NACIONES UNIDAS

EP

Programa de las Naciones Unidas para el Medio Ambiente

Distr.
GENERAL

UNEP/OzL.Pro/ExCom/48/39
2 de marzo de 2006

ESPAÑOL
ORIGINAL: INGLÉS

COMITÉ EJECUTIVO DEL FONDO MULTILATERAL
PARA LA APLICACIÓN DEL
PROTOCOLO DE MONTREAL
Cuadragésima Octava Reunión
Montreal, 3 al 7 de abril de 2006

PROPUESTA DE PROYECTO: TAILANDIA

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

Eliminación

- Plan nacional de eliminación de CFC: programa anual de 2006 — Banco Mundial

PROYECTOS PLURIANUALES – HOJA DE EVALUACIÓN DE PROYECTO
TAILANDIA

TÍTULO DEL PROYECTO	ORGANISMO BILATERAL/ORGANISMO DE EJECUCIÓN
Plan nacional de eliminación de CFC: programa anual de 2006	Banco Mundial

ORGANISMO DE COORDINACIÓN NACIONAL:	Ministerio de Obras Industriales

DATOS DE CONSUMO MÁS RECIENTE PARA SAO OBJETO DEL PROYECTO
A: DATOS DEL ARTÍCULO 7 (TONELADAS PAO, 2004, A FEBRERO DE 2006)

CFC: 1 358,32			

B: DATOS SECTORIALES DEL PROGRAMA DE PAÍS (TONELADAS PAO, 2005, A FEBRERO DE 2006)

SAO	Espumas	Refrigeración					
CFC	114,28	1244,04					

Consumo de CFC remanente admisible para la financiación (toneladas PAO)	n/c

PLAN ADMINISTRATIVO DEL AÑO EN CURSO: Financiación total: millones 851 600 $EUA; eliminación: completa: 243 toneladas PAO.

DATOS DEL PROYECTO		**2006**	2007	2008	2009	2010	Total *
CFC (toneladas PAO)	Límites del Protocolo de Montreal						
	Límite de consumo anual	**1 121**	912	704	496	0	**3 066**
	Eliminación anual con proyectos en curso						
	Eliminación anual nueva abordada						
	Eliminación anual no financiada						
TCA (toneladas PAO)	Límite del Protocolo de Montreal						
	Límite de consumo anual	**4,5**	4,5	4,5	4,5		**34**
	Eliminación anual con proyectos en curso						
	Eliminación anual nueva abordada						
	Eliminación anual no financiada						
CTC (toneladas PAO)	Límite del Protocolo de Montreal						
	Límite de consumo anual	**1,13**	1,13	1,13	1,13	0	**8**
	Eliminación anual con proyectos en curso						
	Eliminación anual nueva abordada						
	Eliminación anual no financiada						
CONSUMO TOTAL DE SAO A ELIMINAR		**243**	**209**	**208**	**208**	**502**	**3 108**
Consumo total de SAO a agregar (HCFC)							
Costos del proyecto ($EUA):							
Financiación para el organismo de ejecución principal: **Banco Mundial**		**851 600**	550 000	550 000	385 000		14 728 626
Financiación total del proyecto		**851 600**	**550 000**	**550 000**	**385 000**		**14 728 626**
Costos de apoyo ($EUA))							
Costos de apoyo para el organismo de ejecución principal: **Banco Mundial**		**68 644**	49 500	49 500	34 650		1 263 976
Costos de apoyo para [*organismo de cooperación*]							
Total de costos de apoyo		**68 644**	**49 500**	**49 500**	**34 650**		**1 263 976**
COSTO TOTAL AL FONDO MULTILATERAL ($EUA)		920 244	599 500	599 500	419 650	0	15 992 602
Relación de costo a eficacia final del proyecto ($EUA/kg)		4,80 $EUA/kg PAO					

* *Los totales incluyen cifras de consumo, eliminación y costo desde la aprobación en 2001 (aprobación del proyecto) hasta 2010.*

SOLICITUD DE FINANCIACIÓN: Aprobación del financiamiento para el programa de trabajo de 2006 del plan nacional de eliminación de CFC de Tailandia, según lo indicado anteriormente.

RECOMENDACIÓN DE LA SECRETARÍA	Aprobación general en los costos indicados anteriormente.

DESCRIPCIÓN DEL PROYECTO

Antecedentes

1. En su 35ª Reunión, el Comité Ejecutivo aprobó el plan nacional de eliminación de CFC de Tailandia y acordó, en principio, el financiamiento total de 14 728 626 $EUA, que se desembolsará entre 2001- 2009, destinado a eliminar el consumo restante de 3 066 toneladas PAO de CFC, Anexo A, Grupo I, 34 toneladas PAO de 1,1,1-TCA y 7,52 toneladas PAO de tetracloruro de carbono. Desde su aprobación, se liberaron al Banco Mundial cinco partidas que representaban los programas de trabajo anuales de 2001 a 2005, con desembolsos totales de 12 392 026 $EUA. En cada uno de los programas anuales terminados, el plan nacional de eliminación redujo satisfactoriamente el consumo de SAO muy por debajo de los objetivos establecidos en el Acuerdo.

Propuesta del proyecto

2. Consecuente con el Acuerdo, el Banco Mundial presenta a la 48ª Reunión el pedido de liberación de la partida de 2006, por un monto de 851 600 $EUA, y los gastos de apoyo asociados, 68 644 $EUA. La propuesta consiste en un informe preliminar sobre la ejecución del programa de trabajo de 2005 y el programa de trabajo propuesto para 2006. Según el Acuerdo, que condiciona el desembolso de 2006 a la verificación satisfactoria, por parte del Banco Mundial, del cumplimiento por Tailandia del objetivo de consumo para 2004, el Banco Mundial adjunta la auditoría de las importaciones de CFC, 1,1,1-TCA y CTC para el año 2004 correspondiente a ese país. Se adjuntan las auditorías de las importaciones de 2004 y el programa de trabajo anual de 2006.

3. La Tabla 1 siguiente resume los datos clave del programa anual de trabajo de 2006 del plan nacional de eliminación de Tailandia.

Tabla 1

País	Tailandia
Título del proyecto:	Proyecto de eliminación de SAO de Tailandia Plan nacional de eliminación de CFC
Año del plan	2006
N° de años terminados	4
N° de años restantes bajo el plan	4
Tope para el consumo de SAO de 2005 (en toneladas PAO), plan anual de 2005	1 364 toneladas PAO de sustancias químicas del Anexo A, Grupo I (CFC) 4,5 toneladas PAO de TCA 1,13 toneladas PAO de CTC Total: 1 369,63 toneladas PAO
Tope para el consumo de SAO de 2006 (en toneladas PAO), plan anual de 2006	1 121 toneladas PAO de sustancias químicas del Anexo A, Grupo I (CFC) 4,5 toneladas PAO de TCA 1,13 toneladas PAO de CTC Total: 1 126,63 toneladas PAO
Financiamiento total aprobado en principio para el plan de eliminación de CFC	14 728 626 $EUA
Financiamiento total liberado a diciembre de 2005	12 392 026 $EUA
Nivel de financiamiento pedido para el plan anual de 2006	851 600 $EUA

Informe preliminar sobre el programa de trabajo anual de 2005

4. La verificación de las importaciones de SAO para 2004 cubierta por el Acuerdo mostró que el consumo real de estos productos químicos en Tailandia fue el siguiente: 1 320,06 toneladas PAO de CFC, y cero tonelada PAO de 1,1,1-TCA y CTC. Todos estos niveles se encuentran por debajo de los objetivos de 2004, según lo indicado en el Acuerdo, a saber: 2 291 toneladas PAO para CFC; 34 toneladas PAO para 1,1,1-TCA y 7,52 toneladas PAO para CTC, respectivamente. Los resultados preliminares del programa de trabajo de 2005 mostraron una vez más que el consumo estaba por debajo de los objetivos: 1 002,54 toneladas PAO de CFC, y cero tonelada PAO para 1,1,1-TCA y CTC, comparado con los objetivos: 1 364 toneladas PAO de CFC, 4,5 toneladas PAO de 1,1,1-TCA, y 1,13 tonelada PAO de CTC. El Banco Mundial planea una verificación de los resultados de 2005 para presentarlos en 2007.

5. La ejecución del plan de eliminación en 2005 siguió beneficiándose con los estrictos controles a las importaciones de CFC, instituidos por el Gobierno, y con los impuestos gravados a dichas importaciones. El Gobierno redujo resueltamente las cuotas de importación más rápidamente de lo establecido en el calendario de reducción del plan nacional de eliminación. Por otra parte, como medida para reducir la dependencia de CFC, el Ministerio de Finanzas introdujo impuestos a las importaciones de CFC que elevaron los precios de estas sustancias controladas. Esto permitió que muchas industrias se decidieran a cambiar el CFC por alternativas.

6. Además de la aprobación del Gabinete de una enmienda al Decreto Ministerial de la Ley sobre el Transporte B.E. 2522 y de la Ley sobre los Vehículos B.E. 2522 de 2004, la enmienda al Decreto entró en vigor en enero de 2005, introduciendo la inspección obligatoria de los refrigerantes en equipos de aire acondicionado para vehículos, como parte de la inspección anual de dichos vehículos. El Gabinete aprobó el marco legal para prohibir el uso de CFC y TCA en los sectores de fabricación que entró en vigor en 2005. Ambas medidas tendrían consecuencias importantes en la ejecución del plan nacional de eliminación después de 2005. Al mismo tiempo se han estado preparando instrumentos jurídicos similares y se anunció la proscripción de refrigeradores e inhaladores de dosis medida que usan CFC.

7. El programa siguió ejecutando varias actividades de asistencia técnica, como: el pleno funcionamiento de la Oficina de Gestión de Proyectos; una campaña pública eficaz para dar a conocer el plan nacional de eliminación y la política del Gobierno de proscripción del uso de CFC, CTC y 1,1,1-TCA en las fábricas, en 2005; y el programa de capacitación de instructores para los oficiales de aduana y los técnicos de equipos de aire acondicionado para vehículos. En 2005 se realizó una campaña especial para educar a los consumidores sobre los efectos potencialmente nocivos del uso de refrigerantes mezclados y fomentar la adaptación de aparatos de aire acondicionado para vehículos que utilizan CFC-12 para que puedan usar HFC-134a. Durante este período de planificación se formaron otros 1 000 técnicos de servicio y, como resultado, actualmente el total de técnicos capacitados a través de 2 547 talleres es de 3 589.

8. Hubo una actualización de los esfuerzos constantes por llegar a las industrias restantes que dependen de SAO para que conviertan su tecnología. En 2005 continuó la capacitación de los oficiales de aduana, con otros 700 oficiales que tomaron cursos de capacitación y con la

distribución de identificadores de refrigerantes en muchas de las oficinas y puertos. Los logros del programa de 2005 se presentan en las Tablas 3 y 4 del programa anual de 2006. La Tabla 6 da el presupuesto de 2005 y el desempeño financiero, proporcionando tanto los gastos anuales de 2005 como las cifras cumulativas desde el comienzo del plan. De los 12,39 millones $EUA aprobados, provenientes del Fondo Multilateral, los desembolsos cumulativos a diciembre de 2005 fueron 2,88 millones $EUA, con otros 7,33 $EUA millones comprometidos para desembolsos futuros.

9. El programa también informó sobre una nueva asignación de 29 474 $EUA, proveniente de las actividades de inversión, para la compra de identificadores de refrigerantes con el fin de encarar la cuestión de los refrigerantes mezclados.

Programa de trabajo de 2006

10. El programa anual de trabajo de 2006 propone reducciones de consumo más rápidas que las establecidas en el Acuerdo:

Tabla 2

	Objetivos Del Acuerdo Para 2006	**Propuestos Para 2006 En El Programa De Trabajo**
CFC	1 121 Toneladas PAO	994,71 Toneladas PAO
1,1,1-TCA	4,5 Toneladas PAO	0
CTC	1,13 Toneladas PAO	0

11. Si bien muchas de las actividades en curso en 2005 continuarían en 2006, el programa anual de 2006 introduciría tres actividades adicionales:

a) Suministro de equipos adicionales para servicio de equipos de aire acondicionado para vehículos con HFC-134a;

b) Centros de pruebas de refrigerantes; y

c) Preparación de la base de datos de CTC usado en laboratorios e identificación de las alternativas para el CTC.

12. De los 2 547 talleres acreditados para hacer el servicio de equipos de aire acondicionado para vehículos, 2 073 recibieron ya los comprobantes para el suministro de equipos de servicio de aire acondicionado para vehículos con HFC-134a. Esto es muy importante, dado que la sustentabilidad de la eliminación en este sector puede depender de la adaptación correcta de los aparatos de aire acondicionado que usan CFC-12 a aparatos que utilizan HFC-134a, y el conocimiento de los procedimientos de adaptación correctos.

13. Además, los talleres de servicio de aparatos de aire acondicionado para vehículos utilizan siempre los equipos de servicio para realizar las pruebas antes de repararlos, en lugar de seguir la antigua práctica de rellenar con refrigerante sin hacer ninguna inspección de fugas. En el futuro esto ayudaría a reducir la cantidad de refrigerante necesaria para recargar equipos de aire

acondicionado con fugas. Por lo tanto, el programa sugiere que se realicen otros talleres para acreditar a los técnicos de servicio de equipos de aire acondicionado y se otorgue una subvención financiera para los equipos de servicio de estos aparatos de aire acondicionado en 2006.

14. El refrigerante contaminado, inclusive también los productos químicos inflamables, plantea un gran problema para los talleres de equipos de aire acondicionado que no tienen los equipos para verificar el tipo de refrigerante. En 2006, el programa consideraría la posibilidad de crear institutos de capacitación, centros de capacitación y puestos de inspección de vehículos privados para suministrar un servicio de prueba de refrigerantes.

15. Como seguimiento de la reunión de 2005 de la red de SEAP del taller sobre ozono para oficiales de SAO y de aduana en Beijing, en 2006 se establecería una base nacional de datos del CTC usado en laboratorios. Esta información se utilizará para estimar el consumo nacional de CTC para usos que pueden considerarse como esenciales antes del año 2010. Con el fin de establecer la necesidad del CTC usado en laboratorios en todo el país, se debe realizar un estudio de los laboratorios especificados. En el último trimestre de 2005, el programa ya tenía un estudio preliminar con laboratorios seleccionados para determinar la necesidad y el uso de CTC.

16. El programa propone reasignar algunos de los ahorros provenientes del componente de inversión para financiar estas iniciativas en 2006.

Auditoría de las importaciones de SAO

17. Un contador público acreditado de Tailandia realizó la auditoría de las importaciones de CFC, 1,1,1-TCA y CTC correspondientes al año 2004. La auditoría abarcó un examen del procedimiento de control de importaciones/exportaciones, aplicado por el Gobierno, y la convalidación de importaciones reales comparadas con las cuotas de importación otorgadas, mediante la comprobación de los documentos que conservan los ministerios en cuestión.

18. El Ministerio de Obras Industriales y el Ministerio de Aduanas controlan conjuntamente la importación/exportación de SAO. El Ministerio de Obras Industriales es responsable de otorgar las cuotas de importación según los objetivos de consumo máximos anuales, establecidos en el plan nacional de eliminación, y el Ministerio de Aduanas se encarga de administrar en las fronteras el despacho de las importaciones y exportaciones de las SAO en cuestión. Sobre una base de muestreo, el auditor primero examinó y verificó las cuotas otorgadas a los importadores, comparando la cantidad máxima permitida en el plan nacional de eliminación y las cantidades permitidas según lo indicado en las licencias de importación. Luego, el auditor verificó la coherencia de los documentos justificativos que los importadores y los exportadores presentaron al Ministerio de Obras Industriales al solicitar el despacho. Estos documentos contenían las importaciones/exportaciones aprobadas por el Ministerio de Obras Industriales, una copia de las licencias de importación/exportación, facturas y conocimientos de embarque. Posteriormente, el auditor examinó los registros del Ministerio de Aduanas para comprobar la coherencia entre los documentos presentados al Ministerio de Obras Industriales y los que habían sido presentados al Ministerio de Aduanas. Finalmente el auditor examinó la metodología usada por el Gobierno para la recopilación de datos.

19. El auditor descubrió varias discrepancias, pero aclaró la mayor parte de ellas, ya que derivaban de la codificación incorrecta de los productos químicos importados o de las subastas autorizadas por el Ministerio de Obras Industriales de las cuotas no utilizadas. No obstante, hubo dos embarques de 63,36 toneladas métricas, que se registraron en el formulario de declaración de aduana como CFC-12, pero que en la factura se registró sólo como refrigerante, sin identificar la sustancia correctamente.

20. El informe de auditoría concluyó que los procedimientos empleados para controlar la importación de SAO eran satisfactorios y que las cifras de importación de SAO para 2004 fueron 218 285 toneladas PAO de CFC-11 y 1 101,7 toneladas PAO de CFC-12. En 2004 no hubo importaciones de CTC, TCA, CFC-113, CFC-114 ni CFC-115. Tailandia tampoco exportó ninguna de las SAO antedichas en 2004. Las importaciones verificadas estuvieron todas por debajo de los objetivos admisibles del Acuerdo, a saber: 2 291 toneladas PAO para CFC, 34 toneladas PAO para 1,1,1-TCA y 7,52 toneladas PAO para CTC, inclusive las 63,36 toneladas PAO de los productos químicos cuya identidad no pudo aclararse.

COMENTARIOS Y RECOMENDACIONES DE LA SECRETARÍA

COMENTARIOS

21. Los informes sobre la marcha de las actividades relativas al programa de trabajo anual de 2005 y el programa de trabajo de 2006 se elaboraron de acuerdo con las directrices para la preparación, ejecución y gestión de los planes de eliminación de SAO, sectoriales y nacionales, basadas en el desempeño (UNEP/OzL.Pro/ExCom/38/57) y aprobadas en la 38ª Reunión.

22. El Gobierno de Tailandia y el Banco Mundial siguieron haciendo esfuerzos encomiables en 2005 para hacer cumplir las políticas, con el fin de facilitar la ejecución del plan nacional de eliminación, especialmente con respecto a la prohibición de CFC y TCA en los sectores de fabricación y la inspección obligatoria de los equipos de aire acondicionado para vehículos en la inspección anual de vehículos. El informe inicial sobre el consumo de CFC en 2005 parecía indicar que Tailandia podría alcanzar el objetivo de reducción del 50 por ciento en 2005, aunque el resultado final se daría después de la verificación de las importaciones de 2005, que se harán a nivel mundial a principios de 2007.

