	September 2003	Announcement of import quotas was re-informed to importers in 2003
4.	Announcement of ban on the use of CFCs, 1,1,1-TCA, and CTC in	September 2003	Announcement of ban was re-informed to importers in 2003

¹ 2002 Performance Target

² 2003 Performance Target

	manufacturing sector		
5.	Announcement of ban on the use of CFCs in foam sector	June - September 2003	Announcement of ban was re-informed to polyol suppliers
6.	Criteria and procedures for financial support for investment projects ²	June-September 2003	Completed for foam sub-sector
7.	Announcement of Mandatory MAC Inspection Requirement ³	January-December 2003	On-going (In process of discussion with LTD)
8.	Develop Strategy – Ban the Use of CFCs in aerosol, foam, and commercial refrigeration manufacturing sector ³	January-December 2003	On-going
9.	Information dissemination on CFC Replacement program and advantage from replacement	January-December 2003	Completed in 2003 and to be continued in 2004
10.	Establishment of Project Management Unit (PMU)	January–August 2003	Completed and PMU is fully operational
11.	Import Duty Exemption	August-December 2003	On-going
12.	Follow-up and Monitoring completed sub-projects	January-December 2003	Completed in 2003 and to be continued in 2004
13.	International Ozone Day Ceremony	16 September 2003	Completed

³ 2004 Performance Target

6. ANNUAL BUDGET

In line with the activities described above, the annual budget is summarized below.

CY 2002 [Preceding Year]

No.	Activity	Planned Expenditure (USD)	Actual Expenditure (USD) ¹	Remarks
1	Investment Projects - Aerosols	102,960	0	
2.	TA for MDIs	57,200	0	
3.	Investment Projects - CFC-113	965,120	0	
4.	Investment Projects - 1,1,1-TCA	440,500	0	
5.	Technical Assistance: Garment	166,100	0	
6.	Investment Projects - Foam	2,200,000	0	
7.	MAC Inspection Requirement	800,000	0	
8.	Train-the-Trainer - MAC	180,000	0	
9.	Project Management Unit	200,000*	0	
10.	Custom Training	82,500	0	
	Total	5,194,380	0	

*Unused funds will be reallocated to support increasing activities of PMU in 2004 and 2005.

¹ Disbursement cannot be made as the Grant Agreement was being amended in 2002. Unless the Grant Agreement is amended, the Government of Thailand cannot disburse funding for project activities. The amendment was effective on December 27, 2002.

Table 1: Database as Reported in 2002 Progress Report

Status	Agency	Project Title	Multi-Year/Multi-Year Partial Phase-out/One-off Phase-Out/Individual/RMP/RMP Update/RMP for Non-LVC/Halon Banking	Region	Country	Sector	Mtg	Type	Num	A/N	O/T	IRD	Chemical	Consumption ODP to be Phased Out per Proposal	Consumption ODP Phased Out	Production ODP to be Phased Out per Proposal	Production ODP Phased Out
COM	IBRD	National CFC phaseout plan: 2002 Annual Programme	Multiyear	ASP	THA	PHA	35	INV	137	N	O	I		0	0	0	0
ONG	IBRD	National CFC phase-out plan: release of second tranche for implementation of the 2002 annual plan	Multiyear	ASP	THA	PHA	37	INV	138	N	O	I		0	0	0	0

Project Title	Date Approved	First Disbursement Date	Date of Compl per Proposal	Planned Date of Completion	Date Completed (Actual)	Date of Financial Completion	Approved Funding (US\$)	Adjustment (US\$)	Approved Funding plus Adjustments (US\$)	Funds Disbursed (US\$)	Per Cent of Funds Disbursed	Balance (US\$)
National CFC phaseout plan: 2002 Annual Programme	1/12/2001		1/12/2002		1/12/2002		540,000.00	0	540,000.00	0	0	540,000.00
National CFC phase-out plan: release of second tranche for implementation of the 2002 annual plan	1/7/2002		1/8/2003	1/8/2003			5,194,380.00	0	5,194,380.00	0	0	5,194,380.00

Project Title	Funds Obligated (US\$)	Estimated Disbursement in Current Year (US\$)	Support Cost Approved (US\$)	Support Cost Adjustment (US\$)	Support Cost Disbursed (US\$)	Support Cost Balance (US\$)	Support Cost Obligated (US\$)	Year Approved	Months from Approval to First Disbursement	Months from Approval to Completion per Proposal	Months from Approval to Planned Completion	Months from Approval to Completion
National CFC phaseout plan: 2002 Annual Programme	540,000.00	150,000.00	27,000.00	0	0	27,000.00	27,000.00	2001	0	12	0	12
National CFC phase-out plan: release of second tranche for implementation of the 2002 annual plan	5,194,380.00	500,000.00	459,494.00	0	0	459,494.00	459,494.00	2002	0	13	13	0

