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DU FONDS MULTILATERAL AUX FINS
D'APPLICATION DU PROTOCOLE DE MONTREAL
Quarante-deuxième réunion
Montréal, 29 mars - 2 avril 2004

PROPOSITIONS DE PROJETS: CHINE

Ce document contient les observations et recommandations du Secrétariat du Fonds sur les propositions de projets suivantes:

Autres

- Plan d'élimination du CFC-11 dans le secteur du tabac: plan de travail 2004 — ONUDI

Production

- Programme d'élimination de la production de CFC: rapport de vérification 2003 et programme de travail 2004 — Banque mondiale

Solvant

- Élimination de SAO dans le secteur des solvants en Chine: tranche 2004 — PNUD

FICHE D'EVALUATION DU PROJET
CHINA

SECTEUR: Autre Consommation sectorielle de SAO (2003): 620 tonnes PAO

Seuils coût-efficacité dans le sous-secteur: S.O.

Titre du projet:

(a) Plan d'élimination du CFC-11 dans le secteur du tabac: plan de travail 2004

Données du projet	**Autres (expansion du secteur tabac)**
Consommation de l'entreprise (tonnes PAO)	
Incidence du projet (tonnes PAO)	200
Durée du projet (mois)	12
Montant initial demandé ($ US)	1 800 000
Coût final du projet ($ US):	
Coûts différentiels d'investissement (a)	1 800 000
Fonds pour imprévus (b)	
Coûts différentiels d'exploitation (c)	
Coût total du projet (a+b+c)	1 800 000
Participation locale au capital (%)	100%
Pourcentage des exportations (%)	0%
Montant demandé ($ US)	1 800 000
Rapport coût-efficacité ($ US/kg)	9,00
Confirmation du financement de contrepartie?	
Agence nationale de coordination	SEPA
Agence d'exécution	ONUDI

Recommandations du Secrétariat	
Montant recommandé ($ US)	1 800 000
Incidences du projet (tonnes PAO)	200
Rapport coût-efficacité ($ US/kg)	9,00
Coût d'appui de l'agence d'exécution ($ US)	135 000
Coût total pour le Fonds multilatéral ($ US)	1 935 000

DESCRIPTION DU PROJET

Plan d'élimination du CFC-11 dans le secteur du tabac: plan de travail 2004

Contexte

1. Lors de la 32e Réunion, un accord entre le Gouvernement de Chine et le Comité exécutif, pour la mise en œuvre du plan d'élimination du CFC-11 dans le secteur du tabac dans ce pays (Plan sectoriel), a été approuvé et un montant de 2 millions de $US a été alloué à l'ONUDI à l'effet de réaliser le programme de travail 2001. Il a été également demandé à l'ONUDI de rendre compte, à une réunion ultérieure du Comité exécutif, sur l'utilisation des fonds destinés à soutenir les coûts et qui sera revue dans deux années (Décision 32/69).

2. Lors de ses 36e et 39e Réunions, le Comité exécutif avait approuvé 4 millions de $US (2 millions $US/réunion) pour l'ONUDI, au titre de deuxième et troisième décaissements pour la mise en œuvre du plan d'élimination du CFC-11 dans le secteur du tabac en Chine.

3. Le Gouvernement de Chine a soumis, à l'attention de la 42e Réunion du Comité exécutif, un rapport périodique sur la mise en œuvre du programme de travail 2003 accompagné d'une demande de 1,8 million $US pour l'application du programme de travail annuel 2004.

Rapport périodique sur la mise en œuvre du programme de travail 2003

4. Au début de 2003, le quota de consommation du CFC-11 a été arrêté pour chaque entreprise, conformément au quota global de consommation de 2003 assigné au secteur du tabac et à la production totale réelle de l'entreprise. A la fin de décembre 2003, conformément à la consommation de CFC-11 signalée par les entreprises, la consommation totale en CFC-11 des entreprises était inférieure à 620 tonnes PAO, soit 80 tonnes PAO de moins que le niveau de consommation de CFC-11 arrêté dans le Plan sectoriel.

5. Trente et une entreprises d'expansion du tabac, qui sont admissibles, ont été invitées à éliminer la totalité de leur quota de CFC-11, au titre de 2003, par le biais du système d'adjudication ouverte. L'adjudication a eu lieu en mars 2003; huit entreprises qui envisageaient de démanteler leurs équipements CFC-11, en 2003, ont soumis leurs offres (l'ONUDI a été tenue informée de tout le processus d'adjudication et a inspecté l'ensemble des documents concernés).

6. En mars 2003, l'Administration publique en charge du monopole sur le tabac (STMA) et l'Administration publique de la protection de l'environnement (SEPA) ont étudié les soumissions et sélectionnées les dix entreprises suivantes s'engageant à démanteler leurs équipements d'expansion du CFC-11 (des contrats ont été signés avec ces entreprises en mai 2003):

Plan sectoriel N°	Nom de l'entreprise	Unités d'expansion	Date d'installation
5	Entreprise de cigarettes de Luohe (un ensemble sur deux)	1	Oct-94
15	Entreprise de cigarettes de Guiyang (un ensemble sur deux)	1	Oct-92
17	*Guiding Cigarette Sub-Factory (Guiding 2)*	1	Sep-92
24	*Hong`an Cigarette Factory*	1	Mar-92
26	*Hubei Sanxia Tobacco (Dangyang Cigarette Factory)*	1	Sep-92
29	*Beijing Cigarette Factory*	1	Avr-90
46	*Harbin Cigarette Factory*	1	Jan-92
48	*Tianjin Cigarette Factory*	1	Juin-92
Total		8	

7. Cinq autres équipements à base de CFC-11, qui ont été installés après le 25 juillet 1995 dans cinq entreprises (Chendu, Fuyang, Chuzhou, Hefei et Lanzhou) (et qui ne peuvent donc prétendre à financement), ont été démantelés sous le contrôle du Gouvernement de Chine sans compensation du Fonds multilatéral.

8. Les activités d'assistance technique suivantes ont été proposées pour l'exercice 2003:

(a) Étude de spécifications techniques et de contrôle de la qualité du tabac gonflé produit en utilisant des technologies sans CFC-11;

(b) Évaluation de la technologie d'expansion par séchage pneumatique à l'eau à haute température; et

(c) Évaluation de la faisabilité de l'unité de gonflage du tabac à base de CO_2, qui a été ouverte à Xuzhou, s'agissant de la fourniture de tabac gonflé aux usines de cigarettes.

9. Or, en raison des problèmes survenus en avril 2003 à cause du SRAS, la mise en œuvre de ces programmes d'assistance technique a été retardée. Ces activités devraient être achevées au second trimestre de 2004.

Programme de travail annuel pour l'exercice 2004

10. Le programme de travail 2004 comprend principalement les activités suivantes:

(a) Détermination, par le Gouvernement de Chine, de nouveaux quotas de CFC-11 pour un reliquat de consommation de 500 tonnes PAO de CFC-11 en 2004 (les entreprises devront respecter les quotas de consommation arrêtés sous peine d'être pénalisées en réduisant leurs quotas respectifs en 2005). Les 23 entreprises qualifiées restantes seront invitées à communiquer leurs quotas par le biais d'un mécanisme d'adjudication publique. Les offres seront ouvertes en avril 2004;

(b) Une étude sur les effets de différents types de feuilles de tabac sur la qualité du tabac gonflé sans CFC-11 (première phase). Les différences relevées dans les caractéristiques des différentes feuilles de tabac produites en Chine appellent des traitements sur mesure en matière de gonflage afin d'obtenir une qualité égale et, partant, répondre aux attentes des usines de cigarettes. Cette étude vise, ainsi, à optimiser la qualité du tabac gonflé et à prévenir les problèmes découlant de l'utilisation du tabac gonflé produit à l'aide de technologies autres que celles à base de CFC-11; et

(c) Programmes d'information, de diffusion, de sensibilisation et de formation, dont des stages organisés à l'intention des personnels de la SEPA et de la STMA sur la gestion et la mise en œuvre de projets; mécanismes d'appel d'offres pour la remise de quotas et la soumissions des offres; signature des contrats de démantèlement d'équipements CFC-11 et d'Élimination de ce type de matériel; mécanisme d'audit et de contrôle; équipements de remplacement et leurs fournisseurs.

11. Les activités prévues en 2004 et les résultats proposés sont fournis au tableau ci-dessous:

Élimination du CFC-11	**Description**	**Fonds demandés ($ US)**
Activités préliminaires	Achever le système d'autorisation des quotas de consommation de CFC-11 dans le secteur du tabac. Déterminer et annoncer les quotas de consommation.	
Démantèlement des équipements de CFC-11	Éliminer 200 tonnes PAO de CFC-11 Démanteler les équipements à base de CFC-11 qui ont été sélectionnés par le processus d'appel d'offres Rédiger les rapports d'achèvement une fois les équipements démantelés	1 700 000
	Total partiel 'fermeture et démantèlement'	1 700 000
Activités d'assistance technique		
Information, sensibilisation et formation	Répartition des quotas, sensibilisation et formation	45 000
Etude sur les effets de différents types de feuilles de tabac sur la qualité du tabac gonflé sans CFC-11 (première phase)	Étude pour optimiser la qualité du tabac gonflé	55 000
	Total partiel 'activités d'assistance technique'	100 000
	Total général	**1 800 000**

12. En outre, le Gouvernement de Chine propose de réaliser les deux programmes d'assistance technique suivants dont le financement proviendra du reliquat des programmes de travail précédents:

(a) Une étude devant établir comment la technique de gonflage au CO_2 affecte les composants chimiques volatiles du tabac. Cette étude vise à comprendre les

changements qui interviennent dans l'arôme du tabac en raison du gonflage des feuilles de tabac à l'aide de la technologie CO_2 et éliminer ces problèmes par le contrôle de la température et des récipients d'arômes afin de garantir la même qualité de cigarette comme quand le tabac était gonflé à l'aide d'équipements à base de CFC-11.

(b) L'achèvement de l'étude sur les effets de différents types de feuilles de tabac sur la qualité du tabac gonflé sans CFC-11 (comme décrit plus haut).

OBSERVATIONS ET RECOMMANDATION DU SECRETARIAT

OBSERVATIONS

13. Le Secrétariat a examiné le rapport périodique sur la mise en œuvre du programme de travail 2003 qui a été présenté par l'ONUDI, à la lumière de l'accord scellé entre le Gouvernement de Chine et le Comité exécutif, et sur la stratégie d'élimination pour le secteur du tabac. Le Secrétariat a noté que les activités réalisées en 2003 et relatives à la consommation de CFC-11 pour le gonflage du tabac ont permis une diminution de l'ordre de 180 tonnes PAO, soit 80 tonnes PAO de plus que le seuil convenu.

14. S'agissant du programme de travail 2004, le Secrétariat note que l'objectif consistant à éliminer 200 tonnes PAO de CFC-11 est conforme à l'accord.

15. Le Secrétariat a demandé clarification sur l'effet que le retard, dans la réalisation des activités d'assistance technique proposées dans le programme de travail 2003, pourrait éventuellement avoir sur le plan global d'élimination du CFC-11 dans le secteur du tabac. L'ONUDI a déclaré qu'en raison de l'épidémie du SRAS, la réalisation des activités d'assistance technique a été retardée de 5 mois; cependant, il est attendu que toutes ces activités seront achevées en mai 2004. Le principal impact de ce retard pénalise l'application des spécifications techniques du tabac gonflé et la prise de la décision sur les investissements en machines de gonflage au CO_2 (la plupart des fournisseurs d'équipements ont pu proposer des calendriers de livraisons plus courts).

16. Depuis l'approbation du projet, quelques 385 000 $US ont été économisés. Le Gouvernement de Chine propose de transférer les économies réalisées sur le programme de travail de 2001 à celui de 2003 afin de pouvoir entreprendre deux activités supplémentaires d'assistance technique destinées à traiter les problématiques du tabac gonflé à base de CO_2. Même si un travail sur ces activités a été réalisé, semble-t-il, les nouvelles activités pourraient être financées en profitant de la souplesse accordée par le Comité exécutif sur la mise en œuvre de projet.

RECOMMANDATION

17. Le Secrétariat du Fonds recommande l'approbation générale du quatrième décaissement du projet assorti des coûts d'appui correspondants au niveau de financement indiqué ci-dessous:

	Titre du projet	Financement du projet ($ US)	Coûts d'appui ($ US)	Agence d'exécution
(a)	Plan d'élimination du CFC-11 dans le secteur du tabac: plan de travail 2004	1 800 000	135 000	ONUDI

PROGRAMME D'ELIMINATION DE LA PRODUCTION DU CFC EN CHINE RAPPORT DE VERIFICATION 2003

DESCRIPTION DU PROJET

18. Selon l'arrangement contenu dans l'Accord portant plan sectoriel de la production de CFC en Chine, la Banque mondiale a soumis le programme annuel 2004 pour l'élimination de la production de CFC en Chine à la 41e Réunion en décembre 2003 et le Comité exécutif avait décidé "d'approuver le programme de travail 2004 pour le programme d'arrêt de la production de CFC en Chine en prenant note que la demande de financement avec des frais d'appui sera présentée à la 42e Réunion par la Banque mondiale, en même temps qu'un rapport de vérification de la mise en œuvre du programme annuel 2003 " (Décision 41/63).

19. Comme il lui été demandé, la Banque mondiale soumettra à la 42e Réunion son rapport de vérification de l'application du Programme d'élimination de la production de CFC de la Chine pour l'exercice 2003 (ci-joint sans la partie données chiffrées). Ce rapport concerne la vérification de 6 unités de production qui produisaient dans le cadre du système de quotas au titre du programme annuel 2003 (le rapport d'audit du SRIC cite les unités A8, A10, B11, B8, B12 et B14).

20. Le rapport contient une synthèse de conclusions et 4 annexes. La synthèse de conclusions fournit une évaluation générale de l'équipe de vérification, sur le degré de réalisation, dans le contexte du programme de travail 2003, des objectifs arrêtés dans l'Accord et les données globales sur la production totale de CFC, les statistiques par type de substance (CFC-11, CFC-12, CFC-113, CFC-114, CFC-115, CFC-13), la consommation totale du produit intermédiaire, ainsi que d'autres questions importantes identifiées lors de la vérification. L'évaluation générale fournie par le rapport de vérification permet de constater que la Chine a respecté le seuil de production annuelle de CFC qui a été arrêté dans l'Accord pour l'exercice 2003, avec une production totale réelle de 29 985,71 tonnes PAO contre 30 000 tonnes PAO permises par l'Accord.

21. L'Annexe I contient une description, pour chaque unité individuelle, du processus de vérification et une analyse des résultats. Le document commence par évaluer le suivi adopté et appliqué par l'unité de production concernant les améliorations suggérées par le dernier audit puis apporte des analyses et des observations sur la qualité de la documentation, aborde de façon détaillée la méthodologie et les documents utilisés pour vérifier la production de CFC et la consommation des produits intermédiaires. L'Annexe I commente également les questions que l'équipe de vérification a identifiées lors de sa visite sur site. La conclusion de vérification de chaque unité se présente sous la forme d'une évaluation du respect, par l'entreprise, du quota de production qui lui a été assigné.

22. L'Annexe II présente les résultats dans le format approuvé par le Comité exécutif et livre des données sur la capacité de production, la gamme de produits, le quota de production et la production mensuelle réelle de CFC, le taux de consommation du produit intermédiaire et le changement constaté dans l'inventaire de ces stocks chaque mois ainsi que le nombre de jours d'exploitation. Des données comparatives de ces paramètres, sur la durée du programme d'élimination, sont fournies pour faciliter le contrôle de la cohérence.

23. L'Annexe III fournit des informations détaillées sur la fermeture définitive, à la fin de 2002, de deux producteurs de CFC et les résultats de vérification du démantèlement de ces deux unités de production début 2003. La première fermeture a touché l'unité CFC-12 de la société *Guangdong Xiansheng Chemical Co. Ltd.*(l'unité A13 dans le rapport d'audit) et a été démantelée conformément au contrat de fermeture passé avec la SEPA et certifié par la SEPA et le Bureau local de protection de l'environnement (EPB). Tout le matériel a été enlevé des locaux avait d'être complètement détruit. Tous les réservoirs d'entreposage des produits CTC et CFC-12 ont été vidés et des trous ont été perforés sur les côtés et le produit CFC-12 résiduel a été mis dans des cylindres. La seconde action de fermeture a touché l'unité de CFC-12 au niveau de l'usine *Zhejiang Linhai Limin Chemical Plant* et le démantèlement est intervenu en janvier 2003, en présence de la SEPA qui l'a confirmé et du bureau local EPB. Parmi le matériel détruit il y a eu deux gazomètres, deux réacteurs à CFC, des récipients de produits, des tours de distillation, des rebouilleurs et des contrôles. Plus de 20 tonnes de déchets de métaux ont été vendues et le personnel de cette unité de production de CFC a été réintégré dans la production de nouveaux produits chimiques auxquels l'unité s'est convertie. Après la fermeture de cette unité de CFC-12, Zhejiang Linhai ne produit que du CFC-13 comme substance réglementée.

24. Dans l'un et l'autre cas, l'équipe de vérification a pu visiter les sites des unités démantelées et a visionné la vidéo de l'opération de démantèlement L'équipe a également reçu le certificat de démantèlement délivré par l'EPB locale et s'est déclarée satisfaite que le démantèlement ait été fait de telle sorte que ces deux unités ne puissent plus reprendre la production de CFC-12. L'Annexe conclut que les données de production du CFC, au niveau de ces deux unités, pendant 2002, soit avant leur fermeture, ont été présentées suivant le format recommandé dans les lignes directrices relatives au contrôle de l'élimination définitive de la production de SAO.

25. L'Annexe IV comprend l'audit financier fourni par l'auditeur qui fait partie de l'équipe de vérification. Cet audit s'intéresse principalement à la vérification de la production de CFC en épluchant les documents financiers tels que l'achat et la consommation de matières premières. Ce rapport donne les résultats vérifiés, unité par unité, de la consommation de CTC et de HF, de la Production de CFC, les ventes des produits sur les marchés intérieur et extérieur et les pays de destination de telles exportations.

OBSERVATIONS ET RECOMMANDATION DU SECRETARIAT

OBSERVATIONS

<u>Évaluation globale de la vérification 2003 à la lumière des lignes directrices pour la vérification de l'élimination de la production de SAO</u>

26. La vérification de la mise en œuvre du programme de travail 2003 a été entreprise par la même équipe qui a appliqué les lignes directrices et la méthodologie utilisées dans d'autres actions antérieures de vérification et a permis une discussion des questions et problèmes identifiés lors de la vérification précédente et un suivi, sur deux années, de ces problèmes pour

constater si des améliorations ont été apportées. Les résultats de cet exercice de vérification sont présentés suivant les formats adoptés et sont assortis d'une documentation adéquate qui permet de repérer et valider la production de CFC et la consommation des produits intermédiaires.

Respect du calendrier de contrôle des CFC-13 prévu dans le Protocole de Montréal

27. L'équipe de vérification confirme que la Chine a réduit sa production de CFC-13 de 20%, passant de 5,7 tonnes PAO contre 21,3 tonnes PAO en 2003, à partir de la base de référence de 27 tonnes PAO qui représente la moyenne pour la période 1998-2000. La Chine est donc en conformité avec le calendrier de contrôle des CFC-13 prévu dans le Protocole de Montréal.

Respect du plafond de consommation de CFC-11

28. La production de CFC-11 vérifiée est de 13 828,38 tonnes PAO. Ce chiffre est dans les limites de la consommation nationale globale de CFC-11 dont le plafond est arrêté à 15 500 tonnes PAO pour l'exercice 2003, conformément à "l'Accord d'élimination du CFC dans le secteur des mousses en polyuréthane en Chine".

Questions relatives au respect des quotas de production

29. Dans ses observations sur les rapports de vérification de la production de CFC en 2001 et 2002, le Secrétariat a transmis la préoccupation exprimée par l'équipe de vérification sur la marge étroite entre la production déclarée par certains opérateurs et le quota qui leur a été assigné. Le Secrétariat appuie également la préoccupation, de l'équipe de vérification, et qui est relative au soi-disant « stock-tampon » de CFC dans certaines entreprises. La SEPA a officiellement informé l'ensemble des producteurs qu'ils étaient appelés à tenir des livres indiquant le stock-tampon au début et à la fin à des fins d'inspection et que toute augmentation de stock-tampon devrait être incluse dans la production déclarée pour le compte de l'année concernée. Par voie de conséquence, des améliorations ont été enregistrées même si la pratique consistant à produire au plus près du quota est toujours suivie par une entreprise.

30. Comme indiqué dans le rapport, on aura remarqué qu'en 2003 il y a eu une évolution dans les ventes de tous les producteurs: les ventes de CFC ont diminué sur le marché intérieur et augmenté à l'exportation. Ceci peut être attribué aux fluctuations des prix des matières de substitution du CFC en Chine. Lors de sa récente visite en Chine, pendant l'évaluation de l'application des accords d'élimination de la production de CFC, le représentant du Secrétariat a appris que les prix du HCFC-141b et du HCFC-22 ont diminué pour situer à parité, ou même au dessous, des prix du CFC-11 et du CFC-12. Ceci a probablement contribué à persuader nombre d'utilisateurs finaux de CFC d'abandonner, plus tôt que prévu, le recours à ces substances. Ceci appelle un contrôle rapproché et étroit de la part du Gouvernement de Chine afin de synchroniser l'élimination de la production et de la consommation de CFC.

31. Conformément aux informations qu'il a fournies aux 36^{e} et 39^{e} Réunions du Comité exécutif, le Secrétariat ne compte pas les données figurant aux Annexes II et III du rapport de vérification. Cependant, ces données peuvent être mises à la disposition des membres du Comité s'ils en font demande.

RECOMMANDATION

32. Le Secrétariat recommande que le Comité exécutif débloque, pour la Banque mondiale, la somme de 13 millions de $US pour la mise en œuvre du programme de travail 2004 du Programme d'élimination de la production de CFC en Chine ainsi que le montant de 975 000 $US au titre de coût d'appui à la Banque mondiale.