23. Los objetivos de 2006 coincidían con los del Acuerdo y el plan de acción que incluyó las medidas en curso y nuevas iniciativas fue plausible y contribuiría al logro de dichos objetivos. Vale mencionar que la reducción que se alcanzará a partir de 2006 tendría que ser casi exclusivamente del sector de servicio, dado que en el sector de fabricación las actividades de conversión ya se habrían terminado. Eso dificultaría el proceso de las reducciones. Se espera que las nuevas iniciativas que se introducirían en 2006 aseguren de manera eficaz las reducciones.

24. El Gobierno de Tailandia introdujo un sistema de control de cuotas de importación de SAO que funciona bajo la responsabilidad común de varios ministerios. Un auditor debidamente autorizado verificó las importaciones en 2004, y examinó además la adecuación de las políticas

de control de las importaciones, los procedimientos promulgados por el Gobierno y los registros conservados por los ministerios gubernamentales pertinentes sobre las importaciones de SAO en 2004. El auditor se declaró satisfecho con las explicaciones sobre las discrepancias que descubrió en su auditoría y posteriormente sacó sus conclusiones y recomendaciones.

RECOMENDACIONES

25. A la luz de la verificación satisfactoria de que las importaciones de CFC, TCA y CTC, en 2004, en Tailandia, estuvieron por debajo de los objetivos de consumo fijados en el Acuerdo, la Secretaría recomienda que el Comité Ejecutivo:

a) Tome nota con beneplácito de la auditoría de las importaciones de CFC, TCA y CTC en Tailandia para el año 2004; y

b) Apruebe el programa de trabajo de 2006 del plan nacional de eliminación de CFC de Tailandia en el nivel del financiamiento solicitado, 851 600 $EUA, y los gastos de apoyo asociados, 68 644 $EUA, para el Banco Mundial.

THAILAND NATIONAL CFC PHASE-OUT PLAN

2006 ANNUAL PROGRAM

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

WITH ASSISTANCE FROM

THE WORLD BANK

19 January 2006

Thailand National CFC Phase-out Plan
2006 Annual Implementation Plan
Submitted to the 48th Executive Committee

DATA SHEET

COUNTRY:	**THAILAND**
PROJECT TITLE:	**National CFC Phase-out Plan**
YEAR OF PLAN: **NO. OF YEARS COMPLETED**: **NO. OF YEARS REMAINIG UNDER THE PLAN**:	2006 4 (2002 - 2005) 4 (2006 – 2009)
TARGET ODS CONSUMPTION IN 2005: **(AGREEMENT)**	• 1,364 ODP tonnes of Annex A, Group I • 4.5 ODP tonnes of 1,1,1-TCA • 1.13 ODP tonnes of CTC.
TARGET ODS CONSUMPTION IN 2006: **(AGREEMENT)**	• 1,121 ODP tonnes of Annex A, Group I • 4.5 ODP tonnes of 1,1,1 – TCA • 1.13 ODP tonnes of CTC.
TOTAL FUNDING APPROVED IN PRINCIPLE:	US$ 14,728,626
TOTAL FUNDING RELEASED AS OF DEC. 2005:	US$ 12,392,026
LEVEL OF FUNDING REQUESTED FOR 2006:	Investment: US$ 651,600 PMU cost: US$ 200,000 **Total: US$ 851,600**
NATIONAL IMPLEMENTING AGENCY:	Project Management Unit Department of Industrial Works
LEAD IMPLEMENTING AGENCY:	The World Bank
IA SUPPORT COSTS:	Investment (9%): US$ 58,644 PMU (5%): US$ 10,000 **Total: US$ 68,644**
CO-IMPLEMENTING AGENCY:	None

PROJECT SUMMARY

The National CFC Phaseout Plan will phase out the remaining consumption of 3,568 ODP tonnes 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 tonnes of 1,1,1-TCA and 7.52 ODP tonnes 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

2005 Annual Program Accomplishments

A. Targets Met

1. The actual consumption of ODS in Thailand in 2004 was 1,320.06ODP tonnes of CFCs. There were no imports of 1,1,1-TCA and CTC in 2004. These levels of consumption were well below the maximum allowable consumption values specified by the Agreement between Thailand and the Executive Committee, as summarized in Table 1.

Table 1: Consumption of ODS in 2004

All data in ODP Tonnes	CFCs	1,1,1 TCA	CTC	Total
Maximum allowable consumption in 2004	2,291	34	7.52	2,332.52
Actual imports in 2004[1]	1,320.06	0	0	1,320.06

[1] As will be presented in 2004 verification report, which is being submitted to the Executive Committee along with this 2006 AWP

2. As per the Agreement between Thailand and the Executive Committee, the annual consumption targets for 2005 include a maximum allowable consumption of 1,364 ODP tonnes of CFCs, 4.5 ODP tonnes of 1,1,1-TCA, and 1.13 ODP tonnes of CTC. These targets represent a reduction of 927 ODP tonnes of CFCs, 29.5 ODP tonnes of 1,1,1-TCA, and 6.39 ODP tonnes of CTC consumption from the previous year's targets.

3. In 2005, the actual consumption of CFCs was 1,002.54 ODP tonnes and zero for 1,1,1-TCA, and CTC. This indicates that Thailand has again surpassed its reduction targets for ODSs in 2005. Verification of the 2005 consumption data will be carried out by an independent auditor as part of the 2006 Annual Program. The 2005 verification report will be submitted to the Executive Committee along with the 2007 Annual Program.

A.1 Policy Actions

Import quotas and excise tax

4. Like CFC consumption in 2003, the significant reduction of CFC consumption achieved in 2004 was also partly attributable to two proactive policies of the Government, which have been consecutively implemented since 2002. These included (i) a policy from the Department of Industrial Works (DIW) to reduce import quotas in 2004 faster than what was originally planned in the National CFC Phase-out Plan and (ii) an excise tax on CFCs imposed by the Ministry of Finance. The Customs Training Program, which was implemented in 2004 through provision of train-the-trainer workshops and acquisition of refrigerant identifiers (RI), has also strengthened understanding on control procedures of relevant agencies and capacity of the Customs and Excise officials to control and monitor import of ODSs. Train-the-trainer workshops also contributed to training of the 700 Customs officials under its training curriculum. These activities have resulted in an

effective import control, which significantly contributed to achievement of CFC reduction achieved in 2004 and in 2005.

5. In addition, another measure that led to achievement of CFC reduction in 2004 was series of public awareness campaigns focusing (i) on the impacts of using CFC-12 contaminated with other chemicals, (ii) on the impacts of using improper refrigerants in MAC systems, in particular the use of CFC-12 in non-CFC MAC system, and (iii) the need and advantage to retrofit CFC-12 MAC system to HFC-134a MAC system. These public awareness campaigns have contributed to vehicle owners and technician of MAC service shops' attention not to use CFC-12 in HFC-134a MAC system and have CFC-12 MAC system retrofitted to HFC-134a MAC system, if applicable.

Mandatory MAC inspections

6. In March 2004, Cabinet has approved an amendment of the Ministerial Decree of the Transportation Act B.E. 2522 and of the Vehicle Act B.E. 2522 to include an inspection of refrigerant in MAC systems as part of the annual vehicle inspection to be enforced by the Department of Land Transport (DLT). The Ministry of Transportation has already signed amendment of the Transportation Act B.E. 2522 and of the Vehicle Act B.E. 2522 and have been effective since January 2005.

Ban of ODS in the manufacturing sector

7. In December 2004, Cabinet approved the legal framework proposed by the Ministry of Industry to ban the use of CFCs and 1,1,1-TCA in the manufacturing sector. The Ministerial Notification of the Factory Act B.E 2535 to ban the use of CFCs and 1,1,1-TCA in the manufacturing sector was signed by the Minster of Industry in July 2005 and publicized in the Royal Gazette in September 2005. To date, this Ministerial Notification has been effective and entered into forced by DIW.

Prohibit Import of CFC-MDI

8. In December 2005, the Food and Drug Administration (FDA) has announced lifting off registration of CFC-MDI containing Salbutamol, Futicasone and Sodium Gromoglycate in a total of 13 products from December 31, 2005. With this regulation, these CFC-MDIs were not able to be imported after December 31, 2005 but still can be sold in the market until their stocks are exhausted.

Prohibit import of CFC-based Refrigerators

9. The Cabinet has already approved a legal framework proposed by the Ministry of Commerce in February 2005 to prohibit import of CFC-based refrigerators. The Ministry of Commerce Notification to prohibit import of CFC-based refrigerators has been finalized by DIW, the Department of Foreign Trade (DFT), the Customs Department, and the Office of the Council of State.

A.2 Public Awareness activities

10. For the two legal frameworks with regard to (i) ban on the use of CFCs and 1,1,1-TCA in manufacturing sector and (ii) inspection of refrigerant in MAC systems as part of annual program, the Project Management Unit (PMU) has continually launched a number of public awareness activities to inform industries and public about these policies measures including the Government's policy to phaseout CFCs, 1,1,1-TCA, and CTC by 2010. This is to increase awareness of the public in deciding to adopt alternatives for their CFC-

based equipment (if applicable) and in helping to prevent unnecessary use of CFCs in MAC sector.

11. PMU has also launched advertisements on major newspapers to identify the remaining use of CTC in laboratories throughout the country. In addition, a number of questionnaires were also sent to known laboratories for the same proposes. This is an initiation to identify the remaining use of CTC in laboratories. Information obtained from laboratories would be aggregated as preliminary information to develop a database of CTC used in laboratories in Thailand.

12. Given that contaminated refrigerant have been widely spread in Thailand, these issued were raised during the certification of MAC technician workshops carried out in 2005. Information with regard to (i) impacts of using contaminated refrigerant, (ii) impacts of using improper refrigerants in MAC systems, in particular the use of CFC-12 in non-CFC MAC system, (iii) the need and advantage to retrofit CFC-12 MAC system to HFC-134a MAC system, and (iv) safety aspects of MAC service has been educated to MAC service shops during the workshops. In addition, PMU also disseminated the same information to the public through radios, newspapers, journals, magazines, advertisements etc. These consecutive public awareness campaigns have been very successful as has been established from feedback from vehicle owners and MAC service shops.

13. A Database of all certified MAC service shops whose technicians have undergone training from DSD has been developed and is functional. The database could be accessed from PMU website www.pmu.go.th.

B. Industry Action

B.1 Aerosol Sector

14. As reported in the 2005 AWP, two of three potential beneficiary companies identified in the National CFC Phaseout Plan have decided not to seek financial assistance. The last company, manufacturer of hi-temperature gold and aluminum automotive paint, automotive undercoat, penetrating oil, and crazy string, signed sub-grant agreement in 2004. This sub-project included procurement of equipment, development of new formulation and safety aspects of products. Completion of this sub-project was expected by February 2006. However, in early 2005, the enterprise decided not to seek financial assistance as it decided to stop manufacturing the products, which will be financed under the National CFCs Phaseout Plan. Therefore, this sub-project was cancelled in May 2005.

15. Given the above circumstance, the conversion of the aerosol sector has been completed, as there are no more enterprises in the sub-sector to seek financial assistance from the National CFCs Phaseout Plan.

B.2 Solvent Sector

CFC-113

16. As reported in the 2005 AWP, four companies of those initially identified confirmed their decision not to seek funding from the National CFCs Phaseout Plan and one company could not be contacted by DIW. There was only one company that confirmed its decision to seek financial support from the National CFCs Phseout Plan to convert to alkaline

cleaning solution on a retroactive financing basis. The sub-grant agreement has been signed and the baseline equipment has already been disposed. Implementation of this sub-project was completed in 2005. The sub-project's PCR has been approved by PMU in February 2005. The sub-project is considered physically and financial completed.

1,1,1-TCA

17. There were three enterprises that expressed their interest to seek financial assistance from the National CFCs Phaseout Plan. A Sub-project for a shoe sole manufacturer that converted its cleaning process to 1,1,2-TCE has been completed and the PMU endorsed the sub-project's PCR in December 2004. The sub-project is considered physically and financial completed.

18. The second sub-project was for a MAC component manufacturer to convert its cleaning process to hydrocarbon washing technology on the retroactive finance basis. After approval of appraisal report in December 2004, sub-grant agreement was signed in February 2005. Baseline equipment has been disposed and sub-project's PCR was endorsed by PMU in August 2005. The sub-project is considered physically and financial completed.

19. The final sub-project is to convert to dry-ice blasting techniques for cleaning of generator motors and to using 1,1,2-TCE for cleaning its small electric components. The sub-grant agreement with this company was signed in December 2004. Implementation of this sub-project was on-going in 2005. Equipment was delivered to the enterprises in December 2005. Commissioning of equipment is expected in March 2006 and endorsement of PCR is expected in June 2006.

CTC

20. As reported in the 2005 AWP, two companies previously identified as potential beneficiaries confirmed their decision not to seek financial support from the National CFCs Phaseout Plan. Only one enterprise in the pharmaceutical industry was identified as potential beneficiary of a CTC-conversion project. The sub-project would be implemented on retroactive finance basis.

21. Appraisal report for this sub-project was approved in April 2005 and sub-grant agreement was signed in July 2005. Disposal of baseline equipment was also carried out in July 2005. The sub-project's PCR was endorsed by PMU in September 2005. The sub-project is considered physically and financial completed.

B.3 Foam Sector

22. Financial assistance to foam enterprises under the National CFCs Phaseout Plan is being implemented through two modalities, as individual sub-projects and as group sub-projects. Progress of sub-project implementation in this sector is described below:

Individual sub-projects

23. As of December 2005, there were ten sub-projects for which baseline equipment had been disposed and PCRs had been approved by PMU. These sub-projects are considered physically and financial completed. Implementation of additional 19 sub-projects was on-going in 2005. PMU, in close coordination with financial intermediary, will work towards accelerating the implementation of these on-going sub-projects in 2006.

Group sub-project

24. PMU developed a group project proposal that includes acquisition of foam mixing equipment and safety equipment, as well as technology transfer & training and foam trial from polyol suppliers. Procurement of conversion assistance package will be undertaken through voucher scheme. Appraisal report of the group sub-project has been already endorsed by PMU in 2005. Although there were 28 small foam companies identified as potential beneficiaries, the number of eligible enterprises confirming their interest to participate in the group sub-project when appraised was 18. Implementation of conversion to alternative in this group sub-project was on-going in 2005 and is expected to be completed in 2006.

C. Technical Assistance

C.1 Project Implementation and Monitoring Unit (PMU)

25. Like those undertaken in 2004, the PMU carried out activities under three major components in 2005: (i) public awareness; (ii) investment activities; and (iii) policy related activities. Detailed activities for each component are described below:

Public awareness

Press Conference and Ceremony with Other Government Agencies

26. PMU in collaboration with the Customs Department organized a press conference in January 2005 to announce coordination between DIW and the Customs Department in inspecting imported ozone depleting substances to the public. 60 sets of RIs have also been officially hand-over to the Customs Department in this press conference.

27. In August 2005, PMU in cooperation with the Food and Drug Administration (FDA) organized a press conference to announce the ban on imports of Salbutamol CFC-MDI at the end of 2005 and the results from the CFC MDI Phaseout Strategy. Participants from relevant agencies, doctors, MDI and DPI pharmaceutical import companies, and media attended this press conference. A pamphlet describing CFC MDI has also been disseminated to the public in the press conference.

28. In November 2005, PMU in close collaboration with the Department of Skill Development (DSD) organized a ceremony to hand-on voucher to MAC service shops whose service technician undergone training from training centers of DSD. The ceremony was chaired by the Minister of Labor. The objective of this ceremony was to announce (i) cooperation between DIW and DSD to phaseout the use of CFCs in MAC sector (ii) success of the program, and (iii) establishment of certification of MAC service technicians in Phase 3, which would be undertaken starting from December 2005. There were approximately 1,000 participants from 683 MAC service shops, officials from the Ministry of Industry and the Ministry of Labor, media and other key stakeholders attending this ceremony.

Website of PMU

29. In accordance with the 2005 AWP, website of PMU has been updated. Information with regard to (i) implementation of the National CFCs Phaseout Plan, (ii) the Ministerial Notification to ban the use of CFCs and 1,1,1-TCA in manufacturing sector, (iii) the

Ministerial Decree to include an inspection of refrigerant in MAC systems as part of the annual vehicle inspection, (iv) the MDI phaseout strategy and regulation issued by FDA to lifting of CFC MDI containing Salbutamol, Futicasone and Sodium Gromoglycate, (v) import quotas until 2010, and (vi) information on potential hazard of blending refrigerants and importance of using proper refrigerant, and MAC inspection requirement etc. have been posted in the website namely www.pmu.go.th.

Database of Certified MAC Service Shops

30. As a part of PMU website, database of all certified MAC service shops whose technicians have undergone training from DSD has been developed and is functional. Information contained in the database included names of MAC service shops, addresses of MAC service shops, telephone and fax numbers. The database also facilitates users to search list of certified MAC service shops by name, street, sub-district, district, province etc. This would help the general public to easily access information about certified MAC service shops when needed.

MAC Inspection Campaign

31. PMU in close collaboration with the Department of Land Transport (DLT) launched "MAC Inspection Campaign" in Bangkok during Songkran (Thai New Year) Festival during April 2005, in the North region (Chiangmai) and in the Northeast region (Mahasarakham) during July 2005, and in Bangkok during December 2005. Information with regards to MAC inspection requirements and effects of contaminated and improper refrigerant through a pamphlet that was disseminated to owners of vehicles during these campaigns.

Contaminated Refrigerant

32. To focus on the issue of contaminated refrigerant in MAC system in 2005, PMU undertook a number of different measures to ensure that importance on the use of refrigerant were brought to attention to general public and technicians of service shops. The information included (i) impacts of using contaminated refrigerant, (ii) impacts of using improper refrigerants in MAC systems, in particular the use of CFC-12 in non-CFC MAC system, (iii) the need and advantage to retrofit CFC-12 MAC system to HFC-134a MAC system, and (iv) safety aspects of MAC service.

33. Information dissemination was made through radios, newspapers, journals, magazines, bus and public vehicle (tuk-tuk) advertisements. In addition, information was disseminated to certified MAC service shops through certification of MAC service technician workshops and newsletters, which was sent to certified MAC service shops on the quarterly basis.

Certification of MAC Service Technicians

34. Announcement of series of certification workshops in Phase 2 (continued from 2004 to March 2005) and in Phase 3 (December 2005-January 2006) were made in 2005 to invite MAC service shops to come forward and participate in the program through newspapers, radios, magazines and brochures. For certified MAC service shops, a banner was ditributed to each certified MAC service shop to attract car owners to have their MAC system serviced. Quarterly newsletters were also sent to these certified MAC service shops in order to inform current situation of MAC service sector including any other information useful for MAC service shops. In addition, stickers containing information

with regard to refrigerant type, name of MAC service shop serviced, and last date serviced has been already produced.

