NATIONS UNIES

EP

Programme des Nations Unies pour l'environnement

Distr.
RESTREINTE

UNEP/OzL.Pro/ExCom/38/51
26 octobre 2002

FRANÇAIS
ORIGINAL: ANGLAIS

COMITE EXECUTIF
DU FONDS MULTILATERAL AUX FINS
D'APPLICATION DU PROTOCOLE DE MONTREAL
Trente-huitième réunion
Rome, 20-22 novembre 2002

PROPOSITIONS DE PROJET: TURQUIE

Le présent document contient les observations et recommandations du Secrétariat du Fonds sur les propositions de projet suivantes:

Halon

• Programme de gestion des halons, récupération, recyclage et stockage des halons.	Banque mondiale

Réfrigération

• Programme annuel 2003 pour le plan du secteur de la réfrigération	Banque mondiale

FICHE D'EVALUATION DU PROJET
TURQUIE

SECTEUR: Halon Utilisation des SAO dans le secteur (2001): 208 tonnes SAO

Seuils du rapport coûts-avantages du sous-secteur: S/O

Intitulés du projet:

a) Programme de gestion des halons, récupération, recyclage et stockage des halons.

Données relatives au projet	**STOCKAGE**
Consommation de l'entreprise (tonnes PAO)	S/o
Incidences du projet (tonnes PAO)	208
Durée prévue du projet (mois)	36
Montant initial demandé ($US)	395 250
Coût final du projet ($US)	
Coûts différentiels d'investissements a)	417
Fonds pour imprévus b)	21 750
Coûts différentiels d'exploitation c)	
Coût total du projet (a+b+c)	439 250
Participation locale au capital (%)	100 %
Pourcentage des exportations (%)	0 %
Montant demandé ($US)	439 250
Rapport coût-efficacité ($US/kg)	s/o
Confirmation du financement de contrepartie?	s/o
Agence nationale de coordination	TTGB
Agence d'exécution	Banque mondiale

Recommandations du Secrétariat	
Montant recommandé ($US)	
Incidences du projet (tonnes PAO)	
Rapport coût-efficacité ($US/kg)	
Coûts d'appui de l'agence d'exécution ($US)	
Coût total pour le Fonds multilatéral ($ US)	

DESCRIPTION DU PROJET

1. Le projet vise à éliminer les utilisations non essentielles des halons, encourager l'utilisation de technologies de protection anti-incendie sans halons, réduire les incidences sur la sécurité et les coûts d'élimination du halon par le renforcement des capacités de lutte contre l'incendie et à mettre en œuvre un programme de gestion et de stockage des halons dans le pays. Ce projet de gestion et de stockage des halons permettra à la Turquie d'honorer ses obligations au titre du Protocole de Montréal.

2. Parmi les activités inscrites à ce projet : encourager l'usage des produits de substitution aux halons dans la protection contre les incendies, garantir la récupération de quantités suffisantes de halons pour satisfaire la demande des utilisations essentielles actuelles lors de la phase d'élimination du plan par le recyclage du halon, empêcher l'émission non nécessaire et la ventilation des halons, fournir une assistance technique aux principaux utilisateurs essentiels de halons, préparer et mettre sur pied un stockage national de halons et prendre part à un réseau régional de stocks de halons.

3. La Turquie demande 439 250 $US plus les coûts de soutien pour, entre autres, entreprendre les activités suivantes:

- Mise en œuvre du programme turc de gestion des halons;
- Mise en place d'un conseil consultatif pour l'élimination du halon (CCEH) qui sera chargé d'assister et guider l'Unité Ozone de Turquie à mettre en œuvre le programme;
- Création d'un centre national d'échange sur les halons, un centre de régénération du halon et un réseau régional de séminaires de récupération et de recyclage;
- Fourniture de l'assistance aux principaux utilisateurs essentiels de halons pour leur permettre d'élaborer leurs propres programmes d'élimination;
- Organisation d'un séminaire de formation sur les systèmes et la sécurité anti-incendie; et
- Participation à un programme régional de gestion des halons.

Contexte de la consommation de halons

4. En Turquie, le halon 1211 est le principal agent des extincteurs portatifs utilisés dans les services postaux et des télécommunications. Le halon 1301 est le principal agent anti-incendie pour la protection du matériel informatique, électrique, les groupes électrogènes et les transformateurs, les équipements de télécommunication, les usines pétrochimiques, les installations de défense et le matériel militaire, les avions et les installations à terre.

5. La proposition indique que la Turquie dispose d'une industrie de la lutte anti-incendie et d'un marché important pour les équipements anti-incendie. Il y a de nombreux fabricants de systèmes de protection anti-incendie et d'extincteurs portatifs, de nombreux importateurs et

distributeurs de ces produits ainsi que des entreprises de réparation des systèmes d'extinction des feux.

6. Le programme pays de la Turquie pour l'année 1992 indique que 23 MT du halon 1211 et 2 MT du halon 1301 ont été importés en 1990. Lors de la préparation du projet de stockage du halon, il a été annoncé qu'environ 25 MT du halon 1211 et 5 MT du halon 1301 sont importés annuellement depuis 1996. Les chiffres de 2001 montrent que la consommation actuelle de halons est d'environ 36 MT du halon 1211 et 1 MT du halon 1301. La capacité disponible de halons est estimée entre 730 MT et 1000 MT du halon 1211 et environ 150 MT du halon 1301, selon les statistiques d'importations précédentes. La récente consommation de halons en Turquie, fournie en application de l'Article 7, a été de 10 tonnes SAO en 2000.

OBSERVATIONS ET RECOMMANDATIONS DU SECRETARIAT

OBSERVATIONS

7. Le Gouvernement de Turquie a confirmé que ce projet est le dernier projet de halons pour lequel il demandait un financement auprès du Fonds multilatéral.

8. Le Secrétariat a également demandé à la Turquie de confirmer qu'elle allait interdire l'importation de halons dans les six mois qui suivront l'installation du matériel de stockage des halons, conformément aux lignes directrices (Décision 18/22). Si le projet est réalisé dans les délais, le matériel de stockage des halons sera installé dès avril 2004. Cela voudra dire que la Turquie interdirait l'importation de halons à partir d'octobre 2004.

9. La Turquie n'a pu s'engager qu'il n'y aurait pas de dérogations à l'interdiction, arguant qu'il pourrait y avoir des besoins imprévus en halons, liés aux impératifs de sécurité nationale par exemple, à des quantités supérieures aux halons disponibles par régénération.

10. La Banque mondiale a estimé que la Turquie devrait recevoir des fonds pour son projet de stockage des halons à la condition suivante:

11. "Si la Turquie ne trouve pas des quantités suffisantes de halons récupérés ou régénérais sur les marchés locaux ou si elle trouve des halons recyclés, sur les marchés internationaux, pour satisfaire ses besoins essentiels, la Turquie se réservera le droit d'importer des halons nouvellement produits pour répondre à ses besoins essentiels jusqu'à 2009. Avant d'importer des halons nouvellement produits, la Turquie devra procéder à une évaluation des utilisations essentielles et des quantités nécessaires ; cette évaluation fera l'objet d'un examen et d'une approbation par des experts indépendants (OORG) préalablement à toute importation. Le Comité exécutif sera tenu informé de l'examen entrepris par les experts et des quantités requises avant toute importation. La Turquie s'engage, après 2009, à suivre les procédures fixées par les Parties au Protocole de Montréal."

RECOMMANDATIONS

12. Le Comité exécutif pourrait examiner les éléments ci-dessus lors de ses délibérations sur cette demande.

FICHE D'EVALUATION DU PROJET
TURQUIE

SECTEUR: Réfrigération Utilisation d'ODS dans le secteur (1999): 741 tonnes SAO

Titres du projet:

a) Programme annuel 2003 pour le plan du secteur de la réfrigération

Données du Projet	**Sous-secteurs multiples**
Consommation Entreprise (tonnes SAO)	
Incidence du projet (tonnes SAO)	375.00
Durée du projet (mois)	
Montant initial demandé ($ US)	2 500 000
Coût final du projet ($ US):	
Coût différentiel d'investissement (a)	
Fonds pour imprévus (b)	
Coût différentiel d'exploitation (c)	
Coût total du projet (a+b+c)	
Participation locale au capital (%)	100%
Pourcentage des exportations (%)	0%
Montant demandé ($ US)	2 500 000
Rapport coût-efficacité ($US/kg.)	
Confirmation du financement de contrepartie?	
Agence nationale de coordination	TTGB
Agence d'exécution	Banque mondiale

Recommandations du Secrétariat	
Montant recommandé ($ US)	
Incidence du projet (tonnes SAO)	
Rapport coût-efficacité (US $/kg)	
Coût d'appui de l'agence d'exécution ($ US)	
Coût total pour le Fonds multilatéral ($ US)	

DESCRIPTION DU PROJET

Le Programme 2002 de mise en œuvre du Plan national d'élimination totale des CFC en Turquie

13. La Banque mondiale a soumis, à l'attention du Comité exécutif, un rapport sur la mise en oeuvre du Plan national d'élimination totale des CFC en Turquie pour la période allant de décembre 2001 à septembre 2002, assorti d'une demande d'approbation du programme annuel de mise en œuvre pour 2003 (joint à ce document).