FICHE D'EVALUATION DU PROJET
CHINE

SECTEUR:	Solvant	Consommation sectorielle de SAO (2003):	CFC-113:	1700 tonnes PAO
			TCA:	580 tonnes PAO
			CTC:	55 tonnes PAO

Seuils coût-efficacité dans le sous-secteur: S.O.

Titre du projet:

(a) Élimination de SAO dans le secteur des solvants en Chine: tranche 2004

Données du projet	**Solvant**
Consommation de l'entreprise (tonnes PAO)	
Incidence du projet (tonnes PAO)	1602
Durée du projet (mois)	12
Montant initial demandé ($ US)	5 555 000
Coût final du projet ($ US):	
Coûts différentiels d'investissement (a)	5 555 000
Fonds pour imprévus (b)	
Coûts différentiels d'exploitation (c)	
Coût total du projet (a+b+c)	5 555 000
Participation locale au capital (%)	100%
Pourcentage des exportations (%)	0%
Montant demandé ($ US)	5 555 000
Rapport coût-efficacité ($ US/kg)	s.o.
Confirmation du financement de contrepartie?	
Agence nationale de coordination	SEPA
Agence d'exécution	PNUD

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

DESCRIPTION DU PROJET

Élimination de SAO dans le secteur des solvants en Chine: tranche 2004

Contexte

33. Pour le compte du Gouvernement de Chine, le PNUD a présenté à la 41e Réunion du Comité exécutif le Rapport périodique annuel 2003 et le Programme de mise en œuvre de 2004 du Plan d'élimination des SAO dans le secteur des solvants en Chine. L'audit de performance du programme annuel 2002 n'a pas été entrepris au moment de la préparation du rapport. Dans la Décision 41/73, le Comité exécutif demandait au PNUD de soumettre, à la 42e Réunion, son rapport périodique pour l'année 2003 et le programme de mise en œuvre 2004 accompagné des conditions d'audit de performance.

34. Le Rapport périodique annuel 2003 qui a été soumis à la 41e Réunion s'est penché sur les activités entreprises en 2003 dans le but d'atteindre les objectifs de maîtrise de la consommation, pour l'année 2003, prévus dans l'Accord (CFC-113: 1700 tonnes PAO; TCA: 580 tonnes PAO; CTC: 55 tonnes PAO). Comme le prévoit l'Accord, le rapport traite également des activités de contrôle réalisées pour confirmer, le cas échéant, que la Chine a réalisé les réductions cumulées de consommation l'année précédente, en l'occurrence en 2002.

35. Dans le document UNEP/OzL.Pro/ExCom/41/28, le Secrétariat a indiqué dans ses observations (pages 28 à 31) qu'à travers le PNUD, la Chine a signalé: qu'elle avait respecté les seuils de consommation pour 2002; qu'elle avait vérifié le respect du seuil arrêté pour le CTC uniquement, et; qu'elle avait respecté les indicateurs de performance prévus dans le programme annuel 2003. Le Secrétariat a également relevé que le CFC-113 continue d'être utilisé comme produit intermédiaire en quantités supérieures à celles arrêtées dans l'Accord.

36. La seule observation que le Secrétariat a émise, sur le projet de programme de mise en œuvre 2004, était de demander des clarifications sur deux nouvelles modalités de mise en œuvre recourrant à une élimination progressive et à un remboursement rétroactif respectivement (fournis par le PNUD et insérés au paragraphe 91 du document sus-cité).

37. Le PNUD a établi un rapport complémentaire (joint au présent document) qui renferme les résultats de la vérification de gestion du programme annuel de mise en œuvre pour 2002, apporte quelques rectifications mineures aux informations relatives à l'application du programme annuel 2003 et aborde la question de l'utilisation du CFC-113 comme produit intermédiaire qui a été soulevée par le Secrétariat dans ses observations sur la présentation faite à la 41e Réunion.

38. L'information ci-après concerne le rapport complémentaire.

Le Rapport complémentaire

39. Le Rapport complémentaire contient les chiffres révisés des contrats d'élimination qui ont été passés en 2003 (Tableau 3 (revu) ci-dessous), signalant une légère réduction dans les seuils, arrêtés dans les contrats signés en 2003, pour l'élimination du CFC-113 et du TCA,

comparés à ceux communiqués dans le rapport précédent. Toutefois, dès que l'on ajoute les taux d'élimination réalisés sur d'autres projets en cours – en plus du plan d'élimination – l'élimination objet de contrat dépasse le seuil établi pour se conformer aux limites de réduction prévues dans l'Accord.

Tableau 3 (revu): Élimination de SAO prévue dans les contrats de 2000 – 2003, Méthode des pièces justificatives et mécanisme de remboursement

			CFC-113 (PAO MT)	TCA (PAO MT)	CTC (PAO MT)	Nbre d'entreprises	Financement (1 000 $US)
2000	Contrats pour élimination future	Prévu	372,8	10	0	10 – 20	5 000
		Signé	378,4	10,1	8,36	16	4 132
	Élimination réalisée	Projets en cours	-	7,4	-		
		Élimination totale en 2000	-	7,4	-		
2001	Contrats pour élimination future	Prévu	524	10	0	10 – 20	5 505
		Signé	541,6	10,6	0	21	4 361
	Élimination réalisée	Projets en cours	54,1	-			
		Contrats 2000	340,1	9,8	8,36		
		Élimination totale en 2001	394,2	9,8	8,36		
2002	Contrats pour élimination future	Prévu	500	25	55	20 – 40	5 830
		Signé	535,8	43,2	17,94	32	4 004
	Élimination réalisée	Projets en cours	291,3	41,7			
		Contrats 2000	38,4	0,4	-		
		Contrats 2001	-	-			
		Élimination totale en 2002	329,7	42,1	-		
2003	Activités d'élimination future	Prévu	600	78	55	120-140	5 255
		Signé	475,3	37,9	0	226	5 100
	Élimination réalisée	Projets en cours	-	-	-		
		Contrats 2001	336,3	7,3			
		Contrats 2002	-	-	-		
		Activités en 2003*	142,1	44,9			
		Élimination totale en 2003	478,4	52,2	-		
2004	Élimination réalisée	Contrats 2001 +	178,9	2,8	-		
Total global de quatre années	Élimination prévue		1 996,8	123	110		
	Objectifs d'élimination		2 200	119	110		
	Élimination à atteindre par l'achèvement des projets en cours et des contrats signés		2 276,5	150,9	26,3		

			CFC-113 (PAO MT)	TCA (PAO MT)	CTC (PAO MT)	Nbre d'entreprises	Financement (1 000 $US)
	Élimination réelle réalisée à ce jour +		1 381,2	114,3	8,36		

* Du remboursement rétroactif de 2003 et des activités d'élimination graduelle
+ Élimination réalisée à février 2004

40. Le Rapport complémentaire contient, par ailleurs, une explication des quantités de CFC-113 utilisées comme produit intermédiaire en relation au faible niveau maximum (10 tonnes PAO) prévu dans l'Accord (cf. page 3 du rapport). La Chine indique que le niveau de 10 tonnes PAO, inscrit dans l'Accord, a été sous-estimé et apporte des informations pour prouver l'existence d'arrangements ayant pour vocation de veiller à ce que les quantités de CFC-113 produites pour servir de produit intermédiaire ne soient pas détournées pour en faire des solvants. La Chine signale également son engagement à réduire graduellement les quantités de produits intermédiaires, et à rendre compte annuellement de cette réduction. Et à l'appui de ces éléments que la Chine a demandé qu'il lui soit permis d'excéder la quantité de 10 tonnes PAO de CFC-113 prévue dans l'Accord, au titre de produit intermédiaire.

41. Ce documents fournit force détails sur la portée, le processus, les conclusions et les problèmes provenant de la vérification de gestion menée sur les seuils d'élimination fixés pour 2002 et les limites de consommation. Voici la portée et l'objectif de l'étude:

(a) Vérifier le niveau de consommation nationale de CFC-113, TCA et de CTC en tant que solvants de nettoyage, pour l'exercice 2002;

(b) Vérifier la mise en œuvre des activités d'élimination menées dans chacune des 21 entreprises qui ont signé les Contrats de réduction de SAO en 2001, avec l'objectif d'arriver à l'élimination en 2003;

(c) Vérifier l'état d'application des mesures de politique générale et des activités d'assistance technique.

42. Pour respecter l'Accord, il est nécessaire pour l'audit de confirmer les seuils de contrôle de la consommation du CFC-113, du TCA et CTC destinés à être utilisés comme solvants en 2002. A cet égard, le Rapport complémentaire indique que:

> "A la lumière du rapport de vérification de la CNAO concernant la production de CFC-113, et des chiffres officiels d'import et d'export, le niveau de la consommation nationale du CFC-113 a été établi à 2 196 tonnes PAO, chiffre inférieur au seuil de contrôle de consommation qui est fixé à 2 200 tonnes PAO four ce qui concerne 2002.
>
> Selon le rapport d'inspection de la Banque mondiale et le Secrétariat du Fonds multilatéral, la production totale de TCA, en 2002, était de 120,5 tonnes PAO. Les données du Bureau de contrôle de l'importation et de l'exportation de SAO indiquent des importations au volume de 261,74 tonnes PAO et les exportations ont atteint le chiffre de 1,6 tonnes PAO. Ainsi, le niveau de consommation totale nationale de TCA était de 380,64 tonnes PAO, un chiffre inférieur aux limites de contrôle de consommation qui sont fixées à 605 tonnes PAO.

> Pour le CTC en tant que solvant de nettoyage, un audit indépendant a conclu que la consommation, au niveau des 21 entreprises (sur les 34 anciennes) qui consomment du CTC, a été de l'ordre de 10,47 tonnes PAO en 2002. Comme ces entreprises, identifiées dans l'enquête originelle, représentaient 38,3% de la consommation nationale, la consommation de CTC en 2002 peut être extrapolée à 27,34 tonnes PAO, soit un chiffre inférieur aux limites de consommation établies à 110 tonnes PAO."

43. Quant au progrès du programme de mise en œuvre 2003, l'audit indique que sur le volume d'élimination prévu sur les contrats de réduction passés en 2001, soit sur 541,58 tonnes PAO de CFC-113 et 10,6 tonnes PAO de TCA, seuls quelques 64,5 tonnes PAO de CFC-113 et 3,9 tonnes PAO de TCA ont été éliminées à la fin d'octobre 2003. Ce rapport de vérification a relevé les principales causes de retard, à savoir la complexité des activités d'élimination, les différentes demandes de mise à jour des spécifications des équipements et l'avènement du SRAS en Chine – toutes ces raisons ont contribué à retarder la livraison du matériel. Les auditeurs ont également fait savoir que l'objectif fixé pour 2003 peut être atteint. Dans le Tableau 3 reproduit ci-dessus, la Chine a indiqué qu'au mois de février 2004, sur les mêmes contrats de 2001, l'élimination réalisée est passée à 515 tonnes PAO de CFC-113 et à 10,1 tonnes PAO de TCA.

44. L'audit a également révélé qu'en raison de retard dans la réalisation, le calendrier d'élimination de l'équipement de base n'était pas conforme à celui prévu dans les contrats. Dans deux cas précis, les entreprises concernées avaient vendu l'équipement au lieu de le détruire. SEPA a été invitée à intervenir pour récupérer cet équipement afin de le détruire et cette Agence s'est engagée à améliorer et mieux surveiller la destruction de ces équipements à l'avenir.

45. Le PNUD a, lui aussi, commandé une étude technique. Quatorze des 21 entreprises qui ont signé des contrats en 2001 ont été visitées. Les résultats (page 7 du Rapport complémentaire) indiquent que les entreprises engagent de sérieux efforts pour arriver à une élimination totale, qu'il y a eu des retards de mise en œuvre impliquant des changements dans les spécifications du matériel et des livraisons tardives et que des problèmes pratiques, liés à l'usage des équipements ou au type d'agent de nettoyage à utiliser, restent à résoudre. Il a été indiqué que la SEPA et le PNUD travailleront de concert pour résoudre ces difficultés.

46. A la lumière du rapport présenté à la 41e Réunion du Comité exécutif et du Rapport complémentaire soumis à la présente réunion, la Chine demande le décaissement du financement approuvé pour 2004 et qui s'élève à 5 555 000 $US plus les frais de soutien de l'ordre de 416 625 $US.

OBSERVATIONS ET RECOMMANDATION DU SECRETARIAT

OBSERVATIONS

47. En ce qui concerne les limites de consommation pour 2002, les résultats de l'audit indiquent que la Chine a respecté les conditions de l'Accord. Pour le CTC, comme on le voit dans les observations du Secrétariat adressées à la 41^{e} Réunion, ce respect a été confirmé par calcul statistique. Le Secrétariat note que cette méthodologie a déjà été acceptée dans le passé par le Comité exécutif pour l'audit de consommation de 2001.

48. Le Tableau 3 décrit l'élimination réalisée chaque année au titre des contrats épuisés et des projets approuvés dans le passé (tous achevés à la fin 2002). Le Secrétariat a demandé des clarifications au PNUD car les chiffres totaux de l'élimination réalisée dans les projets en cours et nouveaux, dans le cadre du Plan, sont inférieurs à l'élimination totale signalée au niveau national conformément aux limites de consommation arrêtées dans l'Accord. A titre d'exemple, l'élimination totale pour le TCA, dans les projets achevés à la fin 2002, concerne 58,4 tonnes PAO, alors que la diminution de la consommation nationale entre 2000 et 2002 est de 240 tonnes PAO. Pour ce qui est du CFC-113, l'élimination réalisée par les projets terminés entre 2000 et 2002 touche 724 tonnes PAO alors que la diminution de la consommation nationale est de 1108 tonnes PAO.

49. Le PNUD a suggéré que les mesures de politique et le contrôle, du côté de l'offre, contribuent à l'élimination et à assurer une certaine durabilité. A cet égard, l'élimination réalisée avec les contrats de réduction des SAO, le système des pièces justificatives et le remboursement rétroactif, ou l'auto-élimination graduelle, ont été surveillés et informés dans le cadre du Plan. Cependant, l'élimination et les réductions de la consommation réalisées, en dehors des activités inscrites dans le Plan, par by entreprises qui s'engagent dans des activités de conversion de leur propre chef, du fait de la demande du marché ou en réaction aux mesures politiques mises en place par la SEPA, ne figurent pas dans les arrangements de communication sur les éliminations prévus dans le Plan. Ces réductions sont, néanmoins, comptabilisées dans le niveau de consommation nationale. Ainsi, les réductions concrètes dans la consommation nationale seront toujours supérieures à la quantité éliminée et comptabilisée dans les activités prévues dans le Plan.

50. Le PNUD a également relevé qu'à travers les contrôles sur l'offre, le quota de production du CFC-113 est limité à la quantité de la limite maximum de CFC-113 utilisé comme solvant. Comme l'importation du CFC-113 est interdite, la quantité de CFC-113 disponible pour la consommation est limitée au seuil de contrôle de la consommation de ce produit. Pour ce qui concerne le TCA, la SEPA accorde un quota d'importation et de production dans les limites de contrôle prévues et la quantité de TCA destinée à la consommation est, elle aussi, limitée. La consommation du CTC comme solvant a été interdite depuis le milieu de l'année 2003.

51. En outre, les consommateurs de SAO sont tenus de demander des certificats d'utilisation pour pouvoir acheter des solvants SAO et les importateurs/distributeurs ne peuvent vendre des solvants SAO qu'aux consommateurs munis d'un certificat d'utilisation. Ainsi, la consommation de solvants qui appauvrissent la couche d'ozone est strictement réglementée au double niveau de la demande et de l'offre et la Chine estime qu'elle respectera les limites de consommation fixées en combinant des mesures politiques et des activités d'élimination en entreprise.

52. Quant aux quantités de CFC-113 utilisé comme produit intermédiaire, le Rapport complémentaire contient un compte-rendu transparent de la situation qui prévaut en Chine et indique que le volume de 10 tonnes PAO que la Chine a accepté d'introduire dans l'accord initial a été fortement sous-estimé. Au regard des engagements pris par la Chine, dans le Rapport complémentaire, pour veiller à ce que les quantités produites pour servir de produit intermédiaire ne soient pas détournées au profit de leur utilisation comme solvant et pour réduire progressivement ces quantités, le Secrétariat a invité le PNUD a lui fournir un calendrier de ces réductions.

53. Le PNUD a fait savoir que la SEPA venait de promulguer un règlement, qui devait entrer en vigueur fin 2003, et qui limite la consommation de CFC-113, comme produit intermédiaire, aux 10 tonnes PAO prévues. Cependant, le Secrétariat a invité le PNUD à revoir cette situation avec le Gouvernement de Chine car, selon des indications provenant du rapport de vérification sur la mise en œuvre de l'élimination dans le secteur productif en 2003, la production de CFC-113 comme produit intermédiaire pour la fabrication d'autres produits industriels tels que le CTFE (chlorotétrafluoro-éthylène) continue à raison d'au moins 1900 tonnes PAO par an. Il semblerait que l'une de ces problématiques est la définition même de la notion de produit intermédiaire et qu'il faut déterminer si le CFC-113 peut être considéré comme un produit intermédiaire dans un processus de production unique. Le PNUD est en train d'étudier la question avec le Gouvernement de Chine et des orientations additionnelles suivront.

54. Sous réserve des informations additionnelles du PNUD et sachant que les tranches précédentes ont été approuvées même si les quantités de CFC-113, utilisé comme produit intermédiaire, ne sont pas reflétées dans l'Accord, le Comité exécutif pourrait décider d'accorder son approbation pour le programme annuel 2004 dans les cas où le CFC-113, utilisé comme produit intermédiaire, continue de dépasser le plafond de 10 tonnes PAO.

55. Quant aux autres activités inscrites au programme annuel de mise en œuvre 2003, le Secrétariat a émis des observations dans son évaluation de projet destinée à la 41^{e} Réunion disant que le PNUD avait soumis un rapport d'achèvement indiquant une gestion satisfaisante au regard des indicateurs du programme annuel 2003 de mise en œuvre.

RECOMMANDATION

56. Sous réserve de l'examen des circonstances de la Chine, en ce qui concerne les quantités de CFC-13 utilisées comme produit intermédiaire, le Comité exécutif pourrait décider d'approuver le financement du programme annuel 2004 de mise en œuvre pour le secteur des solvants en Chine au montant de 5 555 000 $US plus les frais d'appui de 416 625 $US pour le PNUD.

CHINA CFC PRODUCTION PHASE-OUT PROGRAM
2003 VERIFICATION REPORT
FEBRUARY 20, 2004
Revised Feb 27,2004

Inspection Team

F.A. Vogelsberg: Mission Leader and primary text preparation - Annex I
Hua Zhangxi (HZX): Data Summary - Annex II (Gradual Closure) and Annex III (Complete Closure in 2003)
Wu Ning: Financial Verification of CFC Production for China in 2003- Annex-IV

Assisted and Accompanied By

Cui Lei: State Environmental Protection Administration (SEPA)

Inspection Mission Time Frame

February 1 - 14, 2004

Plants Covered in Visitation Order

Zhejiang Juhua Fluoro-chemcial Co. LTD - Zhejiang Province, Quzhou City
Zhejiang Dongyang Chemical Plant - Zhejiang Province, Dongyang City
Zhejiang Linhai Limin Chemical Plant – Zhejiang Province, Linhai City
Zhejiang Chemical Research Institute (ZCRI) - Zhejiang Province, Hangzhou City
Jiangsu Changsu* 3F Refrigerant Co. LTD - Jiangsu Province, Changshu City
Jiangsu Meilan Electro-chemical Co. LTD - Jiangsu Province, Taizhou City

*All World Bank documents spell as Changsu: while the true spelling is Changshu

Report Format and Contents

- Verification conclusions for CFC Production in China for 2003.
- Annex I - Text covering details of technical effort by Vogelsberg and Hua at six CFC Enterprises visited and inspected.
- Annex II - CFC production verification tables for gradual closure at six Enterprises.
- Annex III - Details of complete closure of two Enterprises that ceased CFC production by year end 2002 and inspected during 2003 mission.
- Annex IV - Financial verification of CFC Production for China in 2003

Verification Conclusions with respect to China's CFC Production in 2003

There were two complete closure projects in China CFC Production Sector 2003. The closure projects were Guangdong Xiansheng Chemical Co.Ltd. (SRI# A 13, CFC-12) and Zhejiang Linhai Limin Chemical Plant (SRI# B 8, CFC-12, but the CFC-13 production line remains).Therefore, there were six enterprises producing CFC products in China 2003. The verified overall national production of CFCs in 2003 is 29,985.71 tonnes (ODP) vs their issued quota of 29,998 tonnes, or 12.29 tonnes under their issued quota. The following table is the breakdown by type of product.

Type of CFC Product	Number of Producers	Total Production (tonnes)	
		ODS	ODP
CFC-11	3	13,828.38	13,828.38
CFC-12	4	14,249.10	14,249.10
CFC-13	1	21.28	21.28
CFC-113	1	2,124.92	1,699.94
CFC-114	1	0.00	0.00
CFC-115	2	311.69	187.01
Overall National			29,985.71

In our report of 2002 production we raised concerns about the large amount of "in-process" stocks as well as the closeness of production to allowed quotas at some enterprises. In response the MLF secretariat referred to these comments in the PROJECT DESCRIPTION paragraph 4.1 in UNEP/OzL.Pro/EX Com/39/30. Based on this document, SEPA issued a formal notice to all CFC producers informing them that they should keep their records showing beginning and ending "in-process" stocks so they can be inspected by those verifying annual data. Furthermore any increase of "in-process" stocks are to be included in the year's production. We are pleased to report that this directive has generally been well complied with

The total consumption of CTC for the production of 13,828.38 tonnes of CFC-11 product is 16,554.75 tonnes; and the overall average CTC/ CFC-11 ratio is 1.197 (theoretical 1.12). Among the three CFC-11 producers, the producer that had the lowest CTC/ CFC-11 ratio (1.178) is Jiangsu Changshu 3F Refrigerant Co. Ltd. (SRI# A 10); and the highest ratio (1.240) is Jiangsu Meilan Electro-chemical Plant (SRI# A 8).