Policy Dissemination

35. The two legal frameworks with regard to (i) ban on the use of CFCs and 1,1,1-TCA in manufacturing sector in 2005 and (ii) annual inspection of refrigerant in MAC systems has been continually disseminated to the public through radios, newspapers, journals, and magazines. This also included the Government's policy to phaseout CFCs, 1,1,1-TCA, and CTC by 2010. MAC service shops were also informed of inspection requirement during workshops of certification of MAC service technicians and through quarterly newsletters as well. In addition, regulation issued by FDA to banning of CFC MDI containing Salbutamol, Futicasone and Sodium Gromoglycate from December 31, 2005 has also been disseminated to importers of CFC MDI, hospitals, and PMU website.

CTC Used in Laboratory Survey

36. PMU has also launched advertisements on major newspapers to identify the remaining use of CTC in laboratories throughout the country. In addition, a number of questionnaires were also sent to known laboratories for the same proposes. Information obtained from laboratories would be aggregated as preliminary information to develop database of CTC used in laboratories in Thailand.

Investment activities

37. With regards to investment-related activities in the manufacturing sector, PMU provided technical assistance to foam and solvent enterprises to prepare project proposals aimed at seeking financial assistance from DIW. PMU also assisted enterprises that required information on specific alternative technologies. PMU was also responsible for verification of supporting documentation provided by beneficiary enterprises and for undertaking site visits prior to approval of project proposals submitted by the companies. In addition, PMU also undertook site visits to verify completion of equipment commissioning, of conversion, and to witness disposal of baseline equipment prior approval of the PCRs. An update of the progress of implementation of each sub-sector of the NCFCP is described in the "Industry Action" section, above.

38. With regard to MAC service sector, PMU was responsible for controlling and monitoring work done by the Group Coordinators (GCs), who were appointed to facilitate provision of equipment to certified MAC service shops through voucher scheme. This included issuance of vouchers, inspection of MAC service shops' site and equipment delivery, voucher delivery to and voucher collection from certified MAC serviced shops, follow-up on the use of equipment. An update of the progress of implementation of Mac service sector is described in the "Train-the-Trainer Program and Certification of MAC Service Technicians" section, below.

Policy activities

39. On policy-related activities, the PMU played a vital role in facilitating enforcement of regulation of: 1) mandatory MAC inspections; and 2) ban on the use of CFCs and 1,1,1-TCA in the manufacturing sector. In relation to the MAC inspection, the Cabinet has approved an amendment of the Ministerial Decree of the Transportation Act B.E. 2522 and of the Vehicle Act B.E. 2522 to include inspection of refrigerant in MAC system as a part of the annual inspection to be enforced by DLT. The Ministry of Transportation has

already signed amendment of the Transportation Act B.E. 2522 and of the Vehicle Act B.E. 2522 and have been effective since January 2005.

40. With regards to the regulation to ban the use of CFCs and 1,1,1-TCA in the manufacturing sector, Cabinet approved the legal framework proposed by the Ministry of Industry in December 2004 to ban the use of CFCs and 1,1,1-TCA in the manufacturing sector. The Ministerial Notification of the Factory Act B.E 2535 to ban the use of CFCs and 1,1,1-TCA in the manufacturing sector was signed by the Minster of Industry in July 2005 and publicized in the Royal Gazette in September 2005. To date, this Ministerial Notification is effective and enforced by DIW.

41. DIW has coordinated with the Department of Foreign Trade (DFT) of the Ministry of Commerce to prohibit import of CFC-based refrigerators. The Cabinet has already approved a legal framework proposed by the Ministry of Commerce in February 2005. The draft Ministry of Commerce Notification has been sent to the Office of the Council of State for final review prior to signature. As of December 2005, the Notification to prohibit imports of CFC-based refrigerators has been finalized by DIW, DFT, the Customs Department, and the Office of the Council of State.

42. DIW has coordinated with FDA to announce lifting off registration of CFC-MDI containing Salbutamol, Futicasone and Sodium Gromoglycate in a total of 13 products from December 31, 2005. Therefore these mentioned CFC-MDIs were not able to be imported after December 31, 2005 but still can be sold in the market until their stocks are exhausted.

C.2 MDI

43. The third task of CFC-MDI phaseout strategic assignment was to disseminate the outcome of the first and second task to medical professionals, and patients through symposium, conferences, and group meetings. This dissemination was to general public through different media. Implementation of the third task was undertaken during December 2004 to May 2005. The third task report was submitted on May 27, 2005. This dissemination was to stimulate public awareness for National CFC-MDI phase-out plan. The final report of MDI phaseout strategy was submitted on July 31, 2005. With regard to an Ad-Hoc working group, FDA had appointed the Ad Hoc working group on March 10, 2005 to carry out the strategic plan for phasing out of CFC-MDI in Thailand. This committee composed of all stakeholders including PMU representative.

44. On August 30, 2005 DIW and FDA had co-announced a press conference on prohibiting importation of Salbutamol CFC-MDI at the end of 2005 and on findings from the study that it would not have any effect to patient using this drug. On December 16, 2005 FDA announced lifting off registration of CFC-MDI containing Salbutamol, Futicasone and Sodium Gromoglycate in a total of 13 products from December 31, 2005. Therefore these mentioned CFC-MDIs were not able to be imported after December 31, 2005 but still can be sold in the market until their stocks are exhausted.

C.3 Textile and Garment Industry

45. The Thailand Textile Institute (THTI) has worked closely with Department of Labour Protection and Welfare, National Institute for the improvement of Working Conditions and Environment, Ministry of Labour, and Department of Health, Ministry of Public Health, and Department of Industrial Works, Ministry of Industry, and Faculty of

Medicine, Mahidol University to develop an exposure limit for 1,1,2 trichloroethylene. Three meetings were organized to finalize the exposure limit of 1,1,2-trichloroethylene, which were reached on May 23, 2005.

46. THTI's expert developed specifications of a ventilation equipment to be distributed under the program. To ensure efficiency of ventilation equipment, THTI has developed four prototypes of ventilation system, which were installed at four garment and textile factories, for evaluation during April to May 2005. Information obtained from installing the prototypes has been used to finalize specification of ventilation equipment.

47. With regard to selection of qualified suppliers, THTI carried out the first supplier selection in June 2005 and could not select supplier due to the fact that previous standard price of ventilation system were below proposed price from suppliers. Given the above, THTI had requested TMB, PMU, and the World Bank to elevate the original standard price. Based on information obtained from ventilation system designer, the new standard price of ventilation equipment was set at 26,900 Baht and has been approved by the Bank. After the Bank endorsement on new standard price, the second supplier selection was started on November 1, 2005. As one of the selection criteria, total of eighteen ventilation equipment have been manufactured and installed at 18 demonstration factories by potential suppliers to evaluate performance of ventilation equipment. THTI has completed selection of qualified suppliers on December 27, 2005. List of qualified suppliers, template and value of voucher and procedure of distribution and monitoring of the voucher are available..

48. During 2005, THTI had distributed four editions of newsletters (April-May 2005, June-July 2005, August-September 2005, and October-December 2005) to disseminate program to invite garment and textile industries to come forward.

49. In addition, THTI has submitted the first progress report to TMB and PMU, which had considered the report and accepted on December 2, 2005. During 2005, THTI has prepared database of 1,700 factories. Database of 1,700 factories are included as part of the first progress report.

C.4 Mandatory Requirement for MAC Inspection

50. MAC inspection manual describing inspection procedures, procedures how to operate and maintenance RI has been finalized in January 2005. The final MAC inspection manual also contained pictures indicating positions of service valve, which will be connected to RI, to facilitate inspection performed by technicians of inspection stations.

51. The final draft specification of RIs was completed since December 2004, there were some changes of specification that would be procured for vehicle inspection stations. During January-August 2005, DIW and DLT had a number of meetings to settle on final specification of RI under the program and minimum purity level of refrigerant. In addition to using information from testing & trials of ten units of RIs procured in 2004, a number of standards related to RIs and refrigerant were searched and used as a reference to determine specifications of RIs and to determine minimum purity level of refrigerant that will pass the inspection. From acquired information, the following criteria for MAC inspection were established.

    - Refrigerant in inspected MAC system must be the same type as that designed for MAC system;

- Inspected MAC system must not use CFC-12 or hydrocarbon as refrigerant;
- Total level of any other chemical in inspected refrigerant shall not be more than 2% by weight (refrigerant shall be 98% purity by weight);
- Regulation applies to all MAC-equipped vehicles that register with DLT since effective date of the regulation.

52. Soon after completion of these tasks in August, procurement of RIs for inspection stations owned by DLT was initiated. Procurement of RIs for inspection stations owned by DLT has been carried out through national competitive bidding process starting from September 2005. However, an evaluation committee comprising representatives from DIW and DLT could not evaluate bidding document because of incompetence of submitted document. Therefore, procurement process had to be cancelled in early November 2005. Given the above, new procurement through the national competitive bidding process was undertaken immediately in November 2005. In line with the procurement schedule, it is expected that commissioning of RIs to inspection stations of DLT will be completed by end of March 2006.

53. To date, DLT has used existing refrigerant identifiers to operate MAC inspection for its inspection stations located in Headquarter and Branch Office in Bangkok.

54. With regards to RIs to be distributed to private vehicle inspection stations, DLT has identified potential vehicle inspection stations that will participate in the project. Procurement of RIs to these private inspection stations through voucher scheme will be carried out in early 2006. Delay in distribution of RIs to inspection stations will not affect to implementation of MAC inspection requirement and will not affect enforcement of regulations given that the mandate of the private inspection station is to inspect passenger cars that are more than seven years old. Vehicles that must have their annual inspection at these private inspection stations in 2006 are those registered before 1999, which are not covered by the regulation. Even though these vehicles will not covered by the regulation, private inspection stations are still required to use this instrument to inspect MAC system during annual inspection to increase awareness of owners on contaminated and improper refrigerant, which could lead to reduction of CFCs used in MAC sector. Distribution of RIs to private inspection stations is considered necessary for the success of sustainable phaseout of CFCs.

C.5 Train-the-Trainer Program and Certification of MAC Service Technicians

55. PMU in close collaboration with DSD continued organizing 17 workshops for certification of MAC service technicians during January – March 2005. There were approximately 1,000 service technicians from 730 MAC service shops certified during this period. Therefore, as of March 2005, the total number of technicians and MAC service shops certified under Phase 1 (February-July 2004) and Phase 2 (November 2004-March 2005) of the workshops is 3,589 technicians and 2,547 MAC service shops, respectively.

56. After completion of workshops for certification of MAC service technicians in Phase 2, PMU in collaboration with DSD organized a follow-up workshop in July 2005 to evaluate achievements, to identify difficulties encountered and to develop solutions to address these problems. A tentative training schedule for Phase 3 was discussed and reached during this follow-up workshop. Training schedule for Phase 3 was carried out from

December 2005 to January 2006. There will be 15 workshops for certification of MAC service technicians to meet original target of 2,750 MAC service shops to be trained and receive financial subsidy as stipulated in the project document.

57. With regards to the Group Coordinator (GC) who was assigned to facilitate provision of equipment through the voucher scheme, three GCs were appointed through the selection process and contract signing between the GCs and the financial intermediary was made in March 2005. After signing the contracts, the GCs started their assignment, which consisted of: i) verification of supporting documents; ii) field inspection of MAC service shops sites and distribution of vouchers; iii) instruction on the use of vouchers; iv) collection of vouchers; v) field inspection of equipment delivery; vi) follow-up and monitoring use of equipment; and vii) facilitate disbursement of vouchers.

58. As of December 2005, about 2,073 vouchers for provision of MAC service equipment were distributed to certified MAC service shops whose technicians passed certification workshops under Phase 1 and Phase 2. However, there were about 169 certified MAC service shops not receiving voucher for this instrument as they failed to submit some necessary document needed for verification and make transaction, while there were about 305 certified MAC service shops do not pass inspection carried out by GCs. Table 2 below summarized implementation progress of certification workshops and provision of equipment through voucher scheme of MAC service sector.

Table 2: Implementation Progress of MAC Service Sector

Phase	No. of Training Workshops	No. of Certified Technicians	No. of Certified MAC Service Shops	Voucher Distribution Status		
				No. of MAC Shops Already Received Voucher	No. of MAC Service Shops NOT YET Received Voucher	No. of MAC Service Shops NOT Qualified
1. Certification of MAC Service Technicians Phase 1 (February-July 2004)	36	1,805	1,195	990	100	105
1. Certification of MAC Service Technicians Phase 2 (November 2004 – March 2005)	32	1,784	1,352	1,083	69	200
Total	**68**	**3,589**	**2,547**	**2,073**	**169**	**305**

59. With regards to the provision of 635 recovery/recycling (R&R) machines through the voucher scheme, PMU has had difficulties in securing documentation from service shops that support the minimum consumption level required for eligibility (e.g. 80 kg/month of CFC-12). This documentation can be in the form of invoices, receipts of purchase of refrigerant, or delivery bills etc. that show the minimum monthly consumption. This is due to the nature of service shops, which are typically very small enterprises for which submission of any other documentation related to their expenses or incomes to government agencies is perceived as jeopardizing. In addition, contaminated refrigerants,

which interrupt operation of recovery/recycling machines, are another factor that may be reducing the incentive of MAC service shops to invest on R&R machines. Approximately 100 MAC service shops have submitted the necessary supporting documents, while the remaining MAC service shops failed to submit documentation. This number (100) is not considered adequate for issuance of vouchers on a lot basis. The project would not benefit from economies of scale given this relatively low number of R&R machines, and the estimated costs of the machines and of their distribution would increase relative to the originally estimated values.

60. The PMU is addressing the issue of distribution of the recovery/recycling machines, and working towards measures to increase participation of service shops in the program. The issue was raised during the follow-up MAC workshop and considerable feedback was obtained from participants. It was agreed at that meeting that training centers of DSD would assist PMU in coordinating with MAC service shops to clarify queries and in collecting supporting document as required. In addition, an option to increase level of subsidy to increase incentive for MAC service shops to remove barrier of not investing on this machine was also discussed in the workshop and is being considered by the PMU, as will be indicated in later sections of this AWP.

61. As indicated in the 2005 AWP, PMU has additionally allocated savings of $US 58,724 from the manufacturing sector to the service sector to cover cost of launching certification of MAC service technician workshops in 2005. Having included the first allocation of $US 72,343 transferred in 2004, total saving transferred from manufacturing sector to cover cost of launching certification of MAC service technician workshops is $US 131,067.

62. With regards to procurement of equipment, 62 sets of MAC service equipment and 29 recovery/ recycling/recharge machines have been delivered and commissioned to training institutes and centers of DSD since August 2005. For procurement of 31 units of RIs to DSD, a proposal to grant approval for duty exemption was in the process of consideration and approval by the Cabinet. Therefore, procurement of 31 RIs to DSD was postponed to 2006.

63. In addition, workshops for certification of MAC service technicians in Phase 3 were launched from December 2005-January 2006. As of December 2005, 7 of the 15 workshops had been already organized by DSD.

C.6 Customs Training

64. A press conference between DIW and the Customs Department on their corporation and officially handed over 60 RIs to the Customs Department was commenced on January 27, 2005. The Customs Training Center, Customs Department had launched the first customs training in February 2005. This customs training workshop was in series throughout 2005 by Customs Training Center in order to train respective customs officers working in major ports/entry points across the country. In the training activities, PMU staff and DIW official were invited to give lectures in these training. There were five training sessions in 2005 and about 700 officials were trained. Refrigerant Identifiers have been already distributed to customs stations in major ports/entry points across the country. Additional 800 copies of Customs training manuals have been produced and delivered to the Customs Department.

C.7 Procurement of Refrigerant Identifiers to Other Government Agencies

65. As reported in the 2005 AWP, PMU planned to procure approximately 16 units of RIs to other related government agencies to address problem of contaminated refrigerant, which has become widespread in Thailand. These government agencies are the Ministry of Commerce, the Excise Department, the Office of the Consumer Protection Board, and DIW. Funding for procuring these additional refrigerant identifiers were allocated from two sources: 1) the PMU used savings from activities in the Customs Training Program to finance procurement of refrigerant identifiers for the Excise Department; and 2) the PMU utilized funding savings from the manufacturing sector to procure RI for other agencies. Except RIs for the Excise Department, which were acquired from the Customs Training Program Budget, PMU has allocated saving of $US 29,474 from manufacturing sector to cover the cost of procuring additional RIs to other government agencies (the Ministry of Commerce, the Office of the Consumer Protection Board, and DIW).

66. From the discussion with these related government agencies, the total need for RIs has been changed from 16 RI units to 18 RI units. However, no more allocation is requested for procurement of additional RIs from the previous plan. However, procurement of these RIs could not be carried out in 2005 as a proposal to grant approval for duty exemption for these RIs was in the process of consideration and approval by the Cabinet. Therefore, procurement of these RIs was postponed to 2006.

67. The status of the technical assistance activities is summarized in Table 3, below.

Table 3. Summary of Technical Assistance Activities Carried Out in CY05

No.	Proposed Activity	Objective	Target Group	Impact	Status
	Project Management Unit				
1	Public Awareness Activities	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	PMU conducted a number of activities to disseminate information on the NCFCP. Main activities included press conferences with the Customs Department, FDA, voucher hand-on ceremony with DSD, MAC Inspection Campaign with DLT. Website of PMU and database of certified MAC service shops has been already updated and is functional. Information related to the Government's policy to ban the use of CFCs and 1,1,1-TCA in manufacturing sector and to include MAC inspection as part of annual inspection, contamination refrigerant were also disseminated through newspapers, radio programs, magazines, brochures, bus and tuk-tuk advertisement, newsletters, and during workshops for certification of MAC service technicians. Pamphlets describing contaminated refrigerants and use of improper refrigerant with MAC systems were also distributed to car owners. In addition, PMU also participated in the 2005 International Ozone Day Celebration.
2	Investment Activities				PMU provided technical assistance to foam and solvent enterprises to prepare project proposals to seek financial assistance from DIW and verify supporting documentation provided by beneficiary enterprises. PMU also undertook site visits prior to approval of project proposals and before closure of the project to witness completion of commissioning and to witness disposal of baseline equipment. For MAC service sector, PMU was responsible for controlling and monitoring implementation of voucher scheme through the GCs. This included issuance of vouchers, inspection of MAC service shops' site and equipment delivery, voucher delivery to and voucher collection from certified MAC serviced shops, follow-up on the use of equipment.