14. L'accord sur l'élimination totale des CFC en Turquie a été approuvé à la 35ème Réunion du Comité exécutif en décembre 2001, au coût total de 9 millions de $US. A la même réunion, le Comité exécutif avait approuvé 3,5 millions de $US et 295 000 $US au titre de coûts de soutien à la mise en œuvre du programme annuel 2002 pour couvrir les activités entreprises en 2002.

15. La partie A du rapport décrit l'état de réalisation du Programme annuel 2002 en ce qui concerne les contrats d'élimination passés avec les entreprises, la formation, la récupération/recyclage et les activités d'assistance technique, et la mise en œuvre d'un programme sur les refroidisseurs. Un rapport de vérification de la consommation de CFC en Turquie pour les années 2001 et 2002 accompagne le rapport périodique.

16. Le récapitulatif financier du programme 2002 est présenté au tableau ci-dessous:

Activité	**Montant alloué pour 2002 ($US)**	**Montant contracté (à fin septembre 2002) ($US)**
Programme PME	1800 000	1 276 240
Récupération/recyclage	600 000	1 700 000*
Remplacement des refroidisseurs	900 000	0
Utilisateur final		0
Activités de formation	100 000	289 000
Programme d'assistance technique/Gestion de projets	100 000	60 000
Total	3 500 000	3 325 240

* Fonds affectés à l'appel d'offre. Le montant de contrat sera défini une fois l'évaluation achevée.

17. Le rapport de vérification de la consommation de CFC en Turquie en 2001 et 2002 conclut que les importations étaient inférieures aux quotas accordés conformément aux seuils de consommation fixés dans l'Accord. En 2001, les importations de CFC-12 (662,810 tonnes ODP) étaient très proches du quota déterminé (700 000 tonnes ODP), d'où un taux de 94,7%. Pour ce qui concerne 2002, la Banque mondiale a indiqué que les licences d'importation ne dépasseront pas les seuils de consommation fixés par l'Accord.

Programme de mise en œuvre pour 2003

18. Le programme annuel 2003 est décrit à la Partie B. Il fait référence aux principaux indicateurs d'efficacité: seuil maximum de consommation autorisée de CFC et la valeur des contrats signés. Il décrit également les principales activités incluses dans le plan de réalisation pour 2003, regroupées sous diverses sections: politiques et règlements, quotas d'importation, conversion des PME, formation, plan de récupération et de recyclage, programme de remplacement des refroidisseurs, formation sur mesure, adaptation de rattrapage aux utilisateurs finaux. Le programme annuel prévoit un tableau des coûts décrivant la répartition du montant total affecté pour l'année 2003 dans l'Accord.

19. La Banque mondiale demande le déblocage de la deuxième tranche de 2,5 millions de $US pour la mise en oeuvre du Programme annuel 2003 de la Turquie.

OBSERVATIONS ET RECOMMANDATIONS DU SECRETARIAT

OBSERVATIONS

20. La Banque mondiale propose l'affectation de 2,5 millions de $US au Programme de mise en oeuvre pour 2003, qui est conforme à l'Accord, sous réserve de confirmation que les objectifs d'élimination de l'année précédente ont été atteints, et que les activités prévues pour l'année précédente aient été réalisées conformément au premier plan annuel de réalisation.

21. Dans le Plan de mise en œuvre 2002 destiné au Secrétariat en janvier 2002, la Banque mondiale déclarait que des contrats représentant 80% (2,8 millions $US) du montant disponible (3,5 millions $US) devaient être signés avant l'approbation du Plan de mise en oeuvre 2003. A la fin septembre, des contrats se chiffrant à 1,28 millions $US ont été signés avec des PME turques. Ce chiffre représente 36,5% des fonds alloués. La Banque mondiale a été invitée à clarifier le montant apparemment insuffisant et a indiqué qu'à la fin de l'année, le montant total des contrats signés s'élèvera à 3,3 millions de $US, représentant environ 94% du montant alloué en 2002. Cependant, il y a lieu de noter que, selon l'Accord, l'objectif de 80% à la signature des contrats, ne s'applique pas au Programme annuel 2002 – il entrera en application à partir du Plan de mise en œuvre 2003.

22. Activités de formation prévues dans le Plan de mise en œuvre 2002:

- Formation à l'utilisation des machines de récupération/recyclage des CFC;
- Activités de formation ciblant les PME du secteur de la réfrigération;
- Ateliers de formation pour les PME, récupération/recyclage et programmes de refroidisseurs.

A ce jour, un seul séminaire de formation de formateurs a été organisé, accueillant 10 participants. Les contrats devraient être signés en septembre 2002 avec l'organisme local (KOSGEB) chargé de la gestion du programme de formation. Un nouvel élément (visites d'étude pour les formateurs) a été inclus dans le programme de formation et dont le coût est estimé à 30 000 $US. La Banque mondiale a précisé que KOSGEB pourrait obtenir des informations utiles sur la formation et la certification auprès d'autres pays. Selon les informations supplémentaires

fournies par la Banque mondiale, l'atelier de travail sur le remplacement des refroidisseurs sera organisé au début de l'automne 2003 et examinera les résultats préliminaires du programme. Un atelier de formation prévu pour les PME a été annulé. Les PME seront contactées directement et à titre individuel.

23. Le rapport de mise en œuvre indique que la procédure d'appel d'offres pour la fourniture de matériel de récupération/recyclage/régénération est en cours de finalisation et que des contrats seront signés avec KOSGEB. La Banque mondiale a précisé que des conditions d'efficacité seront incluses dans les contrats comment annoncé dans le document de projet.

24. Le Programme annuel 2002 prévoit que le premier groupe de contrats de remplacement des refroidisseurs (10-15 refroidisseurs) sera signé vers la fin de 2002. Les contrats pour le remplacement du nombre revu de refroidisseurs (6-10 unités) seront signés vers la fin octobre, comme prévu dans le rapport d'exécution. La Banque mondiale a également indiqué que l'approche de fonds autorenouvelable sera appliquée au programme de remplacement des refroidisseurs, tel que prévu dans le document de projet.

RECOMMANDATION

25. Le Comité exécutif pourrait envisager d'approuver, au titre du programme de mise en œuvre, le montant de 2 500 000 $US plus 175 000 $US couvrant les coûts d'appui de l'agence.

REFRIGERATION SECTOR PLAN

TURKEY

2003 ANNUAL PROGRAM

Prepared by

Technology Development Foundation of Turkey (TTGV)
&
National Ozone Unit (NOU)

September , 2002

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Introduction

1. In accordance with the Executive Committee's approval of the "Agreement for Turkey, Refrigeration Sector Plan (RSP)" (UNEP/OzL.Pro/ExCom/35/67, Decision and Annex), Government of Turkey is hereby requesting release of the **second tranche of US$ 2.5 million** for the implementation of the 2003 Annual Program. With this funding, CFC consumption will be limited as per figures given Agreement for Turkey. (UNEP/OzL.Pro/ExCom/35/67, Decision and Annex). Details of the 2003 annual program are provided in Section B.

2. Within the Sector Plan, Turkey agreed to the following control targets for CFC-11 consumption in the PU foam sector.

National Control Targets of Turkey for CFC-11, CFC-12 and CFC-115 consumption in ODP tones

	1999 Baseline	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
Maximum allowable CFC-12 consumption (ODP tonnes)	736	700	650	334	166	100	0	0	0	0
Maximum allowable CFC-11 consumption (ODP tonnes)	1,049	300	250	200	150	50	0	0	0	0
Maximum allowable CFC-115 consumption (ODP tonnes)	9	9	9	0	0	0	0	0	0	0
Max allowable total ODP (ODP tonnes)		977	909	534	316	150	0	0	0	0
Total agreed funding (US $ million)		3.5	2.5	1	0.75	0.75	0.5	0	0	0
Agency support costs (US $ million)		0.295	0.175	0.150	0.045	0.03	0.03	0.03	0.03	0.025

Part A

Implementation Status of the 2002 Annual Program
(As the end of September, 2002)

Many activities have been started during spring 2002 and the following summarizes the discussions and findings: that the performance requirements for 2002 are met.

7. SME Conversion

Around 300 companies were identified in 1997-98 when the RSP was prepared. These were interviewed in 1998, 2001 and also in June 2002. Of the initial 300 companies, 40 have shifted to other business. Furthermore around 100 companies refused participation, which leaves 147 companies for the project.

Detailed information for these companies has been obtained and reviewed by a technical consultant.