The total consumption of HF for the production of 13,828.38 tonnes of CFC-11 product is 2,197.82 tonnes; and the overall average HF/ CFC-11 ratio is 0.159 (theoretical 0.145). Among the three CFC-11 producers, the producer that had the lowest HF/ CFC-11 ratio (0.156) is Jiangsu Changshu 3F Refrigerant Co. Ltd. (SRI# A 10); and the highest ratio (0.178) is Jiangsu Meilan Electro-chemical Plant (SRI# A 8).

The total consumption of CTC for the production of 14,249.10 tonnes of CFC-12 product is 19,581.88 tonnes; and the overall average CTC/ CFC-12 ratio is 1.374 (theoretical 1.272). Among the four CFC-12 producers, the producer that had the lowest CTC/ CFC-12 ratio (1.333) is Jiangsu Changshu 3F Refrigerant Co. Ltd. (SRI# A 10); and the highest (1.396) is Zhejiang Juhua Fluoro-chemical Co. Ltd. (SRI# A 10) as well as Zhejiang Dongyang Chemical Plant (SRI# B 12).

The total consumption of HF for the production of 14,249.10 tonnes of CFC-12 product is 5,566.47 tonnes; and the overall average HF/ CFC-12 ratio is 0.391 (theoretical 0.331). Among the four CFC-12 producers, the producer that has the lowest HF/ CFC-12 ratio (0.367) is Zhejiang Juhua Fluoro-chemical Co. Ltd. (SRI # B 14) and the highest (0.417) are Jiangsu Changshu 3F Refrigerant Co. Ltd. (SRI# A 10) as well as Jiangsu Meilan Electro-chemical Plant (SRI# A 8).

A detailed summary of China CFC production in 2003 is attached in the next page.

All the verified monthly production data and raw material consumption data are recorded in the Annex II of this Report while the verification process as well as the assessment and findings are described in Annex I of this Report.

The enterprises have continued to provide production experts that are paid for by SEPA to audit daily operation at the major plants. While we did not directly interface with these people during our Mission we understood from our SEPA representative that they are still very satisfied with this arrangement.

The complete closure of one CFC-12 production line of Guangdong Xiansheng Chemical Co. Ltd. (SRI# A 13) and two CFC-12 production lines of Zhejiang Linhai Limin Chemical Plant (SRI# B 8) as specified in " China CFC Production Sector Plan and the Annual Program 2003" was verified in January 2003 and the verification report is attached as Annex III of this Report.

SUMMARY OF CHINA CFC PRODUCTION IN 2003

CFC-11

SRI #	Name of Enterprise	Production (ODS)	Production (ODP)	CTC Cons'ption	HF Cons'ption	Ratio CTC/ CFC-11	Ratio HF/ CFC-11
A 8	Jiangsu Meilan Electro-chemical Plant	997. 14	997. 14	1, 236. 59	177. 18	1. 240	0. 178
A 10	Jiangsu Changsu 3F Refrigerant Co. Ltd.	8, 883. 75	8, 883. 75	10, 465. 13	1, 383. 81	1. 178	0. 156
B 14	Zhejiang Juhua Fluoro-chemical Co. Ltd.	3, 947. 49	3, 947. 49	4, 853. 03	636. 83	1. 229	0. 161
	Overall	13, 828. 38	13, 828. 38	16, 554. 75	2, 197. 82	1. 197	0. 159

CFC-12

SRI #	Name of Enterprise	Production (ODS)	Production (ODP)	CTC Cons'ption	HF Cons'ption	Ratio CTC/ CFC-12	Ratio HF/ CFC-12
A 8	Jiangsu Meilan Electro-chemical Plant	1, 066. 03	1, 066. 03	1, 456. 03	444. 20	1. 366	0. 417
A 10	Jiangsu Changsu 3F Refrigerant Co. Ltd.	4, 334. 82	4, 334. 82	5, 776. 53	1, 805. 70	1. 333	0. 417
B 12	Zhejiang Dongyang Chemical Plant	1, 442. 22	1, 442. 22	2, 012. 89	600. 47	1. 396	0. 416
B 14	Zhejiang Juhua Fluoro-chemical Co. Ltd.	7, 406. 03	7, 406. 03	10, 336. 43	2, 716. 10	1. 396	0. 367
	Overall	14, 249. 10	14, 249. 10	19, 581. 88	5, 566. 47	1. 374	0. 391

CFC-13

SRI #	Name of Enterprise	Production (ODS)	Production (ODP)	CFC-12 Cons'ption	Ratio CFC-12/CFC-13
B 8	Zhejiang Linhai Limin Chemical Plant	21. 28	21. 28	55. 01	2. 726

CFC-113

SRI #	Name of Enterprise	Production (ODS)	Production (ODP)	PCE Cons'ption	HF Cons'ption	Ratio PCE/ CFC-113	Ratio HF/ CFC-113
A 10	Jiangsu Changsu 3F Refrigerant Co. Ltd.	2, 124. 92	1, 699. 93	2, 183. 05	961.60	1. 027	0. 453

CFC-114*

SRI #	Name of Enterprise	Production (ODS)	Production (ODP)	CFC-113 Cons'ption	HF Cons'ption	Ratio CFC-113/ CFC-114	Ratio HF/ CFC-114
B-11	Zhejiang Chemical Research Institute	-	-	-	-		

CFC-115

SRI #	Name of Enterprise	Production (ODS)	Production (ODP)	CFC-113 Cons'ption	HF Cons'ption	Ratio CFC-113/ CFC-115	Ratio HF/ CFC-115
A 10	Jiangsu Changsu 3F Refrigerant Co. Ltd.	179. 85	107. 91	300. 75	114. 56	1. 672	0. 637
B-11	Zhejiang Chemical Research Institute	131. 84	79. 10	178. 00	48. 51	1. 350	0. 368
	Overall	311. 69	187. 01	478. 75	163. 07	1. 536	0. 523

* Zhejiang Chemical Research Institute (SRI# B1) had no CFC-114 production in 2003, due to market condition.

ANNEX I

Tuesday, February 3, 2004 - Zhejiang Juhua Fluoro-chemical Co. LTD

12,000 TPA CFC-11/CFC-12
15,000 TPA AHF (same as prior report year)
70,000 TPA Chloromethanes - nominal 20,000 TPA CTC (same as last year's reported capacity)

General

Our last team visit to Juhua was January 23, 2003. No changes to their CFC, HCFC-22 or Chloromethane plants since last year's report. Juhua created Excel spreadsheets for the year 2003 to record and total daily CFC-11/12 production as well as all raw material consumption figures; making reconciliation much easier for the verification team.

Verification of Year 2003 Data for CFC-11/12

Linhai Limin ceased CFC-12 production at year-end 2002 and now purchase CFC-12 from Juhua for conversion to CFC-13. It also is important to note that Linhai was required by SEPA to reduce CFC-13 production in 2003 by 20% from the 27.0MT base line average for 1998-2000; or a 5.7MT reduction to 21.3MT. Since CFC-13 and CFC-12 have the same ODP this 5.7MT was transferred to Juhua (as an increase in their CFC-12 quota for 2003. This is allowable since China can shift production of specific CFCs to meet their needs as long as their ODP quota remains under their quota) The nominal ratio of CFC-12 to CFC-13 is about 2.7 hence Juhua's quota for CFC-12 was increased by 58MT to accommodate Linhai's transformation of CFC-12 to CFC-13. Therefore, Juhua's year 2003 CFC-11 and CFC-12 quota was increased from 11,349MT to 11,412.7MT (11,349+5.7+58). Juhua's 2003 total CFC-11/12 production was 11,411.5MT, within 1.2MT of their official quota.

Total CFC-11/12 plant operating days were 345 in 2003 up from 319 days in 2002; an exceptionally high plant in-time of 94.5% for this type of process. We noted that they report 37 operating days in the February accounting period, because as a state owned enterprise they were required to cut-off January month-end on January 20, to accommodate China's New Year Festival. The net result was to add these days to the February accounting period. The other three fluorocarbon enterprises in Zhejiang Province did not follow this directive since they are not fully state owned and could deviate from this state directive.

In reconciling CFC-12 monthly production figures it was necessary to back-out transfers (sales) to Linhai Limin to arrive at the official reported CFC-12 production as ODS, since this quantity was for transformation to CFC-13 by Linhai Limin.

All CFC-11 and CFC-12 daily production figures were verified as correct (against the Excel sheets) for all 12 operating months.

All CTC and AHF daily transfers to the CFC-11/12 plants were verified for each month (against the Excel spread sheets) and found to be accurate. As reported in the past, the split of CTC and AHF between CFC-11 and CFC-12 production is a calculated figure, based on molar ratios.

Readers of our past reports will have noted our concern of the large "in process" inventory reported by Juhua at month end and year-end. In November of 2002, they only operated the production unit for ten days so "in-process" material could be packaged.

Past report readers will also recall that Juhua's monthly production figures only included packaged goods (drums, DACs, cylinders and tank trucks), and excluded large quantities of bulk not yet packaged.

At SEPA's request, Juhua changed their production accounting from packaged goods only to packaged goods plus finished product in bulk; thereby essentially eliminating "in-process". For this reason the

official 2003 production figures were reconciled by verifying product transferred from the production plant to the shipping warehouse, and then cross-checked by comparing to raw material consumption and product sales, adjusted for year end inventory changes. Wu Ning verified the sales figures with the plant's accounting records. Wu Ning noted the Juhua coded 351MT of direct CFC-12 sales to offshore customers as domestic rather than export. This adjustment increased exports to 2086MT and decreased domestic sales to 459MT.

We attempted to reconcile monthly production by examining daily packaging logs, as in the past, but realized that this now becomes a formidable task that would require a sizeable spread sheet to accurately account for the large number of packages and sizes. For example in March they filled 654 cylinders varying in size from 450kg, 550kg, 900kg, and 1100kg as well as 28,772 DACs that were primarily 13.6kg but intermixed with some 12.0kg and 9.6kg units. Our reconciliation of these filling records was very close to reported values, but slightly lower and we recognized the manual entry into a simple calculator was prone to entry errors in such a compressed time frame. Juhua fills DACs and cylinders two shifts, seven days per week; keeping separate records for filling of owned cylinders and customer's cylinders. Shift logs for DACs and the cylinder shift logs flow to a monthly packaged goods summary that includes any bulk tank truck movements in the monthly period. As in the past, all records are very detailed, dated and signed by all people involved in the activity.

Juhua's CFC-11 sales, export and domestic were lower in 2003 vs. 2002; while CFC-12 exports were larger and domestic sales were lower than 2002. Juhua's CFC-11/12 finished product inventories at year-end 2003 were up by 1,310MT over 2002.

We are satisfied that the 2003 data reported by Juhua is accurate and they remain in compliance with their CFC production commitments.

Wednesday, February 4 - Zhejiang Dongyang Chemical Plant

5,000 TPA CFC-12
8,000 TPA HCFC-22
20,000 TPA AHF

General

This is the team's fifth visit to Dongyang Chemical for production verification. The prior visit was January 22, 2003. There were no significant changes at the site.

Verification of Year 2003 Data

This site is one of the easiest to verify data due to the plant's configuration, a single CFC product, plus good records that are readily crosschecked.

All daily CFC-12 production transfer slips for movement to the warehouse and all monthly transfer slips were examined and found to be correct. All DAC and cylinder filling records were examined for each day and each month and crosschecked against the production transfer slips. All these data were correct.

The AHF/CTC warehouse supervisor maintains a bound notebook record for CTC, showing starting inventory, purchases, daily transfers to the CFC-12 unit (by level change in the bulk tank) and ending inventory. From this book, they generate a daily raw material and CFC-12 production report. A monthly report is prepared from the daily reports, showing daily and cumulative figures.

AHF is transferred via a level tank that is 1320kg in size so that daily and monthly AHF values are very easily justified against their paper records. All CTC and AHF records were found to be 100% accurate and supporting official CFC-12 production for 2003.

We noted that Dongyang operated 319 days in2003 vs. only 239 days in 2002; yet produced only 83% of 2002 production of 1442MT or 29% of the plants 5,000MT capacity. They explained that the region is critically short of electrical power and the plant's refrigeration equipment is their major power consumer. They can hold their average power load to an acceptable level by operating their fluorocarbon plants at consistent low rates rather than create high peak months, if they were to idle the plant for several month and then run at a high rate to produce their production quota.

In addition, the demand for aqueous HCl by-product is rather weak and operation of CFC-12 at high rates would oversupply the local market.

Dongyang's CFC-12 exports were 801MT, a significant increase over the 455MT in 2002, while their domestic sales declined slightly. Dongyang exports significant quantities of HCFC-22 and their Article 5.1 customers have asked for increased CFC-12 supplies claiming shortage from other traditional sources. All exports are direct and do not involve a local trading company. All exports were licensed by SEPA and all paperwork was in order.

The Team is fully satisfied with the verification effort for 2003 data.

Thursday. February 5 - Zhejiang Linhai Limin Chemical Plant

100 TPA CFC-13
15,000 TPA HCFC-22

General

The team's last (fourth time) verification of this Enterprise was January 20 and 21, 2003, which included verification of shutdown and dismantlement of their CFC-12 unit. Linhai Limin have plans to double HCFC-22 capacity to 30,000 TPA by the end of 2004.

Verification of CFC-13 Data

As mentioned in the preceding pages concerning Juhua, Linhai Limin were required to reduce CFC-13 production by 20% in 2003 from 27MT to 21.3MT. In addition, they now purchase CFC-12 feedstock from Juhua, which is nominally 58.01MT using the plant's typical ratio of 2.7kg of CFC-12/1.0kg of CFC-13.

To ensure that Juhua does not exceed their CFC ODS quota it was agreed at the start of 2003 that Linhai Limin would complete their year's CFC-13 operation by end of October so there would be time to determine if the full 58.01MT of CFC-12 would be utilized as feedstock. If the CFC-13 unit operated more efficiently there could be some unused CFC-12 since Linhai Limin could not exceed their 21.3MT CFC-13 quota. In this case, Juhua would have to adjust their 2003 quota by any unused CFC-12 as the unused would be classed as ODS, not feedstock.

Linhai Limin started 2003 CFC-13 production in February and terminated the year's campaign in mid October with a yearly total of 20.99MT or 0.31MT short of their quota. China's Space agency declared and emergency need for CFC-13; hence Linhai Limin restarted their plant and produced 0.29MT of CFC-13 utilizing the 1.35MT of unused CFC-12 feedstock.

The above restart, as well as the initial plant start-up in February 2003 resulted in two very poor months of CFC-12/CFC-13 ratios since there are substantial losses when the plant is restarted after total shutdown and evacuation. Linhai Limin exported CFC-13 in 2003 for the first time in our verification; 210kg to Israel.

We are fully satisfied that Linhai Limin's 2003 CFC-13 data is accurate as reported.

Friday, February 6 - Zhejiang Chemical Industry Research (ZCRI)Institute

150 TPA CFC-114/115

General

ZCRI continues to have a large CFC-114 stock and very low sales, hence they did not produce additional materials in 2003. They shifted their CFC-114 quota to
CFC-115 giving them a CFC-115 quota of 83 ODP tonnes or 138.3 ODS tonnes of CFC-115.

Verification of year 2003 CFC-115 Data

They only operated seven months, starting in May and ending in December. The hot summer months led to more frequent power interruptions causing them to fall short of their CFC-115 quota. The warmer weather also caused slightly lower CFC-113 and AHF yield to CFC-115, but still well within historical performance.

Cylinder filling records were kept in a bound notebook and provide excellent easy to follow detail on each cylinder filling; including; date, cylinder sequence number, cylinder identity number, product grade/purity, date sampled/date accepted by warehouse, tare weight, starting cylinder weight (any heel adds to tare but is not new production), gross weight, net weight and cumulative net weights (new production).

The cylinder filling entries were found to be accurate. Transfer slips to cover movement of production to the warehouse cross checked the cylinder filling records.

Transfer records for raw material consumption were checked and found to be correct as reported.

In 2002, ZCRI used some by-product CFC-113a as feedstock for CFC-115. However, in 2003 all CFC-113a was consumed in pesticide manufacture.

Reactor log sheets were examined and found to reflect reported operating days and production rates. In 2002, ZCRI operated 201 total days, but only 156 days on CFC-115. The balance was for CFC-114.

In 2003 they operated 221 days since they produced considerable more CFC-115 than in 2002, 131.8MT in 2003 vs. 90MT in 2002.

ZCRI's closing CFC-114 stock of 31.4MT is almost a ten-year supply at current low market demand. Their only export was 1MT to the United Arab Emirates.

The verification Team was fully satisfied with ZCRI's records, which support their reported 2003 CFC-115 production.

Sunday/Monday – February 8-9 – Jiangsu Changsu 3F Refrigerant Co. LTD

10,000 TPA CFC-11
5,000 TPA CFC-12
4,000 TPA CFC-113
400 TPA CFC-115

General

In last year's report, which covered our January 25-26, 2003 visit, we highlighted the importance of not operating so close to their quota limit and that they must maintain records showing "in-process" stocks and such stocks should be minimized. The MLF secretariat referred to these comments in the PROJECT DESCRIPTION paragraph 4.1 in UNEP/OzL. Pro/EX Com/39/30. Based upon this document, SEPA has issued a formal notice to all CFC producers informing them that they should keep their records showing beginning and ending "in-process" stocks so they can be inspected by those verifying their data. Furthermore any increase of "in-process" stocks is to be included in year's reported production.

Readers of this year's report will also recognize that total CFC-113 generated by 3F for ODS plus non-ODS uses exceeds their stated 4,000MT capacity. In 2003, 3F constructed a new CFC-113 unit (capacity not disclosed) that is integrated into their new Chlorotetrafluoroethylene (CTFE) polymer and new CFC-113a pesticide intermediate plants. They intend to dismantle their older CFC-113 unit in mid 2005 when they must cease production of CFC-113 for non-feedstock applications.

Verification of Year 2003 CFC Production

As at all plants Wu Ning conducted his financial review in parallel with verification of plant production records by Messers Vogelsberg, Hua and Cui (SEPA).

CFC-113

3F produces CFC-113 for; merchant sales (as ODS), Zhejiang Chemical Research Institute (ZCRI) for conversion to CFC-114/115, internal conversion toCFC-115, feedstock for internal CTFE polymer and to

CFC-113a as an intermediate for pesticide manufacturing.

3F operated 11 months or 354 days, and produced 2124.92MT as ODS (equivalent to 1,699.94 ODP tonnes) vs. its ODS quota of 2125MT(equivalent to 1,700 ODP tonnes). This figure is exclusive of 2,661 MT of CFC-113 (as ODS) that was transformed by 3F and ZCRI to CFC-115 and other non-ODS products. Because the Fluoropolymer and pesticide business is quite competitive in China, 3F have asked the verification team to respect their commercial concerns and not disclose the specific amounts of CFC-113 that are transformed into CTFE or pesticides made from CFC-113a. We have access to all these data and are fully satisfied that all CFC-113 not reported as ODS production was indeed transformed to non-ODS materials. This is one of the areas where the outside inspectors from other Enterprises are helpful as they provide another level of assurance beyond just examining data.

Their CFC-113 production records are excellent and easily verified, utilizing a bound notebook for daily- production and raw material consumptions. Daily transfer slips document transfers between the production unit and the raw material storages (PCE and AHF) and finished product warehouse. All daily and monthly figures were verified as correct and reasonable.

There are three shift tanks to receive distilled new production of CFC-113. At the end of 2002, all three tanks were empty and at the end of 2003 two were empty and one at 5 units @45kg/unit or 225kg of "in-process" material. This makes 3F technically 100kg over their CFC-113 agreed production quota; more on this later in the text.

The PCE is transferred via pipeline to a weigh tank. The PCE transfers are entered into a bound notebook, then to a monthly production record. A PCE transfer slip is also generated as additional documentation.

AHF is transferred via pipeline to a weigh tank each shift; so three AHF transfer slips are generated each operating day. The shift figures are noted on a daily report of consumption and production. The bound notebook has a column showing cumulative figures for the month making verification very easy.

CFC-113 transfers to the CFC-115 plant are via bulk tank in the warehouse to the CFC-115 plant weigh tank. At month-end they make a paper transfer of unused CFC-113 back to the CFC-113 warehouse. The years starting and ending CFC-113 inventory in the CFC-115 plant were zero. All figures were correct.

We next examined CFC-113 transfers to non ODS CTFE and CFC-113a manufacture. These transfers are also recorded in a bound notebook showing daily and cumulative quantities. A daily transfer slip is produced, we verified daily and monthly transfer figures to CTFE and CFC-113a as correct. CTFE operated 12 month while CFC-113a operated 8 months, March – October.

CFC-115 Verification

CFC-115 cylinders are typically filled to exact weights, primarily 400kg, making counting and verification easy. 3F does not evacuate the returned cylinders or account for any heel that may be present, since almost all CFC-115 is used internally to blend with HCFC-22 to produce R-502. Since they do not re-tare cylinders before filling, they are likely shorting themselves by a couple of metric tonnes against their production quota, since they count the cylinders net weight as gross weight minus a completely empty tare weight.

They produced 179.85MT of CFC-115 vs. their180MT quota (equivalent to 107.91 and 108 ODP tonnes respectively) by operating 221 days in a nine-month period from mid February to mid October. No in-process CFC-115 remained at year-end.

CFC-113 to CFC-115 verification has already been covered above. AHF to CFC-115 is via cylinders, and AHF use records are in a bound notebook showing daily and cumulative quantities. As in other activities, they generate a daily AHF transfer slip. All figures for raw material use (CFC-113 and AHF) were verified as accurate.

CFC-11 Verification

Verified monthly production as accurately reported vs daily drum and cylinder filling and transfer records. Both the CFC-11 and CFC-12 plants were shutdown for maintenance before year end 2003,

hence “in-process” inventory is not an issue as it was in 2002.