No.	Proposed Activity	Objective	Target Group	Impact	Status
3	Coordinate with Other Agencies Responsible for Policy Activities				In relation to the MAC inspection program, the Ministry of Transportation has already signed amendment of the Transportation Act B.E. 2522 and of the Vehicle Act B.E. 2522 and have been effective since January 2005. The Ministerial Notification of the Factory Act B.E 2535 to ban the use of CFCs and 1,1,1-TCA in the manufacturing sector was signed by the Minster of Industry in July 2005 and publicized in the Royal Gazette in September 2005. To date, this Ministerial Notification has been effective and entered into forced by DIW. The Cabinet has already approved a legal framework proposed by the Ministry of Commerce to prohibit import of CFC-based refrigerators in February 2005. The Notification to prohibit import of CFC-based refrigerators has been finalized since December 2005. FDA announced lifting off registration of CFC-MDI containing Salbutamol, Futicasone and Sodium Gromoglycate in a total of 13 products from December 31, 2005.
	Technical Assistance for MDI Sector				
1	Dissemination of Finding from Data Collection and MDI Phaseout Strategy	To increase awareness on CFC MDI transition plan	Pharmaceutical Association, Doctors, MDI Importers, and Patients	To promote the use of non-CFC MDI	The third task to disseminate the outcome of the first and second task to key stakeholders was completed in May 2005. FDA had appointed the Ad Hoc working group on March 10, 2005 to carry out the strategic plan for phasing out of CFC-MDI in Thailand. DIW and FDA had co-announced a press conference on CFC MDI Phaseout Strategy in August 2005. FDA also announced lifting off registration of CFC-MDI containing Salbutamol, Futicasone and Sodium Gromoglycate in a total of 13 products from December 31, 2005.

No.	Proposed Activity	Objective	Target Group	Impact	Status
	Textile and Garment Industry				
1	Implementation of Technical Assistance and Investment Activities	To develop local exposure limits and proper ventilation systems, to carry out information dissemination and to facilitate the conversion	1,000 - 1,400 Garment and Textile factories	Reduction of 1,1,1-TCA in Textile and Garment Industry	Exposure limit of 1,1,2-trichloroethylene has been established in close coordination with key stakeholders. Specification of ventilation equipment has been developed. Four prototypes have been installed at 4 garment and textile factories for improvement of final specification. THTI carried out the first supplier selection in June 2005 and could not select supplier due to the fact that previous standard price of ventilation system was below proposed price from suppliers. A new process for selection of suppliers was initiated and completed in December 2005. Distribution of voucher will be carried out in 2006.
	Mandatory Requirement for MAC Inspection				
1	Development of Inspection Manual and Procurement of Refrigerant Identifiers	To prevent HFC MAC system from being reverse-retrofitted to CFC-12	DLT'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	MAC inspection manual has been finalized in January 2005. There were some changes of specification so DIW and DLT had a number of meetings to settle on final specification of RI and minimum purity level of refrigerant that will pass the inspection. All issues were solved in August 2005, and procurement of RIs was initiated immediately in September 2005. However, procurement process had to be cancelled in early November 2005 due to incompetence of bidding document submitted by all bidders. New procurement was undertaken immediately in November 2005 and commissioning of RIs to inspection stations of DLT will be completed by end of March 2006. With regard to RIs to be distributed to private vehicle inspection stations, DLT has identified potential vehicle inspection stations that will be participated in the project. Procurement of RIs to these private inspection stations through voucher scheme would be carried out in early 2006.
	Train-the-Trainer Program and Certification of MAC Service Technicians				

No.	Proposed Activity	Objective	Target Group	Impact	Status
1	Train-the-Trainer Program	Increase technical capacity of MAC Service shops	Authorized Training centers and MAC service shops	Reduction of CFC-12 consumption in MAC service from repairing MAC system properly	62 sets of MAC service equipment and 29 recovery/ recycling/recharge machines have been delivered and commissioned to training institutes and centers of DSD since August 2005. For procurement of 31 units of RIs to DSD, a proposal to grant approval for duty exemption was in the process of consideration and approval by the Cabinet. Therefore, procurement of 31 RIs to DSD was postponed to 2006.
2	Certification of MAC Service Technicians				17 workshops for certification of MAC service technicians have been organized during January – March 2005. The second follow-up workshop with DSD was organized in July 2005 to evaluate achievements, to identify difficulties encountered and to develop solutions to address these problems. 3,589 service technicians from 2,547 MAC service shops were trained and certified during Phase 1 and Phase 2. 15 workshops for certification of MAC service technicians in Phase 3 were scheduled starting from December 2005. As of December 2005, 7 of which have been already organized by DSD. 3 GCs has been appointed through the selection process and contract signing between the GCs and the financial intermediary was made in March 2005. As of December 2005, about 2,073 vouchers for provision of MAC service equipment were hand-on to certified MAC service shops.
	Customs Training Program				
1	Train-the-Trainer Program	Build technical capacity of custom officials to inspect the import	Customs Officials	Strengthen effectiveness of import control system of	A press conference between DIW and the Customs Department on their corporation and officially handed over 60 RIs to the Customs Department was commenced on January 27, 2005. Refrigerant Identifiers have been already distributed to customs stations in major ports/entry points across the country.

No.	Proposed Activity	Objective	Target Group	Impact	Status
2	Training Curriculum	chemicals		CFC	The Customs Training Center, Customs Department had launched the first customs training in February 2005. There were five training sessions in 2005 and about 700 officials were trained. Additional 800 copies of Customs training manuals have been produced and delivered to the Customs Department.
	Procurement of Refrigerant Identifiers to Other Government Agencies				
1	Procurement of Refrigerant Identifiers	To address problem of contaminated refrigerant and monitoring use of contaminated refrigerant	Ministry of Commerce, the Excise Department, the Office of the Consumer Protection Board, and DIW	Help preventing misuse of refrigerant	The total need for RIs has been changed from 16 to 18 RI units. No more allocation is requested for procurement of additional RIs from the previous plan. However, procurement of these RIs could not be carried out in 2005 as a proposal to grant approval for duty exemption for these RIs was in the process of consideration and approval by the Cabinet. Therefore, procurement of these RIs was postponed to 2006.

D. Summary of Government Actions Taken

68. DIW issued import quotas for CFC-11 and CFC-12 to importers of these chemicals. The amount of quota for CFC-11 and CFC-12 issued in 2005 was within the amount stipulated by DIW for the period of 2002 – 2010. There were no import licenses granted to importers for CFC-113, CFC-114, and CFC-115, 1,1,1-TCA and CTC in 2005.

69. The Ministerial Notification of the Factory Act B.E 2535 to ban the use of CFCs and 1,1,1-TCA in the manufacturing sector was signed by the Minster of Industry in July 2005 and publicized in the Royal Gazette in September 2005. The Ministerial Notification to ban the use of CFCs and 1,1,1-TCA in manufacturing sector has been circulated to the Factory Control and Inspection Bureaus for enforcement and importers for acknowledgement. In addition, the Ministerial Notification was also disseminated to the public through radio programs, newspapers, and website. This also included the Government's policy to phaseout CFCs, 1,1,1-TCA, and CTC by 2010.

70. The Ministry of Transportation has already signed amendment of the Transportation Act B.E. 2522 and of the Vehicle Act B.E. 2522 to include an inspection of refrigerant in MAC systems as part of the annual vehicle inspection to be enforced by the Department of Land Transport (DLT) and have been effective since January 2005.

71. DIW has coordinated with the Department of Foreign Trade (DFT), Ministry of Commerce to prohibit import of CFC-based refrigerators. The Cabinet has already approved a legal framework proposed by the Ministry of Commerce in February 2005. The draft Ministry of Commerce Notification has been sent to the Office of the Council of State for final review prior to signature. As of December 2005, the Notification to prohibit import of CFC-based refrigerators has been finalized by DIW, DFT, the Customs Department, and the Office of the Council of State.

72. The Food and Drug Administration (FDA) has announced lifting off registration of CFC-MDI containing Salbutamol, Futicasone and Sodium Gromoglycate in a total of 13 products from December 31, 2005. Therefore these mentioned CFC-MDIs were not able to be imported after December 31, 2005 but still can be sold in the market until their stocks are exhausted.

73. 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 2004 import of CFCs, 1,1,1-TCA and CTC was submitted to the Executive Committee at its 48th Meeting. The report confirmed that Thailand met all targets for 2004.

74. Database of all certified MAC service shops whose technicians undergone training from DSD has been developed and is functional. Information contained in database included names of MAC service shops, address of MAC service shops, telephone number and fax number. The database also facilitates users to search list of certified MAC service shops by name, street, sub-district, district, province etc. This would help general public to easily access to information of certified MAC service shops when needed.

75. Key activities for the Government actions in 2005 are summarized in Table 4, below:

Table 4- Key Government actions in 2005

NO.	POLICY/ACTIVITY PLANNED	EXPECTED SCHEDULE OF IMPLEMENTATION	STATUS
1.	Control import quota for CY2005	January-December 2005	Total quota for CFC-11 and CFC-12 issued to importers and preliminary information indicates that the total amount of CFCs, 1,1,1-TCA and CTC was within the respective targets stipulated in the Agreement.
2.	Verification of CFCs, 1,1,1-TCA, and CTC consumption for CY 2004	July-November 2005	Completed and will be submitted as a part of this Annual Program.
3.	Ban on the use of CFCs and 1,1,1-TCA in manufacturing sector[1]	January-December 2005	The Ministerial Notification of the Factory Act B.E 2535 to ban the use of CFCs and 1,1,1-TCA in the manufacturing sector was signed and publicized in the Royal Gazette. This regulation has entered into force and has been disseminated to the Factory Control and Inspection Bureaus, importers and the public (through radio programs, newspapers, and website).
4.	Announcement of MAC Inspection Program[1]	January-December 2005	The amendment of the Transportation Act B.E. 2522 and of the Vehicle Act B.E. 2522 to include an inspection of refrigerant in MAC systems as part of the annual vehicle inspection was signed and publicized in the Royal Gazette. This regulation has entered into force and has been disseminated to public through radio programs, magazines, journals, newspapers, and website. This regulation has also been disseminated to vehicle owners during MAC inspection campaign and to MAC service shops during workshops

[1] 2004 Performance Target

NO.	POLICY/ACTIVITY PLANNED	EXPECTED SCHEDULE OF IMPLEMENTATION	STATUS
			for certification of MAC service technicians.
5.	Database of trained technicians in the MAC sector[2]	June-November 2005	Database of certified service technicians was developed and is functional. The database facilitates users to search list of certified MAC service shops by name, street, sub-district, district, province etc.
6.	Annual MAC inspection requirement is operational[2]	January – December 2005	DLT has used existing refrigerant identifiers to operate MAC inspection for its inspection stations located in Headquarter and Branch Office in Bangkok in 2005. In addition, DLT also have MAC inspection campaign during the year of 2005 as mentioned above.
7.	Public Awareness Activities	January-December 2005	See Part C above
8.	Follow-up and Monitoring completed sub-projects	January-December 2005	Completed
9.	International Ozone Day Ceremony	15-16 September 2005	Completed

[2] 2005 Performance Target

E. 2005 Budget and Financial Performance

Table 5- 2005 Budget

	Description	(SU$)Original Funding Approved			(SU$)Revised Budget		(SU$)Funding Disbursed			Obligated Expenditure in CY [2](SU$)2005
		Cumulative Funding Approved as of December 2004	Funding Approved in 2005CY	Cumulative Funding Approved as of December 2005	Proposed Reallocation of Funding in 2005CY [1]to /from	Cumulative Revised Funding Approved as of December 2005	veCumulati Expenditure Disbursed as of December 2004	Actual Expenditure Disbursed 2005in CY	Cumulative Expenditure Disbursed as of December 2005	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	Investment Projects - Aerosols	102,960	0	102,960	0	102,960	0	0	0	0
2	TA for MDIs	57,200	0	57,200	0	57,200	12,491	37,365	49,855	0
3	Investment Projects - CFC-113	805,154	0	805,154	0	805,154	0	260,443	260,443	0
4	Investment Projects - 1,1,1-TCA and CTC	181,000	0	181,000	0	181,000	0	101,040	101,040	58,982
5	TA for contact cleaners[3]	23,100	0	23,100	0	23,100	0	0	0	0
6	Garment and Textile Industry	1,026,066	0	1,026,066	0	1,026,066	17,870	56,121	73,991	952,075
7	Investment Projects - Foam	3,247,503	0	3,247,503	88,197-	3,159,306	38,923	342,232	381,155	1,623,476
8	MAC Inspection Requirement	1,237,500	0	1,237,500	0	1,237,500	16,258	2,272	18,530	1,218,970
9	Train-the-Trainer - MAC	319,000	0	319,000	0	319,000	30,878	171,181	202,059	54,250
10	Certification of MAC Service Technicians Workshops	72,343	0	72,343	58,724	131,067	35,691	34,057	69,747	17,119
11	Financial Subsidy for Purchasing MAC Servicing Equipment and Group Coordinator Fee	2,170,000	770,000	2,940,000	0	2,940,000	0	655,541	655,541	2,284,459
12	Financial Subsidy for Purchasing MAC R&R Machines	514,800	180,400	695,200	0	695,200	0	0	0	695,200

	Description	(SU$)Original Funding Approved			(SU$)Revised Budget		(SU$)Funding Disbursed			Obligated Expenditure in CY [2](SU$)2005
		Cumulative Funding Approved as of December 2004	Funding Approved in 2005CY	Cumulative Funding Approved as of December 2005	Proposed Reallocation of Funding in 2005CY [1]to /from	Cumulative Revised Funding Approved as of December 2005	veCumulati Expenditure Disbursed as of December 2004	Actual Expenditure Disbursed 2005in CY	Cumulative Expenditure Disbursed as of December 2005	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
13	Project Management Unit	1,140,000	200,000	1,340,000	0	1,340,000	544,317	392,740	937,057	402,943
14	Custom Training	165,000	0	165,000	0	165,000	32,352	106,483	138,835	10,500
15	Refrigeration Train-the-trainer	0	180,000	180,000	0	180,000	0	0	0	0
16	Procurement of Refrigerant Identifiers for Other Government Agencies	0	0	0	29,474	29,474	0	0	0	21,000
	TOTAL	**11,061,626**	**1,330,400**	**12,392,026**	**0**	**12,392,026**	**728,779**	**2,159,475**	**2,888,254**	**7,338,973**

Remarks: (1) Negative figures shown in column (4) correspond to the amount of funding reallocated to other activity. Positive figures shown in the same column indicate the amount of funding allocated to respective activity

(2) Figures shown in column (9) indicate funding already committed that will be disbursed in the future;

(3) Activities in 5 were completed as part of activities in 1,2 and 3 in 2005. Therefore there is no obligated expenditures for this category

Table 6- Cumulative disbursement by approved tranches (as per Progress Report)

Year of AWP	Amount approved (US$)	Amount disbursed up to Dec. 2005 (US$)	Amount committed (US$)
2001	540,000	540,000	
2002	5,194,380	1,347,515	7,338,973
2003	4,011,846	930,991	
2004	1,315,400	69,748	
2005	1,330,400	0	
	12,392,026	**2,888,254**	**7,338,973**

Part II

2006 Annual Program

F. Actual consumption in 2005 and target consumption in 2006

Table 7- Actual consumption in 2005 and target consumption in 2006 (in ODP Tonnes)

Indicators		Chemicals	Preceding Year[1] (2005)	Year of Plan[2] (2006)	Reduction
Supply of ODS	**Maximum allowable ODS imports**	CFCs	1,364	1,121	243
		TCA	4.5	4.5	0
		CTC	1.13	1.13	0
	Import	CFCs	1,002.54	994.71	7.83
		TCA	0	0	0
		CTC	0	0	0
	Production	--	--	--	--
	Total (1)	**CFCs**	**1,002.54**	**994.71**	**7.83**
		TCA	**0**	**0**	**0**
		CTC	**0**	**0**	**0**
Demand of ODS	**Manufacturing**	CFCs	0	0	0
		TCA	0	0	0
		CTC	0	0	0
	Servicing	CFCs	1,002.54	994.71	7.83
	Stockpiles	--	---	---	---
	Total (2)	**CFCs**	**1,002.54**	**994.71**	**7.83**
		TCA	**0**	**0**	**0**
		CTC	**0**	**0**	**0**

[1] Actual amount of reported chemicals imported to Thailand in 2005. However, actual consumption is subjected to be verified by an independent auditor.

[2] Target amount of reported chemicals in 2006.

G. Industry Action

76. PMU will continue its outreach program to create awareness of the Government's policy to ban the use of CFCs and 1,1,1-TCA in the manufacturing sector, (ii) Government's policy to ban the use of CFCs, 1,1,1-TCA, and CTC by 2010, (iii) the Government's policy to include MAC inspection as part of annual vehicle inspection, and (iv) contaminated refrigerant. PMU will also accelerate implementation of remaining investment sub-projects in solvent and foam sectors. This also includes monitoring and follow-up, through appointed coordinators, on provision of MAC service equipment for MAC service shops and provision of ventilation equipment to garment and textile industries, which are implemented through voucher scheme. The annual program for 2006 will continue to build on the progress made up to 2005.

77. With regard to request for procurement of additional RIs to other related government agencies, the Ministry of Commerce, the Excise Department, the Office of the Consumer Protection Board, and DIW in the 2005 AWP, PMU will continue to carry out procurement process soon after securing the Cabinet's approval for duty exemption of these RIs.

Additional Activities Proposed for the National CFCs Phaseout Plan

78. Having implemented the National CFCs Phaseout Plan since 2003, a number of findings and experiences have been recognized. To maximize achievement obtained from implementation of this plan, it is proposed that additional activities that have never been proposed under the original National CFCs Phaseout Plan be implemented starting from 2006. These activities include (i) provision of additional HFC-134a MAC service equipment, (ii) refrigerant testing centers, and (iii) preparation of CTC database used in laboratories and identification of alternatives for CTC. Description for each activity is as follow:

(I) Provision of Additional HFC-134a MAC Service Equipment

79. As described in section C.5 "Train-the-Trainer Program and Certification of MAC Service Technicians" above, the total number of technicians and MAC service shops certified under Phase 1 (February-July 2004) and Phase 2 (November 2004-March 2005) of the workshops is 3,589 technicians and 2,547 MAC service shops, respectively. Of the 2,547 certified MAC service shops, 2,073 have already received vouchers for provision of HFC-134a MAC service equipment. During December 2005-January 2006, DSD in close collaboration with PMU organized 15 workshops for certification of MAC service technicians throughout country. With completion of Phase 3 training, it is expected that the total number of MAC service shops eligible to receive financial assistance for provision of MAC service equipment reach the estimated 2,750 shops targeted in the original project document of the National CFCs Phaseout Plan. It is important to note that the figure of 2,750 shops quoted on the proposal was determined based on partial information available at the time of project development, which has subsequently been updated and confirmed in the course of project implementation.