Project Title	Remarks (Specify milestone achieved, remedial actions, and issues of relevance to ExCom)	Remarks (continued) (for Multi-Year, One-off address provisions of agreement, RMPs; and implementation of conditions of agreements).	Year of Contribution	Com Imp Delay	Sum of AO and AP	ONG or COM AM	ONG or COM AM for CPG,TAS,TRA AND INS	Sum of AO and AP for CPG,TAS,TRA
National CFC phaseout plan: 2002 Annual Programme	Country/Bank amended grant agreement signed Dec. 02. TOR for Project Management Unit chief done and advertisement will be done by Mar. 03. Roles and responsibilities of other staff in PMU have been decided upon and TOR being prepared. Second tranche for 2002 AP approved at the 37th ExCom.			0	12	0	0	0
National CFC phase-out plan: release of second tranche for implementation of the 2002 annual plan	NCFCP Regional Workshop conducted Dec. 02. NCPP activities conducted are, (1) Aerosol: Enterprise contacted and supporting documents being prepared. (2) Solvents: Thai Textile Institute preparing proposal. (3) Foam: Series of meetings with polyol suppliers held. (4) Training-the-Trainer for MAC: MOA between DIW and Department of Skill Development (DSD) signed. (5) MAC Inspection: Steering Committee was established and MOA between LTD and DIW was being reviewed. (6) MDI: Discussion with Food and Drug Administration initiated and FDA preparing consultant TOR. (7) Customs Training: Discussion with Customs Department initiated and MOA signed.			0	13	0	0	0

Project Title	Year of Business Plan	Business Plan Allocation (Investment/Non-Investment)	Multi-Year Current Tranche - Consumption Performance Target (ODP Tonnes)	Multi-Year Current Tranche - Actual Consumption (ODP Tonnes)	Multi-Year Current Tranche - Production Performance Target (Odp Tonnes)	Multi-Year Current Tranche - Actual Production (ODP Tonnes)	Multi-Year Current Tranche Confirmation of Annual Performance Target - Annual Target Met as Reported by Country (Yes/No)	Multi-Year Current Tranche Confirmation of Annual Performance Target - Verification Completed (Yes/No)	Multi-Year Current Tranche Confirmation of Annual Performance Target - Verification Report to ExCom (Yes/No)
National CFC phaseout plan:	2001	INV	0	0	0	0			

2002 Annual Programme												
National CFC phase-out plan: release of second tranche for implementation of the 2002 annual plan	2002	INV	3107.52	3102.77	0	0	Yes	No	No			

Table 2: Multi-year Agreement Summary

Country	Sector Plan/National ODS Phase-Out Plan	Date Approved	Planned Date of Completion	Funds Committed by ExCom (US\$)	Funds Released including Present Year by ExCom (US\$)	Funds Disbursed to the Country (US\$)	Total ODP Consumption to be Phase-out for the Plan	ODP Consumption Allowed for the Reporting Year	Actual ODP Consumption for Reporting Year	Total ODP Production to be Phase-out for the Plan	ODP Production Allowed for the Reporting Year	Actual ODP Production for Reporting Year	Remarks (Achievement of Conditions of Approval, Milestones, Relevant Issues concerning next Targets)
Malaysia	National CFC phaseout plan: 2002 Annual Programme	Dec-01	Dec-09	14,728,626	5,734,380		3,108	3,108	3,103				New PMU chief hired and staff recruitment will now commence.

CY 2003 [Year of Annual Work Program] – As of October 10, 2003

No.	Activity	Planned Expenditure (USD)	Actual Expenditure (USD)	Remarks
1.	Investment Projects - 1,1,1-TCA	440,500	0	
2.	TA for contact cleaners	23,100	0	
3.	Investment Projects - Foam	1,419,846	0	
4.	MAC Inspection Requirement	437,500	0	
5.	Train-the-Trainer - MAC	139,000	0	
6.	Financial Subsidy for Purchasing MAC Servicing Equipment	990,000	0	
7.	Financial Subsidy for Purchasing MAC R&R Machines	279,400	0	
8.	Project Management Unit	200,000	67,076	
9.	Custom Training	82,500	0	
	Total	4,011,846		