As with all materials on this site transfer slips are generated by the sending department and the receiving department. The daily figures are recorded and totaled month to date by the accountant for each product in a bound notebook. We verified CTC and AHF transfer slips against the bound notebook entries, and found monthly totals correctly reported.

CTC is received via pipeline into one of two level tanks which in turn feed to the four reactor feed tanks; thus providing a mechanism for accurate CTC measurement.

AHF is received via pipeline into a similar set of two weigh tanks that feed to four shift feed weigh tanks.

The CFC-11 plant operated 314 days over eleven month from January to mid November producing 8883.75 MT vs their 8884MT quota. The plant operating hours are noted in the accounting notebook and reflect hours the feeds are going to at lease one reactor.

CFC-12 Verification

CFC-12 operated 345 days over twelve months from January to the last week in December, producing 4334.82MT vs. their 4335MT quota.

The CTC, AHF and CFC-12 transfer slips are identical to the CFC-11 plant and were verified against the accounting bound notebook record. All monthly CTC, AHF and CFC-12 data were found to be accurate as reported. We did note a mistake in the notebook cumulative total in the month of September but is was corrected 6 days later by adjusting the monthly total. There were several confusing entries in the AHF notebook, primarily because daily transfer slips were dated wrong or out of sequence. All of these items were justified with 3F’s accounting help.

We are satisfied that CFC-12 production was accurately reported for each month and the year.

Summarizing Remarks

Changshu 3F realize they must count the 225kg of “in-process” CFC-113 (real weight but equivalent to 180kg ODP) in their 2003 production. However, since the formality for changing their financial record would be very difficult they prefer to include this amount against their 2004 quota.

While overall CFC production at Changshu 3F in 2003 is very close to their combined quota of all CFC’s but does not exceed this value, we believe it is best to avoid changing the financial records and to shift this 225kg to their 2004 quota of CFC-113. This sends a message to 3F that they could be penalized in subsequent years if they do not properly account for any unpackaged production; so called “in-process” material. While Changshu 3F made some improvement in their margin vs. quota (from 0.4 ODP MT in 2002 to 0.584 ODP MT in 2003) we still maintain that operating so close to their maximum quota creates an unacceptable risk of violating its and China’s obligation with the MLF.

We had 3F explain how they approach year-end without over shooting their quota. Using the CFC-12 plant as an example, there are eight main equipment pieces between the CTC and AHF feed tanks and the final product receivers. Experience has demonstrated that once they stop CTC/AHF feeds that the process inventory is about 1MT and they assume it will all convert to CFC-12. Once the reactor is shut down they evacuate the system, drain the heavy residues for incineration and dispose of the old catalyst. They aim to finish the yearly production 1MT short of their quota.

We accept that the above claim possible but represents some risk to the Enterprise since any failure of their control and instruments could cause them to exceed their quota.

Tuesday/Wednesday February 10-11 – Jiangsu Meilan Electro-chemical Co. LTD

3,000 TPA CFC-11
3,000 TPA CFC-12
40,000 TPA HCFC-22
16,000 TPA AHF
70,000 TPA Chloromethanes

General

Since our last verification visit January 27, 2003, Meilan have doubled their HCFC-22 capacity to 40,000MT by building a new 20,000MT plant. This compliments their two-10,000MT units,one using old technology the other using same technology as their newest plant. Expansion is primarily for refrigeration market though they are one of six producers of PTFE in China.

Verification of 2003 Production Data

CFC-11

They only produced CFC-11 four months, March, and October through December, operating only 81 days producing 997MT vs. their quota of 1,000MT.

Based on prior year's experience we used the CFC-11 plant's distillation (shift) log sheets as the primary verification tool, adding each shifts production for each month. We found the log sheet figures matched reported production accurately. We cross- checked transfer slips from production to the warehouse and all matched reported production. We also checked drum filling records, which are recorded in a bound notebook. All drums are 250kg making accounting very easy. Month drum filling records must be adjusted for starting and ending bulk inventory to get actual new monthly production. All of these figures matched production transfer slips.

CTC is transferred via pipeline to two day tanks and then to two sets of feed tanks to be used for either CFC-11 or CFC-12 production. A transfer slip is generated for each transfer. A paper transfer back to the CTC storage warehouse occurs at month-end and is reversed at the beginning of the next month. Thus, the net transfer figure is the CTC consumed quantity for the month. All transfers are exact increments of 6.66MT, making verification very easy. Monthly reported CTC transfers and consumptions were verified as reported.

AHF is transferred via pipeline to a weigh tank then to the process. A transfer slip is created for each transfer. All monthly transfers were correct. These figures represent AHF consumption since the values are the weights of AHF used from the process feed weigh tanks.

2003 CFC-11 domestic sales were 532MT vs. 995MT in 2002.

CFC-12

As reported before, Meilan package all CFC-12 into cylinders, no tank trucks and no DACs. The cylinders are filled to exact net weight, primarily 450, 500, 1,00 and 1100 kg in size. l Cylinder filling activity is recorded on a detailed filling log sheet. Monthly cylinder filling figures are adjusted for starting and ending bulk inventory to arrive at monthly production.

We checked all daily cylinder filling log sheets and verified each month's cylinder filling figures to be correct as reported for a yearly total of 1,066.03MT vs. their 1068MT quota. Year 2003 starting bulk was 126.806MT, ending bulk was 196.164MT and 993.408MT of CFC-12 was put into cylinders in 2003. While they only operated nine months or 169 days, they filled cylinders every month in 2003.

All exported CFC-12 was in returnable cylinders, 184.8MT in 2003 vs. 105MT in 2002. As at most enterprises their domestic sales were lower in 2003 vs. 2002, 814MT vs. 1141 respectively. As discussed above, CTC transfers and consumption figures are handled the same for CFC-12 and CFC-11. All monthly CTC transfers and consumption figures were verified as correct for each operating month.

As discussed in the CFC-11 sections, AHF transfers are handled the same as for CFC-12 and CFC-11. All monthly AHF transfer and consumption figures were verified as correct for each of the nine operating months.

It is notable that Meilan, which have smaller CFC-11 and CFC-12 production units than 3F stop their production 2-3MT short of their annual quota. We asked what their reaction/distillation systems hold up was and they replied that they do not feel they can reliably predict or calculate how

much actual production will occur once raw material feeds are stopped; for this reason they terminate CTC and AHF feeds earlier than necessary if they tried to make their entire quota.

Our verification team is fully satisfied with the records and procedures used by Meilan and feel that it is one of the easiest plants to work with.

Annex III
CHINA CFC PRODUCTION SECTOR
COMPLETE CLOSURE PROJECT 2003
VERIFICATION REPORT

In accordance with China CFC Production Sector Plan and the Annual Program 2003, three CFC production units in two corresponding China enterprises have been closed. The enterprises are:

A 13	Guangdong Xiansheng Chemical Co. Ltd.	1 CFC-12 unit
B 8	Zhejiang Linhai Limin Chemical Plant	2 CFC-12 units

In January of 2003, A World Bank Verification Team, consisting of Messrs. F. A. Vogelsberg, consultant, Hua Zhangxi, consultant, and Wu Ning, financial analyst, conducted verification of the production of CFCs by the seven enterprises in China, in which the above mentioned two enterprises with closure projects are included. When the Verification Team arrived at the plantsites, the management of the enterprises reported to the Verification Team that they had dismantled their CFC 12 production units in accordance with the closure contract signed between the concerning enterprises and SEPA. Following verification of 2002 production the Verification Team inspected records and physical site of the former plant to assure that all work required for complete closure was done at the respective enterprise.

The results of inspection are as follows:

Friday/Saturday January 17, 18 – Guangdong Xiansheng Chemical Co. Ltd

3000 TPA CFC-12

(i) Plant Closure

Last CFC production was December 26, 2002. Plant dismantlement started December 28th and was completed by January 2, 2003. Work was done by plant personnel,, witnessed by SEPA and local EPB officials. All equipment were removed from the process building and destroyed so it could not be reused. The three large 300 MT (each 7 m^3 ø) CTC storage tanks were emptied and holes cut in the tank sides. The two-day CFC-12 receivers and large CFC-12 storage tanks were emptied and holes cut in them. The plants 770MT of CFC-12 inventory has all been stored in one and ½ tonne cylinders. At 2002 sales rate, this inventory could exceed 3 years sales from this enterprise.

Total plant employment was 40 persons; eighteen were terminated at the end of 2002 and compensated one-year's salary, plus one additional month's salary for each year's service. The remaining 22 will stay on for the foreseeable future. We viewed video made during the plant dismantlement and took a complete set of photographs to document the current dismantled state.

The Verification Team found that the certificate issued by the local environment authority certifying the witnessing of dismantlement of the CFC production unit and the destruction of the critical equipment was not available. The enterprise management promised to urge the local environment authority, Guangdong Zengcheng City Environment Protection Bureau to issue the document. On March 25, 2003 this certificate was issued and submitted to SEPA. The Verification Team has the certificate and is ready to submit the complete closure report for this enterprise.

Monday/Tuesday January 20-21 – Zhejiang Linhai Limin Chemical Plant

3,000TPA CFC-112 (2 Reactors; only one operating at a given time)

100 TPA CFC-13

15,000 TPA HCFC-22 (prior reported capacity was 10,000 TPA)

Plant Closure

The last CFC-12 production for this site was December 22. Plant dismantlement was done by plant forces assisted by a rented hoist, from January 2 through January 5. Twenty (20) MT of scrap metal was sold for 19,600RMB. They destroyed one of two raw gasholders, two CFC-12 reactors, product receivers, distillation columns, distillation re-boilers, as well as piping and controls.

All plant personnel associated with CFC-12 production will remain employed in continuing and expanding activity on this site. While we were examining the former CFC-12 building they were installing glass- lined vessels in the vacant space as part of a new, fine chemical facility now under construction.

The two original CFC-12 reactors were integrated into the two HCFC-22 buildings and CFC-12 refining was a separate structure. Photos were taken to show where the removed CFC-12 equipment had been housed.

The dismantlement was viewed by SEPA and the local EPB officials and fully recorded on video and still photographs, which we examined. Certificate for witnessing the dismantlement of the two CFC 12 production units and destruction of their critical equipment was issued by the Zhejiang Linhai City Environment Protection Bureau. The Verification Team has the certificate.

CTC was stored in one of 3 – 300MT bulk tanks (two were chloroform service). The CTC tank has been put into chloroform service. Remaining CTC has since been sold.

Based upon the inspection and examination of all information as well as the observation on field sites, the Verification Team concluded that **a**ll the three CFC-12 production units in the two corresponding enterprises have been closed completely. The dismantling and disposal of key equipment meets the requirement specified in the Agreement. All the evidence as well as the remaining plant sites have been reviewed and inspected by the Verification Team. Those two enterprises will not be able to resume CFC production.

The closure questionnaires have been filled-out in accordance with Section A, B .C and D1 of the "Guidelines and Standard Format for Verification of ODS Production Phase-out" for the above-mentioned two enterprises are attached below.

Annex IV

Financial Verification
of
CFC production in China in 2003

1. From February 1st to 14th, 2004, I joined a mission comprising Messrs. Tony Vogelsberg (team leader/technical expert) and Hua Zhangxi (HZX, technical expert) to carry out the verification of CFC production in China in 2003 in accordance with the CFC Production Sector 2003 annual programme. The mission was accompanied by the representative from State Environmental Protection Agency (SEPA). The mission visited the following plants/company/institute:

(i) Zhejiang Juhua Fluoro-Chemical Co. Ltd. (CFC 11, CFC 12),
(ii) Zhejiang Dongyang Chemical Plant (CFC 12),
(iii) Zhejiang Linhai Limin Chemical Plant (CFC 13),
(iv) Zhejiang Chemical Industry Research Institute (CFC 114, CFC 115),
(v) Jiangsu Changshu Ref. Plant-Changshu 3F (CFC11, CFC12, CFC113 & CFC115), and
(vi) Jiangsu Meilan Electro-Chemical Plant. (CFC 11, CFC 12).

2. Based on experience gained from previous verifications, the mission split into a technical group and financial group to hold separate discussions with each CFC production plant/company/institute in parallel during the verification. I took the lead in financial discussions with each plant/company/institute. Therefore, this report only covers the financial verification of each CFC production plant/company/institute, which follows the Guidelines and Standard Format for Verification of ODS Production Phase-out[1] (Guidelines).

3. In addition to the Guidelines, the financial verification was done under the following assumptions due to the tight schedule of the mission agreed by Ms. Helen Chan, Task Team Leader, EASES, the World Bank:

(i) The plants/company/institute understood the importance of this verification, and
(ii) The plants/company/institute provided completed documents and information needed for this verification.

4. Like the verification in 2003, this verification exercise was conducted ahead of the annual national audit of the CFC production sector by China National Audit Office (CNAO). The mission had no CNAO's documentation and reporting as reference to follow. Therefore, I checked necessary financial records and the original documents covering the following aspects:

(i) Production of each CFC,
(ii) Procurement and production of raw materials for CFC (CTC, AHF, CFC12, CFC 113, and PCE), and
(iii) Consumption of raw materials (CTC, AHF, CFC 113, CFC 12, and PCE).

5. Before the verification, each plant/company/institute filled in questionnaires and submitted them to HZX through SEPA. Necessary clarifications were requested by HZX and feedbacks were given by relevant plants/company/institute.

6. The findings of my verification were summarized as follows:

- **Zhejiang Juhua Fluoro-Chemical Co. Ltd. (CFC 11, CFC 12)**

7. Zhejiang Juhua Fluoro-Chemical Co. Ltd. (Juhua) produced CFC 11 and CFC 12 in 2003. By

[1] UNDP/Ozl.Pro/Excom/32/33 of October 24, 2000, adopted as Decision 32/70 at the 32nd Excom Meeting.

the end of each month, CFC 11 and CFC 12 production unit in Juhua submitted its monthly *Raw Material Consumption Calculation Report* to the accounting office of Juhua. This report provided the information for CFC 11 and CFC 12 production, beginning stock of AHF and CCL_4, consumption of AHF and CCL_4 by CFC 11 and CFC 12, and end stock of AHF and CCL_4. This report is a summary of daily production activities in the current month which are reflected in other separate sheets and slips forming the base of accounting records. During the verification, the data in the report were reconciled with Juhua's accounting records and the questionnaire submitted to SEPA by Juhua before the verification. It is satisfactory that the accounting records reflect the production of CFC 11 and CFC 12 in Juhua, which are presented in the following table:

CFC 11 and CFC 12 Productions by Juhua in 2003

CFC 11	CFC 12		
		Produced as Commodity	Procured as Feedstock for Linhai
3,947.486 Tonnes	7,464.042 Tonnes	7,406.029 Tonnes	58.013 Tonnes

8. CFC 12 produced for Linhai as feedstock was verified in Zhejiang Linhai Limin Chemical Plant (Linhai).

9. In 2003, CFC 11 and CFC 12 produced by Juhua was sold in domestic market and exported to Iran, Indonesia, Malaysia, Singapore, and United Arab Emirates for CFC 11 and Indonesia, Saudi Arabia, Turkey, Vietnam, Malaysia, Thailand, Russia*, United Arab Emirates, Bengal, Philippines, and Egypt for CFC 12. The exports of CFC 11 and CFC 12 were through a trading company and Juhua itself. All exports were licensed by the State Office for Import and Export Management of Substances Depleting the Ozone Layer in Beijing.

10. Juhua produced all CTC for its production in 2003 while it produced and purchased AHF. In 2003, Juhua produced 16,203.74 Tonnes of CTC and 94% was transferred to CFC 11 and CFC 12 production unit. The verified accounting records for CTC and AHF consumed by CFC 11 and CFC 12 production, which are consistent with the questionnaire submitted to SEPA by Juhua for verification, are shown in the following table:

CTC and AHF Consumed by CFC 11 and CFC 12 Productions in Juhua in 2003

Consumed by	CTC	AHF
CFC 11	4,853.032 Tonnes	636.829 Tonnes
CFC 12	10,417.350 Tonnes	2,737.422 Tonnes
Total	15,270.382 Tonnes	3,374.251 Tonnes

- **Zhejiang Dongyang Chemical Plant (CFC 12)**

11. Zhejiang Dongyang Chemical Plant (Dongyang) produced CFC 12 in 2003. CFC 12 production unit in Dongyang submitted its *Monthly Report of Production and Material Consumption* to the accounting office by the end of each month. This report summarized the information of production of CFC 12 and consumption of CTC and AHF consumed by CFC 12. This report also recorded the number of days and the beginning and end stocks of AHF remaining in CFC 12 production unit. During the verification, the accounting records were reconciled with this report and the results are satisfactory. The total production of CFC 12 and its sales in 2003 are presented in the following table:

CFC 12 Production and Sales by Dongyang in 2003

Product	Production	Sales		
			Domestic	Overseas
CFC 12	1,442.218 Tonnes	1,755.838 Tonnes	954.75 Tonnes	801.088 Tonnes

* For MDIs only.

12. The overseas markets of CFC 12 produced by Dongyang in 2003 were Saudi Arabia, Bengal, United Arab Emirates, Philippines, Thailand, Indonesia, Iran, and Vietnam. The exports of CFC 12 were made by Dongyang itself. All exports were licensed by the State Office for Import and Export Management of Substances Depleting the Ozone Layer in Beijing. Each shipment had its separate license.

13. Dongyang in 2003 purchased CTC and produced AHF for its production of CFC 12. The verified volumes of CTC and AHF consumed by CFC 12 production was shown in the following table:

CTC and AHF Consumed by CFC 12 in Dongyang in 2003

Consumed by CFC 12	CTC	AHF
	2,012.893 Tonnes	600.472 Tonnes

- **Zhejiang Linhai Limin Chemical Plant (CFC 13)**

14. Zhejiang Linhai Limin Chemical Plant (Linhai) produced CFC 13 in 2003. CFC 12 production facilities were dismantled in 2002. Therefore, Linhai purchased CFC 12 as feedstock of CFC 12 from Juhua and as commodity as well. The production of CFC 13 and the consumption of CFC 12 of each month in 2003 were summarized by the *Monthly Warehouse Receiving, Delivering, and Inventory Reports*, which were prepared by the warehouse of Linhai and submitted to the accounting office of Linhai. During the verification, it was found that these reports matched the accounting records. The verified production of CFC 13, its sales, and consumption of CFC 12 are shown in the following table.

CFC 13 Production, Sales, and CFC 12 Consumption in Linhai in 2003

CFC 13 Production	CFC 13 Sales			CFC 12 Consumption
		Domestic	Overseas	
21. 278 Tonnes	24.698 Tonnes	24.488 Tonnes	0.21 Tonnes	58.013 Tonnes

15. Only one Israel company bought 210 kg of CFC 13 from Linhai. Unlike CFC 11 and CFC 12 exported by Dongyang, the export of CFC 13 did not need license from Government of China.

- **Zhejiang Chemical Industry Research Institute (CFC 114, CFC 115)**

16. Zhejiang Chemical Industry Research Institute (Zhejiang Chemical) produced CFC 115 in 2003. Due to low market demand, Zhejiang Chemical did not produce CFC 114 in 2003. The production of CFC 115 was reflected in the *Monthly Production Report* and the *Monthly Raw Materials Consumption by Main Products*, which were reported to the accounting office in Zhejiang Chemical by the end of each month. This report summarized the daily reports of production and consumption and formed the base of accounting records. Therefore, during the verification, these reports were used to check the accuracy of accounting records and no inconsistency was found. The verified CFC 115 production by Zhejiang Chemical in 2003 and the its sales are presented in the following table:

CFC 114 and CFC 115 Production and Sales by Zhejiang Chemical in 2003

	Production	Sales		
			Domestic	Overseas
CFC 114	0.000 Tonnes	2.0909 Tonnes	1.0909 Tonnes	1.0000 Tonnes
CFC 115	131.837 Tonnes	2.9870 Tonnes	2.9870 Tonnes	0.0000 Tonnes

17. The 1 ton of CFC 114 was sold to a customer in United Arab Emirates in 2003, which was licensed by the State Office for Import and Export Management of Substances Depleting the Ozone Layer in Beijing.

18. Zhejiang Chemical in 2003 purchased 178 Tonnes of CFC 113 from Changshu 3F as feedstock of CFC 115 production. This purchase was verified in Changshu 3F. Zhejiang Chemical purchased AHF in 2003 for the production of CFC 115. The verified consumptions of CFC 113 and AHF were

shown in the following table.

CFC 113 and AHF Consumption by CFC 115 in Zhejiang Chemical in 2003

Consumed by	CFC 113	AHF
CFC 114	0.00 Tonnes	0.00 Tonnes
CFC 115	178.00 Tonnes	48.51 Tonnes
Total	178.00 Tonnes	48.51 Tonnes

- **Jiangsu Changshu Ref. Plant-Changsu 3F (CFC11, CFC12, CFC113 & CFC115)**

19. Jiangsu Changshu Ref. Plant-Changsu 3F (Changshu 3F) produced CFC 11, CFC 12, CFC 113, and CFC 115 in 2003. The *Monthly Production Reports*, which were sent to accounting office in Changshu 3F at the end of each month and prepared by production units, summarized the production of CFC 11, CFC 12, CFC 113, and CFC 115 in the current month. They also recorded the consumption of CTC, AHF, and PCE. The data contained in these reports were reconciled with accounting records of Changshu 3F. The results show that the accounting records reflected the production and consumption. The verified productions of CFC 11, CFC 12, CFC 113, and CFC 115 and their sales are presented in the following table:

CFC 11, CFC 12, CFC 113, and CFC 115 Production in Changshu 3F in 2003

	Production	Sales		
			Domestic	Overseas
CFC 11	8,884 Tonnes	8,858 Tonnes	8,645 Tonnes	213 Tonnes
CFC 12	4,335 Tonnes	5,053 Tonnes	2,234 Tonnes	2,819 Tonnes
CFC 113	2,125 Tonnes	1,643 Tonnes	1,614 Tonnes	29 Tonnes
CFC 115	180 Tonnes	164 Tonnes	164 Tonnes	0 Tonnes

20. The production of CFC 113 only refers to the commodity, excluding one used as intermediates for chemical conversion, which was also verified during the verification.