80. However, from close collaboration with DSD and from discussion during the two follow-up workshops, it was fond that a number of additional MAC service shops expressed their interest to attend the certification workshops. To ensure efficiency of workshops, DSD has set maximum number of attendance to attend the certification workshops, depending

on individual workshop capacity and infrastructure. Pursuant to the above, a number of MAC service shops failed to apply for training. It was re-confirmed when PMU made announcement of workshops for certification of MAC service technicians in Phase 3, which is the last Phase under the original plan, DSD informed that a number of MAC service shops who was trying to apply for training has failed due to limited quota.

81. Discussion with MAC service shops (during workshops and follow-up distribution of equipment) and with DSD (during the follow-up workshops) reveals that certification of MAC service technician workshops and provision of financial subsidy for MAC service shops are very beneficial to Thailand not only in aspect of reducing CFC consumption but also in other aspects. These are:

- MAC service shops have been acknowledged of the Government policy to phaseout CFC by 2010 and had better understanding on the need and advantage of retrofitting from CFC-12 MAC system to HFC-134a MAC system and procedures how to retrofit properly;
- MAC service shops assured quality and efficiency in making retrofitting from CFC-12 MAC system to HFC-134a MAC system. MAC systems have been retrofitted to HFC-134a system as per suggestion of MAC service shops;
- MAC service shops always use MAC service equipment to perform testing before repairing MAC system when compared to former method to top up refrigerant without any leaking inspection. This wold help reducing the amount of refrigerant need for re-topping up into leaking MAC system in the future, which is considered as unnecessary use;
- The use of MAC service equipment to perform testing instead of using torching method may lead to accident reduction. Prior to having MAC service equipment, some MAC service shops used torching method to perform leaking inspection, which could potentially lead to explosions if the remaining refrigerant contains flammable chemical;
- Strengthen relationship between MAC service shops and DSD and establish networks among MAC service shops in the region. These relations and network would enable MAC service shops and DSD to exchange new technology and information;
- Voucher scheme, which has been used for provision of equipment under this program, is a commercial practice. Equipment suppliers must provide incentive for MAC service shops for selecting their equipment. After voucher scheme was launched, there was competition on price of MAC service equipment so it is lower than those sold prior to implementation of this program.

82. The above finding proves that implementation of this program is very successful and could lead to Thailand's ability to phaseout CFC in MAC service sector in sustainable and effective manner.

83. Therefore, it is proposed that additional workshops for certification of MAC service technicians be launched and financial subsidy for MAC service equipment be provided to MAC service shops, even if the target of 2,750 MAC service shops is reached. DSD is willing to cooperate with DIW to continue organizing workshops for certification of MAC service technicians after completion of Phase 3 training.

84. To undertake the above activities, it is necessary for PMU to secure funding to cover the following costs:

    a. Financial subsidy for provision of MAC service equipment;

    b. Organizing series of workshops for certification of MAC service technicians;

    c. Service fee of the group coordinators, who will assist PMU to monitor and follow-up implementation of this program through voucher scheme;

85. Cost for organizing series of workshops for certification of MAC service technicians (item no. 2) will be utilized from budget of $US 131,067, which has been already allocated under previous AWPs for launching workshops in Phase 1, 2, and 3 (see section C.5 "Train-the-Trainer Program and Certification of MAC Service Technicians").

86. For financial subsidy for provision of MAC service equipment (item no. 1) and service fee of the group coordinators (item no .3), PMU will use the flexibility provided in the Agreement to reallocate savings from the manufacturing sector to cover the above costs. The amount of additional funding requested for allocation is described below:

Description	**Additional Request ($US)**	**Remarks**
Financial subsidy for provision of MAC service equipment (500 sets)	500,000	
Organizing series of workshops for certification of MAC service technicians (20 sessions)	0	Use funding of $US 131,067 reallocated under 2004 and 2005 AWP
Service fee of the group coordinators (500 shops)	55,000	
Expected saving from funding approved for financial subsidy for purchasing 2,750 MAC service equipment and GC's Fee	- 213,890*	
Total Request	**341,110**	Reallocated from saving in manufacturing sector

Remarks: * Figure represents savings from overall MAC service technician certification program, and accounts for the estimated US$ 385,000 that will be released under the 2006 Annual Program

87. It is proposed that the additional number of MAC service shops to be trained and received financial subsidy for provision of MAC service equipment is approximately 500 shops. However, within the request allocation, there may be slightly change on the number of MAC service shops depending on exchange rate.

88. Implementation of this activity will be similar those implemented for MAC service sector. Workshops for certification of MAC service technicians will be launched starting from July-September 2006. Distribution of vouchers to these certified MAC service shops will be carried out after completion of all workshops for certification of MAC service technicians.

(II) Refrigerant Testing Centers

89. Issue of contaminated refrigerant has been widely spread in Thailand and was raised by MAC service shops during workshops for certification of MAC service technicians. From implementation of activities in MAC service sector, contaminated refrigerant found MAC system is resulted from 2 factors as follows:

    a. Service Behavior of MAC Service Shops: In addition to leading to increase of CFC-12 consumption for service, top-up method could lead to contamination problem. Some MAC service shops do not recognize the type of refrigerant that remains in the MAC system. With topping-up practice, newly charged refrigerant will mix with remaining refrigerant in repaired MAC system. If these refrigerants are not the same chemicals, mixed refrigerant in that MAC system can be considered as contaminated refrigerant;

    b. Trade of Substandard Blended Refrigerant in the Market: Although there is no topping-up practice among these MAC service shops, contaminated refrigerant in MAC system is also caused by substandard blended refrigerant traded in the market. Discussions with MAC service shops revealed that, in some cases, refrigerant that is claimed as CFC-12 or HFC-134a has possibility of being not only contaminated refrigerant but also flammable chemical. However, without an instrument to verify type of refrigerant, MAC service shops cannot seek confirmation on type of refrigerant being traded in the market.

90. Given that contaminated refrigerants not only damage MAC systems but also may lead to serious harm to humans, in particular dealing with flammable chemicals, information dissemination with regard to effect of contaminated refrigerant targeting at MAC service shops and vehicle owners has been launched through different channels including during the certification workshops.

91. To address the first factor, during the certification workshops, MAC service shops have been informed of effect to MAC system from having contaminated refrigerant and repair using top-up practice. MAC service shops were encouraged to recognize type of refrigerant designed by manufacturer prior to performing service. MAC service shops were also encouraged to use stickers providing information of existing refrigerant in MAC system (developed under this program), which will enable others to identify refrigerant in MAC system. If remaining refrigerant is as same as that designed for system and topping-up is inevitable, MAC service shops should top-up using the same refrigerant.

92. With regard to the later factor, the use of RI would help MAC service shops to identify type of refrigerant when purchased. Use of RIs would help MAC service shops to exactly acquire refrigerant as needed and subsequently can avoid wrong understanding on type of refrigerant. This would relieve problem of contaminated refrigerant in the current situation. However, given high price of RIs, most of MAC service shops would not invest on purchase of RI for their business. Without RI to identify type of refrigerant being traded, it is believed that the problem of contaminated refrigerant will be recurrent.

93. Therefore, to overcome this problem, DIW will use existing facilities under the National CFCs Phaseout Plan to enable these MAC service shops to identify type of refrigerant being traded. Under the National CFCs Phaseout Plan, RIs will be distributed to (i)

training institutes and training centers of DSD, (ii) vehicle inspection stations owned by DLT, and (iii) private vehicle inspection stations, which are located throughout the country. With this approach, MAC service shops including any service shops can have refrigerant being traded inspected at the training institutes and training centers of DSD and private vehicle inspection stations. This would help service shops to precisely know type of refrigerant being traded and could lead to reduction of using contaminated refrigerant in MAC and refrigeration service sectors.

94. In 2006, PMU will discuss with DSD and DLT about the possibility that training institutes and training centers of DSD and private vehicle inspection stations are set up to provide a refrigerant testing service. If so, PMU will work out with DSD and DLT to stipulate operation procedures to include refrigerant testing in the training institutes and training centers of DSD and private vehicle inspection stations. In addition, PMU will launch information dissemination activities, as part of its public awareness activities, on concept of refrigerant testing centers and information on where and how to have refrigerant tested. PMU will also follow-up and monitor implementation of this activity aiming to strengthen effectiveness of the program, which will help reducing contaminated refrigerant issue. If this activity is agreed among DSD and DLT, it is expected that refrigerant testing centers can be commenced starting from the third quarter of 2006 and will be fully implemented from 2007 onwards. The final details of this initiative are still being discussed with DSD, including the potential costs of running the program. Initial feedback from MAC service shop owners shows that they would be willing to pay fees associated with using testing stations, which would be marginal compared to the cost of replacing contaminated refrigerant.

(III) Preparation of National Database of CTC Used in Laboratories and Identification of Alternatives Chemicals/Methods Used in Replacement of CTC

95. Reference to 2005 Meeting of SEAP Network of ODS Officers and Customs-Ozone workshop at Beijing, the meeting recommended that countries should establish the national demand for CTC in laboratory use. This information shall be used for preparation of national consumption of CTC usage as essential use before the year 2010. In order to establish the need of CTC that is used in laboratories throughout the country, the survey of the target laboratories must be carried out. In the last quarter of 2005, PMU has done preliminary survey within selected laboratories to find the need and the use of CTC. The selected target laboratories were central laboratory for foods and agricultural products, service laboratories, petrochemical laboratories, pharmaceutical laboratories, waste management laboratory, academic toxicological laboratory, and academic chemical laboratory. The outcome of the preliminary survey indicated that:

    a. Some laboratories have changed to use alternative methods such as instrument testing methods (atomic absorption method) and/or alternative chemicals such as acetone and chloroform.

    b. Standard methods such as ASTM D3467-04 still recommend the use of CTC, although the alternative method has been established but cannot cover full range testing.

    c. Academic chemical laboratories still need CTC for research and development and teaching program in certain chemical reactions such as RuO_3 Oxidation reaction.

d. Some laboratories have stopped using CTC due to the fact that CTC is a controlled substances and it is difficult to obtain CTC from vendors in small quantity. Therefore, in such laboratories, the need of CTC persists.

96. In 2006 and 2007, PMU will prepare and develop database of target enterprises where laboratory may be incorporated as self-testing facility and CTC may be used in their testing activities. These target enterprises include food and beverage enterprises, chemical processing and synthesis enterprises, paint production enterprises, pharmaceutical and cosmetics enterprises, fermentation processing enterprises, scientific laboratories in high schools, chemical laboratories in vocational schools, colleges, and universities. PMU will survey these enterprises by mailing questionnaire to find out the need and/or annual consumption of CTC in those laboratories. This survey will also investigate the use of alternative chemical and/or method in those laboratories. The database of CTC annual consumption in laboratory will be then established and alternative chemicals and methods will also be indicated for each specific testing objective on the timely basis. This database will be updated and also used as a reference for laboratories throughout the country to acquire information of alternative methods or alternative testing chemicals.

(IV) Others

97. The PMU has been fully functional since September 2003, which is approximately one and a half years behind the original schedule, as per the approved project document. After full establishment of PMU, the need to develop implementation strategies and action plans of activities as proposed in the National CFCs Phaseout Plan resulted in implementation delays on some of the activities. However, to date, PMU has taken up momentum and has caught up project implementation, such that all activities under the National CFCs Phaseout Plan will be completed within the duration of the program. The increase in rate of disbursement in 2005, for instance, indicates the acceleration of project implementation. In CY 2005, roughly $US 2.16 million were disbursed and approximately $US 7.3 million were committed.

98. Some of activities included the original National CFCs Phaseout Plan, and some of the newly proposed activities (as mentioned in I, II and III above) must be implemented from 2006 onwards. In particular, a major component of the National CFC Phaseout Plan, namely the conversion of the refrigeration servicing sector, has not yet started. This activity was purposely designed to start after the MAC servicing component was underway, to be able to capitalize on all the lessons learned from the MAC program. Given the progress in the implementation of the MAC component, the refrigeration servicing component will not start until 2006.

99. With all the work that remains to be done under the project, for MAC service sector, refrigeration service sector, refrigerant testing centers, CTC, and the rest, funding for the Project Implementation Component of the project needs to be extended. DIW would like to use the flexibility provided in the Agreement to reallocate savings from other sectors to Project Implementation Component after 2006. Given that continuity of PMU is very critical to maintain momentum of National CFCs Phaseout Plan implementation after 2006, and in light of the progress to date and of the activities that remain, the Government will determine the distribution of tasks for the PMU and the NOU in the years to come, such that implementation until 2010 continues smoothly and Thailand can meet all the targets agreed upon under the National CFC Phaseout Plan.

100. A breakdown of ODS consumption in 2005 and 2006 by sector, in both manufacturing and servicing, is presented in Table 7. Table 8 provides a breakdown of consumption by ODS:

Table 8 - Breakdown of actual consumption of ODS in 2005 and target consumption in 2006 in various sectors

Sector	Actual Consumption Preceding Year (ODP Tonnes) 2005[1] (1)	Target Consumption Year of Plan (ODP Tonnes) 2006 (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	0	0	0	0		0
Foam	0	0	0	20		0
Refrigeration	0	0	0	0		0
Solvents	0	0	0	1		0
Other	0	0	0	0		0
Total	**0**	**0**	**0**	**21**		**0**
Servicing						
Refrigeration	1,002.54	994.71	7.83	0	8	7.83
Total	**1,002.54**	**994.71**	**7.83**	**0**	**8**	**7.83**
GRAND TOTAL	**1,002.54**	**994.71**	**7.83**	**21**	**8[2]**	**7.83**

Remarks: Actual consumption in 2005 is subject to verification by an independent auditor.

[1] The ODS consumption figure shown for each sub-sector in the year 2005 is lower than the target for that year due to continuous information dissemination and workshops for certification of MAC service technicians, which raised concern of MAC service shops and owners of vehicles in reducing the use of CFC. In addition, the Government policy to include excise tax on CFCs imposed by the Ministry of Finance has also resulted in reducing the use of CFCs in unnecessary applications.

[2] Eight ongoing activities include: (i) Chiller Replacement/Retirement, (ii) Retirement of CFC-12 Domestic Refrigerators, (iii) Retirement of CFC-12 commercial refrigerators, (iv) Retirement of CFC-12 Refrigerator Containers, (v) Retirement of Vehicles with CFC-12 MAC, (vi) MAC Inspection Requirement, (vii) Train-the-Trainer Program and Certification of MAC Service Technicians, and (viii) Financial Subsidy for R&R Machines.

Table 9 - Breakdown of actual consumption of CFCs, 1,1,1-TCA, and CTC in 2005 and target consumption of CFCs, 1,1,1-TCA, and CTC in 2006

Sector	Actual Consumption Preceding Year (ODP Tonnes) 2005				Target Consumption Year of Plan (ODP Tonnes) 2006			
	CFCs	1,1,1-TCA	CTC	Total	CFCs	1,1,1-TCA	CTC	Total
Manufacturing								
Aerosol	-	-	-	-	-	-	-	-
Foam	-	-	-	-	-	-	-	-
Refrigeration	-	-	-	-	-	-	-	-
Solvents	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-
Servicing								
Refrigeration	1,002.54	-	-	1,002.54	994.71	-	-	994.71
GRAND TOTAL	**1,002.54**	**0**	**0**	**1,002.54**	**994.71**	**0**	**0**	**994.71**

Remarks: Actual consumption in 2005 is subjected to be verified by an independent auditor.

H. Technical Assistance

H.1 Project Implementation and Monitoring (PMU)

101. PMU will appoint an independent auditor to perform the required verification of import of CFCs, 1,1,1-TCA, and CTC for CY2005. The verification report of chemicals covered by the National CFCs Phaseout Plan for CY 2005 will be completed by the third quarter of 2006, and it will be submitted to the Executive Committee along with the 2007 Annual Program.

102. After granting the Cabinet's approval on duty exemption of RIs, PMU will procure additional RIs for itself, other offices within DIW and other Government agencies such as the Ministry of Commerce, the Excise Department, and the Office of Consumer Protection Board. Acquisition of refrigerant identifiers for these agencies is considered necessary, as it would strengthen their capacity to identify the composition of refrigerants and, if found, to investigate original source of contaminated refrigerant. This would help preventing misuse of refrigerant or the use of contaminated refrigerant in MAC and refrigeration systems.

103. In 2006, the PMU will continue updating website and database of certified MAC service shops, which have been functional. This would facilitate general public to seek information of the National CFCs Phaseout Plan and on certified MAC service shops where they should have their MAC systems serviced.

104. With regards to the proposed CTC survey, PMU will continue activities to secure information of remaining use of CTC in laboratory throughout the country. The CTC

survey carried out in 2006 will focus on all potential laboratories in Thailand using primary information obtained from initial survey conducted in 2005.

105. With regards to the public awareness component, PMU plans to launch a number of activities in 2006. Key activities comprise the following:

- Update website of PMU: PMU will update progress of project implementation in PMU website, which will continue to build on the progress made up to 2005. Information on potential hazard of contaminated refrigerants, and importance of using proper refrigerant, etc. which would be beneficial to end-users and service shops, will be update and posted in this website. In addition, database of MAC service technicians will be updated after completion of each training Phase;

- MDI Phaseout Strategy: In 2006, PMU plans to make series of announcement regarding MDI Phaseout Strategy and regulation issued by FDA to lifting of CFC MDI containing Salbutamol, Futicasone and Sodium Gromoglycate from December 31, 2005. Main target group includes hospital, doctor, and importers of CFC-MDI. Report summarizing MDI Phaseout Strategy will be publicized and distributed to key stakeholders;

- MAC Service Sector: PMU will continue disseminating information of hazard of contaminating refrigerant to the public mainly to car owners and MAC service shops. Dissemination also includes invitation to car owners to have their MAC systems serviced by certified MAC service shops and encouraging owners of vehicles to retrofit MAC to HFC-134a system. Banners and stickers will be distributed to certified MAC service shops. Pamphlet listing name of certified MAC service shops would also be publicized and distributed to car owners. PMU in close cooperation with DSD will also reach out to service technicians to get them to enroll in the Certification program. MAC program advertisement will be released through various type of media such as newspapers, radio programs, pamphlets, magazines, newsletters, and bus and public vehicle (Tuk-tuk) advertisement;

- MAC Inspection Requirements and MAC Inspection Campaign: Information with regard to MAC inspection requirements will also be continued in 2006 to inform public of the policy and to increase awareness of car owners to have their MAC system filled with proper refrigerants. Information will be disseminated through various types of media such as newspapers, radios, pamphlets, magazines, and bus and public vehicle (Tuk-tuk) advertisement. In addition, PMU will coordinate with DLT to organize MAC Inspection Campaign in April 2006 and in December 2006 before long holidays in Thailand;

- Refrigerant Service Sector: At the last quarter of 2006, PMU will kick off disseminating a certification of refrigeration service technician program, which will be implemented in 2007. Additional information on the planned measures for the implementation of this project component are included in section H8.