According the RSP, TTGV obtained prices for standardized equipment and standard costs have been applied for grant allocations to the SME's. Additional criteria were applied for evaluation of each SME. Attachment 2 describe evaluation criteria by the SME's.

TTGV has informed those SME's for contracting. As the end of September, 53 companies have signed contracts with TTGV with a total amount of 1.28 mill US$.as given in Attachment 1. Additional applications from some other SME's have been received and they will be evaluated early October 2002. Hence, further contracts will be signed by late 2002 and early 2003 with the remaining SME's. The contracting takes more time than expected. The reasons are that, 1) contracting with larger companies is relatively smooth and smaller companies more complicated due to lack of managing capacity; 2) A lot of SME's owners cannot be reached because of summer season. It is expected that the amount of total contracts will increase by the end of 2002. The copies of signed contracts will be sent to the World Bank.

8. Training

First step of the training component was the train-the-trainer seminar. It was performed btw 26th-30th August 2002 in Ankara. The trainer was Berthold Schneider from BFS in Germany. 10 participants from KOSGEB participated the seminar. About 15.000 US$ has disbursed. for this activity.

The organization, KOSGEB, has been selected to manage the training as well as the recovery & recycling projects as per attached TOR's. TTGV and KOSGEB principally agreed for both issues. The contracts will be signed at the end of September. The total amount of training is 274.000 US$.

The budget for the training was revised at the request of KOSGEB. Basically the teacher's fee was reduced and the equipment scope enhanced to also include service equipment for refrigerators using hydrocarbons as refrigerant. Further an allocation for a study tour for the teachers have been agreed.
There will be established 12 training centers in Turkey, located strategically where the concentration of SME's and service companies is highest.

KOSGEB seems to be the obvious choice for training, but impressions after the meeting held indicated that they should be well guided in this. It may also influence the impression, that meetings were held with a manager and not the persons that will do the implementation work.

9. Recovery/ Recycling/ Reclaim (RRR)

During the May 2002 World Bank mission, it was agreed to implement this project in one phase rather than two phases as originally planned. For compability reasons it is preferred to procure all equipment from the same supplier, which could not be ensured in the component would be implemented in two phases.

Procurement is being undertaken by TTGV. The International Competitive Bidding (ICB) was started after getting no objection from the World Bank. Bid opening was on 6th September, 2002. After bid evaluation the awarded bidder will be informed late September and contracting will be done. The bids received range from 1.45 to 1.67 mill. US$. The total allocated amount for the RRR is 1.7 mill. US$

KOSGEB will also be involved in this component. It is planned that the reclaim and recycling centers will be hosted by KOSGEB and other organizations. Locations have been settled (3 reclaim centers and 24 recycling centers) and KOSGEB will find suitable hosts. Another contract will be signed with KOSGEB at the end of September and equipments will be provided by TTGV as per the result of bidding.

A TOR for the responsibilities has issued sent to KOSGEB.

10. Chiller Replacement

The chiller replacement component has also been accelerated, which turns out to be very beneficial, since the practical chiller replacement needs to take place during winter, where there is no need for cooling.

Meetings have been held with York Turkey and also 4 5 chiller sites were visited in Ankara and Antalya.

It appears that each chiller installation has it's own particularities. This will complicate evaluation criteria, which are currently being drafted. As examples can be mentioned, that chillers running with either R-500 (R-12/152a mixture) or CFC-113 were identified. Furthermore it is found that some chillers are not designed for optimal operation. In any case the chiller owners all informed that energy consumption is very high and energy savings are most welcome. The chiller owners have good documentation for total energy consumption and chiller consumption can be estimated as difference between summer and winter.

Most chillers do though run with CFC-11, which makes conversion into a non-ODS technology relatively more costly, since the only CFC-11 replacement is HCFC-123, which is now also controlled by Montreal Protocol. Conversion from CFC-11 into non-ODS (HFC-134a) will require a complete replacement of the chiller, whereas HCFC-123 will require "only" compressor, control board and purging device replacement.

Chiller replacement costs have been received and are currently being processed. It may be so, that the initial estimate of 60,000 US$ (average) may be at the low end. In any case there is a certain proportionality between chiller capacity and related costs. It may lead to the result, that fewer chillers than foreseen can be replaced.

So far around 50 chillers have been identified through York. Companies Trane (representative in Istanbul), Daikin/McQuay (represented by TEBA in Izmir) and Carrier will also be contacted.

It may be considered to revise the implementation strategy for the chiller replacement as follows:

- Selection of 6-10 chillers (up to budget allocation) based on information from York, Trane, Daikin/McQuay and Carrier;
- Contracting should not be later than October 2002;
- Summer 2003: Workshop with chiller owners where results from first chiller replacements can be presented; and
- Autumn 2003: Contracts for remaining chillers.

11. Technical Assistance & Project Management

US$ 60,000 has been disbursed for the activities of technicall assistance & project management office.

12. Summary

The total contract amount is 3.325 mill.US$ as the end of September 2002 as per the following table. So that, the performance targets have been met for 2002.

Cost Table

Activity	**Amount allocated for 2002 (US$)**	**Amount Contracted (as the end of September 2002) (US$)**
SME program	1,800,000	1,276,240
Recovery/recycling	600,000	1,700,000*
Chiller replacement	900,000	0
End user		0
Training activities	100,000	289,000
Technical assistance program/Project management office	100,000	60,000
Total	3,500,000	3,325,240

* Allocated Fund for bidding. Contracted amount will be defined after evaluation finalized

MoE will inform the secretariat on 30th September for 2001 ODS import. For 2002, licenses will not exceed the quantities specified in the agreement for RSP.

Part B
2003 Annual Program

1. Introduction
The refrigeration sector was approved in December 2001. 2002 implementation has been executed as per implementation plan 2002 with some corrections and a status report has been submitted. The second implementation Plan will cover the period from December 2002 and through December 31, 2003. The CFC consumption target will be met for 2003 as given in the Implementation Plan (see table below). All targets set by the sector plan after its approval in December 2001.

Taking into account the short time available to reduce the import to zero, a number of activities have to be initiated already in 2002 and 2003 in order to ensure the impact in 2004 and onward.

This second annual plan will consist of the following key components: a) review and strengthening of existing phase-out policies and regulations; b) issue CFC import quotas for 2003 (quotas for 2002 were issued to importers consistent with the draft sector plan); c) continue for the implementation signed contracts with SME commercial refrigeration companies; d) continue the implementation re-training of the refrigeration industry as per contracted; e) continue the implementation of the recovery/recycling/reclaim program as per contracted; f) start the training of customs officials; g) sign contracts with eligible chiller companies as identified during 2002 and 2003; and h) start the end user retrofit programme.

2. Time Period Covered
December 31 2002 – December 31, 2003

3. Performance Indicators

3.1 ODS Consumption
The maximum allowable CFC consumption in the refrigeration – and foams sector in 2003 is given in the table below.

ODS Substance	**Consumption in refrigeration – and foams sector**
	Year-2003
CFC-12	334
CFC-114 and CFC-115	0
CFC-11 consumption	200
Total ODP consumption	534

All figures in MT.

The release of the third tranche for the 2004 Implementation Plan to be approved at the last meeting in 2003 is contingent on the performance target for 2003 being met.

The 2004 implementation plan will be submitted at the third meeting in 2003 accompanies by a 2002 consumption verification report.

3.2 Contracts Signed

In accordance with the agreement between Turkey and the Executive Committee of the Multilateral Fund, the third performance indicator is the value of contracts signed.

It is required that contracts amounting to 80% (US$ 2.0 million) of the available amount (US$ 2.5 million) are signed before the approval of the 2004 Implementation Plan.

4 Implementation Plan for 2003

The key components of the main activities in the 2003 Implementation Plan are as follows:

4.1 Policies and Regulations

In order to support the implementation of the sector plan, the policies and regulations in place will be reviewed and evaluated in the context of the sector plan. If necessary, implementations to amend existing policies, improve the enforcement the existing policies or initiate new policies will be taken.

4.2 Import Quotas

Quotas are issued to eligible importers on an annual basis. Each importer is entitled to a quota based on his historical imports and adjusted so the aggregate import is within the allowed annual consumption. While the 2002 quotas have been managed in accordance with the approved sector plan, the 2003 quotas will be issued during the first quarter of 2003 based on specific requests from the individual importers.

4.3 SME conversion

The contracting takes more time than expected as desribed in Status Report 2002. So that, signature of further contracts will be continued by late 2002 and early 2003 with the remaining SME's.

As per the written statements in the signed agreements, project monitoring will be continued and the completed projects will be reported by visiting companies. With this contracts, SME's obliged to report with the documentary evidence that CFC's are no longer used by the company except for service purposes. Agreement also states that company baseline equipment retained for service purposes only (charging units, vacuum pumps, and /or leak detectors) shall not be used for manufacture, assembly or installation of new refrigeration appliances.

4.4 Re-Training

The re-training of refrigeration technicians commenced by the end of 2002. It will continue during 2003 as planned.