21. The overseas customers bought CFC 11, CFC 12, CFC 113, and CFC 115 from Changshu 3F in 2003 included Saudi Arabia, Lebanon, Chile, Cyprus, Gabon, Indonesia, United Arab Emirates, Nigeria, Cambodia, Papua New Guinea, and Korea.

22. In 2003, Changshu 3F purchased back CFC 12 and CFC 113 from its distributors since the prices of overseas markets were more favorable than in domestic market.

23. Changshu 3F purchased CTC, purchased and produced AHF, and imported PCE in 2003. The verified consumption of CTC, AHF, PCE, and CFC 113 are shown in the following table:

CTC, AHF, PCE, and CFC 113 Consumed by CFC 11, CFC 12, CFC 113, and CFC 115 in Changshu 3F in 2003 for ODS Production Only

Consumed by	CTC	AHF	PCE	CFC 113
CFC 11	10,435.130 Tonnes	1,383.810 Tonnes		
CFC 12	5,776.530 Tonnes	1,805.700 Tonnes		
CFC 113		2,216.680 Tonnes	2,183.052 Tonnes	
CFC 115		114.560 Tonnes		300.750 Tonnes
Total	16,211.660 Tonnes	5,520.750 Tonnes	5,005.094 Tonnes	300.750 Tonnes

24. In July 2003 Changshu 3F got a certificate of ISO 9001:2000 for its manufacture and sale of fluorine chemicals product.

- **Jiangsu Meilan Electro-Chemical Plant. (CFC 11, CFC 12)**

25. Jiangsu Meilan Electro-Chemical Plant (Meilan) produced CFC 11 and CFC 12 in 2003. A

Monthly Production Statistic Report was prepared by the CFC production unit at the end of each month. This report records the total production of AHF, CFC11, and CFC 12 in the current month. It also records the consumption of CTC and AHF for productions of CFC 11 and CFC 12. This report, during the verification, was used to check the accuracy of accounting records since both had the same source of data – raw material receiving slips prepared by production unit and product receiving slips prepared by warehouse and cosigned by production unit. All the data contained in the reports matched the data in accounting books. The verified productions and sales of CFC 11 and CFC 12 are presented in the following table:

CFC 11 and CFC 12 Productions by Meilan in 2003

	Production	Sales		
			Domestic	Overseas
CFC 11	997.14 Tonnes	603.901 Tonnes	531.901 Tonnes	72.0 Tonnes
CFC 12	1,066.03 Tonnes	999.012 Tonnes	814.212 Tonnes	184.8 Tonnes

26. The only overseas customer of CFC 11 and CFC 12 in 2003 was in Taiwan and the destination of exports was Kelang, Malaysia. These exports were licensed by the State Office for Import and Export Management of Substances Depleting the Ozone Layer in Beijing. Each shipment had its separate license.

27. Meilan produced and purchased CTC and AHF in 2003. AHF was produced by the CFC production unit while CTC was produced by another unit. In 2003, Meilan produced 3,395.89 Tonnes of CTC and 31% was transferred to the CFC production unit and the balance was reserved by the CTC production unit for outside sales. It was said that in 2004 all CTC produced by Meilan will be transferred to CFC production unit as feedstock of CFC production. To meet the demand of CFC production, Meilan purchased CTC and AHF from other suppliers in 2003. The volumes of CTC and AHF produced and purchased were verified. The following table presents the verified consumption of CTC and AHF by CFC production.

CTC and AHF Consumed by CFC 11 and CFC 12 in Meilan in 2003

Consumed by	CTC	AHF
CFC 11	1,236.593 Tonnes	177.182 Tonnes
CFC 12	1,456.029 Tonnes	444.197 Tonnes
Total	2,692.622 Tonnes	621.379 Tonnes

Wu Ning
Financial Analyst
Verification Team of CFC Production in China in 2003
February 12, 2004

SUPPLEMENTARY REPORT
ON
2003 PROGRESS REPORT
AND
PERFORMANCE AUDIT ON 2002 PHASE-OUT TARGETS

CHINA SOLVENT SECTOR PHASE-OUT PLAN

submitted by
State Environmental Protection Administration (SEPA), China
and
United Nations Development Programme (UNDP)

2 February 2004

Subsequent to the "Progress Report on the Implementation of Solvent Sector Plan for ODS Phaseout in China for 2003 and 2004 Annual Implementation Programme" submitted by SEPA and UNDP in October 2003, and the comments of the Multilateral Fund Secretariat in ExCom Document 41/28, this is a supplementary report on the results of the independent Performance Audit and the UNDP Technical Audit undertaken in November and December 2003, as stated in Section E and F of the original Progress Report. The result of the audits was submitted to the MLF Secretariat immediately prior to the commencement of the 41st Executive Committee Meeting, but was too late for the Secretariat to review and report to the Executive Committee.

After the submission of the 2003 Progress Report, ODS Reduction Contracts were signed with 12 enterprises in November 2003. The number of SMEs participated in the voucher system was revised from 78 downward to 71, excluding 7 SMEs that were disqualified for the voucher system. The revised quantities to be phased out by these 71 SMEs were 142.37 ODP tonnes (instead of 170.04 ODP tonnes) of CFC-113 and 8.21 ODP tonnes (instead of 11.50 ODP tonnes) of TCA. The revised four year cumulative quantities to be phased out by the 2000, 2001, 2002 and 2003 Annual Implementation Programmes are reflected in the following revised Table 3:

Table 3 (revised): Phase-out through 2000 – 2003 ODS Reduction Contracts, Voucher System and Reimbursement Mechanism

			CFC-113 (ODP MT)	TCA (ODP MT)	CTC (ODP MT)	No. of Enterprises	Funding (US$ 1,000)
2000	Contracts for future phaseout	Planned	372.8	10	0	10 – 20	$5,000
		Signed	378.4	10.1	8.36	16	$4,132
	Phase-out achieved	On-going projects	-	7.4	-		
		Total 2000 phaseout	-	7.4	-		
2001	Contracts for future phaseout	Planned	524	10	0	10 – 20	$5,505
		Signed	541.6	10.6	0	21	$4,361
	Phase-out achieved	On-going Projects	54.1	-			
		2000 Contracts	340.1	9.8	8.36		
		Total 2001 phaseout	394.2	9.8	8.36		
2002	Contracts for future phaseout	Planned	500	25	55	20 – 40	$5,830
		Signed	535.8	43.2	17.94	32	$4,004
	Phase-out achieved	On-going Projects	291.3	41.7			
		2000 Contracts	38.4	0.4	-		
		2001 Contracts	-	-			
		Total 2002 phaseout	329.7	42.1	-		
2003	Activities for future phaseout	Planned	600	78	55	120-140	$5,255
		Signed	475.3	37.9	0	226	$5,100
	Phase-out achieved	On-going Projects	-	-	-		
		2001 Contracts	336.3	7.3			
		2002 Contracts	-	-	-		
		2003 Activities *	142.1	44.9			
		Total 2003 phaseout	478.4	52.2	-		
2004	Phase-out achieved	2001 Contracts +	178.9	2.8	-		
Four Year Cumulative Total	Phaseout Planned		1,996.8	123	110		
	Phase out Targets		2,200	119	110		
	Phaseout to be achieved by completion of on-going projects and signed contracts		2,276.5	150.9	26.3		
	Actual Phase-out achieved +		1,381.2	114.3	8.36		

* From 2003 retroactive reimbursement and gradual phase-out activities

\+ Phase-out achieved as of February 2004

While the phase-out quantity for CFC-113 and TCA signed up in the 2003 Annual Implementation Programme fell short of the required annual quantities to be phased out, the four year cumulative quantities still exceed the required cumulative phase-out targets. As indicated in the original progress report, SEPA and UNDP will intensify efforts to locate enterprises that had phased out the use of OD solvents at its own initiative, and process retroactive reimbursement so that the cumulative quantities of phase-out will continue to exceed the requirements in the Agreement.

The MLF Secretariat pointed out that the 2002 consumption of CFC-113 for exempted feedstock uses was reported as 211 ODP tonnes, used in the production of CFC-114 and CFC-115. This quantity exceeded China's agreement that "the annual production and import of these specifically exempted substances will not exceed 10 ODP tonnes of CFC-113 for feedstock, …"

China would like to point out that the intent of this limit, as stated in paragraph c of the Agreement, is "to ensure that production and import of CFC-113 and CTC specifically for exempted feedstock use and process agent use are not diverted to solvent use, China agrees to prepare annually a list of the quantities purchased of these ODSs by specific plants for these exempted uses and to ensure that such production and/or import is not diverted to solvent use. In addition, China agrees that the annual production and import of these specifically exempted substances will not exceed 10 ODP tonnes of CFC-113 for feedstock, …" While China realizes that it had provided an underestimated quantity of CFC-113 use for feedstock of only 10 ODP tonnes at the time of concluding the Agreement, it is noted that the 211 ODP tonnes of CFC-113 was verified as being used in the production of CFC-114 and CFC-115, not for solvent use. Therefore the intent to monitor and control the diversion of feedstock to solvent use has been achieved.

Furthermore, China commits to monitor the use of CFC-113 as feedstock to ensure that it will not be diverted to solvent use, and to continue to reduce the quantity of CFC-113 used as feedstock. In view of the fact that the control on diversion of CFC-113 to solvent use can be monitored and achieved, China requests the Executive Committee to allow the use of CFC-113 for feedstock to exceed the 10 ODP tonnes limit, with the commitment that China will gradually reduce the annual quantity of CFC-113 for feedstock use, and to ensure that CFC-113 for feedstock use can be verified and that it is not diverted to solvent use. China will continue to report annually to the Executive Committee on the quantity and purpose of its CFC-113 for feedstock use.

PERFORMANCE AUDIT ON 2002 TARGETS

An independent accounting firm, Beijing Zhong Tian Hua Zheng Certified Public Accountants Co. Ltd. was contracted to undertake an independent performance audit during November 2003. The scopes of the performance audit are:

a) to verify the national consumption level of CFC-113, TCA and CTC as cleaning solvents, for the year 2002;

b) to verify the implementation of phase-out activities, carried out at individual enterprise level for 21 enterprises that had signed the 2001 ODS Reduction Contracts, with phase-out to be achieved in 2003;
c) to verify the status of implementation of policy measures and technical assistance activities.

It is noted that performance audit for 2001 were carried out by the Department of Foreign Funds Application Audit of the China National Audit Office (CNAO), however due to its tight schedule on other pre-scheduled audit activities as a result of SARS situation in China, CNAO informed UNDP that it would not be able to complete the performance audit by November 2003. Through a solicitation process, Beijing Zhong Tian Hua Zheng Certified Public Accountants Co. Ltd. was contracted in October 2003 to undertake the performance audit on the 2002 phase-out targets and limits and the implementation of the 2002 Annual Implementation Programme.

Scope of Audit

To carry out the performance audit, the following process was undertaken by Zhong Tian Hua Zheng CPA Co. Ltd.:

a) In accordance with draft Terms of Reference for the performance audit formulated by UNDP and the project characteristic, Zhong Tian Hua Zheng prepared its audit programme and uniform audit work sheets;
b) The auditors were trained prior to the audit. They were organized to study the data related to the project and audit target as well as audit emphasis;
c) The auditors were divided into several groups according to the regions of the enterprises and carried out audit on-the-spot separately;
d) Zhong Tian Hua Zheng hired a technical expert to assist the auditors to audit 2 individual enterprises. Technical reports were submitted by the expert.

Audit Process

During the audit at individual enterprise level, on the basis of the actual condition of the enterprise, the implementing surrounding of the enterprises was studied, and the production and operation of the enterprise was inspected on the spot. After getting familiar with the production procedure, the management of production, the fixed assets and the storage, the auditors applied an all-round audit on the implementation of the ODS phase-out project, including the cleaning equipments, consumption of ODS as well as use of MLF grant from five points of purchasing, management of storage, production and equipment, financial accounting. Based on the financial accounting documents of the enterprise, the auditors cross-checked the ODS and substitute consumption figures through checking the information on major raw materials and products, revenues and costs, as well as the running records of the cleaning equipments, etc. Also, the auditors traced some enterprises' purchasing of ODS to their suppliers.

For the actual consumption level, the auditors verified the actual levels of production, import and export for CFC-113, TCA and CTC in 2002 at the national level. First, information on ODS solvent production was obtained from the Audit Report by Foreign Funds Application Audit Dept. of CNAO for CFC-113; from Inspection Reports by the World Bank and the MP MLF

ExCom for TCA (the figures in the two reports coincides each other); and from Audit Report on the 21 CTC consuming enterprises by Beijing Zhong Tian Hua Zheng Certified Public Accountants Co., Ltd. in October 2003 for CTC solvent consumption.

Information on import and export of ODS solvents from the ODS Import and Export Control Office jointly set up by Ministry of Foreign Trade and Economic Cooperation (MOFTEC), SEPA, and the General Administration of the Customs, were verified. Finally national annual consumption level was calculated as the sum of production and import minus export for each ODS solvent.

The actual implementation status of policies stipulated by SEPA and technical assistance activities under the Annual Implementation Programme were then analysized.

Audit Conclusions

Based on the CNAO Audit Report on CFC-113 production, and the official government import and export data, the national consumption level of CFC-113 was verified at 2,196 ODP tonnes, which was below the consumption control targets of 2,200 ODP tonnes for 2002.

According to the Inspection Report by the World Bank and the MLF Secretariat, the total 2002 production quantity of TCA was 120.5 ODP tonnes. The data from the ODS Import and Export Control Office showed import quantity of 261.74 ODP tonnes and export of 1.6 ODP tonnes. Therefore the total national level consumption of TCA was 380.64 ODP tonnes, which was below the 2002 consumption control targets of 605 ODP tonnes.

For CTC as cleaning solvent, an independent audit verified that the consumption at the remaining 21 of the original 34 CTC-consuming enterprises was 10.47 ODP tonnes in 2002. As these enterprises identified in the original survey represented 38.3% of the national consumption, the 2002 CTC consumption can be extrapolated at 27.34 ODP tonnes, which is below the 2002 consumption control targets of 110 ODP tonnes.

The independent performance therefore verified that China met the 2002 consumption control targets for CFC-113, TCA and CTC for solvent use.

For the 21 enterprises who had signed the 2001 ODS Reduction Contracts in July and September 2001, that would contribute to phasing out 541.58 ODP tonnes of CFC-113 and 10.6 ODP tonnes of TCA, the audit concluded that phase-out activities at 5 of these enterprises had been completed by October 2003, with 64.47 ODP tonnes of CFC-113 and 3.9 ODP tonnes of TCA phased out. The audit report identified the main reasons of the delays to the complexity of the phase-out activities, the different demands for updating equipment specifications and the situation of SARS in China, that delayed the delivery of equipment. The auditors also recognized the yearly reduction of ODS consumption for 2001, 2002 and the first ten months of 2003, and is of the opinion that overall the project was implemented smoothly.

The performance audit also verified the implementation of policies and technical assistance activities and noted that all enterprises using ODS solvents have license and purchase ODS solvent according to quota, which indicates that the policy implemented by SEPA has performed

effectively. It also concluded that the policies and technical assistance activities carried out by SEPA was in conformity with the actual situation of the sector plan and ensured the phase-out projects to be smoothly implemented.

Issues Identified

During the performance audit, the auditors found that the quantities of ODS consumption at three enterprises was different from the ODS Reduction Contracts, resulting in an aggregated increase of some 2.55 ODP tonnes in the total ODS consumption that would be phased out. The one enterprise that has actual ODS consumption lower than the quantity stipulated in the ODS Reduction Contract, will be investigated by SEPA for appropriate action and SEPA will report to the auditors and UNDP.

The performance audit also indicated that the schedule of disposal of baseline equipment was not in accordance of the schedule stipulated in the ODS Reduction Contracts, due to the delay in completing enterprise-level phase-out activities. It also discovered that two enterprises have sold off their baseline equipment. SEPA has been informed to take appropriate action to work with these two enterprises to recover the baseline equipment for proper disposal. SEPA commits to improve and properly monitor the disposal of baseline equipment in the future.

Observation and Recommendation

Through the performance audit, the auditors recognized that all enterprises realized the importance of use of non-ODP solvents, and some enterprises began to phase-out ODS solvent before this project. Most of the enterprises' accounting department is well organized, internal control proved to be effective, the accounting function be identified well, and the business can be recorded in time. Perfect financial management on storage, equipment, management system on production and technique procedure exist in most of the enterprises, which can ensure the phase-out project to be smoothly implemented basically. At the same time, most of the enterprises have completed testing on use of non-solvent, and has more or less used non-ODS solvents in their production. In the auditor's opinion, technique, staff qualification and management system of most enterprises can meet the needs of the ODS phase-out project. For long run, the use of non-ODS solvent can bring good economic and social benefit, and the expected purpose of the project will be realized.

The performance audit verified the control target of ODS phase-out project for the year 2002 was realized at the national level. By the end of October 2003, while phase-out activities at some of the enterprises had not been completed fully due to the complexity of the cleaning technique and equipment, but in terms of the implementation status, the auditor thinks that overall the project was implemented smoothly and the expected target can be realized. The management and control on the project was effective, and the whole phase-out programme was in conformity with the situation of China. The policies made and measures taken which conformed to the situation of the project were the guarantee to smoothly realize the phase-out project, because of the complexity of the phase-out activities, the support from MLF is necessary.

UNDP INDEPENDENT TECHNICAL AUDIT

A UNDP-commissioned technical audit was conducted by two technical experts 3-9 December 2003. The two experts visited and inspected 14 of the 21 enterprises who had signed the 2001 ODS Reduction Contracts. Most of these 14 enterprises had completed installation of the replacement equipment, undertaken trial and some had started its cleaning applications with non-ODS alternative cleaning solvents. Most of these 14 enterprises were generally well satisfied with the performance of the new installation. The remaining enterprises will have their equipment installed, commissioned and undergo trial so that project activities will be completed by the end of 2003.

During their visits, the experts discussed with the enterprise to review the alternative cleaning technology, inspected the baseline and replacement equipment, evaluated the cleanliness result, confirmed ODS consumption and phase-out, verified destruction of baseline equipment and identified issues that need resolutions.

The technical audit concluded that the 14 enterprises show serious effort in the elimination of ODS in their cleaning applications and that they not only fulfil the MLF funded phase-out activities, but also develop self-financed replacement technologies enthusiastically.

The technical audit also identified that the original phase-out schedule in some enterprises has been delayed due to the late delivery of equipment, as a result of the need to modify the equipment specifications because of the selection of the alternative technologies or the change of alternative technology due to practical need.

The technical audit also discovered some practical problems in the use of new replacement equipment and cleaning agents that need to be resolved with the equipment suppliers. In addition, some alternative cleaning solvents will involve exercising safety measures due to its flammability, higher operating costs in terms of electricity, DI water will also be incurred by the enterprises.

SEPA and UNDP will work together with these enterprises to resolve the outstanding issues identified.

RELEASE OF 2004 FUNDING TRANCHE

The performance audit and technical audit undertaken in 2003 concluded that the 2002 phase-out targets and limits stipulated in the Agreement have been met, the Executive Committee is requested to review this Supplementary Report, in conjunction with the "Progress Report on the Implementation of Solvent Sector Plan for ODS Phaseout in China for 2003 and 2004 Annual Implementation Programme" submitted in October 2003 (Revised 23 November 2003), the comments of the Secretariat contained in ExCom Document 41/28 and approve the 2004 Annual Implementation Programme of the China Solvent Sector Plan as the basis for the release of the 2004 funding level of $5,555,000 and the corresponding support fees of $416,625.

Annex II

CFC Production Verification 2003

Tables

CFC Production Phase Out Verification (Including Gradual Closure)

February 2004

(A8 Jiangsu Meilan)

A. Plant identification

Name of Enterprise	:	Jiangsu Meilan Electro-chemical Plant
Plant Ref. Number	:	
Sector Plan #	:	1
SRI #	:	A8
Address of the Plant	:	No. 460 Yangzhou Lu, Taizhou City, Jiangsu Province, PC 225300
Contact person(s) and Functional Title	:	Mr. Yin Ming, General Manager
Telephone Number	:	0523-6552276-2128
Fax Number	:	0523-6552323
E-mail Address	:	mldh.tz@public.tz.js.cn

B/ Verification

Team Composition	:	3
Leader	:	1
Name	:	F.A. Vogelsberg
Functional Title	:	Consultant, The World Bank
Member(s)	:	2
Name	:	Wu Ning/ Hua Zhangxi
Functional Title	:	Financial Analyst/ Technical Consultant, the World Bank
Date of Plant Visit	:	Feb 10-11, 2004
Duration of Visit	:	1.5 days

Plant History

ODS Products	No. of Lines	Capacity in Baseline Year*	**Production****						
			Base line* Year	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6 2003
CFC-11	1	3,000	1,050	2,009	1,766	1,049.8	1,049.7	1,049.7	997.14
CFC-12	1	3,000	1,793	1,606	1,866	1,793.0	1,792.9	1314.7	1,066.03
CFC-13									
CFC-113									
CFC-114/115									
Raw Materi Production									
HF	1	3,000*	7	553	3,336	4,223	4,835	4835	6,573
CTC	1****	-	-	-	-	-	703	2,929	3,395.89

*The year from which data is used for approving the ODS production phase out project.

**Till the year prior to the verification.

***This applies to plants where production of either HF or CTC or both is integrated. The HF production has been expanded to 6,000. In 2001 a new HF production unit with capacity of 10,000 was built and started up.

**** A new chloromethane production unit was built and started up in 2001. The total capacity of various chloromethanes is 30,000, in which CTC shares 1,500. In 2002, it was expanded to 70,000 in which CFC shares 3,500. The actual production in 2001 and 2003 has been verified by a Word Bank Team in Sept. 2003.