- Press Conference: DIW and THTI will jointly organize a press conference in early 2006 to make an announcement on distribution of vouchers to garment and textile factories. DIW and DSD will also organize the third press conference at the last quarter of 2006 to announce closure of implementation of MAC service sector and to announce implementation of refrigeration service sector.

106. On policy related activities, the DIW will work closely with the Department of Foreign Trade (DFT), the Customs Department and the Office of the Council of State to have Ministry of Commerce Notification to prohibit import of CFC-based refrigerators signed

and effective. In addition, PMU will coordinate related government agencies to ensure effective enforcement of the two legal frameworks to ban the use of CFCs and 1,1,1-TCA in manufacturing sector and to include MAC inspection as part of annual inspection.

H.2 MDI

107. In the year 2006, FDA will encourage non CFC-MDI containing other active ingredients to be registered in order to replace the existing CFC-MDI products by setting up fast-track registration, especially to the physician's drug-of-choice product such as Budesonide. Strategically, FDA will stimulate the replacement of CFC-MDI under the concept of same route of administration, same indication, same level of convenience, similar price level of replaced product, and similar availability of the product to targeted patients. FDA and DIW will continue dissemination of awareness information to the general public.

H.3 Textile and Garment Industry

108. Presently, THTI has conducted a detailed survey to identify potential beneficiary garment factories, and it has coordinated with PMU to set up press conference to promote the project in the first quarter of 2006. This press conference will be held in February 2006 to make an announcement on distribution of vouchers to garment and textile factories. The first lot of vouchers will be distributed to 200 garment and textile factories. Distribution of vouchers for other factories will be carried out at the second quarter of 2006. At this time, this project is about five months delayed from schedule.

109. PMU will also monitor and follow-up, through THTI, on provision of ventilation equipment to garment and textile industries, which is implemented through voucher scheme.

H.4 Mandatory Requirement for MAC Inspection

110. RIs procured for inspection stations owned by DLT would be delivered and commissioned by March 2006 and inspection stations owned by DLT will be equipped with RIs for their operations.

111. Procurement of RIs for private inspection stations, which will be carried out through a voucher scheme, will take place in early 2006. Private inspection stations will be invited to attend two workshops. The first workshop is to distribute vouchers to private inspection stations and to inform of the government policy to include MAC inspection as part of annual vehicle inspection. The second workshop is to commission RIs and provide training on MAC inspection to private inspection stations.

H.5 Train-the-Trainer Program and Certification of MAC Service Technicians

112. PMU and DSD will continue organizing remaining 8 workshops for certification of MAC service technicians in Phase 3 in January 2006. The third follow-up workshop with training institutes and centers of DSD will take place in April 2006. As indicated in Section G "Industry Action", if approved, PMU in collaboration with DSD will launch additional workshops for certification of MAC service technicians from July-September 2006.

113. Distribution of vouchers for MAC service equipment to these certified MAC service shops will be carried out after completion of workshops for certification of MAC service

technicians. PMU will also monitor and follow-up, through 3 GCs, on provision of MAC service equipment through voucher scheme.

114. As mentioned in Section C.5 "Train-the-Trainer Program and Certification of MAC Service Technicians", various factors have resulted in implementation delay in provision of recovery/recycling machines are (i) difficulties in securing supporting document to prove qualification and eligibility of MAC service shops to receive financial assistance of this equipment and (ii) contamination problem, which reduce incentive of MAC service shops to invest on this machine. From discussion with DSD during the second follow-up workshop, training centers of DSD would assist PMU in coordinating with MAC service shops to clarify queries and in collecting supporting document as required. This would help facilitate securing supporting document for the consideration for issuance of vouchers.

115. With regards to assignment performed by group coordinators (GCs), it is originally planned that GCs will monitor and follow-up distribution of recovery/recycling machines in conjunction with for MAC service equipment. However, due to reasons above, distribution of recovery/recycling machines could not be implemented in conjunction with distribution of MAC service equipment. Therefore, if MAC service shops received financial subsidy for recovery/recycling machine program after MAC service equipment, additional monitor and follow-up on distribution of recovery/recycling machines through the group coordinators (GCs) is still required. In this regard, PMU will use the flexibility provided in the Agreement to reallocate savings from the manufacturing sector to cover additional service fee for group coordinators in monitoring and follow-up distribution of recovery/recycling machines through voucher scheme. The actual number of recovery/recycling machines distributed, actual level of subsidy, and actual transfer for GCs' service fee will be reported to the Executive Committee in the 2007 Annual Program.

H.6 Customs Training

116. Customs Training Center will start new training session from March 2006 and will include the experience of illegal trade that were confined in 2005 and the treatment of mixed refrigerants such as drop-in products. Customs Training Center has planned to train and refreshment of their officials about 700-800 officials through 2006.

117. In close coordination with the National Ozone Unit, Customs Training Program will be held by the first quarter of 2006 to discuss experiences using RIs to monitor import of CFCs and to discuss on strengthening import control of CFCs. As filter of RI is consumable spare part, the Customs Department may require replacement filters for operation of 60 RIs distributed to the Customs Department (approximately 10 pieces of filters for operation of one RI per year). PMU will investigate the need of filters in the workshop and if need be, PMU will use flexibility provided in the Agreement to reallocate saving under the Customs Training program to purchase filters for operation of 60 RIs at the Customs Department.

H.7 Procurement of Refrigerant Identifiers to Other Government Agencies

118. After granting the Cabinet's approval on duty exemption of RIs, PMU will procure eighteen RIs for itself, other offices within DIW and other Government agencies such as the Ministry of Commerce, the Excise Department, and the Office of Consumer

Protection Board. These RIs will be distributed to these related government agencies when delivered.

H.8 Train-the-Trainer Program and Certification of Refrigeration Service Technicians

119. A technical working group comprising representatives from DIW, DSD, and key stakeholders will be established in early 2006 (i) to develop refrigeration training manual (ii) to select participating training institutes and training centers, and (iii) to develop scope of the 2-days training course for the Certification of Refrigeration Service Technician Program. This standard 2-days training course will be used by all training institutes and centers of DSD to launch workshops for certification of refrigeration service technicians.

120. From the discussion with DSD to prepare implementation of this activity, DSD was interested in having RIs at training institutes and training centers participating in this program to address the issue related to contaminated refrigerant. PMU will confirm the need of RIs with DSD before procuring refrigeration training equipment for these training centers. If need be, PMU will discuss with DSD and will adjust the number of refrigeration service equipment (60 sets) and recovery/ recycling/ recharge machines (60 sets) to be procured. Savings will be used for funding of the RIs to these training centers. Actual number of equipment procured under this activity will be reported in 2007 Annual Program. Procurement of refrigeration service equipment and recovery/ recycling/ recharge machines will be carried out by the first quarter of 2006. If RI is needed, procurement of RIs will be carried out immediately after approval of Cabinet on duty exemption.

121. Implementation of train-the-trainer program and certification of service technicians in refrigeration service sector will be similar to those implemented for MAC service sector. After completion of development of training manual for refrigeration, train-the-trainer workshop will be organized, which is expected in June 2006. Training schedule of workshops for certification of refrigeration service technicians will be set during train-the-trainer workshops.

122. In line with implementation schedule and funding released for this component, workshops for certification of refrigeration service technician will be carried out from 2007-2009. Provisions of refrigeration service equipment to certified refrigeration service shops will be implemented though voucher scheme. PMU will initiate process to select qualified suppliers and to appoint group coordinators (GCs) that will facilitate implementation through voucher scheme (issuance of vouchers, inspection of refrigeration service shops' site and equipment delivery, voucher delivery to and voucher collection from certified refrigeration serviced shops, follow-up on the use of equipment).

123. As the original provisions included in the National CFCs Phaseout Plan did not include funding for service fees for the GCs and cost of launching workshops for certification of refrigeration service technicians, PMU will also use the flexibility provided in the Agreement to reallocate savings from the manufacturing sector to cover (i) service fee for GCs and (ii) cost of launching workshops for certification of refrigeration service technicians during 2007-2009. Expected saving to be reallocated from manufacturing sector to cover GCs' service fee for provision of approximately 1,485 targeted refrigeration shops is approximately $US 163,350, while saving reallocated from

manufacturing to cover cost of launching workshops during 2007-2009 is approximately $US 50,000. However, actual transfer will be reported in the 2007 Annual Program

Table 10 - Summary of technical assistance activities to be carried out in CY2006

No.	Proposed Activity	Objective	Target Group	Impact	Status
	Project Management Unit				
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 continue in 2006.
2	Public Awareness Activities				Public awareness activities in 2006 will be carried out throughout the year. Activities include update of PMU website and MAC database. Public awareness on the Government's policy to ban the use of CFCs and 1,1,1-TCA in the manufacturing sector, (ii) to ban the use of CFCs, 1,1,1-TCA, and CTC by 2010, (iii) to include MAC inspection as part of annual vehicle inspection, (iv) to lift of CFC MDI containing Salbutamol, Futicasone and Sodium Gromoglycate, and (v) to prohibit import of CFC-based refrigerators will be disseminated. With regard to service sector, announcement of certification workshops for MAC and refrigeration, and contaminated refrigerant will be carried out through various type of media such as newspapers, radio programs, televisions, pamphlets, magazines, and newsletters, bus and public vehicle (Tuk-tuk) advertisement. Press conference among key government agencies and MAC inspection campaign with DLT will also be organized.
3	Implementation of Investment Activities				PMU will accelerate implementation of remaining investment sub-projects in solvent and foam sectors. This also includes monitoring and follow-up, through appointed coordinators, on provision of MAC service equipment for MAC service shops and provision of ventilation equipment to garment and textile industries, which are implemented through voucher scheme.

No.	Proposed Activity	Objective	Target Group	Impact	Status
4	Coordinate with other agencies related to policy and regulations				DIW will work closely with DFT, the Customs Department and the Office of the Council of State to have Ministry of Commerce Notification to prohibit import of CFC-based refrigerators signed and effective. PMU will coordinate related government agencies to ensure effective enforcement of the two legal frameworks to ban the use of CFCs and 1,1,1-TCA in manufacturing sector and to include MAC inspection as part of annual inspection. In addition, DIW will assign other offices within DIW and will coordinate with other government agencies for their corporation to identify composition of refrigerant and, if found, to investigate original source of contaminated refrigerant. Refrigerant identifiers will be procured and distributed to these government agencies.
	Technical Assistance for MDI Sector				
1	Implementation of CFC-MDI Phaseout Strategy	To increase awareness on CFC MDI transition plan	Pharmaceutical Association, Doctors, MDI Importers, and Patients	To promote the use of non-CFC MDI	FDA will encourage non CFC-MDI to be registered in order to replace the existing CFC-MDI products by setting up fast-track registration. FDA and DIW will continue dissemination of awareness information to the general public.
	Textile and Garment Industry				
1	Implementation of Technical assistance and Investment Activities	To develop local exposure limits 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	Press conference to promote the project will be held in the first quarter of 2006 to make an announcement on distribution of vouchers to garment and textile factories. The first lot of vouchers will be distributed to 200 garment and textile factories. Distribution of vouchers for other factories will be carried out at the second quarter of 2006. PMU will also monitor and follow-up implementation of this activity through THTI.

No.	Proposed Activity	Objective	Target Group	Impact	Status
	Mandatory Requirement for MAC Inspection				
1	Procurement of Refrigerant Identifiers	To prevent HFC MAC system from being reverse-retrofitted to CFC-12	DLT'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	RIs procured for inspection stations owned by DLT would be delivered and commissioned by March 2006 and inspection stations owned by DLT will be equipped with RIs for their operations. Procurement of RIs for private inspection stations will take place in early 2006. Private inspection stations will be invited to attend two workshops. The first workshop is to distribute vouchers to private inspection stations and to inform of the government policy to include MAC inspection as part of annual vehicle inspection. The second workshop is to commission RIs and provide training on MAC inspection to private inspection stations.
	Train-the-Trainer Program and Certification of MAC Service Technicians				
1	Train-the-Trainer Program	Increase technical capacity of MAC Service shops	Authorized Training centers and MAC service shops	Reduction of CFC-12 consumption in MAC service from repairing MAC system properly	PMU will procure 31 units of RIs to DSD soon after a proposal to grant approval for duty exemption is approved by the Cabinet.

No.	Proposed Activity	Objective	Target Group	Impact	Status
2	Certification of MAC Service Technicians				PMU and DSD will continue organizing remaining 8 workshops for certification of MAC service technicians in Phase 3 in January 2006. The third follow-up workshop with training institutes and centers of DSD will take place in April 2006. If a proposal to train and provide financial subsidy to additional 500 MAC service shops is approved, PMU and DSD will launch additional workshops from July-September 2006. PMU will work closely with financial intermediary and GCs to distribute vouchers for MAC service equipment to remaining certified MAC service shops. With regard to R&R machine, PMU will work closely with DSD and GCs to secure supporting document for issuing voucher for this machine. A program for R&R machine will be implemented immediately in 2006.
	Customs Training Program				
1	Train-the-Trainer Program	Build technical capacity of custom officials to inspect the import chemicals	Customs Officials	Strengthen effectiveness of import control system of CFC	A follow-up workshop on Customs Training Program will be held by the first quarter of 2006 to discuss experiences using RIs to monitor import of CFCs and to discuss on strengthening import control of CFCs.
2	Training Curriculum				Customs Training Center will start new training session from March 2006. Customs Training Center has planned to train and refreshment of their officials about 700-800 officials through 2006.
	Procurement of Refrigerant Identifiers to Other Government Agencies				

No.	Proposed Activity	Objective	Target Group	Impact	Status
1	Procurement of Refrigerant Identifiers	To address problem of contaminated refrigerant and monitoring use of contaminated refrigerant	Ministry of Commerce, the Excise Department, the Office of the Consumer Protection Board, and DIW	Help preventing misuse of refrigerant	After granting the Cabinet's approval on duty exemption of RIs, PMU will procure eighteen RIs for related other government agencies. These RIs will be distributed to these related government agencies when delivered.
	Train-the-Trainer Program and Certification of MAC Service Technicians				
1	Train-the-Trainer Program	Increase technical capacity of MAC Service shops	Authorized Training centers and MAC service shops	Reduction of CFC-12 consumption in MAC service from repairing MAC system properly	A technical working group comprising representatives from DIW, DSD, and key stakeholders will be established to develop refrigeration training manual, to select participating training institutes and training centers, and to develop scope of the 2-days training course. PMU will confirm the need of RIs with DSD before procuring refrigeration training equipment. If need be, PMU will adjust the number of refrigeration service equipment and recovery/recycling/recharge machines to be procured. Saving will be used for funding of the RIs to these training centers. Procurement of refrigeration service equipment and recovery/recycling/recharge machines will be carried out by the first quarter of 2006. If RI is needed, procurement of RIs will be carried out immediately after approval of Cabinet on duty exemption. Train-the-trainer workshop will be organized in June 2006.
2	Certification of MAC Service Technicians				Certification of refrigeration service technicians will be implemented in 2007. Provisions of refrigeration service equipment to certified refrigeration service shops will be implemented though voucher scheme. PMU will initiate process to select qualified suppliers and to appoint group coordinators (GCs) that will facilitate implementation through voucher scheme in 2006.

I. Planned Government Actions

124. PMU will coordinate related government agencies to ensure effective enforcement of the two legal frameworks to ban the use of CFCs and 1,1,1-TCA in manufacturing sector and to include MAC inspection as part of annual inspection, which have been effective since 2005.

125. DIW will work closely with the Department of Foreign Trade (DFT), the Customs Department and the Office of the Council of State to have Ministry of Commerce Notification to prohibit import of CFC-based refrigerators signed and effective.

126. PMU will work closely with FDA in encouraging non CFC-MDI containing other active ingredients to be registered in order to replace the existing CFC-MDI products by setting up fast-track registration.

127. DIW will coordinate with other related government agencies to address the issues of contaminated refrigerant in preventing misuse of refrigerant or the use of contaminated refrigerant in MAC and refrigerant system.

128. PMU will appoint an independent auditor to perform the required verification of import of CFCs, 1,1,1-TCA, and CTC for CY2005. The verification report of chemicals covered by the National CFCs Phaseout Plan for CY 2005 will be completed by the third quarter of 2006, and it will be submitted to the Executive Committee along with the 2007 Annual Program.

129. PMU will update progress of project implementation in PMU website, which will continue to build on the progress made up to 2005. Information on potential hazard of contaminated refrigerants, and importance of using proper refrigerant, etc. which would be beneficial to end-users and service shops, will be update and posted in this website. In addition, database of MAC service technicians will be updated after completion of each training Phase.

130. Key activities for the Government actions to be executed in 2006 are summarized in Table 10, below.

Table 11 – Key Government actions in 2006

NO.	POLICY/ACTIVITY PLANNED	EXPECTED SCHEDULE OF IMPLEMENTATION	STATUS
1.	Control import quota for CY2006	January-December 2006	Quota for CFC-11 and CFC-12 was issued in December 2005 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 2005	April-September 2006	Appointment of auditor will be completed by the first quarter of 2006 and verification will be completed by September 2006.