4.5 Recovery and Recycling Scheme

A contract for the full equipment supply was signed by late September 2002. Equipment will be delivered during spring 2003. Initially equipment will be supplied to the SME's followed by a short training session.

Secondly the reclaim and recycling centers will be established according to the plan given in Attachment 3. The organization, KOSGEB, will be responsible for either hosting the centers or subcontract suitable companies for hosting.

Finally remaining segments of the Turkish refrigeration sector will receive recovery equipment.

The process will be monitored by KOSGEB and reports of the amounts being recovered/reprocessed will be submitted to TTGV quarterly.

4.6 Chiller Replacement Program

The chiller database was established during fall 2002. From this database a number of chillers were selected and contracts signed with the chiller owners (amounts up to the budget allocation). During winter 2002/03 the new chillers will be installed and commissioned.

When the chiller season starts in March/April, data will be collected and based on these a workshop will be held during August/September 2003. Here the energy savings from the first chiller replacements will be presented to remaining chiller owners. These will then be invited to submit applications to TTGV and the most cost effective offers will be selected for second phase chiller replacement. Contracts will be signed during fall 2003.

4.7 Customs Training

This component will be started spring 2003. Initially the equipment needs will be identified by TTGV in cooperation with MoE and Customs department.

Equipment will be procured during summer 2003 and delivery is expected by fall 2003.

A one-day training is planned for the customs officers introducing the equipment and cautions required to prevent illegal import of CFC's. This training will take place when equipment is in Turkey and distribution will be made during the training.

4.8 End-User Retrofit

The identification of beneficiaries will start parallel with the re-training. The trainers will report back on capabilities of the companies and based on this beneficiaries will be selected for first phase end-user retrofit.

A strategy for the end-user retrofit including more detailed information of the cost implications will be made during spring 2003. Based on the strategy a number of companies will be invited to participate this activity.

Results of first round end-user retrofit will be disseminated during fall 2003 to remaining companies and these will be invited to apply for participation in the subsequent phases of the component.

4.9 Technical Assistance & Project Management

Technical assistance for above activities & operation of the project management office will be continued.

4.10 Cost Table

Activity	Amount allocated for 2003 (US$)	Activity starting	Contracts signing completed	Full ODS impact of activity
Policies and regulations	0			
Quota allocated	0	Dec. 2002	Sept. 2003	
SME program	250,000	Dec. 2001	Ongoing	25% in 2002 75% in 2003 100% in 2004
Recovery/recycling	1,100,000	May, 2002	Ongoing	2005
Customs training	200,000	April 2003	Dec. 2003	
Chiller replacement	660,000	Jan. 2003	Ongoing	2005
End user	90,000	Jan. 2003	Ongoing	2005
Training activities	100,000	Jan. 2002	Ongoing	NA
Technical assistance program/Project management office	100,000	Jan. 2003	Ongoing	NA
Total	2,500,000			

Attachment 1

ITTGV-NO	NAME OF COMPANY	BUDGET (US$)
6	Nurdil Teknik Soğutma San. ve Tic. Ltd. Şti.	53.850
20	Akmaks Soğutma Isıtma Sanayi Tic. Ltd. Şti.	3.450
94	Ata Makina Isı San.ve Tic.Ltd. Şti.	3.450
300	Ege Soğutmacılık Klima Soğuk Hava Tes.İth. İhr. San.ve Tic. A.Ş.	33.000
284	Ege Fen Klima Sistemleri ve Turizm San. Tic. Ltd. Şti.	3.450
289	Diktaş Soğutma ve Metal İmalat San. ve Tic. A.Ş.	49.900
229	Mekso Soğutma Sanayi ve Ticaret Ltd. Şti.	49.900
44	Yüksel Ticaret Mutfak Cihazları ve Sanayi Buzdolapları	2.975
187	Buzkar Soğutma	2.975
233	Teknik Soğutma	45.950
255	Buz Çelik Soğutma Malzemeleri ve Metal San. ve Tic. Ltd. Şti.	44.785
277	Gültekin Teknik Isıtma Soğutma San. ve Tic. Ltd. Şti	5.425
193	Kaplanlar Soğutma San. ve Tic. Ltd. Şti.	53.850
164	Mattaş Endüstriyel Mutfak San. A.Ş.	6.255
12	Altuğ Soğutma Sistemleri Otomotiv Turizm San. ve Tic. Ltd. Şti.	2.975
64	Şenol Ticari Buzdolabı Sanayii	6.925
165	Ekosan Mutfak ve Soğutma Ekipmanları San. ve Tic. Ltd. Şti.	59.775
312	ISM Makine Elektrik Sanayi ve Ticaret A.Ş.	41.000
265	Bütaş Klima San. ve Tic Ltd. Şti.	2.975
295	Yaz-Kar Klima Soğutma San. Tic. A.Ş.	2.975
166	Yılmaz Soğutma Sanayi	4.950
158	Akçay Soğutma Klima ve Havalandırma San. Tic. Ltd. Şti.	45.950
308	Kartek Soğutma Sanayi ve Tic. Ltd. Şti.	2.975
48	Üçkar Soğutma Mutfak Gereçleri San. ve Tic. Ltd. Şti.	2.975
18	Behzat Makina San. ve Tic. Ltd. Şti.	2.975
180	Tekso Teknik Soğutma San. Tic. A.Ş.	95.800
261	Buzsan Buzdolapları Mühendislik Hizmetleri Kuluçka Makinaları Tekstil Hizmetleri İmalat San. Ve Tic..	2.975
169	Mertsan Isıtma Havalandırma Klima San. ve Tic. Ltd. Şti.	2.975
206	Capri Soğutma San. ve Tic. Ltd. Şti.	43.975
222	Şanlı Soğutma San. ve Tic. Ltd. Şti.	44.450
283	Kartaş Soğutma San.Tic.	43.975
294	Kar-Buz Soğutma	45.615
302	Doğal Isıtma Soğutma Cihazları	2.975
71	Buzkap Soğutma San.Tic.Ltd. Şti.	44.925
19	Alaska Gıda Soğutma Dayanıklı Tüketim Malları San. ve Tic. Ltd. Şti.	2.975
306	Güldem Soğutma Sistemleri Klima Tesisat Taahüt Tic. ve San. Ltd. Şti.	2.975
82	Ömür Isı Sanayi ve Tic. A.Ş.	2.975
14	Buzdon Soğutma Isıtma ve Dayanıklı Tüketim Malları San. ve Tic. Ltd. Şti.	47.925
77	Burak Pazarlama Gıda San. ve Tic. A.Ş.	2.975
104	Termonem Soğutma ve Süpermarket Ekipmanları San. İç ve Dış Tic. Ltd. Şti.	43.975
305	Marso Endüstriyel Soğutma Sanayi ve Ticaret Ltd. Şti.	43.975
78	Kaysu Su Arıtma San. ve Tic. Ltd. Şti.	127.400
304	Tamer Soğutma San. ve Tic. A.Ş.	53.850
91	Buzullar Soğutma San. Ltd. Şti.	4.120
160	Bakaçlar Soğutma San. ve Tic. Ltd. Şti.	4.950
135	Karsan Buzdolabı San.	44.450
75	Termo Ark San. ve Tic. Ltd. Şti.	4.615
155	Alaska Soğutma Sanayi	2.975
185	DES Soğutma	2.975
226	Gama Soğutma	2.975
50	Algaz Mutfak Cihazları San. ve Tic. A.Ş.	4.950
32	Mega Mutfak Eşyaları ve Ticari Buzdolapları	2.975
181	Tekno Çelik Soğutma ve Mutfak Cihazları San. A.Ş.	8.900
	TOTAL	**1.276.240**

Attachment 2

Turkish RSP – SME Conversion – Evaluation Criteria

1. Background

The most urgent component of the Turkish Refrigeration Sector Plan (RSP) is the conversion of the small and medium sized enterprises (SME), since these have been suffering from the accelerated Turkish ODS phase-out regulation.
Around 300 SME have been identified and interviewed in 1998, 2001 and in 2002. Of the around 300 SME's 147 companies responded to the 2002 survey and they will all be included in the project. Remaining companies have either refused to participate (98 companies), have shifted to other business or have been closed (41 companies) or were impossible to reach (8 companies).
Application forms for the 147 SME's have been evaluated and their grant allocation determined using the subsequent evaluation criteria.

2. Eligibility Criteria

The following eligibility criteria have been applied:

- All companies using or have been using CFC-11 or CFC-12 are eligible for participation; and
- Companies using only non-CFC (HCFC or HFC) with no reported CFC consumption are eligible for participation and their HCFC / HFC consumption is taken as potential CFC consumption. However, this potential consumption is not taken into account in the final ODS phase-out calculation.