Plant Activity in the Year Verified

Plant for Complete Closure

No. of CFC-11/12 lines closed	:	N.A.
Date of CFC production ceased	:	N.A.
Date of dismantling completed	:	N.A.
Verification of destruction of key components by		[Name of certifying body] N.A.
Reactor tank(s) dismantled and destroyed	:	N.A.
Control and monitoring equipment dismantled destroyed	:	N.A.
Pipes dismantled and destroyed	:	N.A.
Utilities dismantled and destroyed	:	N.A.
Evidence of destruction (photos or videos)		N.A.
Chance of resuming production	:	N.A.
Assessment by the verification team to be included in the verification report	:	N.A.

2. Plant for gradual closure

Annual CFC-11/12 quotas, production, sales and stocks since the baseline year*

CFC Products (CFC-	Baseline Year*	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6 2003
Quota			1,766	1,050	1,050	1,050	1,000
Opening Stock at beginning of year	117	123	337	275	53.1	155.1	137.6
Production	1,050	2,009	1,766	1,049.8	1,049.7	1,049.7	997.14
Sales	1,044	1,795	1,828	1,271.7	947.7	1,067.2	603.9
Closing stock at end of year	123	337	275	53.1	155.1	137.6	530.84

CFC Products (CFC-	Baseline Year*	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001**	Year 5 2002	Year 6 2003
Quota			1,866	1,793	1,793	1,313	1,068
Opening Stock at beginning of year	133	201	54	101	138.8	81.9	150.23
Production	1,793	1,606	1,866	1,793.0	1,792.9	1,314.7	1,066.03
Sales	1,725	1,753	1,819	1,755.2	1,849.8	1,246.4	999.01
Closing stock at end of year	201	54	101	138.8	81.9	150.2	217.25

* The year from which the data is used to approve the ODS production phase out project.

** In May 2001, the enterprise used 0.04 tons of their own product as make-up for refrigeration system of their own production unit. The Verification categorized such product transfer as sales.

Annual HF/CFC and CTC/CFC ratios

Ratio	Baseline Year	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6* 2003
CFC-11	1,050	2,009	1,766	1,049.8	1,049.7	1,049.7	997.14
HF/CFC-11	0.174	0.181	0.177	0.180	0.180	0.186	0.178
CTC/CFC-11	1.273	1.267	1.270	1.271	1.271	1.309	1.240
CFC-12	1,793	1,606	1,866	1,793.0	1,792.9	1314.7	1,066.03
HF/CFC-12	0.377	0.403	0.391	0.388	0.397	0.416	0.417
CTC/CFC-12	1.338	1.368	1.375	1.342	1.361	1.397	1.366

* Till the year of the verification

Operational days per year

Type of Product	Baseline Year	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6* 2003
CFC-11		210	146	88	96	106	81
CFC-12		217	131	152	213	139	169

*Till the year of the verification

Monthly CFC Production and Raw Material Consumption

Notice: The Plant has separate production lines for CFC-11 and CFC-12. However, their raw material stocks are combined. Therefore, the two tables (CTC for CFC-11 and CTC for CFC-12) are combined together here.

CFC-11 / CFC-12 Production and CTC Consumption

Month	CFC-11 and CFC-12	No. of Op'ting Days for CFC-11	No. of Op'ting Days for CFC-12	CFC-11 Production	CFC-12 Production	CTC Consump-tion of CFC-11	CTC Consump-tion of CFC-12	CTC/ CFC-11 Ratio	CTC/ CFC-12 Ratio	CTC Opening Stock	CTC Procured/ Added*	CTC Sold Out	CTC Closing Stock
Jan		-	-	-	-	-	-			29.05	-	-	29.05
Feb		-	-	-	-	-	-			29.05	45.00	-	74.05
Mar		13.0	18.0	164.89	189.15	206.36	261.48	1.252	1.382	74.05	426.74	-	32.94
Apr		-	-	-	-	-	-			32.94	40.90	-	73.84
May		-	28.0	-	205.95	-	279.29		1.356	73.84	252.64	-	47.19
Jun		-	17.0	-	94.60	-	130.41		1.379	47.19	140.15	-	56.93
Jul		-	15.0	-	73.96	-	100.88		1.364	56.93	58.00	-	14.05
Aug		-	17.0	-	66.97	-	92.42		1.380	14.05	99.90	-	21.53
Sept		-	17.0	-	97.80	-	132.72		1.357	21.53	131.95	-	20.77
Oct		20.0	22.0	191.75	122.57	244.14	165.22	1.273	1.348	20.77	417.70	-	29.10
Nov		30.0	23.0	397.00	131.62	489.91	179.04	1.234	1.360	29.10	671.43	-	31.59
Dec		18.0	12.0	243.50	83.41	296.18	114.58	1.216	1.374	31.59	412.27	-	33.10
		81.0	169.0	997.14	1,066.03	1,236.59	1,456.03	1.240	1.366		2,696.67	-	

*Partly purchased-in from the market, and partly provided by their CTC production unit.

Monthly CFC Production and Raw Material Consumption

Notice: The Plant has separate production lines for CFC-11 and CFC-12. However, their raw material stocks are combined; and there other HF uses. Therefore, the two tables (HF for CFC-11 and HF for CFC-12) are combined together here.

CFC-11 / CFC-12 Production and HF Consumption

Month	CFC-11 and CFC-12	No. of Op'ting Days for CFC-11	No. of Op'ting Days for CFC-12	CFC-11 Production	CFC-12 Production	HF Consump-tion of CFC-11	HF Consump-tion of CFC-12	HF/ CFC-11 Ratio	HF/ CFC-12 Ratio	HF Opening Stock	HF Procured/ Added	HF Sold Out & for Other Uses*	HF Closing Stock
Jan		-	-	-	-	-	-			52.54	701.86	538.20	216.20
Feb		-	-	-	-	-	-			216.20	601.50	797.47	20.23
Mar		13.0	18.0	164.89	189.15	29.56	80.54	0.179	0.426	20.23	1,002.99	876.69	36.44
Apr		-	-	-	-	-	-			36.44	822.03	784.85	73.62
May		-	28.0	-	205.95	-	85.29		0.414	73.62	1,093.63	953.82	128.14
Jun		-	17.0	-	94.60	-	39.86		0.421	128.14	856.13	810.76	133.65
Jul		-	15.0	-	73.96	-	30.78		0.416	133.65	907.14	811.89	198.12
Aug		-	17.0	-	66.97	-	28.09		0.419	198.12	718.57	802.15	86.45
Sept		-	17.0	-	97.80	-	40.23		0.411	86.45	938.69	781.95	202.97
Oct		20.0	22.0	191.75	122.57	35.11	50.48	0.183	0.412	202.97	1,047.76	1,011.49	153.66
Nov		30.0	23.0	397.00	131.62	70.04	54.14	0.176	0.411	153.66	951.00	819.60	160.88
Dec		18.0	12.0	243.50	83.41	42.48	34.81	0.174	0.417	160.88	748.93	821.42	11.11
		81.0	169.0	997.14	1,066.03	177.18	444.20	0.178	0.417		10,390.23	9,810.29	

* Refers to all HF for other non-CFC uses within the enterprise and HF sold out as commodity.

CFC Production Phase Out Verification (Including Gradual Closure)

Feb 2004

(A 10 Jiangsu Changsu 3F)

A. Plant identification

Name of Enterprise	:	Jiangsu Changsu 3F Refrigerant Co. Ltd.
Plant Ref. Number	:	
Sector Plan #	:	6
SRI #	:	A10
Address of the Plant	:	Fushan, Haiyu Town; P.C. 215522
		Changsu City, Jiangsu Province
Contact person(s) and Functional Title	:	Shen Xuezhong, General Manager
Telephone Number	:	0520-2629918
Fax Number	:	0520-2621243
E-mail Address	:	

B. Verification

Team Composition	:	3
Leader	:	1
Name	:	F.A. Vogelsberg
Functional Title	:	Consultant, The World Bank
Member(s)	:	2
Name	:	Wu Ning/ Hua Zhangxi
Functional Title	:	Financial Analyst/ Technical Consultant, The World Bank
Date of Plant Visit	:	Feb 07-09, 2004
Duration of Visit	:	2.5 days

Plant History

ODS Products	No. of L	Cap'ty in Baseline Y	Production**						
			Baseline Y	Year 1 19	Year 2 19	Year 3 200	Year 4 20	Year 5 2002	Year 6 2003
CFC-11		1	10,232	8,380	7,960	8,192	8221.9	10,231.9	8,883.75
CFC-12			2,739	3,452	2,780	5,019.1	5,075	3,034.7	4,334.82
CFC-13								-	-
CFC-113 (as ODS)			3,858	3,470	3,542	3,445.0	3,375	2,750	2,124,92
CFC-115 (as ODS)			34	8	150	150	50	100	179.85
Raw Materials Production ***									
HF			4,804	5,276	7,615	7,497	10,428	6,376	6,402
CTC								19.5	

*The year from which data is used for approving the ODS production phase out project.

**Till the year prior to the verification.

***This applies to plants where production of either HF or CTC or both is integrated. Now the HF production has been expanded to 12,000, with 3 production lines.

D. Plant Activity in the Year Verified

Plant for Complete Closure

No. of CFC-11/12 lines closed : N.A.

Date of CFC production ceased : N.A.

Date of dismantling completed : N.A.

Verification of destruction of key components by : [Name of Certifying Body] N.A.

Reactor tank(s) dismantled and destroyed : N.A.

Control and monitoring equipm dismantled and destroyed : N.A.

Pipes dismantled and destroyed : N.A.

Utilities dismantled and destroyed : N.A.

Evidence of destruction (photos or videos) :

Chance of resuming production : N.A.

Assessment by the verification team to be included in the verification report : N.A.

2. Plant for gradual closure

Annual CFC-11/12 quotas, production, sales and stocks since the baseline year*

CFC Products (CFC-	Baseline Year*	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6 2003**
Quota****			7,960	8,192	8,222	1,0232	8,884
Opening Stock at beginning of year	511	874	629	352	40.5	0.4	36.9
Production	10,232	8,380	7,960	8,192.0	8,221.9	10231.9	8,883.75
Sales	9,869	8,625	8,237	8,503.5	8,262	10,195.4	8,858.06
Closing stock at end of year	874	629	352	40.5	0.4	36.9	62.59

CFC Products (CFC-	Baseline Year*	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6 2003**
Quota****			2,779	5019	5,075	3,035	4,335
Opening Stock at beginning of year	473	590	514	1	3.3	31	99.9
Production	2,739	3,452	2,780	5,019.1	5,075	3034.7	4,334.82
Sales*****	2,622	3,528	3,293	5,016.8	5,047.3	2965.9	4,389.95
Closing stock at end of year	590	514	1	3.3	31	99.9	44.75

CFC Products(CFC-113	Baseline Year*	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6 2003**
Quota			3,542.5	3,445	3,375	2,750	2,125
Opening Stock at beginning of year	212	435	426	248	5.5	0.5	165.3
Production***	3,858	3,470	3,542	3,445.0	3,375	2,750	2,124.92
Sales*****	3,635	3,479	3,720	3,687.5	3,380	2,585.2	1,627.62
Closing stock at end of year	435	426	248	5.5	0.5	165.3	662.6

CFC Products (CFC-115	Baseline Year*	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6 2003**
Quota****			150	100	50	100	180
Opening Stock at beginning of year	0	12	3	58	74.1	44.8	15.1
Production	34	8	151	100.2	50	100	179.85
Sales	22	17	96	84.1	79.3	129.7	164.01
Closing stock at end of year	12	3	58	74.1	44.8	15.1	30.94

*The year from which data is used to approve the ODS production phase out project.

**Till the year of the verification

*** Refers to CFC-113 production for non- raw material uses. CFC-113 production for uses as intermediates for CFC-114/115 and other non-CFC products excluded.

**** In the beginning of 2003, the quota for CFC-11, CFC-12, and CFC-115 is issued as 9,532, 3,735 and 60 ODP tons respectively. However, based upon the market demand conditions, the enterprise applied and the Chinese Government approved to change the quota for CFC-11, CFC-12 and CFC-115 to 8,884, 4,335 and 108 ODP tons respectively, for which the quota of real ODS tons became 8,884, 4,335 and 180 tons respectively.

***** The Enterprise purchased-in certain amount of product from market and sold out to the clients. Therefore, the sales here refers to the sales of the product that produced by the enterprise under quota control (i.e. The total sales in accounting deducted by amount purchased-in).

Annual HF/CFC and CTC, PCE or CFC 113/ CFC ratios

Ratio	Baseline Year	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6* 2003
CFC-11	10,232	8,380	7,960	8,192.0	8,221.9	10,231.9	8,883.75
HF/CFC-11	0.165	0.167	0.160	0.160	0.157	0.158	0.156
CTC/CFC-11	1.191	1.259	1.259	1.255	1.247	1.187	1.178
CFC-12	2,739	3,452	2,780	5,019.1	5,075	3,034.7	4,334.82
HF/CFC-12	0.38	0.409	0.401	0.409	0.411	0.408	0.417
CTC/CFC-12	1.380	1.514	1.403	1.400	1.411	1.313	1.333
CFC-113	3,858	3,470	3,542	3,445.0	3,375	2,750	2,124.92
HF/CFC-113	0.480	0.456	0.480	0.509	0.474	0.458	0.453
PCE/CFC-113	1.053	1.041	1.065	1.048	1.067	0.995	1.027
CFC-115	33.6	8	151	100.2	50	100	179.85
HF/CFC-115	1.122	1.678	1.138	0.886	0.803	0.670	0.637
CFC-113/115	2.383	2.02	1.607	2.105	1.720	1.769	1.672

* Till the year of the verification

Operational days per year

Type of Production	Baseline Year	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6* 2003
CFC-11	356	326	323	302	297	349	314
CFC-12	357	339	250	293	307	265	345
CFC-113	313	343	340	327	327	304	332
CFC-115	179	86	353	246	85	144	221

*Till the year of the verification.

Monthly CFC Production and Raw Material Consumption

CFC-11 Production and CTC Consumption

Month	CFC-11	No. of Operating days*	CFC-11 Production	CTC Consump-tio n	CTC/ CFC-11 Ratio**	CTC Opening Stock***	CTC Procured/ Added	CTC Sold Out	CTC Closing Stock***
Jan		31.0	930.25	1,094.36	1.176	Please refer to " Monthly CTC Overall Balance"			
Feb		31.0	925.00	1,088.91	1.177	Table attached later.			
Mar		28.0	900.16	975.64	1.084				
Apr		31.0	850.00	992.46	1.168				
May		30.0	909.98	1,092.46	1.201				
Jun		22.0	335.14	401.81	1.199				
Jul		30.0	870.00	1,032.90	1.187				
Aug		30.0	800.73	974.96	1.218				
Sept		31.0	875.60	1,053.81	1.204				
Oct		30.0	878.26	1,053.04	1.199				
Nov		20.0	608.63	704.78	1.158				
Dec		-	-	-					
		314.0	8,883.75	10,465.13	1.178				

* Operating days of a month is recorded from the 26th day of the previous month to 25th day of the month. This is the reason for 31 operating days appeared in February, April and September

** The CTC/CFC-11 ratio in March was lower than the theoretical value. The enterprise management explained that was due to part of the product was processed in Feb , while packaged and transferred to warehouse in Mar.

*** The CTC storage is used commonly by both CFC 11 and CFC 12 production units.

CFC-11 Production and HF Consumption

Month	CFC-11	No. Of Operating days*	CFC-11 Production	HF Consump-tio n	HF/ CFC-11 Ratio	HF Opening Stock**	HF Procured/ Added	HF Sold Out	HF Closing Stock**
Jan		31.0	930.25	144.65	0.155	Please refer to " Monthly HF Overall Balance"			
Feb		31.0	925.00	144.97	0.157	Table attached later.			
Mar		28.0	900.16	135.33	0.150				
Apr		31.0	850.00	131.37	0.155				
May		30.0	909.98	139.20	0.153				
Jun		22.0	335.14	50.66	0.151				
Jul		30.0	870.00	138.82	0.160				
Aug		30.0	800.73	130.20	0.163				
Sept		31.0	875.60	137.19	0.157				
Oct		30.0	878.26	135.36	0.154				
Nov		20.0	608.63	91.06	0.150				
Dec		-	-	-					
		314.0	8,883.75	1,378.81	0.155				

* Operating days of a month is recorded from the 26th day of the previous month to 25th day of the month. This is the reason for 31 operating days appeared in April and September.

** Storage of HF is commonly used for the whole enterprise.

Monthly CFC Production and Raw Material Consumption

CFC-12 Production and CTC Consumption

Month	CFC-12 No. of Operating days*	CFC-12 Production	CTC Consump-tion	CTC/ CFC-12 Ratio	CTC Opening Stock**	CTC Procured/ Added	CTC Sold Out	CTC Closing Stock**
Jan	31.0	300.16	389.34	1.297	Please refer to " Monthly CTC Overall			
Feb	31.0	321.95	414.04	1.286	Balance" Table attached later.			
Mar	28.0	517.26	655.72	1.268				
Apr	31.0	600.20	766.14	1.276				
May	30.0	586.07	820.03	1.399				
Jun	22.0	412.72	548.60	1.329				
Jul	30.0	260.62	403.22	1.547				
Aug	29.0	255.19	333.58	1.307				
Sept	31.0	314.65	417.88	1.328				
Oct	30.0	300.27	398.30	1.326				
Nov	31.0	302.39	401.39	1.327				
Dec	21.0	163.35	228.29	1.398				
	345.0	4,334.82	5,776.53	1.333				

* Operating days of a month is recorded from the 26th day of the previous month to 25th day of the month. This is the reason for 31 operating days appeared in February, April, September and November.
** The CTC storage is used commonly by both CFC 11 and CFC 12 production units. Therefore, stock figures are not recorded here.

CFC-12 Production and HF Consumption

Month	CFC-12 No. Of Operating days*	CFC-12 Production	HF Consump-tion	HF/ CFC-12 Ratio	HF Opening Stock	HF Procured/ Added	HF Sold Out	HF Closing Stock
Jan	31.0	300.16	120.67	0.402	Please refer to " Monthly HF Overall			
Feb	31.0	321.95	142.87	0.444	Balance" Table attached later.			
Mar	28.0	517.26	208.32	0.403				
Apr	31.0	600.20	242.36	0.404				
May	30.0	586.07	250.98	0.428				
Jun	22.0	412.72	161.30	0.391				
Jul	30.0	260.62	125.47	0.481				
Aug	29.0	255.19	102.73	0.403				
Sept	31.0	314.65	123.18	0.391				
Oct	30.0	300.27	121.62	0.405				
Nov	31.0	302.39	130.08	0.430				
Dec	21.0	163.35	76.12	0.466				
	345.0	4,334.82	1,805.70	0.417				

* Operating days of a month is recorded from the 26th day of the previous month to 25th day of the month. This is the reason for 31 operating days appeared in February, April, September and November.
** Storage of HF is commonly used for the whole enterprise.

Monthly CFC Production and Raw Material Consumption

CFC-113 Production and PCE Consumption

Month	CFC-113	No. of Operat-ing days*	Production **	PCE Consumption	PCE/ CFC-113 Ratio	PCE Opening Stock	PCE Procured/ Added	PCE Other Uses and Sold Out***	PCE Closing Stock
Jan		31.0	343.32	339.467	0.989	4,000.94	-	1,115.60	2,545.87
Feb		31.0	434.23	439.410	1.012	2,545.87	-	26.97	2,079.49
Mar		28.0	242.64	229.177	0.945	2,079.49	-	150.63	1,699.68
Apr		31.0	166.48	170.508	1.024	1,699.68	-	292.44	1,236.74
May		30.0	16.32	16.451	1.008	1,236.74	3,051.25	354.69	3,916.85
Jun		-	-	-		3,916.85	-	261.96	3,654.89
Jul		30.0	52.67	59.311	1.126	3,654.89	761.36	392.81	3,964.13
Aug		29.0	64.89	72.763	1.121	3,964.13	-	352.09	3,539.28
Sept		31.0	91.24	104.571	1.146	3,539.28	3,113.26	369.97	6,178.00
Oct		30.0	206.28	215.666	1.045	6,178.00	1.00	223.76	5,739.57
Nov		31.0	310.40	330.219	1.064	5,739.57	64.00	138.30	5,335.05
Dec		30.0	196.45	205.511	1.046	5,335.05	-	1,399.59	3,729.95
		332.0	2,124.92	2,183.054	1.027		6,990.87	5,078.81	

* Operating days of a month is recorded from the 26th day of the previous month to the 25th day of the month. This is the reason for 31operating days in February, April, September and November.

** Production refers to the CFC-113 product that is not to be chemically converted. That is to be used as ODS.

*** Refers to all uses other than for Production as mentioned in **, as well as sold out.

Monthly CFC Production and Raw Material Consumption

CFC-113 Production and HF Consumption

Month	CFC-113	No. of Operat-ing days*	Production **	HF Consump-tio n	HF/ CFC-113 Ratio	HF Opening Stock	HF Procured/ Added	HF Sold Out	HF Closing Stock
Jan		31.0	343.32	157.04	0.457	Please refer to "HF Monthly Overall Balance"			
Feb		31.0	434.23	189.38	0.436	Table attached later.			
Mar		28.0	242.64	101.73	0.419				
Apr		31.0	166.48	74.29	0.446				
May		30.0	16.32	7.42	0.455				
Jun		-	-	-					
Jul		30.0	52.67	26.75	0.508				
Aug		29.0	64.89	32.60	0.502				
Sept		31.0	91.24	46.10	0.505				
Oct		30.0	206.28	93.69	0.454				
Nov		31.0	310.40	142.0905	0.458				
Dec		30.0	196.45	90.5010	0.461				
		332.0	2,124.92	961.60	0.453				

-

* Operating days of a month is recorded from the 26th day of the previous month to the 25th day of the month. This is the reason for 31operating days in February, April, September and November.