NO.	POLICY/ACTIVITY PLANNED	EXPECTED SCHEDULE OF IMPLEMENTATION	STATUS
3.	Ban on the use of CFCs, and 1,1,1-TCA in manufacturing sector[1]	January-December 2006	This regulation has been entered into force since 2005.
4.	Database of trained technicians in the MAC sector[2]	January-December 2006	Database will be updated from database in 2005 and will be included in PMU website
5.	Annual MAC inspection requirement is operational[2]	January-December 2006	This regulation has been entered into force since 2005.
6.	Public Awareness Activities	January-December 2006	See Part H above
7.	Follow-up and Monitoring completed sub-projects	January-December 2006	-
8.	International Ozone Day Ceremony	September 2006	-

[1] 2004 Performance target

[2] 2005 Performance Target

J. 2006 Budget and Planned Disbursement

Table 12 – Budget and planned disbursement in 2006

	Description	(SU$)Original Funding Approved			(SU$)Revised Budget		(SU$)Funding Disbursed					Expected Saving (SU$)
		Cumulative Available Funding as of December 2005	Funding Approved 2006in CY	Cumulative Available Funding in 2006CY	Proposed Reallocation of Funding 2006in CY [1]to /from	Cumulative Available Funding in 2006CY	Cumulative Expenditure Disbursed asmberof Dece 2005	Obligated Expenditures		[2]Planned Disbursement		
								Obligated Expenditures from CY 2005	Expected Obligated Expenditure 2006in CY	Expected Disbursement in CY 2006	To be Disbursed after CY 2006	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
1	-Investment Projects Aerosols	102,960	0	102,960	0	102,960	0	0	0	0	0	102,960
2	TA for MDIs	57,200	0	57,200	0	57,200	49,855	0	0	0	0	7,345
3	-CFC -Investment Projects 113	805,154	0	805,154	0	805,154	260,443	0	0	0	0	544,711
4	-1,1,1 -Investment Projects TCA and CTC	181,000	0	181,000	0	181,000	101,040	58,982	0	58,982	0	20,978
5	TA for contact cleaners	23,100	0	23,100	0	23,100	0	0	0	0	0	23,100
6	Garment and Textile Industry	1,026,066	0	1,026,066	0	1,026,066	73,991	952,075	0	952,075	0	0
7	-ects Investment Proj Foam	3,159,306	0	3,159,306	604,460-	2,554,846	381,155	1,623,476	0	1,623,476	0	550,215
8	MAC Inspection Requirement	1,237,500	0	1,237,500	0	1,237,500	18,530	1,218,970	0	1,218,970	0	0
9	MAC -Trainer -the-Train	319,000	0	319,000	0	319,000	202,059	54,250	0	54,250	0	62,692
10	Certification of MAC Service Technicians Workshops	131,067	0	131,067	0	131,067	69,747	17,119	22,500	39,619	0	21,700
11	Financial Subsidy for Purchasing MAC Servicing Equipment and Group including)Coordinator Fee ACM 500additional	2,940,000	385,000	3,325,000	341,110	3,666,110	655,541	2,284,459	726,110	2,455,569	555,000	0

	Description	(SU$)Original Funding Approved			(SU$)Revised Budget		(SU$)Funding Disbursed					Expected Saving (SU$)
		Cumulative Available Funding as of December 2005	Funding Approved 2006in CY	Cumulative Available Funding in 2006CY	Proposed Reallocation of Funding 2006in CY [1]to /from	Cumulative Available Funding in 2006CY	Cumulative Expenditure Disbursed as mberof Dece 2005	Obligated Expenditures		[2]Planned Disbursement		
								Obligated Expenditures from CY 2005	Expected Obligated Expenditure 2006in CY	Expected Disbursement in CY 2006	To be Disbursed after CY 2006	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	(Service shops											
12	Financial Subsidy for Purchasing MAC R&R Machines and Group Coordinator Fee	695,200	127,600	822,800	50,000	872,800	0	695,200	177,600	436,400	436,400	0
13	Project Management Unit	1,340,000	200,000	1,540,000	0	1,540,000	937,057	402,943	200,000	602,943	0	0
14	Custom Training	165,000	0	165,000	0	165,000	138,835	10,500	2,400	12,900	0	13,265
15	-Trainer -the-Train Refrigeration	180,000	139,000	319,000	0	319,000	0	0	319,000	319,000	0	0
16	Procurement of Refrigerant Identifiers to Other Government Agencies	29,474	0	29,474	0	29,474	0	21,000	0	21,000	0	8,474
17	Certification of Refrigeration Service Technicians Workshops (2009-2007)	0	0	0	50,000	50,000	0	0	50,000	0	50,000	0
18	Financial Subsidy for Purchasing Refrigeration Servicing Equipment and Group Coordinator Fee (2009-2007)	0	0	0	163,350	163,350	0	0	163,350	0	163,350	0
	TOTAL	**12,392,026**	**851,600**	**13,243,626**	**0**	**13,243,626**	**2,888,254**	**7,338,973**	**1,660,960**	**7,795,183**	**1,204,750**	**1,355,439**

Remarks: (1) Negative figures shown in column (4) indicate the amount of funding reallocated to other activities. Positive figures shown in the same column represent the amount of funding allocated to respective activity;

(2) Planned disbursement shown in column (9) and (10) is based on available funding as of CY2006

AUDITOR'S REPORT

THE VERIFICATION OF THE YEAR 2004'S CFCs, 1,1,1-TRICHLOROETHANE AND CARBON TETRACHLORIDE CONSUMPTION OF THAILAND

PREPARED BY

S&T PARTNERSHIP,
BANGKOK, THAILAND

NOVEMBER 28, 2005

S&T
Partnership

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List of Abbreviations

1,1,1-TCA	=	1,1,1-Trichloroethane
B.E.	=	Buddhist Era
CD	=	Customs Department
CTC	=	Carbon Tetrachloride
DIW	=	Department of Industrial Works
ExCom	=	Executive Committee
Max.	=	Maximum
MLF	=	Multilateral Fund
MOI	=	Ministry of Industry
MOI Not.	=	Notification by the Ministry of Industry
MT	=	Metric Ton
NCFCP	=	National CFC Phaseout Plan
No.	=	Number
ODS	=	Ozone Depleting Substances

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The Ozone Depleting Substances (ODS) Phaseout Project of Thailand:
The National CFC Phaseout Plan
Verification of 2004 ODS Consumption

AUDITOR'S REPORT

I have audited the documents relating to procedures of the issue of import/export quota against the ODS Import/Export License executed by Department of Industrial Works (DIW), and import/export control executed by DIW and Customs Department (CD). I have audited supporting documents to certify actual consumption of Annex A, Group I chemicals (CFC-11, CFC-12, CFC-113, CFC-114, and CFC-115); 1,1,1-Trichloroethane (1,1,1,-TCA); and Carbon Tetrachloride (CTC) during January 1, 2004 to December 31, 2004. The DIW, CD, and importers/exporters are jointly responsible for these supporting documents. My responsibility is to express an opinion on the import-export (actual consumption) of the controlled chemicals and the compliance with the condition agreed with the Executive Committee (ExCom) based on my audit.

I conducted my audit in accordance with generally accepted auditing standards. Those standards require that I plan and perform the audit to obtain reasonable assurances that the actual consumption (import-export) of the controlled chemicals is within the condition agreed with the ExCom. The audit includes examining, on a test basis, evidence supporting the amounts and types of these controlled chemicals that have been issued against ODS Import/Export License and actually imported or exported for the year 2004. I believe that my audit provides a sound basis for my opinion.

In my opinion, the actual permits to importers/exporters were correctly licensed and within the maximum allowable consumption level (for import of CFC-11 and CFC-12), in accordance with the quota specified in the agreement between the Government of Thailand and the ExCom.

And also the actual consumption (import – export) of the controlled chemicals was within the condition agreed with the ExCom as follows:

Imported were 218.285 ODP tonnes of CFC-11 and 1,101.77 ODP tonnes of CFC-12. CFC-113, CFC-114, CFC-115, 1,1,1-TCA, and CTC were not imported.

Exported was none of CFC-11, CFC-12, CFC-113, CFC-114, CFC-115, 1,1,1-TCA, and CTC.

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The document process and the data records from DIW have been found to be consistent and correctly recorded with supporting document. Therefore, reliability of data from DIW is dominant and well prepared with fulfill criteria in import/export verification for the year 2004.

Tip-upsorn Kamlang-ngarm
Certified Public Accountant (Thailand)
Registration No.6672

S&T Partnership, Bangkok, Thailand.
November 28, 2005

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Chapter I
Introduction

1.1 Background

The Government of Thailand, through Department of Industrial Works (DIW), has received an approval from the Multilateral Fund (MLF) to implement a program for the phased reduction and complete phaseout of consumption of Annex A, Group I, chemicals, 1,1,1-TCA and CTC in the country by applying a combination of regulations, and financial assistance. The program, Thailand National CFC Phaseout Plan (Thailand NCFCP), aims to reduce the negative impacts to the enterprise in light of the world market trend and the regulatory actions. The Government of Thailand, through DIW, wishes to ensure that (i) the public and enterprises are informed and aware of the situation and (ii) the enterprises that are eligible to obtain funding from the MLF, but have not received any assistance from the MLF will have an opportunity to request for technical and/or financial assistance.

The Thailand NCFCP was approved at the 35th Meeting of the Executive Committee (ExCom) in December 2001 and will be implemented through the World Bank. The ExCom has agreed on the principle that it will continue providing fund at the level agreed in the final agreement between the Government of Thailand and the ExCom on an annual basis to support annual programs for this plan. By this approval, Thailand agrees that in exchange for the funding level, it will eliminate its 1,1,1-TCA and CTC consumption by 2010 (Except any consumption that is considered by the Parties as essential uses), and also agrees to reduce its total Group I, Annex A CFC consumption.

From the agreement between the Government of Thailand and the ExCom, it was specified that maximum allowable consumption levels for Annex A, Group I chemicals, 1,1,1-TCA and CTC in 2004 are 2,291 ODP tonnes, 34 ODP tonnes, and 7.52 ODP tonnes respectively.

To have the ExCom released year 2006 tranche, it is required that the government of Thailand must demonstrate the actual consumption of the said chemicals is in line with the agreed level specified in the agreement and submit an audit report as a part of the annual work plan.

1.2 Scope of work and audit methodology

The objective of this assignment is to perform an audit and certify that consumption of Annex A, Group I chemicals, 1,1,1-TCA and CTC in 2004 are in line with the maximum agreed level specified in the agreement.

Verification of process for issuing of import quota for the year 2004: Review and verify process of issuing of import quota to the importer carried out by DIW to ensure that

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the procedures are in line with the procedures set forth in Ministry of Industry's Notification issued under the Hazardous Substances Act B.E.2535 and decision made by the Hazardous Substances Committee.

Verification of quotas issued to importers: Review and verify Import Permits issued to importers by comparing the Import Quota in the agreement and permitted amount as indicated in the Import Licenses.

Verification of documentation that importers/exporters submitted to DIW when seeking clearance: Through a full examination of document, we verify consistencies of supporting document importers/exporters submitted to DIW when seeking clearance. The supporting documents for the verification are:

- Import/Export Clearance Forms approved by DIW;
- Import/Export License and Quantity Deduction Form;
- Invoice(s);
- Bill of Lading.

Verification of the record of Customs Department (CD): By a systematic sampling, we verify consistencies of supporting documents importers/exporters submitted to the authorities of CD when seeking the clearance of CD. The verification also includes the examination to ensure that supporting documents submitted to DIW for the shipments have the same content as those submitted to CD. Supporting documents for the verification are:

- Printouts on Import/Export of the chemicals from CD;
- Declaration Form;
- Import/Export Clearance Form approved by DIW;
- Invoice(s);
- Bill of Lading.

Review and summarize methodology used by the government for data collection: Review and summarize the methodology used by the government for data collection.

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Chapter II
Note to procedures for the issue of Import Quota and Export Allowance

2.1 General

According to the notification by the Ministry of Industry dated 17 February 1995, (cited here as MOI Not.1995), Ozone Depleting Substances (ODS) listed in Annex A, B, and C of the Montreal Protocol are classified as type 3 hazardous substances under Thailand's Hazardous Substances Act and as such the import, export, production and possession of these substances require a permit from Department of Industrial Works (DIW), whereas Annex E chemicals are under responsibility of Department of Agriculture. For chemicals listed under Annex A, B, and C, importers/exporters must register with DIW for acquisition of import/export license.

In addition to import/export license, MOI dated 23 August 1995 has required importers to seek importation clearance for each shipment before it arrives in Thailand, while exportation clearance for each shipment is required before it departs from Thailand. Applications for import and export permits are handled and approved by DIW.

The importers are required to furnish import license and approved by DIW to Customs Department (CD) to allow such chemicals entering into Thailand. The authorities of CD will make a note on the quantity deduction form attached with the original license when a goods is cleared through CD. The license with quantity deduction form is showed to DIW every time the importer wants to get permission to bring in a new shipment of ODS. In that way DIW can control that no ODS is imported after the importers' allowance amount has been met.

By the end of July of the imported year and January of the following year, the importers are required to submit DIW distribution declaration report. This would enable DIW to inspect list of the customers to whom importers sold ODS.

Import of ODS without a license can result in facing fines and imprisonment. Failure to comply with all conditions attached to import licenses can result in suspension or cancellation of import licenses. Import licenses can be suspended up to one year. If licenses are cancelled, importers will no longer be able to import that particular chemical until a new license is issued by DIW. An application for a new license for those importers, whose previous licenses were revoked, cannot be reproduced within five years after the date of cancellation of the previous licenses.

2.2 Procedures for the issue of Import Quota and Export Allowance of Annex A Group I chemicals, 1,1,1 –TCA and CTC against the ODS Import/Export License (Executed by DIW)

Procedures for the issue of Import Quota and Export Allowance of Annex A Group I chemicals,1,1,1-TCA and CTC against the ODS Import/Export License (executed by DIW) for each year will take into account the maximum allowable consumption stipulated in the agreement between the Government of Thailand and the Executive Committee (Excom).

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Year	Max. Allowable Consumption Level for Annex A Group I chemicals (ODP tonnes)	Max. Allowable Consumption Level for 1,1,1-TCA (ODP tonnes)	Max. Allowable Consumption Level for CTC (ODP tonnes)
2004	2,291	34	7.52

*2.2.1 **Specific procedures:*** The decision dated June 16, 2000 by the Hazardous Substances Committee mandates DIW to take into account the following conditions for the issue of import license for CFCs, 1,1,1-TCA and CTC to importers:

For CFC-11 and CFC-12:

- The importer must import such chemicals in the previous year for at least 3 consecutive years and follow the procedures set forth in Ministry of Industry's Notification issued under the Hazardous Substances Act B.E.2535.
- Each importer's quota of the chemicals is allocated with a 10% reduction from that of the previous year, however, the quota for each importer can be flexibly determined and shall be based on the domestic need and shall not exceed the maximum allowable consumption level stipulated with the ExCom agreement, as stated in Article 2.2.

For CFC-113, CFC-114, CFC-115, 1,1,1-TCA and CTC:

- The importer must be the end-user of such chemicals in the manufacturing process before January 1, 1999 or entity authorized by the end-users.
- In case of the authorized entity, there must be the letter notifying justification for the need to use such chemicals as well as phaseout plan of such chemicals. The phaseout plan must clearly specify the required amount and phaseout schedule.
- The allowable amount for such chemical is based on the production capacity, amount of such chemicals used per production unit, phaseout plan, financial and technical feasibility to convert to alternative technologies.

In accordance with importation of CFC-11 or CFC-12, quota for import of CFC-11 and CFC-12 will be based on conditions above. The importers of CFC-11 or CFC-12 must seek an import license from DIW on an annual basis. Before the end of each year, DIW will convene a meeting between DIW and importers of CFC-11 and CFC-12 to seek a bilateral and definitive agreement on percentage of reduction for the following year. The importer that has been allocated small quantity of Import Quota which does not meet its cost – effectiveness and willing to accept the condition that it will import constant amount annually and stop import of CFC-11 and CFC-12 within the following five consecutive years can make a request for the constant quota to DIW(Decision of the meeting dated

December 15, 1998 and dated November 30, 1999). However, the constant quota can be applied until year 2005 (Decision of the meeting dated June 5, 2001).

By the end of the year, DIW will notify importers regarding the Import Quota amount of CFC-11 and CFC-12 for next year. The importers can subsequently proceed with the request for CFC-11 or CFC-12 import license.

For import of CFC-113, CFC-114, CFC-115, 1,1,1-TCA and CTC the issue of import license will be based on case by case basis in accordance with conditions above. Like that of CFC-11 or CFC-12, import license of these chemicals is valid only for one year.

With regard to export of CFC-11, CFC-12, CFC-113, CFC-114, CFC-115, 1,1,1-TCA and CTC the issue of export license will be based on the case by case basis and the exporters are required to provide justification for export to support consideration of DIW.

2.2.2 In addition to specific procedures: DIW requires importers/exporters of Annex A Group I chemicals, 1,1,1-TCA and CTC to follow the Hazardous Substance Act B.E.2535 for seeking import/export license as follows:

Supporting documents for requesting the license: Importers/exporters of controlled substances must register with DIW for acquisition of Import/Export License. In order to obtain Import/Export License, the importers/exporters are required to furnish DIW with the following supporting documents:

- Import/Export Request Form completely filled with information regarding (i) Name of Importer/Exporter,(ii) Contact Address,(iii) Place for Storing Chemical legally occupied by importers/exporters,(iv)Formula and Mixtures, (v) Name of Manufacturer and Place of Manufacturing, (vi) Annual Imported/Exported Quantity;
- A copy of identification card of authorized representatives of importer/ exporter;
- A copy of a certificate of juristic person;
- An authorization form;
- A copy of registration license;
- A copy of chemical formula analysis;
- Map of place for storing chemicals and surrounding areas;
- Outline of building for storing chemicals;
- Documents describing packaging/contained that keep chemical;
- Fact sheets of chemical safety;
- Documents describing method for chemical storage;
- Documents describing safety measures.

Procedures of DIW in verification of supporting documents: The authorities of DIW will carry out verification process to assure that all supporting documents are completely submitted, consistently and importantly, to ensure that safety measures to storage that particular chemical are adequately employed. If supporting documents are not completely submitted, the authorities of DIW will notify importers/exporters and request them to submit additional document to DIW within 3 weeks from date of notification (as indicated in the letter). If not, DIW will return all documents to importers/exporters.

However, in case of any inconsistencies or any queries among these supporting documents, DIW will seek clarifications from importers/exporters. Correction of Import/Export Request Form can be carried out by initialing the importers/exporters' signature at every corrected part.

Inspection of storing place: In a case that the verification of supporting documents is finished, the authorities of DIW will carry out inspection of storing places for the following purposes:

- A building for storing chemicals meet criteria set forth in Ministerial Decree No.1 (B.E. 2537) issued under Article 10 of the Hazardous Substances Act B.E. 2535.
- A method for storing chemicals meet criteria set forth in Ministerial Decree No.1 (B.E. 2537) issued under Article 11, 12, 13 and 19 of the Hazardous Substances Act B.E. 2535.
- Safety measures of storing places are in accordance with criteria set forth in Ministerial Decree No.1 (B.E. 2537) issued under Article 18 and 19 of the Hazardous Substances Act B.E. 2535.
- Determination of Import Quota and Export Allowance quantity shall be taken into account appropriateness of place and method for storing chemical and in accordance with Notification by the Minister of Industry issued under Article 20(1) of the Hazardous Substances Act B.E. 2535

The Issue of Import/Export License: In a case that results from inspection are in accordance with set forth criteria and conditions, DIW will proceed with the issue of Import/Export License. Importers/Exporters will obtain original Import/Export Licenses and a copy of Import/Export License, will be kept at the office of DIW.