3. ODS Phase-Out Evaluation

The following criteria/methods have been applied for determination of ODS phase-out:

- Baseline for ODS phase-out is taken as either 1999 consumption or average 1997-99;
- Companies not reporting ODS consumption have been evaluated on production volume, production type and number of employees. A standard charge of either 10 kg CFC-12 or 1 kg CFC-12 per unit has been applied. This estimated consumption is not taken into account in the final ODS phase-out calculation; and
- Companies providing data for only 2000 and/or 2001 are evaluated as if 1999 production was similar to 2000 or 2001 production. This may result in a conservative estimate, since Turkey suffered from economical crisis in 2001; This estimated 1999 consumption is not taken into account in the final ODS phase-out calculation.

4. Grant Allocation

Grant allocation have been determined using the following criteria:

- No Cost Effectiveness threshold have been applied;
- Export is not deducted (based on first 45 received applications, where no export exceeded 10%);
- Eligible baseline equipment will be replaced on a one-to-one basis;
- Above-mentioned criteria will be adjusted, so that companies can receive one charging unit, one vacuum pump and one leak detector per 250 units annual production. The rationale for 250 annual produced units is one unit produced per day. Units may be charged on-site and therefore companies may have difficulties transporting the equipment from one site to another in one working day;

- If a company will be eligible to receive several charging units or vacuum pumps (using above criteria), they have the freedom to spend the money for stationary charging units with higher capacity provided the cost is within the total allocation for charging units and vacuum pumps;
- All companies having manual PU operations are eligible for one PU dispenser;
- The standard PU dispenser will be low pressure (LP) and have a capacity of 60 kg/min. The rationale for dispenser capacity of 60 kg/min is that such capacity will facilitate proper foaming of most commercial refrigerating appliances;
- Companies being eligible for one or two foam dispensers may procure dispensers of different capacity or may procure high pressure (HP) dispenser(s) at their own choice. However, potential additional costs has to be covered by the SME;
- Standard cost for refrigerant equipment is determined as the maximum of 3 quotes obtained. The rationale for using maximum cost is that the equipment should be available within reasonable distance of the SME to ensure future servicing but also to facilitate normal commercial practice by the SME. Standard costs applied are as follows: Charging unit: US$ 1,165; Vacuum pump: US$ 475; Leak detector: US$ 335. (Standard cost evaluation is detailed in Item 6);
- Standard cost for PU equipment amounts to US$ 38,000 as defined by Cannon price quotation;
- All companies are given a grant allocation of US$ 1,000 for chemicals for test and trials of the refrigerating circuit; and
- All companies having PU operations are given a grant allocation of US$ 3,000 for chemicals for test and trials of the foam dispenser.

5. Baseline Disposal

The following rules will be applied for CFC baseline equipment:

- Companies having refrigeration baseline equipment (charging units, vacuum pumps and/or leak detectors) are allowed to keep this equipment for servicing purposes. Companies are committed to refrain from using this equipment for production of refrigerating appliances using CFC; and
- Companies having PU foam dispensers are obliged to dispose these as per Montreal Protocol rules. Documentary evidence for disposal shall be submitted to TTGV.

6. Standard Cost Calculation For Refrigeration Equipment

Price quotations were received from the companies Wigam and Refco, both represented in Turkey. Further the company, ITE, which is about to establish representation in Turkey, provided a price list applicable for Turkey. The price quotations were based on technical requirements sent by TTGV specifying standard equipment for evacuation, charging and leak detection.
The charging unit was specified so that two configurations should be quoted as follows:

- Configuration 1: Compact unit consisting of vacuum pump, filling glass, charging manifold, manometers and hoses; and
- Configuration 2: Separate components comprising vacuum pump, charging manifold, manometers, hoses and charging scale.

The prices obtained were as follows:

Company	Description	Type	Price (US$)
Wigam[1]	Charging unit – configuration 1	SP45D/VR/A6/4	475.40
	Charging unit – configuration 2	EPS42D/V/A6/4/EV	772.60
	Vacuum pump	DIP 402 (Including SW-68 oil for the vacuum pump	266.40
	Leak detector	TIF XP-1	282.30
Refco[2]	Charging unit – configuration 1	10705-RD-4-R-134a	991.30
	Charging unit – configuration 2	12800	708.10
	Vacuum pump	RL-4 (Including P-15-S-1 oil for the vacuum pump)	363.50
	Leak detector	XP-1	276.50
	Leak detector	ZX-1 (not including the spare sensor)	333.80
ITE[1]	Charging unit – configuration 1	CS 4D 4 22/44	1,162.10
	Charging unit – configuration 2	MK 50DS+2805 BC/4+E-348 x 3+ITE 9120	914,30
	Vacuum pump	MK 50DS (including 1 liter 500 P1 oil)	472,70
	Leak detector	ITE-5650A-FP + ITE-573	265,20
Standard cost	**Charging unit**		**1,165.00**
	Vacuum pump		**475.00**
	Leak detector		**335.00**

[1] Prices given in Euro: Conversion: 1 Euro = 0.9905 US$
[2] Prices given in Swiss Franc: Conversion: 1 CHF = 0.6744 US$

Attachment 3

Locations of recycling and reclaim centers

Recycling centers shall be located in the following cities:

- Adana
- Ankara
- Antalya
- Aydin
- Balikesir
- Bursa
- Diyarbakir
- Gaziantep
- Icel
- Isparta
- Istanbul (2)
- Izmir
- Kayseri
- Kocaeli
- Konya
- Kütahya
- Manisa
- Mugla
- Samsun
- S. Urfa
- Sivas
- Tekirdag
- Zonguldak

Reclaim centers shall be located in the following cities:

- Istanbul
- Ankara
- Izmir

Central storage will be in Istanbul.

Attachment 4

VERIFICATION REPORT FOR THE CFC CONSUMPTION IN TURKEY FOR 2001 AND 2002

PREPARED BY

Dr. Göksel N. Demirer

September 2002

This report was prepared to carry out the verification of annual CFC (11, 12, and 502) consumption in Turkey for the years 2001 and 2002. To this purpose, a series of visits were undertaken to the Ministry of Environment, the CFC 11, 12 and 115 (not directly but as the 51% ingredient of the CFC 502 amount) importer companies and a polyol supplier to the foam industry as well as companies which completed or are carrying out MLF projects (present and past consumers) as seen in Table 1. During these visits the import licenses and custom records were collected/reviewed, quotas and realized import amounts were determined, the sources of import were questioned, the general comments of the persons interviewed on different aspects of the quota system, illegal imports, etc. were taken. It must be underlined here that the data on the sales and stocks were provided by the importer companies themselves and could not be double-checked due to time limitation. The outputs based on these data/information were organized in a way to verify the annual CFC (11, 12, and 502) consumption in Turkey for the years 2001 and 2002 and assess the strengths and weaknesses of the present quota system in the following sections.

Table 1. The visits undertaken for the preparation of the verification report

Date of Visit	**Company**	**Person Interviewed**	**Category**
September 9, 2002	Ministry of Environment, ANKARA	Mrs. Rezzan Katircioglu	
September 10, 2002	NURDIL Teknik Sogutma San. ve Tic. Ltd. Sti. Organize Sanayi Bolgesi Osmanli Cad. No:9 Sincan ANKARA Phone: 0 312 267 02 35 Fax: 0 312 267 02 39	Mr. Riza Dilber	Ongoing MLF project
September 10, 2002	DIKTAS Sogutma ve Met. Ima. San. ve Tic. A.S. Sincan Organize Sanayi Bolgesi Babursah Cad. No:21 ANKARA Phone: 0 312 267 01 90 Fax: 0 312 267 10 03	Mr. Levent Okutan	Ongoing MLF project
September 11, 2002	Uzman Demir Celik Sanayi A.S. Fazlipasa Cad. No:8 Topkapi ISTANBUL Phone: 0 212 544 40 97, 0 212 544 32 96 Fax: 0 212 544 33 78	Mr. Suat Yildiz	Importer
September 11, 2002	TEKGAZ Tek. Gaz. ve Mal. San. Mum. A.S. Fazlipasa Cad. No:8 Topkapi ISTANBUL Phone: 0 212 544 40 97, 0 212 544 32 96 Fax: 0 212 544 33 78	Mr. Suat Yildiz	Importer
September 11, 2002	CANTAS Ic ve Dis Tic. Sog. Sis. San. A.S. Dolapdere Cad., No:155 Pangaalti ISTANBUL Phone: 0 212 232 91 22 Fax: 0 212 225 81 11	Mr. Erim Eksioglu	Importer