** Production refers to the CFC-113 product that is not to be chemically converted. That is to be used as ODS.

Monthly CFC Production and Raw Material Consumption

CFC-115 Production and CFC-113 Consumption (Expressed in material tons)

Month	CFC-115	No. of Operat-ing days*	CFC-115 Prod'n (ODS)	CFC-113 Consump-tion (ODS)	CFC113 /CFC115 Ratio**	CFC-113 Opening Stock	CFC-113 Procured /Added ***	CFC 113 for Other Intermediate Uses****	CFC-113 Sold Out (As ODS)	CFC-113 Closing Stock
Jan		-	-	-		165.30	408.82	65.50	106.75	401.87
Feb		10	3.20	8.95	2.798	401.87	460.88	17.70	126.77	709.33
Mar		28	23.20	37.68	1.624	709.33	402.13	121.80	141.00	810.97
Apr		31	25.00	43.70	1.748	810.97	451.98	241.80	123.77	853.68
May		30	25.00	42.85	1.714	853.68	368.03	301.00	147.50	730.36
Jun		21	17.60	30.81	1.751	730.36	257.15	234.20	140.50	582.00
Jul		30	25.00	38.44	1.538	582.00	401.52	310.40	141.50	493.17
Aug		29	25.00	41.71	1.668	493.17	378.00	271.40	168.00	390.06
Sept		31	26.00	42.69	1.642	390.06	414.03	280.10	138.75	342.55
Oct		11	9.85	13.92	1.413	342.55	420.30	200.10	148.04	400.79
Nov						400.79	440.40	130.00	120.00	591.19
Dec						591.19	382.65	186.20	125.04	662.60
		221	179.85	300.75	1.672			2,360.20	1,627.62	

* Operating days of a month is recorded from the 26th day of the previous month to the 25th day of the month. This is the
for 31 operating days in April,and September.

** The ratio in Feb was high due to the start-up of evacuated equipment, But the ratio of the whole year seems normal.

*** Refers to all CFC 113 including both for ODS sales and all intermediate uses.

**** Refers to the CFC-113 that used as intermediates to be chemically converted to other non-ODS products within the enterprise and that supplied to Zhejiang Chemical Institute (B 11) under control for their CFC 114/115 production as well as intermediate that to be chemically converted to non -ODS product(s).

CFC-115 Production and HF Consumption

Month	CFC-115	No. 0f Op'ting days*	CFC-115 Prod'n (ODS)	HF Consump-tion	HF/ CFC-115 Ratio	HF Opening Stock	HF Procured/ Added	HF Sold Out	HF Closing Stock
Jan		-	-	-		Please refer to "Monthly HF Overall Balance"			
Feb		10	3.20	3.42	1.068	Table attached later.			
Mar		28	23.20	14.67	0.632				
Apr		31	25.00	15.30	0.612				
May		30	25.00	16.19	0.648				
Jun		21	17.60	11.97	0.680				
Jul		30	25.00	15.40	0.616				
Aug		29	25.00	16.22	0.649				
Sept		31	26.00	16.23	0.624				
Oct		11	9.85	5.16	0.524				
Nov		-	-	-					
Dec		-	-	-					
		221	179.85	114.56	0.637				

Monthly CFC Production and Raw Material Consumption

Monthly CTC Overall Balance

Month	CTC Consumption for CFC-11	CTC Consumption for CFC-12	CTC Consumption Total	CTC Opening Stock	CTC Procured/ Added	CTC Sold Out	CTC Closing Stock
Jan	1,094.36	389.34	1,483.70	2107.761	1,166.54	5.02	1,785.58
Feb	1,088.91	414.04	1,502.95	1,785.58	1,033.99	19.80	1,296.82
Mar	975.64	655.72	1,631.36	1,296.82	1,093.27	18.00	740.73
Apr	992.46	766.14	1,758.60	740.73	1,080.22	14.40	47.95
May	1,092.46	820.03	1,912.49	47.95	1,909.52	-	44.98
Jun	401.81	548.60	950.41	44.98	1,156.75	-	251.32
Jul	1,032.90	403.22	1,436.12	251.32	1,488.77	-	303.96
Aug	974.96	333.58	1,308.54	303.96	1,428.77	-	424.20
Sept	1,053.81	417.88	1,471.69	424.20	1,306.59	-	259.10
Oct	1,053.04	398.30	1,451.34	259.10	1,700.10	4.60	503.26
Nov	704.78	401.39	1,106.17	503.26	1,512.96		910.04
Dec	-	228.29	228.29	910.04	912.86		1,594.61
	10,465.13	5,776.53	16,241.66		15,790.33	61.82	

Monthly CFC Production and Raw Material Consumption

Monthly Overall HF Balance

Month	HF Consumpt'n for CFC-11	HF Consumpt'n for CFC-12	HF Comsumpt'n for CFC 113 as ODS*	HF Consumpt'n for CFC-115	HF Total Consumpt'n for CFCs	HF Opening Stock	HF Procured/ Added	HF for Other Uses**	HF Closing Stock
Jan	144.65	120.67	157.04	-	422.36	66.07	645.44	279.76	9.39
Feb	149.97	142.87	189.38	3.42	485.63	9.39	753.84	269.23	8.37
Mar	135.33	208.32	101.73	14.67	460.05	8.37	771.82	277.87	42.27
Apr	131.37	242.36	74.29	15.30	463.32	42.27	677.88	250.11	6.72
May	139.20	250.98	7.42	16.19	413.79	6.72	773.80	363.62	3.11
Jun	50.66	161.30	-	11.97	223.93	3.11	494.10	264.70	8.57
Jul	138.82	125.47	26.75	15.40	306.44	8.57	704.30	401.15	5.28
Aug	130.20	102.73	32.60	16.22	281.75	5.28	736.93	377.32	83.13
Sept	137.19	123.18	46.10	16.23	322.70	83.13	640.61	387.11	13.93
Oct	135.36	121.62	93.69	5.16	355.83	13.93	696.11	353.23	0.98
Nov	91.06	130.08	142.09	-	363.23	0.98	752.65	341.19	49.21
Dec	-	76.12	90.50	-	166.62	49.21	432.24	308.83	6.00
	1,383.81	1,805.70	961.60	114.56	4,265.67		8,079.70	3,874.11	

* Refers to HF used for the production of CFC 113 that is to be sold out as commodity, exclusive that as intermediates to be chemiclly converted to other materials.
** Including HF consumed for all non-CFC production within the Enterprise and HF sold out as commodity.

CFC Production Phase Out Verification (Including Gradual Closure)

February 2004

(B 8 Zhejiang Linhai Limin)

A. Plant identification

Name of Enterprise	:	Zhejiang Linhai Limin Chemical Plant
Plant Ref. Number	:	
Sector Plan #	:	22
SRI #	:	B8
Address of the Plant	:	Zhenxing Jie, P.C.317000, Linhai City, Zhejiang Province
Contact person(s) and Functional Title	:	Ms. He Jianmim, General Manager
Telephone Number	:	0576-5177088
Fax Number	:	0576-5178058
E-mail Address	:	IHLM@mail.tzptl.zj.cn

B. Verification

Team Composition	:	3
Leader	:	1
Name	:	F.A. Vogelsberg
Functional Title	:	Consultant, The World Bank
Member(s)	:	2
Name	:	Wu Ning/ Hua Zhangxi
Functional Title	:	Financial Analyst/ Technical Consultant, The World Bank
Date of Plant Visit	:	Feb. 05,2004
Duration of Visit	:	1.0 day

C. Plant History

Date of Construction 1983

ODS Products	No. of	Capacity in	Production**						
			Baseline Ye	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6 2003 2
CFC 11									
CFC 12	2	3,000	1,365	1,658	1,188	1,364.7	1,364.9	886.9	0
CFC 13	1	50	27	26	27	27	7	27	21.28
CFC 114/115									
Raw Materials Production**									
CTC	No								
HF	No								

*The year from which data is used for approving the ODS production phase out project.

**Till the year prior to the verification.

***This applies to plants where production of either HF or CTC or both is integrated.

D. Plant Activity in the Year Verified

1. Plant for Complete Closure

No. of CFC-12 lines closed	:	**2**
Date of CFC production ceased	:	December 22, 2002
Date of dismantling completed	:	January 5, 2003
Verification of destruction of key components by	:	Zhejiang Linhai City Environment Protection Bureau
Reactor tank(s) dismantled and destroyed	:	Yes
Control and monitoring equipm dismantled and destroyed	:	Yes
Pipes dismantled and destroyed	:	Yes
Utilities dismantled and destroyed	:	Yes
Evidence of destruction (photos or videos)	:	Yes, Available
Chance of resuming production	:	No
Assessment by the verification team to be included in the verification report	:	The CFC-12 production units have been closed completely. All the building space in which the CFC-12 production units were installed have been evacuated and used for other new non-CFC production

2. Plant for gradual closure

The production of CFC-12 of the enterprise was completely closed at the end of 2002 and the two CFC-12 production lines have been dismantled in the beginning of 2003. See Section D.1 of this Report as well Annex III **"CHINA CFC PRODUCTION SECTOR COMPLETE CLOSURE PROJECT 2003 VERIFICATION REPORT"**

Annual CFC-13 quotas, production, sales and stocks since the baseline year*

CFC Products (CFC-	Baseline Year*	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6 2003
Quota***			27	27	27	27	21.3
Opening Stock at beginning of year	0.91	7.91	7.34	2.6	7.9	5.1	3.58
Production	27.00	26.40	26.95	27	27	27	21.28
Sales	20.00	26.97	31.72	21.7	29.8	28.5	24.70
Closing stock at end of year	7.91	7.34	2.57	7.9	5.1	3.58	0.16

*The year from which data is used to approve the ODS production phase out project.

**Till the year of the verification

*** The quota issued in the beginning of 2003 was 27 tons ODP. In order to meet the obligation of china as specified in Annex B Group I of the Montreal Protocol, Chinese Government reduced the quota to 21.3 tons ODP. The difference of 5.7 tons ODP of CFC-13 was transferred to 5.7 tons ODP of CFC-12 of Zhejiang Juhua (B 14) by mutual agreement.

Annual HF/CFC and CTC/CFC ratios

Ratio	Baseline 1997	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5	Year 6*
CFC-13	27.00	26.40	26.95	27.0	27	27	21.28
HF/CFC-13	0.888	1.098	1.073	1.122**	1.155	1.128	1.000
CTC/CFC-13	2.843	3.623	3.360	3.713***	3.796	3.821	3.805

* Till the year of the verification

** Obtained indirectly by (ratio CFC-12/CFC-13) × (ratio HF/ CFC-12)

*** Obtained indirectly by (ratio CFC-12/CFC-13) × (ratio CTC/ CFC-12)

Since 2003, the CFC12 feedstock for CFC 13 is supplied from Juhua Fluoro-chemical (B14), the ratio HF/CFC 12 and CTC/CFC 12 refers to that of Juhua Fluoro-chemical.

Operational days per year

Type of Production	Baseline 1997	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6* 2003
CFC-13	135	157	173	228	277	224	186

* Till the year of the verification

Monthly CFC Production and Raw Material Consumption

CFC-13 Production and CFC-12 Consumption

Month	CFC-13	No. of Operating days*	CFC-13 Production	CFC-12 Consump-tion	CFC-12/ CFC-13 Ratio**	CFC-12 Opening Stock	CFC-12 Procured/ Added	CFC-12 Sold Out	CFC-12 Closing Stock
Jan		-	-	-		-		-	
Feb		8.0	0.35	1.24	3.534	-	1.54	-	0.30
Mar		29.0	3.71	10.02	2.700	0.30	9.90	-	0.19
Apr		31.0	4.03	10.59	2.631	0.19	20.96	-	10.56
May		25.0	2.60	7.01	2.700	10.56	14.40	-	17.95
Jun		31.0	4.41	11.91	2.700	17.95	11.21	-	17.26
Jul		30.0	3.34	9.01	2.700	17.26	-	-	8.25
Aug		-	-	-		8.25	-	-	8.25
Sept		11.0	0.88	2.36	2.691	8.25	-	-	5.89
Oct		14.0	1.69	4.54	2.688	5.89	-	-	1.35
Nov		-	-	-		1.35	-	-	1.35
Dec		7.0	0.286	1.35	4.720	1.35	-	-	-
		186.0	21.28	58.01	2.726		58.01	-	

***** Operating days of a month is recorded from the 26 th day of the previous month to the 25 th day of the month. This is the reason or 31 operating day appeared in April and June.

**The CFC-12/CFC13 ratio in February and December is higher than the year average. The enterprise's-management explained that, during the stop of a campaign, the refrigeration system was shut off, and the remaining reactant mixture was to be dischargedinto pressure cylinders to avoid the over pressure in the reactor resulted in by the temperature rising. Thus, at the starting of a new campaign, they must fill more reactant into reactor. In September, the refrigeration system operation was maintained and such situation did not happen.

CFC Production Phase Out Verification (Including Gradual Closure)
February 2004
(B 11 Zhejiang Chemical Institute)

Plant identification

Name of Enterprise	:	Zhejiang Chemical Industry Research Institute
Plant Ref. Number		
Sector Plan #	:	10
SRI #	:	B11
Address of the Plant	:	No. 926, Xixi Lu, P.C. 310023, Hangzhou City, Zhejiang Province
Contact person(s) and Functional Title	:	Mr. Zhang Jianjun, Deputy Director
Telephone Number	:	0517-5229414
Fax Number	:	0517-5221129
E-mail Address	:	

B. Verification

Team Composition	:	3
Leader	:	1
Name	:	F.A. Vogelsberg
Functional Title	:	Consultant, The World Bank
Member(s)	:	2
Name	:	Wu Ning/ Hua Zhangxi
Functional Title	:	Financial Analyst/ Technical Consultant, The World Bank
Date of Plant Visit	:	Feb 06-07, 2004
Duration of Visit	:	1.5 day

C. Plant History

Date of Construction 1990									
ODS Products ODS)	No. of l	Capacity in B	Production**						
			Baseline Ye	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6 2003
CFC 114/ 115	1	100	10.6/ 120.3	20.7/ 102.2	0./ 120	7.33/ 119.6	6.8/ 127	29/ 90	0/ 131.84
Raw Materials Production**									
CTC									
HF									

*The year from which data is used for approving the ODS production phase out project.
**Till the year prior to the verification.
***This applies to plants where production of either HF or CTC or both is integrated.

D. Plant Activity in the Year Verified
1. Plant for Complete Closure

No. of CFC-11/12 lines closed : N.A.

Date of CFC production ceased : N.A.

Date of dismantling completed : N.A.

Verification of destruction of key components by : [Name of certifying body] N.A.

Reactor tank(s) dismantled and destroyed : N.A.

Control and monitoring equipm dismantled and destroyed : N.A.

Pipes dismantled and destroyed : N.A.

Utilities dismantled and destroyed : N.A.

Evidence of destruction (photos or videos) :

Chance of resuming production : N.A.

Assessment by the verification team to be included in the verification report : N.A.

2. Plant for Gradual Closure

Annual CFC-114/115 quotas, production, sales and stocks since the baseline year*

CFC Products (CFC	Baseline Year*	Year 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6 2003**
Quota***			11	11	6.8	29	0
Opening Stock at beginning of year	7.96	15.25	20.60	17.52	20.74	23.565	35.466
Production	10.60	20.70	0	7.33	6.83	28.974	0
Sales	3.31	15.35	3.08	4.11	4.01	17.073	4.041
Closing stock at end of year	15.25	20.60	17.52	20.74	23.56	35.466	3.425

CFC Products (CFC expressed as OD	Baseline Year*	Year 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6 2003**
Quota***			120	120	127***	90	138.333
Opening Stock at beginning of year	3.64	40.27	74.81	49.45	79.21	84.887	95.823
Production	120.30	102.20	119.98	119.64	127	89.996	131.84
Sales	83.67	67.66	145.34	89.88	121.3	79.060	157.55
Closing stock at end of year	40.27	74.81	49.45	79.21	84.9	95.823	70.113

*The year from which data is used to approve the ODS production phase out project.
**Till the year of the verification
*** In the beginning of 2003, the quota for CFC-114 is issued as 11 and for CFC-115 is 120 (ODS, equivalent to 72 ODP); However, based upon the market situation, the enterprise applied and the Chinese Government approved to change the quota for CFC-114 to 0 and the quota for CFC-115 to 138.333 (ODS, equivalent to 83 ODP).

Annual HF/CFC-114 (CFC 115) and CFC-113/CFC-114 (CFC-115) ratios

Ratio	Baseline 1997	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6* 2003
CFC-114	10.60	20.70	0	7.33	6.83	28.974	0
HF/CFC-114		0.41	0	0.337	0.413	0.153	
CFC-113/CFC-114		1.200	0	1.207	1.304	1.202	
CFC-115	120.30	102.20	119.98	119.64	127	89.996	131.84
HF/CFC-115		0.569	0.479	0.482	0.417	0.362	0.368
CFC-113/CFC-115		1.549	1.665	1.564	1.387	1.341	1.350

* Till the year of the verification

Operational days per year

Type of Production	Baseline 1997	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6* 2003
CFC-114	**	**	**	**	**	**	**
CFC-115	330	248	266	303	249	201	221

*Till the year of the verification.
** The CFC-114 production uses the same production unit as the CFC-115 production. In 2000, among the total 303 operating days, 20 days have the CFC-114 production. In 2001, among the total 249 operating days, 8 day have the co-production of CFC-114. In 2002 shared 45 operating days in total of 201. In 2003, no CFC 114 was produced, and all operational day refers to CFC 115 production.

Monthly CFC Production and Raw Material Consumption

CFC-114/115 Production and CFC-113 Consumption **(Expressed in ODS)**

Month	CFC-114/115	No. of Opera-ting days*	CFC-114 Produc-tion	CFC-115 Produc-tion	CFC-113 consump-tion for CFC-114	CFC-113 Consump-tion for CFC-115	CFC-113 /CFC-114 Ratio	CFC-113 /CFC-115 Ratio	CFC-113 Opening Stock	CFC-113 Procured/ Added ****	CFC-113 for Other Non-CFC Products	CFC-113 Sold Out****	CFC-113 Closing Stock
Jan		-	-	-	-	-			-	-	-	-	-
Feb		-	-	-	-	-			-	-	-	-	-
Mar		-	-	-	-	-			-	-	-	-	-
Apr		-	-	-	-	-			-	10.00	-	-	10.00
May		7.0	-	-	-	-			10.00	-	-	-	10.00
Jun		31.0	-	23.78	-	33.20		1.396	10.00	50.00	-	-	26.80
Jul		30.0	-	21.48	-	28.80		1.341	26.80	28.00	-	-	26.00
Aug		31.0	-	11.66	-	16.00		1.373	26.00	10.00	-	-	20.00
Sept		31.0	-	14.21	-	19.50		1.372	20.00	20.00	-	-	20.50
Oct		30.0	-	19.75	-	26.00		1.316	20.50	30.00	-	-	24.50
Nov		31.0	-	24.27	-	32.50		1.339	24.50	20.00	-	-	12.00
Dec		30.0	-	16.70	-	22.00		1.317	12.00	10.00	-	-	-
		221.0	-	131.84	-	178.00		1.350		178.00	-	-	

* The operating days are recorded from the 26th of previous month to the 25th of the month.

Monthly CFC Production and Raw Material Consumption

CFC-114/CFC-115 Production (expressed in ODS) and HF Consumption

Month	CFC-114 /CFC-115	No. Of Opera-ting days*	CFC-114 Produc-tion	CFC-115 Produc-tion	HF Consump-tion for CFC-114	HF Consump-tion for CFC-115	HF/ CFC-114 Ratio	HF/ CFC-115 Ratio	HF Opening Stock	HF Procured/ Added	HF for Other Uses**	HF Closing Stock
Jan		-	-	-	-	-			0.66	27.39	25.41	2.64
Feb		-	-	-	-	-			2.64	28.05	28.05	2.64
Mar		-	-	-	-	-			2.64	23.43	24.75	1.32
Apr		-	-	-	-	-			1.32	31.68	30.69	2.31
May		7.0	-	-	-	-			2.31	14.52	14.85	1.98
Jun		31.0	-	23.78	-	9.02		0.379	1.98	28.91	12.23	9.64
Jul		30.0	-	21.48	-	8.14		0.379	9.64	50.21	37.47	14.24
Aug		31.0	-	11.66	-	4.29		0.368	14.24	25.60	32.15	3.40
Sept		31.0	-	14.21	-	5.28		0.372	3.40	44.33	31.72	10.73
Oct		30.0	-	19.75	-	7.59		0.384	10.73	18.54	19.58	2.10
Nov		31.0	-	24.27	-	8.25		0.340	2.10	33.17	19.21	7.81
Dec		30.0	-	16.70	-	5.94		0.356	7.81	19.86	21.31	0.42
		221.0	-	131.84	-	48.51		0.368		345.69	297.42	

* The operating day are recorded from the 26th of previous month to the 25th of the month.

** Means HF used for other non CFC products within the enterprise.

CFC Production Phase Out Verification (Including Gradual Closure)
February 2004
(B12 Zhejiang Donyang)

A. Plant identification

Name of Enterprise	:	Zhejiang Dongyang Chemical Plant
Plant Ref. Number	:	
Sector Plan #	:	7
SRI #	:	B12
Address of the Plant	:	Wunning Dong Lu, P.C. 322100, Dongyang City, Zhejiang Province
Contact person(s) and Functional Title	:	Mr. Wang Tian'e, Deputy Director
Telephone Number	:	0759-6623201
Fax Number	:	0759-6632697
E-mail Address	:	Zjfcc@public.dy.jhptt.zj.cn

B. Verification

Team Composition	:	3
Leader	:	1
Name	:	F. A. Vogelsberg
Functional Title	:	Consultant, The World bank
Member(s)	:	2
Name	:	Wu Ning/ Hua Zhangxi
Functional Title	:	Financial Analyst/ Technical Consultant, The World Bank
Date of Plant Visit	:	Feb. 04, 2004
Duration of Visit	:	1 day

C. Plant History

Date of Construction 1979									
ODS Produ	No. of l	Capacity in	Production**						
			Baseline Ye	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6 2003**
CFC 11									
CFC 12	1	5,000	2,219	2,751	2,063	2218.5	2218.9	1,740.7	1,442.22
Raw Materials Production***									
CTC	0	0	0	0	0	0	0	0	0
HF	3	15,000	10,872	11,065	10,415	11,744	13,862	16,599	16,481

*The year from which data is used for approving the ODS production phase out project.