2.3 Procedures for import/export control through approval of import/export clearance (executed by DIW)

For each shipment, before controlled substances are arrived at or departed from the port, importers/exporters are required to furnish DIW with the following supporting documents in order to obtain import/export clearance:

- Import/Export Clearance Form completely filled with information regarding (i) Names of Chemicals, (ii) Formula and Mixtures, (iii) Trade Names, (iv) Imported/Exported quantity, (v) Packaging, (vi) Places of storing chemicals,

(vii) Names of Vessels and Customs' point of entry/departure, and (viii) Estimated Date of Arrival/Departure;

- Original Import/Export License and Quantity Deduction Form;
- Invoice(s);
- Bill of Lading.

Importer/Exporter is required to submit 2 sets of the above supporting documents. All the supporting documents must be initiated by authorized representatives of importer/exporter.

After verifications of these supporting documents, it was found that all supporting documents were completely submitted and reliable, DIW will approve import/export clearance by initialing authorized official's signature in the import/export clearance form. If supporting documents are not completely submitted, the authorities of DIW will explain a suspension of approval of import/export clearance to importer/exporter and will return all documents to importer/exporter. In this case, importer/exporter is required to re-submit full supporting documents for approving of import/export clearance.

However, in case of any inconsistencies or any queries regarding these supporting documents, DIW will seek clarification from the importer/exporter. DIW will not approve import/export clearance unless the importer/exporter has clarified all discrepancies. Correction of supporting documents shall be allowed only for Import/Export Clearance Form. In this case, both importer/exporter and the authorities of DIW are required to initial at every corrected part.

After the import/export clearance has been approved, DIW will deduct import/export quantity that have been approved from the remaining allowable quantity and specified in Quantity Deduction Form which is attached with an original import/export license. This would enable DIW and CD to assure that no ODS will be imported/exported after the importers/exporters' allowable amount has been met.

When approved, 1 set of supporting documents will be returned to importer/exporter for the clearance with CD. Another one will be kept at the office of DIW.

2.4 Procedures for import/export control through the clearance of CD (executed by CD)

For each shipment, the importer/exporter is required to furnish CD with the original import/export license and approved import/export clearance from DIW to get such chemical entering through or departing from port or check point. In addition, the importer/exporter is required to submit declaration form to the authorities of CD.

To have the clearance of CD, importer/exporter is required to furnish CD with the following supporting documents:

- Declaration Form;
- Import/Export Clearance Form initiated by the authorities of DIW;

- Original Import/Export License and Quantity Deduction Form;
- Invoice;
- Bill of Lading.

The authorities of CD will make a note on the supporting documents when goods is cleared through CD. If it is found that all supporting documents are completely submitted, consistent, and reliable, the authorities of CD will endorse the import/export of the controlled substances. In addition, the authorities of CD will take a note on Quantity Deduction Form, countering the note signed by authorities of DIW. This is to ensure that no ODS is imported after the importer's allowable amount has been met.

When endorsed, the original license and Quantity Deduction Form will be kept with importer. The other supporting documents will be kept at the office of CD.

Chapter III
Audit results

The audit methodology was mentioned in Chapter I (see page1 Article 1.2).

3.1 Verification of process for issuing import/export quota for the year 2004

Audit examinations on the process for issuing ***import quota of CFC-11 and CFC-12*** for the year 2004 were carried out and the followings were note:

i. Department of Industrial Works (DIW) convened a meeting between CFC-11 and CFC-12 importers and DIW for the quota allocated to the importer in the year 2004 at DIW meeting room on September 19, 2003.

ii. It was agreed in the meeting that the Import Quota allocated to importer for CFC-11 and CFC-12 of 2004 would be the same as that of 2003 (Decision of the meeting dated September 19, 2003).

iii. The Import Quota of CFC-11 and CFC-12 for each importer as agreed in the meeting has been submitted to the importers.

iv. Importers of CFC-11 and CFC-12 that obtained the Import Quota in the year 2004 have imported CFC-11 or CFC-12 for the last 3 consecutive years in accordance with the criteria described above.

v. DIW sent a letter notifying Customs Department (CD) with regard to the CFCs Import Quota issued to each importer for the year 2004 to ensure that neither CFC-11 nor CFC-12 will be imported after the importer's allowable amount has been met.

vi. The authorities of DIW proceeded with issue of Import License by following procedures for approval of import licenses as mentioned in Chapter II, paragraph 2.2.

There is no import quota and license of CFC-113, CFC-114, CFC-115, 1,1,1-TCA and CTC in 2004.

There was no exporter requested for export of CFC-11, CFC-12, CFC-113, CFC-114, CFC-115, 1,1,1-TCA and CTC in the year 2004.

Through audit's examination, we are satisfied that DIW has properly controlled and adhered to the procedures of issuing import/export quota and licenses.

3.2 Verification of quotas issued to importers/exporters

Import: Verification of Import Permits issued to importers of CFC-11 and CFC-12 were carried out by comparing the Import Quota agreed in the meeting and permitted

amount as indicated in the Import Licenses for all the importers. With regard to 1,1,1-TCA and CTC, there is no Import Quota to the importer, as import of 1,1,1-TCA and CTC will be approved on case by case basis.

Export: For the year 2004, no exporter requested exportation to DIW.

From the examination, the followings were noted:

For Import:

Table 1: Annex A, Group I, Chemicals.

Type of Controlled Substances	(a) Max. Allowable Consumption Level (ODP tonnes)	(b) 2004 Import Quota* (ODP tonnes)	(c) 2004 Import Permit* (ODP tonnes)	(d) Import Amount* (ODP tonnes)
CFC-11		746.16	622.690	218.2850
CFC-12		1,303.82	** 1,392.188	1,101.7700
CFC-113	2,291	0	0	0
CFC-114		0	0	0
CFC-115		0	0	0
Total	2,291	2,049.98	2,014.878	1,320.055

Table 2: 1,1,1-TCA

Type of Controlled Substances	(a) Max. Allowable Consumption Level (ODP tonnes)	Requested Amount * (ODP tonnes)	Import Amount* (ODP tonnes)
1,1,1-TCA	34	0	0

Table 3: CTC

Type of Controlled Substances	(a) Max. Allowable Consumption Level (ODP tonnes)	Requested Amount* (ODP tonnes)	Import Amount* (ODP tonnes)
CTC	7.52	0	0

Remarks: (a) = The agreement between the Government of Thailand and the ExCom
(b) = The quotas 2004 granted by DIW.
(c) = The amount of Import License granted by DIW.
(d) = The actual Import relying on permitted quantity (approved date in Import Clearance Form from DIW between January 1, 2004 and December 31, 2004).
* = In accordance with the permitted quantity in the year 2004. More details see Appendix D and E.
** = Further details see Appendix E.

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From tables above, it was noted that actual permits to the importers/exporters were correctly licensed and the total amount permits through import/export licenses does not exceed the maximum allowable consumption level as stipulated in the agreement between the Government of Thailand and the ExCom.

3.3 Verification of documentation that importers/exporters submitted to DIW when seeking clearance and verification of the record of CD

Verification of documentation that importers/exporters submitted to DIW when seeking clearance and also the record of CD was carried out by comparing document between DIW and CD. The followings were noted:

3.3.1 Examination of CFC-11 import was carried out by verifying 5 of 11 transactions of Customs Declaration Form.

- Five transactions of documentation (100.00% of verified documentation) are consistent with record of DIW;

  The 5 transactions of documentation are listed by importers as follow (For more details, see Appendix I)

  1. Berli Jucker Specialties Ltd.
  2. Pacific Unitrade Co., Ltd.
  3. Chemical Specialties Corporation Limited
  4. Industrial Trade Ltd.

3.3.2 Examination of CFC-12 import was carried out by verifying 25 of 56 transactions of Customs Declaration Form.

- Twenty three transactions of documentation (92.00% of verified documentation) are consistent with record of DIW.
- Two transactions of documentation (8.00% of verified documentation) is not consistent with record of DIW;

  The 25 transactions of documentation are listed by importers as follow: (For more details, see Appendix I)

  1. Dot Bamboo (Bangkok) Co., Ltd.
  2. Pacific Unitrade Co., Ltd.
  3. Toyokoki Inter Co., Ltd.
  4. Thasco Chemical Co., Ltd.
  5. I.C.P. Chemical Co., Ltd.
  6. Coolman Corpotation Ltd.
  7. Numthai Equipment Co., Ltd.
  8. Union Trading and Industries Co., Ltd.
  9. Ausinee Co., Ltd.
  10. Industrial Trade Co., Ltd.
  11. East Asiatic (Thailand) Public Co., Ltd.
  12. I.M.H. International Co., Ltd.

3.3.3 There is no import/export of CFC-113, CFC-114, CFC-115, 1,1,1-TCA and Carbon Tetrachloride (CTC) in 2004;

3.3.4 There is no export of CFC-11 in 2004;

3.3.5 Examination of CFC-12 export was carried out by verifying 1 of 1 transaction of Customs Declaration Form.

- One transaction of documentation (100.00% of verified documentation) is not consistent with the record of DIW;
  The transaction of documentation is listed by exporter as follows:

1. Luck 118 Enterprise Corporation Ltd.

From the verification, it was noted that there were some discrepancies between total imports/exports received from the record of DIW and those of CD, which could be summarized as follows:

Import of CFC-12

Given the 25 from 56 audited Customs Declaration Forms, a full examination of document of 54 Import Clearance Forms and 29 Import Licenses, the verification could identify reasons for discrepancy of the record of CD and the record of DIW from the actual import amount of 1,101.77 ODP tonnes.

Based on the available documents, the discrepancy of the record of CD from the actual import amount was the following:

(i) 4.9096 MT of CFC-12, by "Pacific Unitrade Company Limited", which had the leftover allotted import quota, was obtained from an auction at Custom Department – Mukdaharn Custom House on July 27, 2004 with the approval from DIW. Audit revealed that the licensed amount 4.9096 MT was acquired from an auction instead of an import and still within the Import Quota.

No	Type of Supporting Document Verified*			Type of Controlled Substance	Accurate Quantity (MT)
	Customs Declaration Form	Invoice No.	Import Clearance No.		
1	-	-	-	CFC-12	4.9096

Remark: * = Letter dated July 27, 2004 from Mukdaharn Custom House to Director General of DIW

(ii) 63.36 MT of CFC-12 imported by "I.M.H. International Co., Ltd." was declared to be CFC-12 in Customs Declaration Form without a valid license granted from DIW. The relevant supporting documents are:

No	Type of Supporting Document Verified			Type of Substance	Accurate Quantity (MT)
	Customs Declaration Form	Invoice No.	Import Clearance No.		
1	0591-01247-00046 (09/12/2004)	P0704 (06/12/2004)	-	*N/A	31.68
2	0591-0124-700138 (23/12/2004)	P0706 (20/12/2004)	-	*N/A	31.68
			Total quantity verification		63.36

Remark: * = It was stated in the Customs Declaration Form as CFC-12, but invoice showed "Refrigerant". Due to there was no sufficient evidence, the chemical could not be identified the definite type of substance. Further details see Appendix A.

Based on the available documents, the discrepancy of the record of DIW from the actual import amount was the followings:

(i) 37.32 MT of CFC-12 imported by "Ausinee Co., Ltd." was not actually imported. From the verification of Customs Declaration Form, audit revealed that the amount was only requested for import clearance from DIW without actual shipment. The relevant supporting documents are:

No	Type of Supporting Document Verified			Type of Controlled Substance	Accurate Quantity (MT)
	Customs Declaration Form	Invoice No.	Import Clearance No.		
1	-	137933/137935 (20/05/2004)	07721 (11/06/2004)	CFC-12	37.32

(ii) 4.16 MT of CFC-12 imported by "Pacific Unitrade Company Limited" was due to the importer requested amount of 19.80 MT for import clearance from DIW while actually imported amount was 15.64 MT.

No	Type of Supporting Document Verified			Type of Controlled Substance	Accurate Quantity (MT)
	Customs Declaration Form	Invoice No.	Import Clearance No.		
1	2801-00347-08551 (26/03/2004)	LK13488/EXP/GAS (22/03/2004)	03906 (24/03/2004)	CFC-12	15.64

Based on the available documents, the discrepancy of the record of CD and DIW from the actual import amount was the following:

(i) 3.2096 MT of CFC-12, by "Pacific Unitrade Company Limited", which had the leftover allotted import quota, was obtained from an auction at Custom Department – Mukdaharn Custom House on August 24, 2004. Audit revealed that the licensed amount

3.2096 MT was acquired from an auction instead of an import and still within the Import Quota.

No	Type of Supporting Document Verified			Type of Controlled Substance	Accurate Quantity (MT)
	Customs Declaration Form	Invoice No.	Import Clearance No.		
1	-	-	-	CFC-12	*3.2096

Remark: * = It was kept from Letter dated August 24, 2004 from Mukdaharn Custom House to Director General of DIW, which DIW was not received during the year 2004.

Export of CFC-12

Given the 1 from 1 audited Customs Declaration Form, the verification could identify reasons for discrepancy of 1.354 MT raised from 1 Customs Declaration Form from the total export amount of 1.354 MT from the record of CD. Based on the available documents, audit verification of Customs Declaration Form revealed the following:

(i) 1.354 MT of CFC-12 exported by "Luck 118 Enterprise Corporation Ltd." was incorrectly declared to be CFC-12 in the Customs Declaration Form. The audit revealed that the exporter actually exported COLD 12, COLD 13, COLD 22, COLD 134 and COLD 502, which were remarked "COLD IS HYDROCARBON REFRIGERANTS (NON CFC & HFC)" in the invoice. The relevant supporting documents are:

No.	Type of Supporting Document Verified			Type of Substance	Accurate Quantity (MT)
	Customs Declaration Form No.	Invoice No.	Import Clearance No.		
1	5901-10347-00054 (01/03/2004)	EPL00088 (25/02/2004)	-	* COLD 12, COLD 13, COLD 22, COLD 134 and COLD 502	1.354

Remarks: * = as stated in the Customs Declaration Form and the invoice

Audit examination on the documentation of CD to verify the actual import-export amount of these chemicals was carried out. The verification could be summarized in the table below.

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For Actual Import:

	Substances	Actual Import Amount (MT)	CD Database		Customs Declaration Form Examined			Customs Declaration Form NOT Examined	
			No. of Shipment Imported	Import Amount Captured from CD (MT)	No. of Shipment Examined	Import Amount Examined		No. of Shipment NOT Examined	Import Amount NOT Examined (MT)
						Correct (MT)	Other/ Inconsistency (MT)		
1	CFC-11	218.2850	11	218.2850	5	113.840	-	6	104.4450
2	CFC-12	1,101.7700	56	1,164.1468	25	550.180	63.36	31	550.6068
3	CFC-113	-	-		-	-	-	-	-
4	CFC-114	-	-		-	-	-	-	-
5	CFC-115	-	-		-	-	-	-	-
6	1,1,1-TCA	-	-		-	-	-	-	-
7	CTC	-	-		-	-	-	-	-

For Actual Export:

	Substances	Actual Export Amount (MT)	CD Database		Customs Declaration Form Verified			Customs Declaration Form NOT Verified	
			No. of Shipment Exported	Import Amount Captured from CD (MT)	No. of Shipment Verified	Export Amount Verified		No. of Shipment NOT Verified	Export Amount NOT Verified (MT)
						Correct (MT)	Other/ Inconsistency (MT)		
1	CFC-11	-	-	-	-	-	-	-	-
2	CFC-12	-	1	1.354	1	-	1.354	-	-
3	CFC-113	-	-	-	-	-	-	-	-
4	CFC-114	-	-	-	-	-	-	-	-
5	CFC-115	-	-	-	-	-	-	-	-
6	1,1,1-TCA	-	-	-	-	-	-	-	-
7	CTC	-	-	-	-	-	-	-	-

3.4 Review and summarize methodology used by the Government for data collection

Notification by the Minister of Industry requires that importers of Hazardous Substances Type 3 must submit distribution declaration report to DIW by the end of July of importing year and by the end of January of next year. This would enable DIW to inspect list of customers to whom the importers sold ODS. Major customers purchasing the chemicals from importers were summarized as follows:

CFC-11: Given that there were 12 importers of CFC-11, whose licenses were issued by DIW in 2004, Distribution Declaration Forms Submitted to DIW (twice a year per importer). Based on reviewed Distribution Declaration Forms as provided by DIW, it was found that distribution chains of CFC-11 in 2004 were to (i) Other importers and distributors, (ii) The manufacturers of foam products that still require CFC-11 for their manufacturing process and (iii) The chiller's owners or chiller service companies through distributors.

CFC-12: Given that there were 15 importers of CFC-12, whose licenses were issued by DIW in 2004, Distribution Declaration Forms submitted to DIW (twice a year per importer). Based on reviewed Distribution Declaration Forms as provided by DIW, it was found that distribution chains of CFC-12 in 2004 were to service shops of mobile air-conditioning (MAC) and refrigeration through distributors.

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Chapter IV
Conclusion

Process for issues of import quota for the year 2004

The audit examination revealed that DIW has properly controlled and adhered to the procedures of issuing import quota and licenses, in accordance with Ministry of Industry's Notification issued under the Hazardous Substances Act B.E.2535 and decision made by the Hazardous Substances Committee.

Actual import consumption

The audit examination revealed that actual imports did not exceed the maximum allowable consumption level as compliant in the agreement between the Government of Thailand and the Executive Committee as follows:

(i) Actual imports were 218.285 MT of CFC-11, and 1,101.77 MT of CFC-12.

(ii) CFC-113, CFC-114, CFC-115, 1,1,1-TCA and CTC were not imported.

Actual export consumption

As shown in table of export of CFC-12, appendix H, showed that the substance exported was not the controlled chemicals. Therefore, there was no export amount in year 2004.

Quotas issued to importers

Total Import Quotas and total Import Permits through import licenses did not exceed the maximum allowable consumption level as compliant in the agreement between the Government of Thailand and the Executive Committee.

Reliability of the data between DIW and CD in the year 2004

For import of CFC-11, there was no difference between the data records from DIW and that of CD. For import of CFC-12, the document process and the data records from DIW have been found to be consistent and correctly recorded with supporting document. Therefore, reliability of data from DIW is dominant and well prepared with fulfill criteria in import/export verification for the year 2004.