September 11, 2002	TURA Sog. San. Tic. A.S. Dereboyu Cad. No: 27 Dolapdere ISTANBUL Phone: 0 212 237 50 00 Fax: 0 212 255 58 65	Mr. Ali Turhan	Importer
September 11, 2002	SOGUK TEKNIK San ve Tic. A.S. Tarlabasi Cad. No: 48 Taksim ISTANBUL Phone: 0 212 250 05 72 Fax: 0 212 250 87 76	Mr. Ali Turhan	Importer
September 12, 2002	CETINEL Sogutma San. ve Tic. A.S. Kurabiye Sok. No:21 Beyoglu ISTANBUL Phone: 0 212 252 58 58 Fax: 0 212 251 75 19	Mr. Vahe Dagdevirenel	Importer
September 12, 2002	TERMO Sogutma San. Tic. A.S. Kurabiye Sok. No:21 Beyoglu ISTANBUL Phone: 0 212 252 58 58 Fax: 0 212 251 75 19	Mr. Vahe Dagdevirenel	Importer
September 12, 2002	TEKPOL Poliuretan San. Tic. A.S. Eski Ankara Cad. No: 54 Seyhli Pendik IST Phone: 0 216 378 64 51 Fax: 0 216 378 64 56	Mr. Ali Kilic	Importer
September 12, 2002	ANATEKS Isitma ve Sog. Sis. San. Dis. A.S. Tarlabasi Cad. No: 80 Taksim ISTANBUL Phone: 0 212 256 00 33 Fax: 0 212 235 68 18	Mr. Metin Terzibasiogullari Ms. Hulya Kizir	Importer
September 12, 2002	TEKNION San. Mam. Paz. Tic. A.S. Tarlabasi Cad. No: 80 Taksim ISTANBUL Phone: 0 212 256 00 33 Fax: 0 212 235 68 18	Mr. Metin Terzibasiogullari Ms. Hulya Kizir	Importer
September 12, 2002	TEKSO Teknik Sogutma San. ve Tic. A.S. Yukari Dudullu Organize Sanayi Bolgesi 2. Cad. No:7 Umraniye ISTANBUL Phone: 0 216 420 30 09 Fax: 0 216 420 56 61	Mr. Fikret Guneskuter	Ongoing MLF project
September 12, 2002	PIMSA Poliuretan Imalat San. ve Tic. A.S. Istanbul Dudullu Organize Sanayi Bolgesi 3. Cad. No:10 Imes Sanayi Sitesi Umraniye ISTANBUL Phone: 0 216 364 10 80 Fax: 0 216 364 11 17	Mr. Kemal Agacan	Completed MLF project
September 12, 2002	ELASTOGRAN Poliuretan San. ve Tic. Ltd. Sti. Eski Ankara Cad. No:54 Seyhli, Pendik ISTANBUL Phone: 0 216 378 64 43 Fax: 0 216 378 64 56	Mr. Adnan Sanlisoy	Polyol supplier
September 13, 2002	FLOGAZ Florlu Gazlar San. ve Tic. A.S. Yapi Kredi Plaza C Blok Kat 18 Levent IST Phone: 0 212 279 70 71 Fax: 0 212 279 07 36	Mr. Aksel Keribar	Importer
September 13, 2002	MESPA End. Paz. Ltd. Sti. Tarlabasi Cad. Yaya Alt. Geçidi No:1-3 Taksim ISTANBUL Phone: 0 212 235 70 64 Fax: 0 212 256 98 34	Mr. Ozcan Saracoglu Mr. Taner Senkardes	Importer

The copies of the import licenses were obtained and reviewed for each importer and tabulated in Tables 2-7. The import figures gathered from the importer company records were also compared with the records of the Custom Office and the Ministry of the Environment for confirmation. The import amounts from all these sources (company, Custom Office and the Ministry of the Environment`s records) were in fairly good agreement.

The import license (quota) and realized import amounts, and ratio of realized import to quota (%) were given in Table 8. It is clear from Table 8 that the quota values set for CFC 11 are well over the Turkey's need. The ratio of realized import to quota for CFC 11 decreased from 41.7 to 21.3% from

2001 to 2002. As of September 2002, only 21.8 % of the quota limit for CFC 115 (or 502) has been imported as seen in Table 8. Note that the quota system was implemented on May 2002 and the import figures for CFC 115 (or 502) before the implementation of the quota system in May 2002 are not covered in this report mainly due to the difficulty of collecting consistent and reliable data during the time frame of the study.

The persons interviewed at the importer companies supportingly stated that the quota amounts for CFC 11 and 115 are more than the needs of Turkey. However, the decrease in the ratio of realized import to quota for CFC 12 from 94.7% in 2001 to 69.8 % in 2002 explained by the importer company officials as solely due to the economical crisis in the country. They further stated that CFC 12 is the only CFC in the quota system the demand for which is higher than the quota.

Furthermore, any source of CFC import other than the legally permitted sources was investigated during the interviews conducted at the importer companies and the result came out to be negative.

Table 2. The import license (quota) and realized import amounts for CFC 11 for 2001

Importer		**Country of Import**	**License No**	**Amount (kg)**	
Company	**Person Interviewed**			**Import License (Quota)**	**Realized**
CANTAS Ic ve Dis Tic. Sog. Sis. San. A.S.	Mr. Erim Eksioglu	Greece	133	100000	18000
TEKPOL Poliuretan San. Tic. A.S.	Mr. Ali Kilic	Italy	154	79200	76800
CETINEL Sogutma San. ve Tic. A.S.	Mr. Vahe Dagdevirenel	Belgium	134	80840	13720
			Total	260040	108520

Table 3. The import license (quota) and realized import amounts for CFC 12 for 2001

Importer		**Country of Import**	**License No**	**Amount (kg)**	
Company	**Person Interviewed**			**Import License (Quota)**	**Realized**
Uzman Demir Celik Sanayi A.S.	Mr. Suat Yildiz	India, England	140	4500	4500
TEKGAZ Tek. Gaz. Ve Mal. San. Mum. A.S.	Mr. Suat Yildiz	Holland, Spain, England, India	141	33266	33266
CANTAS Ic ve Dis Tic. Sog. Sis. San. A.S.	Mr. Erim Eksioglu	Greece	146	193574	193574

TURA Sog. San. Tic. A.S.	Mr. Ali Turhan	Italy	142	7363	7344
SOGUK TEKNIK San ve Tic. A.S.	Mr. Ali Turhan	Italy	137	108957	108936
ANATEKS Isitma ve Sog. Sis. San. Dis. A.S.	Mr. Metin Terzibasiogullari Ms. Hulya Kizir	India	145	32467	32450
TEKNION San. Mam. Paz. Tic. A.S.	Mr. Metin Terzibasiogullari Ms. Hulya Kizir	India	143	12367	12363
CETINEL Sogutma San. ve Tic. A.S.	Mr. Vahe Dagdevirenel	Belgium	138	77653	77642
TERMO Sogutma San. Tic. A.S.	Mr. Vahe Dagdevirenel	Belgium	139	5471	5467
FLOGAZ Florlu Gazlar San. ve Tic. A.S.	Mr. Aksel Keribar	Italy	144	112281	112268
MESPA End. Paz. Ltd. Sti.	Mr. Ozcan Saracoglu Mr. Taner Senkardes	Spain	136	112101	75000
			Total	700000	662810

Table 4. The import license (quota) and realized import amounts for CFC 502 for 2001

Importer		**Country of Import**	**License No**	**Amount (kg)**	
Company	**Person Interviewed**			**Import License (Quota)**	**Realized**
SOGUK TEKNIK San ve Tic. A.S.	Mr. Ali Turhan	Italy	Before the implementation of the quota system		2448
CANTAS Ic ve Dis Tic. Sog. Sis. San. A.S.	Mr. Erim Eksioglu	Greece	Before the implementation of the quota system		680
CETINEL Sogutma San. ve Tic. A.S.	Mr. Vahe Dagdevirenel	Belgium	Before the implementation of the quota system		3740
				Total	6868*

* Before the implementation of the quota system

Table 5. The import license (quota) and realized import amounts for CFC 11 for 2002

Importer		**Country of Import**	**License No**	**Amount (kg)**	
Company	**Person Interviewed**			**Import License (Quota)**	**Realized**
Uzman Demir Celik Sanayi A.S.	Mr. Suat Yildiz	Spain, India	167	12500	0
TEKGAZ Tek. Gaz. ve Mal. San. Mum. A.S.	Mr. Suat Yildiz	Spain, India	170	12500	0
CANTAS Ic ve Dis Tic. Sog. Sis. San. A.S.	Mr. Erim Eksioglu	Greece	169	79754	18000
SOGUK TEKNIK San ve Tic. A.S.	Mr. Ali Turhan	Italy	168	34352	19200
TEKPOL Poliuretan San. Tic. A.S.	Mr. Ali Kilic	-	171	76800	0
CETINEL Sogutma San. ve Tic. A.S.	Mr. Vahe Dagdevirenel	Belgium	172	34094	15960

Total	250000	53160

Table 6. The import license (quota) and realized import amounts for CFC 12 for 2002