**Till the year prior to the verification.

***This applies to plants where production of either HF or CTC or both is integrated.

D. Plant Activity in the Year Verified

Plant for Complete Closure

No. of CFC-11/12 lines closed : N.A.

Date of CFC production ceased : N.A.

Date of dismantling completed : N.A.

Verification of destruction of key components by : [Name of certifying body] N.A.

Reactor tank(s) dismantled and destroyed : N.A.

Control and monitoring equipm dismantled and destroyed : N.A.

Pipes dismantled and destroyed : N.A.

Utilities dismantled and destroyed : N.A.

Evidence of destruction (photos or videos) : N.A.

Chance of resuming production : N.A.

Assessment by the verification team to be included in the verification report : N.A.

2. Plant for gradual closure

Annual CFC-12 quotas, production, sales and stocks since the baseline year*

CFC Produ (CFC-11, CF	Baseline Year*	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6** 2003
Quota			2,053	2,219	2,219	1,741	1,444
Opening Stock at beginning of year	259	202	1,120	836	1,631.9	1,051.8	1,355.41
Production	2,219	2,751	2,053	2,218.5	2,218.9	1740.7	1,442.22
Sales	2,276	1,833	2,337	1,422.6	2,799	1,437.1	1,755.84
Closing stock at end of year	202	1,120	836	1,631.9	1,051.8	1,355.4	1,041.79

*The year from which data is used to approve the ODS production phase out project.

**Till the year of the verification

Annual HF/CFC and CTC/CFC ratios

Ratio	Baseline 1997	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6* 2003	Year 7
CFC-12	2,219	2,715	2,053	2,218.5	2,218.9	1,740.7	1,442.22	
HF/CFC-12	0.342	0.365	0.367	0.375	0.377	0.396	0.416	
CTC/CFC-12	1.325	1.368	1.367	1.357	1.357	1.413	1.396	

* Till the year of the verification

Operational days per year

Type of Production	Baseline 1997	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6* 2003	Year 7
CFC-12	319	277	229	235	242.5	238.5	319	

*Till the year of the verification

In 2003, due to restriction of daily power supply, the enterprise had to reduce the daily production load and extend the operational period. Details see Annex of this Report.

Monthly CFC Production and Raw Material Consumption

CFC-12 Production and CTC Consumption

Month	CFC-12	No. Of Operat-ing days	CFC-12 Production	CTC Consump-tion	CTC/ CFC-12 Ratio	CTC Opening Stock	CTC Procured/ Added	CTC Sold Out	CTC Closing Stock
Jan		25.0	88.82	135.36	1.524	277.31	220.84	0.13	362.66
Feb		25.0	105.71	146.36	1.384	362.66	314.91	0.31	530.90
Mar		25.5	101.15	138.39	1.368	530.90	104.58	-	497.09
Apr		27.0	108.46	150.18	1.385	497.09	-	0.21	346.70
May		28.5	112.91	154.70	1.370	346.70	-	-	192.00
Jun		27.0	98.95	139.03	1.405	192.00	86.91	0.03	139.84
Jul		27.5	116.48	161.61	1.387	139.84	111.43	-	89.66
Aug		25.5	120.66	163.68	1.357	89.66	185.95	0.03	111.90
Sept		27.0	126.32	177.27	1.403	111.90	197.93	0.29	132.27
Oct		28.0	155.20	215.80	1.390	132.27	168.22	-	84.69
Nov		25.5	161.00	226.12	1.404	84.69	214.29	-	72.86
Dec		27.5	146.54	204.39	1.395	72.86	453.29	-	321.76
		319.0	1,442.22	2,012.89	1.396		2,058.35	1.01	

Monthly Overall HF Balance of the Enterprise

Month	CFC-12	HF Added to CFC Unit	HF Opening Stock	HF Procured/ Added	HF Sold Out and Others*	HF Closing Stock
Jan		39.60	0.67	1,273.61	1,183.60	51.08
Feb		42.24	51.08	1,074.12	1,075.16	7.80
Mar		39.60	7.80	1,602.04	1,565.69	4.56
Apr		46.20	4.56	1,467.13	1,408.83	16.66
May		47.52	16.66	1,387.47	1,346.81	9.80
Jun		43.56	9.80	1,462.74	1,420.23	8.75
Jul		46.20	8.75	1,250.11	1,182.86	29.80
Aug		52.80	29.80	1,172.79	1,138.18	11.61
Sept		54.12	11.61	1,203.16	1,137.65	22.99
Oct		67.32	22.99	1,477.02	1,296.45	136.24
Nov		71.28	136.24	1,536.82	1,591.86	9.93
Dec		52.80	9.93	1,573.51	1,471.77	58.87
		603.24		16,480.51	15,819.08	

* Including HF for all other non-CFC uses within the Enterprise and HF sold out as commodity.

CFC-12 Production and HF Consumption

Monthly HF Balance of CFC 12 Production Unit

Started from 2003, a separate HF Storage was set-up for CFC 12 production, and the Monthly HF Balance is as follows:

Month	CFC-12	No. Of Operating days	CFC-12 Production	HF Consump-tion	HF/ CFC-12 Ratio	HF Opening Stock of CFC Unit	HF Added to CFC Unit	HF Closing Stock of CFC Unit
Jan		25.0	88.82	37.02	0.417	-	39.60	2.58
Feb		25.0	105.71	41.00	0.388	2.58	42.24	3.82
Mar		25.5	101.15	39.66	0.392	3.82	39.60	3.76
Apr		27.0	108.46	43.71	0.403	3.76	46.20	6.25
May		28.5	112.91	46.84	0.415	6.25	47.52	6.92
Jun		27.0	98.95	40.94	0.414	6.92	43.56	9.55
Jul		27.5	116.48	46.18	0.396	9.55	46.20	9.57
Aug		25.5	120.66	57.37	0.475	9.57	52.80	5.00
Sept		27.0	126.32	52.12	0.413	5.00	54.12	7.00
Oct		28.0	155.20	68.32	0.440	7.00	67.32	6.00
Nov		25.5	161.00	68.28	0.424	6.00	71.28	9.00
Dec		27.5	146.54	59.03	0.403	9.00	52.80	2.77
		319.0	1,442.22	600.47	0.416		603.24	

Production CFC Phase Out Verification (Including Gradual Closure)

February 2004

(B 14 Zhejiang Juhua)

A. Plant identification

Name of Enterprise	:	Zhejiang Juhua Fluoro-chemical Co. Ltd.
Plant Ref. Number	:	
Sector Plan #	:	3
SRI #	:	B14
Address of the Plant	:	Kecheng Qu, P.C. 324004, Guzhou City, Zhejiang Province
Contact person(s) and Functional Title	:	Mr. Cai Jian Qun, Acting General Manager
Telephone Number	:	0570-3097543
Fax Number	:	0570-3098687
E-mail Address	:	Qzfh@ppp.qzptt.zj.cn

B. Verification

Team Composition	:	3
Leader	:	1
Name	:	F.A. Vogelsberg
Functional Title	:	Consultant, The World Bank
Member(s)	:	2
Name	:	Wu Ning/ Hua Zhangxi
Functional Title	:	Financial Analyst/ Technical Consultant, The World Bank
Date of Plant Visit	:	February 02-03, 2004
Duration of Visit	:	2 days

C. Plant History

Date of Construction 1993									
ODS Products	No. of	Capacity in B	Production**						
			Baseline Y	Year 1 1998	Year 2 1999	Year 3 2(	Year 4 2001	Year 5 2002	Year 6** 2003
CFC 11/12 (Combined)	1	4,000/ 8,000	4,339/ 7,7(	4,121/	3,376/	4,339/ 7,	4,827.3/ 7,706.1	4,489/ 7,1	3,947.49/ 7,4(
Raw Materials Production									
CTC	1	12,000***	11,659	10,751	13,140	13,479	15,697	17,217	16,204
HF	1	10,000 ****	8,929	10,614	11,361	13,290	14,994	16,080	15,384

*The year from which data is used for approving the ODS production phase out project.

**Till the year prior to the verification.

*** The capacity of total chloromethanes is 30,000. The final capacity of the chlorometnanes is 70,000 with CTC capacity of 20,000.

**** Has been expanded to 15,000.

D. Plant Activity in the Year Verified

1. Plant for Complete Closure

No. of CFC-11/12 lines closed : N.A.

Date of CFC production ceased : N.A.

Date of dismantling completed : N.A.

Verification of destruction of key components by : [Name of certifying body] N.A.

Reactor tank(s) dismantled and destroyed : N.A.

Control and monitoring equipment dismantled a destroyed : N.A.

Pipes dismantled and destroyed : N.A.

Utilities dismantled and destroyed : N.A.

Evidence of destruction (photos or videos) : N.A.

Chance of resuming production : N.A.

Assessment by the verification team to be included in the verification report : N.A.

2. Plant for gradual closure

Annual CFC-11/12 quotas, production, sales and stocks since the baseline year*

CFC Products (CF	Baseline Year*	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6** 2003
Quota			3,375	4,339	4,827.5	4,489	3,948
Opening Stock at beginning of year	85	15	419	0	0	0	565.04
Production	4,339	4,121	3,376	4,339	4,827.3	4,489	3,947.49
Sales	4,409	3,717	3,599	4,339	4,827.3	3,924	3,360.55
Closing stock at end of year	15	419	0	0	0	565	1,151.98

CFC Products (CF	Baseline Year*	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6** 2003
Quota			6,325	7,760	7,706.5	7,157	7,406.7***
Opening Stock at beginning of year	20	2	420	4	6	5.7	96.14
Production	7,760	7,632	6,325	7,759	7,706.1	7,157	7,406.03
Sales	7,778	7,214	6,741	7,757	7,706.4	7,000.6	6,683.10
Closing stock at end of year	2	420	4	6	5.7	96.1	819.06

*The year from which data is used to approve the ODS production phase out project.

**Till the year of the verification

*** In the annual Program 2003, the quota for CFC-12 is issued as 7,401 tons ODP. However, since Zhejiang Linhai Limin Chemical Plant (SRI# B 8) has to reduce the CFC-13 quota from 27 to 21.3 tons ODP pursuant to the Montreal Protocol, 5.7 tons ODP was transferred to Zhejiang Juhua for CFC-12 through mutual agreement.

Annual HF/CFC and CTC/CFC ratios

Ratio	Baseline 1997	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6* 2003
CFC-11	4,339	4,121	3,376	4,339	4,827.3	4,489	3,947.49
HF/CFC-11	0.150	0.151	0.150	0.157	0.156	0.160	0.161
CTC/CFC-11	1.151	1.152	1.150	1.215	1.209	1.208	1.229
CFC-12	7,760	7,632	6,325	7759	7,706.1	7,157	7,406.03
HF/CFC-12	0.340	0.341	0.341	0.357	0.354	0.363	0.367
CTC/CFC-12	1.304	1.309	1.304	1.381	1.374	1.372	1.396

Operational days per year

Type of Production	Baseline 1997	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002	Year 6* 2003
CFC-11	341	347	335	346	319	319	345
CFC-12	(341)**	(347)**	(335)**	(346)**	(319)**	(319)	(345)

*Till the year of the verification.

** Operated together with CFC-11 in a combined production line.

Monthly CFC Production and Raw Material Consumption

CFC-11 and CFC 12 Production and CTC Consumption

Month	No. of Opera-ting days*	CFC-11 Production	CFC-12 Production	CFC-12 for Feedstock **	CTC Consump-tion for CFC-11	CTC Consump-tion for CFC-12	CTC Consump-tion for feedstock CFC 12	Total CTC Consump-tion for all CFC-12***	CTC/ CFC-11 Ratio	CTC/ CFC-12 Ratio	CTC Opening Stock	CTC Procured/ Added	CTC Sold Out and other usess	CTC Closing Stock
Jan	16.0	185.59	346.04	-	230.23	487.53	-	487.53	1.241	1.409	1,645.23	954.41	290.48	1,591.40
Feb	37.0	460.12	799.11	-	564.09	1,112.64	-	1,112.64	1.226	1.392	1,591.40	1,808.39	278.02	1,445.04
Mar	30.0	373.46	659.09	9.90	462.70	927.40	13.93	941.33	1.239	1.407	1,445.04	1,574.46	350.77	1,264.71
Apr	30.0	417.46	617.38	22.50	509.96	856.54	31.22	887.75	1.222	1.387	1,264.71	1,313.10	173.25	1,006.85
May	30.0	418.70	679.20	14.40	514.81	948.44	20.11	968.55	1.230	1.396	1,006.85	1,163.84	211.75	475.58
Jun	29.0	311.32	641.55	11.21	383.12	896.66	15.67	912.33	1.231	1.398	475.58	1,372.76	211.30	341.59
Jul	31.0	239.21	653.52	-	291.64	904.88	-	904.88	1.219	1.385	341.59	1,162.60	93.00	214.68
Aug	30.0	262.77	526.91	-	324.77	739.62	-	739.62	1.236	1.404	214.68	1,367.39	70.75	446.93
Sept	29.0	372.53	625.70	-	459.12	875.79	-	875.79	1.232	1.400	446.93	1,902.38	218.00	796.40
Oct	25.0	290.51	473.99	-	360.52	668.06	-	668.06	1.241	1.409	796.40	1,172.60	211.00	729.42
Nov	29.0	343.29	678.85	-	419.39	941.88	-	941.88	1.222	1.387	729.42	1,336.87	195.07	509.94
Dec	29.0	272.53	704.69	-	332.69	977.00	-	977.00	1.221	1.386	509.94	1,074.94	26.00	249.20
	345.0	3,947.49	7,406.03	58.01	4,853.03	10,336.43	80.93	10,417.35	1.229	1.396	249.20	16,203.74	2,329.39	

* According to the notice of local statistics bureau, the production statistics of January 2003 was to be terminated at Jan 19 Starting from Jan 20 the production will be classified as happened in February. This is the reason for 37 operating days in February.

** Refers to CFC-12 produced for feedstock of CFC-13 production of Linhai Limin Chemical Plant (B8). Not used as ODS.

*** Including CTC consumption for both CFC-12 as ODS and CFC-12 as feedstock for Linhai Limin Chemical Plant.

Monthly CFC Production and Raw Material Consumption

CFC-11 and CFC 12 Production and HF Consumption

Month	No. of Opera-ting days*	CFC-11 Production	CFC-12 Production	CFC-12 for Feedstock **	HF Consump-tion for CFC-11	HF Consump-tion for CFC-12	HF Consump-tion for feedstock CFC 12	Total HF Consump-tion for all CFC-12***	HF/ CFC-11 Ratio	HF/ CFC-12 Ratio	HF Opening Stock	HF Procured/ Added	HF Sold Out and Other Uses	HF Closing Stock
Jan	16.0	185.59	346.04	-	30.01	127.22	-	127.22	0.162	0.368	463.91	1,133.33	852.47	587.54
Feb	37.0	460.12	799.11	-	73.42	289.87	-	289.87	0.160	0.363	587.54	2,086.12	1,546.56	763.81
Mar	30.0	373.46	659.09	9.90	59.70	239.60	3.60	243.19	0.160	0.364	763.81	1,785.16	1,640.10	605.98
Apr	30.0	417.46	617.38	22.50	67.36	226.47	8.25	234.72	0.161	0.367	605.98	1,654.90	1,175.12	783.68
May	30.0	418.70	679.20	14.40	68.12	251.23	5.33	256.55	0.163	0.370	783.68	1,725.79	1,556.38	628.42
Jun	29.0	311.32	641.55	11.21	50.61	237.10	4.14	241.25	0.163	0.370	628.42	1,649.33	1,463.21	522.69
Jul	31.0	239.21	653.52	-	38.55	239.38	-	239.38	0.161	0.366	522.69	1,672.93	1,448.24	469.46
Aug	30.0	262.77	526.91	-	42.61	194.23	-	194.23	0.162	0.369	469.46	1,476.65	1,199.80	509.47
Sept	29.0	372.53	625.70	-	60.10	229.46	-	229.46	0.161	0.367	509.47	1,693.33	1,420.55	492.69
Oct	25.0	290.51	473.99	-	47.30	175.46	-	175.46	0.163	0.370	492.69	1,450.54	1,361.23	359.24
Nov	29.0	343.29	678.85	-	55.12	247.79	-	247.79	0.161	0.365	359.24	1,336.12	1,119.48	272.98
Dec	29.0	272.53	704.69	-	43.94	258.31	-	258.31	0.161	0.367	272.98	1,754.59	1,263.08	462.23
	345.0	3,947.49	7,406.03	58.01	636.83	2,716.10	21.32	2,737.42	0.161	0.367		19,418.79	16,046.21	

* According to the notice of local statistics bureau, the production statistics of January 2003 was to be terminated at Jan 19.
Starting from Jan 20 the production will be classified as happened in February. This is the reason
for 37 operating days in February.
** Refers to CFC-12 peoduced for feedstock of CFC-13 production of Linhai Limin Chemical Plant (B8). Not used as ODS.
*** Including both CFC-12 as ODS and CFC-12 as feedstock for Linhai Limin Chemical Plant.

CFC Production Phase-out Verification (Complete Closure)
January 2003
(CFC-12, A 13 Guangdong Xiansheng)

A. Plant identification

Name of Enterprise : Guangdong Zengcheng Xiangsheng Chemical Co. Ltd**.**

Plant Ref. No.

Sector Plan # : 36

SRI # : **A 13**

Address of the Plant : Zhuchun Farm, P.C. 511370, Zengcheng City, Guangdong Province

Contact person(s) and Functional Title : Mr. Ouyang Shiming, General Manager

Telephone Number : 020-82854060

Fax Number : 020-82852815

Email Address

B. Verification

Team Composition : 3

Leader : 1

Name : F.A. Vogelsberg

Functional Title : Consultant, The World Bank

Member(s) : 2

Name : Wu Ning/ Hua Zhangxi

Functional Title : Financial Analyst/ Technical Consultant, The World Bank

Date of Plant Visit : January 17-18, 2003

Duration of Visit : 1 1/2 days (inclusive inspection of production in 2002 and complete closure in 2003 Annual Program)

C. Plant History

Date of Construction 1994								
ODS Products	No. of Lines	Capacity in Baseline	Production**					
			Baseline Year	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001 201	Year 5** 2002
CFC 11								
CFC 12	1	3,000	1,100	1,834	1,601	1,098	1,099.4	620.9
CFC 113								
CFC 114/115								
Raw Materials Production***								
HF								
CTC								

*The year from which data is used for approving the ODS production phase out project.
**Till the year prior to the verification.
***This applies to plants where production of either HF or CTC or both is integrated.

D. Plant Activity in the Year Verified

Plant for Complete Closure

No. of CFC-11/12 lines closed	:	1
Date of CFC production ceased	:	December 26, 2002
Date of dismantling completed	:	January 2, 2003
Verification of destruction of key components by	:	Guangdong Zengcheng City, Environment Protection Bureau. Certificate was issued on Mar. 25, 2003
Reactor tank(s) dismantled and destroyed	:	Yes
Control and monitoring equipment dismantled a destroyed	:	Yes
Pipes dismantled and destroyed	:	Yes
Utilities dismantled and destroyed	:	Yes
Evidence of destruction (photos or videos)	:	Yes, Available
Chance of resuming production	:	No
Assessment by the verification team to be included in the verification report	:	Closed completely. All the building in which the CFC-12 production unit was installed has been evacuated.

CFC Production Phase Out Verification (Complete Closure)
January 2003
(CFC-12, B 8 Zhejiang Linhai Limin)

A. Plant Identification

Name of Enterprise	:	Zhejiang Linhai Limin Chemical Plant
Plant Ref. Number	:	
Sector Plan #	:	22
SRI #	:	B8
Address of the Plant	:	Zhenxing Jie, P.C.317000, Linhai City, Zhejiang Province
Contact person(s) and Functional Title	:	Ms. He Geping, Vice General Manager
Telephone Number	:	0576-5177088
Fax Number	:	0576-5178055
E-mail Address	:	IHLM@mail.tzptl.zj.cn

B. Verification

Team Composition	:	3
Leader	:	1
Name	:	F.A. Vogelsberg
Functional Title	:	Consultant, The World Bank
Member(s)	:	2
Name	:	Wu Ning/ Hua Zhangxi
Functional Title	:	Financial Analyst/ Technical Consultant, The World Bank
Date of Plant Visit	:	Jan 20-21 2003
Duration of Visit	:	1 1/2 days (inclusive inspection of Production in 2002 and complete closure of CFC-12 production lines in 2003 Annual Program)

C. Plant History

Date of Construction 1983								
ODS Products	No. of Lines	Capacity in Baseline Year	Production**					
			Baseline Year	Year 1 1998	Year 2 1999	Year 3 2000	Year 4 2001	Year 5 2002
CFC 11								
CFC 12	2	3,000	1,365	1,658	1,188	1,364.7	1,364.9	886.9
CFC 13	1	50	27	26	27	27	7	27
CFC 114/115								
Raw Materials Production**								
CTC	No							
HF	No							

*The year from which data is used for approving the ODS production phase out project.
**Till the year prior to the verification.
***This applies to plants where production of either HF or CTC or both is integrated.

D. Plant Activity in the Year Verified

Plant for Complete Closure

No. of CFC-11/12 lines closed	:	2
Date of CFC production ceased	:	December 22, 2002
Date of dismantling completed	:	January 5, 2003
Verification of destruction of key components by	:	Zhejiang Linhai City Environment Protection Bureau
Reactor tank(s) dismantled and destroyed	:	Yes
Control and monitoring equipment dismantled and destroyed	:	Yes
Pipes dismantled and destroyed	:	Yes
Utilities dismantled and destroyed	:	Yes
Evidence of destruction (photos or videos)	:	Yes, Available
Chance of resuming production	:	No
Assessment by the verification team to be included in the verification report	:	The CFC-12 production units have been closed completely. All the building space in which the CFC-12 production units were installed have been evacuated and used for other new non-CFC production