Importer		**Country of Import**	**License No**	**Amount (kg)**	
Company	**Person Interviewed**			**Import License (Quota)**	**Realized**
Uzman Demir Celik Sanayi A.S.	Mr. Suat Yildiz	India, Spain, England	175	11438	0
TEKGAZ Tek. Gaz. ve Mal. San. Mum. A.S.	Mr. Suat Yildiz	Spain, England, India	173	36662	27200
CANTAS Ic ve Dis Tic. Sog. Sis. San. A.S.	Mr. Erim Eksioglu	Greece	179	150647	139422
TURA Sog. San. Tic. A.S.	Mr. Ali Turhan	Italy	184	13790	13776
SOGUK TEKNIK San ve Tic. A.S.	Mr. Ali Turhan	Italy	176	113191	113180
ANATEKS Isitma ve Sog. Sis. San. Dis. A.S.	Mr. Metin Terzibasiogullari Ms. Hulya Kizir	England	181	29875	0
TEKNION San. Mam. Paz. Tic. A.S.	Mr. Metin Terzibasiogullari Ms. Hulya Kizir	England	180	19946	16864
CETINEL Sogutma San. ve Tic. A.S.	Mr. Vahe Dagdevirenel	Belgium	185	78042	67456
TERMO Sogutma San. Tic. A.S.	Mr. Vahe Dagdevirenel	Belgium	183	12871	0
FLOGAZ Florlu Gazlar San. ve Tic. A.S.	Mr. Aksel Keribar	England	182	98246	16864
MESPA End. Paz. Ltd. Sti.	Mr. Ozcan Saracoglu Mr. Taner Senkardes	India	178	75292	48960
BIRSAN Mak. San. ve Tic. A.S.	**			10000	9996
			Total	650000	443722

** Company cannot be visited during the course of the study and the information was obtained from the Ministry of Environment and the company itself by fax

Table 7. The import license (quota) and realized import amounts for CFC 502 for 2002

Importer		**Country of Import**	**License No**	**Amount (kg)**	
Company	**Person Interviewed**			**Import License (Quota)**	**Realized**
CANTAS Ic ve Dis Tic. Sog. Sis. San. A.S.	Mr. Erim Eksioglu	China	191	1889	1889
TURA Sog. San. Tic. A.S.	Mr. Ali Turhan	Italy	195	4022	0
SOGUK TEKNIK San ve Tic. A.S.	Mr. Ali Turhan	Italy	197	8551	1360

CETINEL Sogutma San. ve Tic. A.S.	Mr. Vahe Dagdevirenel	Belgium	192	2037	680
TERMO Sogutma San. Tic. A.S.	Mr. Vahe Dagdevirenel	Belgium	193	500	0
BIRMAK Sogutma San. ve Tic. A.S.	*	*	*	500	*
BIRSAN Mak. San. ve Tic. A.S.	**	**	**	500	**
			Total	17999	3929

* Company cannot be visited during the course of the study and the information was obtained from the Ministry of Environment

** Company cannot be visited during the course of the study and the information was obtained from the Ministry of Environment and the company itself by fax

Table 8. The import license (quota) and realized import amounts, and ratio of realized import to quota for CFC 11, 12, and 115

	CFC 11	**CFC 12**	**CFC 502**	**CFC 115**
2001				
National Control Target	300000	700000	-	9000
Import license (quota) issued	260040	700000	-	-
Import realized	108520	662810	6868*	3502*⊕
Ratio of realized import to quota (%)	41.7	94.7	-	-
2002				
National Control Target	250000	650000	-	9000
Import license (quota) issued	250000	650000	- 17999	- 9180 ⊕
Import realized	53160	453718	3929	2003 ⊕
Ratio of realized import to quota (%)	21.3	69.8	21.8	21.8

* Before the implementation of the quota system

⊕ 51% of the CFC 502 value

During the company visits, the stocks of the companies were also recorded for January 1, 2001 and 2002 and as of September 2002 and tabulated in Table 9.

Table 9. The stocks for CFC 11, 12 and 502 for 2001 and 2002

Importer		**At Jan. 1, 2001**	**At Jan. 1, 2002**	**As of Sept. 2002**
Company	**Person Interviewed**			
CFC 11				
SOGUK TEKNIK San ve Tic. A.S.	Mr. Ali Turhan	0	0	13200

CETINEL Sogutma San. ve Tic. A.S.	Mr. Vahe Dagdevirenel	324	4493	2261
TERMO Sogutma San. Tic. A.S.	Mr. Vahe Dagdevirenel	15680	0	0
	Total	16004	4493	15461
CFC 12				
TURA Sog. San. Tic. A.S.	Mr. Ali Turhan	190	17544	1523
SOGUK TEKNIK San ve Tic. A.S.	Mr. Ali Turhan	52183	1850	653
ANATEKS Isitma ve Sog. Sis. San. Dis. A.S.	Mr. Metin Terzibasiogullari Ms. Hulya Kizir	0	2584	0
TEKNION San. Mam. Paz. Tic. A.S.	Mr. Metin Terzibasiogullari Ms. Hulya Kizir	22848	4950	0
CETINEL Sogutma San. ve Tic. A.S.	Mr. Vahe Dagdevirenel	19444	3890	15164
TERMO Sogutma San. Tic. A.S.	Mr. Vahe Dagdevirenel	3495	367	0
FLOGAZ Florlu Gazlar San. ve Tic. A.S.	Mr. Aksel Keribar	99688	53108	0
MESPA End. Paz. Ltd. Sti.	Mr. Ozcan Saracoglu Mr. Taner Senkardes	1523	0	5603
	Total		84293	
CFC 502				
CANTAS Ic ve Dis Tic. Sog. Sis. San. A.S.	Mr. Erim Eksioglu	0	0	1483
TURA Sog. San. Tic. A.S.	Mr. Ali Turhan	6500	612	8241
SOGUK TEKNIK San ve Tic. A.S.	Mr. Ali Turhan	217	27	54
CETINEL Sogutma San. ve Tic. A.S.	Mr. Vahe Dagdevirenel	*	1659	572
	Total		2298	10350

* The company could not provide it in the course of the study

Furthermore, the sale records of the importer companies were obtained and the totals for 2001 and 2002 were tabulated in Table 10. It must be noted that the companies were asked to report their sales records by fax and the sales records could not be double-checked. Therefore, data given in Table 10 represents the total sales of the companies that responded to this request.

Table 10. The sale records of the importer companies

Company	**Sales-2001**			**Sales-2002**		
	CFC 11	**CFC 12**	**CFC 502**	**CFC 11**	**CFC 12**	**CFC 502**
Uzman Demir Celik Sanayi A.S.	*	*	*	*	*	*
TEKGAZ Tek. Gaz. ve Mal. San. Mum. A.S.	*	*	*	*	*	*
CANTAS Ic ve Dis Tic. Sog. Sis. San. A.S.	17923	139410	938	18000	155366	-
TURA Sog. San. Tic. A.S.	-	162207	8051	-	90930	6800
SOGUK TEKNIK San ve Tic. A.S.	*	*	*	*	*	*
CETINEL Sogutma San. Ve Tic. A.S.	22810	82753	2135	-	-	-
TERMO Sogutma San. Tic. A.S.	15680	8595	-	-	-	-

TEKPOL Poliuretan San. Tic. A.S.	22200	-	-	23100	-	-
ANATEKS Isitma ve Sog. Sis. San. A.S.	-	29865	-	-	2584	-
TEKNION San. Mam. Paz. Tic. A.S.	-	60968	-	-	24616	-
FLOGAZ Florlu Gazlar San. ve Tic. A.S.	-	157229	-	-	69101	-
MESPA End. Paz. Ltd. Sti.	-	-	-	-	49735	-
BIRSAN Mak. San. ve Tic. A.S.	-	-	-	-	9996	-

* not responded

In order to check whether there is a balance between the realized import amounts, stocks and the sales Tables 11-16 were established. In Tables 11-16 the sum of columns A and B must be equal to sum of C and D. The last column in these tables indicate whether the realized import amounts, stocks and the sales are balanced (Yes) or not (No).

Table 11. The balance of the realized import amounts, stocks and the sales for CFC 11 for 2001

Company	**Realized Import in 2001 (kg)**	**Stocks as of Jan. 1, 2001 (kg)**	**Sales in 2001 (kg)**	**Stocks as of Jan. 1, 2002 (kg)**	**Balanced**
	A	B	C	D	
CANTAS Ic ve Dis Tic. Sog. Sis. San. A.S.	18000	0	17923	0	Yes
TEKPOL Poliuretan San. Tic. A.S.	76800	0	22200	0	No
CETINEL Sogutma San. ve Tic. A.S.	13720	324	22810	4493	No

Comparison of Tables 9, 10 and 11 indicate that TERMO sold 15680 kg of CFC 12 from its stocks without importing.

Table 12. The balance of the realized import amounts, stocks and the sales for CFC 12 for 2001

Company	**Realized Import in 2001 (kg)**	**Stocks as of Jan. 1, 2001 (kg)**	**Sales in 2001 (kg)**	**Stocks as of Jan. 1, 2002 (kg)**	**Balanced**
	A	B	C	D	
Uzman Demir Celik Sanayi A.S.	4500	0	?	0	?
TEKGAZ Tek. Gaz. Ve Mal. San. Mum. A.S.	33266	0	?	0	?
CANTAS Ic ve Dis Tic. Sog. Sis. San. A.S.	193574	0	139410	0	No
TURA Sog. San. Tic. A.S.	7344	190	162207	17544	No
SOGUK TEKNIK San ve Tic. A.S.	108936	52183	?	1850	?
ANATEKS Isitma ve Sog. Sis. San. Dis. A.S.	32450	0	29865	2584	Yes
TEKNION San. Mam. Paz. Tic. A.S.	12363	22848	60968	4950	No
CETINEL Sogutma San. ve Tic. A.S.	77642	19444	82753	3890	No
TERMO Sogutma San. Tic. A.S.	5467	3495	8595	367	Yes
FLOGAZ Florlu Gazlar San. ve Tic. A.S.	112268	99688	157229	53108	Yes
MESPA End. Paz. Ltd. Sti.	75000	1523	?	0	?

Table 13. The balance of the realized import amounts, stocks and the sales for CFC 502 for 2001

Company	**Realized Import in 2001 (kg)**	**Stocks as of Jan. 1, 2001 (kg)**	**Sales in 2001 (kg)**	**Stocks as of Jan. 1, 2002 (kg)**	**Balanced**
	A	B	C	D	
SOGUK TEKNIK San ve Tic. A.S.	2448	217	?	27	?
CANTAS Ic ve Dis Tic. Sog. Sis. San. A.S.	680	0	938	0	No
CETINEL Sogutma San. ve Tic. A.S.	3740	?	2135	1659	Yes
TURA Sog. San. Tic. A.S.	0	0	8051	0	No

Table 14. The balance of the realized import amounts, stocks and the sales for CFC 11 for 2002

Company	**Realized Import in 2002 (kg)**	**Stocks as of Jan. 1, 2002 (kg)**	**Sales in 2002 (kg)**	**Stocks as of Sept. 2002 (kg)**	**Balanced**
	A	B	C	D	
Uzman Demir Celik Sanayi A.S.	0	0	?	0	?
TEKGAZ Tek. Gaz. ve Mal. San. Mum. A.S.	0		?	0	?
CANTAS Ic ve Dis Tic. Sog. Sis. San. A.S.	18000	0	18000	0	Yes
SOGUK TEKNIK San ve Tic. A.S.	19200	0	?	13200	?
TEKPOL Poliuretan San. Tic. A.S.	0	0	23100	0	No
CETINEL Sogutma San. ve Tic. A.S.	15960	4493	?	2261	?

Table 15. The balance of the realized import amounts, stocks and the sales for CFC 12 for 2002

Company	**Realized Import in 2002 (kg)**	**Stocks as of Jan. 1, 2002 (kg)**	**Sales in 2002 (kg)**	**Stocks as of Sept. 2002 (kg)**	**Balanced**
	A	B	C	D	
Uzman Demir Celik Sanayi A.S.	0	0	?	0	?
TEKGAZ Tek. Gaz. ve Mal. San. Mum. A.S.	27200	0	?	0	?
CANTAS Ic ve Dis Tic. Sog. Sis. San. A.S.	139422	0	155366	0	No
TURA Sog. San. Tic. A.S.	13776	17544	90930	1523	No
SOGUK TEKNIK San ve Tic. A.S.	113180	1850	?	653	No
ANATEKS Isitma ve Sog. Sis. San. Dis. A.S.	0	2584	2584	0	Yes
TEKNION San. Mam. Paz. Tic. A.S.	16864	4950	24616	0	No
CETINEL Sogutma San. ve Tic. A.S.	67456	3890	?	15164	?
TERMO Sogutma San. Tic. A.S.	0	367	?	0	?
FLOGAZ Florlu Gazlar San. ve Tic. A.S.	16864	53108	69101	0	Yes
MESPA End. Paz. Ltd. Sti.	48960	0	49735	5603	No
BIRSAN Mak. San. ve Tic. A.S.*	9996	?	?	?	?

* Company cannot be visited during the course of the study and the information was obtained from the Ministry of Environment

Table 16. The balance of the realized import amounts, stocks and the sales for CFC 502 for 2002

Company	**Realized Import in 2002 (kg)**	**Stocks as of Jan. 1, 2002 (kg)**	**Sales in 2002 (kg)**	**Stocks as of Sept. 2002 (kg)**	**Balanced**
	A	B	C	D	
CANTAS Ic ve Dis Tic. Sog. Sis. San. A.S.	1889	0	?	1483	?
TURA Sog. San. Tic. A.S.	19992	612	8800	8241	No
SOGUK TEKNIK San ve Tic. A.S.	2938	27	?	54	?
CETINEL Sogutma San. ve Tic. A.S.	680	1659	?	572	?
TERMO Sogutma San. Tic. A.S.	0	0	?	0	?
BIRMAK Sogutma San. ve Tic. A.S. *	?	?	?	?	?
BIRSAN Mak. San. ve Tic. A.S. *	?	?	9996	?	?

* Company cannot be visited during the course of the study and the information was obtained from the Ministry of Environment

It is not possible to drive any concrete conclusions for Turkey as a whole from the data and balance of the realized import amounts, stocks and the sales presented in Tables 11-16. As seen in these tables most of the sales and some stocks and realized import data are missing which could not be collected. As seen in Table 1 too many companies were visited per day and most of the company visits were less than an hour. In evaluating the results given in Tables 11-16 it should also be kept in mind that all the sales and stock records were provided by the companies and cannot be double-checked by reviewing their records. Moreover, the imbalances in individual companies must further be investigated with a more comprehensive study.

In evaluating the balances between the realized import amounts, stocks and the sales for 2002, it must be noted that this report does not cover the last three months of the year. A verification report to cover 2002 as a whole must be conducted on March 2003, the earliest.

As the last part of the report, companies which completed or are carrying out MLF projects (present and past consumers) were visited (Table 1) in order to confirm whether the market are procuring from the legal importers. NURDIL Teknik Sogutma San. ve Tic. Ltd. Sti. and DIKTAS Sogutma ve Met. Ima. San. ve Tic. A.S. are the companies which are carrying out MLF projects. NURDIL does not use CFC 11 or 502 but uses around 100 kg CFC 12/year only for service needs of the old refrigerators. They buy this CFC 12 from CANTAS, TURA and CETINEL all of which are legal importers.

DIKTAS does not use CFC 11 or 502 either but uses less than 20 kg CFC 12/year only for service needs of the old refrigerators. They buy this CFC 12 from CANTAS.

Furthermore, TEKSO Teknik Sogutma San. ve Tic. A.S. (ongoing MLF project) and PIMSA Poliuretan Imalat San. ve Tic. A.S. (completed MLF projects) were visited (Table 1). Neither of these companies uses any CFC 11, 12 or 502.

ELASTOGRAN Poliuretan San. ve Tic. Ltd. Sti. was visited as an example of polyol supplier to the foam industry (Table 1). They import only 10% of their polyol consumption preblended, while they blend 90% of it with HCFC. Mr. Adnan Sensoy, the Production and Technical Service Manager of ELASTOGRAN stated that Huntsman-Shell imports all its consumption as preblended from Italy. Moreover, a fax message from Shell-Turkey stated that Shell has no CFCs in any of its products.

During the company visits, the persons interviewed (Table 1) stated their general comments of on different aspects of the quota system, illegal imports, etc. These comments are summarized below:

- For CFC 12 all the quota amount is not used in manufacturing but consumed mainly by small scale service providers. Because there are so many old refrigerators which use CFC 12, this demand for CFC 12 for servicing is not expected to decrease significantly in the near future.

- Companies with completed or ongoing ODS projects use almost no CFC 11, 12 or 502.

- There is illegal input of CFC 12 to Turkey. This input is mainly from the Southeast Region and the Syria is suspected to be the country of origin. There is Arabic letters on the containers. Another suspected illegal input is from Dubai. Illegal CFC 12 containers (Atoken- France and Refron-India) are loaded to passenger buses and enter Turkey. The price is cheaper than legally imported CFC 12. Five Turkish importer companies filed a complaint in 1999 to let the Turkish legal authorities know this situation and make them take the necessary precautions to prevent this illegal input. They stated that the situation did not change and the illegal input of CFC 12 is still the case. They further stated that the rate of this illegal import gets higher especially towards the end of the year when the quota limits get lower. This illegal input is mainly

consumed locally in the South East region. Even though there are no concrete figures, the total amount is thought to be significant. They further suggested illegal input to Turkey can be stopped if the use of disposable containers is banned like in Europe.

- Some importer company officials pointed out that a considerable amount of CFCs are imported to free zones in Turkey which are not covered in the quota system. Then, they are sold to countries like Bulgaria, Kosova, Azerbaijan, Romenia, etc.

- Some of the CFC 12 which is imported legally under the quota system to Turkey is exported mainly to Bulgaria and some other European countries.