

PROJECT DOCUMENT TEMPLATE

**Montreal Protocol Operations
Global Environment Coordination**

WORLD BANK - March 2002

EXCOM PROJECT DOCUMENT FORMAT

COVER PAGE

- 1. PROJECT OBJECTIVES:**
- 2. SECTOR BACKGROUND**
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- 4. PROJECT DESCRIPTION**
- 5. JUSTIFICATION FOR SELECTION OF ALTERNATIVE TECHNOLOGY**
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OORG TECHNICAL REVIEW

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- Annex 2 Calculation of Incremental Operating Costs (IOC)
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- Annex 8: For umbrella projects, brief information regarding each individual enterprise participating in the umbrella projects (annex 8.xx). Also provide capital costs, operating costs and baseline equipment information for each enterprise. (if annex 7 is not used, please make it annex 7).

Xth EXECUTIVE COMMITTEE MEETING OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL (cover page only)

PROJECT COVER SHEET

COUNTRY: **IMPLEMENTING AGENCY** The World Bank

PROJECT TITLE:

PROJECT IN CURRENT BUSINESS PLAN: **YES – [Projects must be part of the BP for the year]**

SECTOR:

SUB-SECTOR COVERED:

ODS and Substitute used (one line for each), ODS1: Before: After:
ODS2: Before: After:

ODS USE IN SECTOR:

Baseline (Average 1995-1997) ODP tonnes
Latest reported consumption for the sector: [Year]: ODP

ODS USE AT ENTERPRISE [Latest 12 month or 3 year Average] MT ODP

PROJECT IMPACT (As used by enterprise minus HCFC impact): MT ODP

PROJECT DURATION: [30 month - unless longer duration can be justified]

PROJECT COSTS: (total and full costs of the project)

Incremental Capital Cost	US\$
Contingency (10%)	US\$
<u>Incremental Operating Cost</u>	<u>US\$</u>
Total Project Cost	US\$

LOCAL OWNERSHIP: % **EXPORT COMPONENT:** %

REQUESTED GRANT (if above threshold “max within threshold”: **US\$**

IA SUPPORT COSTS: [13% of first US\$ 500,000 and 11% of the rest] **US\$**

TOTAL COST OF PROJECT TO MULTILATERAL FUND: **US\$**

COST EFFECTIVENESS: US\$ /kg ODP

COUNTERPART FUNDING: **[Letter must be attached]**

GOVERNMENT HCFC ENDORSEMENT LETTER (If applicable): **[letter must be attached]**

PROJECT MONITORING MILESTONES: **[Must be included]**

NATIONAL COORDINATING AGENCY:

PROJECT SUMMARY

EXAMPLE 1

[Name and type of products manufactured by the enterprise]. This project will facilitate the phase out of [ODS types and amounts used by the company by converting its production/use to [substitute(s)] technology. The company has [#] manufacturing plants, and markets its products in _____ with an x% export to non Article 5 countries. The company is an integrated factory that manufactures _____, as well as _____.

The company was established in [year], the present equipment was installed before July 1995/funding based on capacity installed before 1995. Necessary changes at the enterprise includes the following:

The total requested MLF funding of the project is US\$ XXX (maximum within threshold/equal total incremental costs of the project) based on an incremental capital costs of US\$ YYY and incremental operating costs of US\$ ZZZZ covering a [#] years period. After the completion of the project, equipment replaced will be dismantled and disposed as shown in annex 5.

IMPACT OF PROJECT ON COUNTRY'S MONTREAL PROTOCOL OBLIGATIONS (Sample Only)

Implementation of the project will help (COMPANY) to meet its 2005 reduction obligations in ODS consumption by eliminating the use of more than [] ODP tonnes per year of [specify ODS].

Prepared by:

Date:

Reviewed by:

Date:

PROJECT SUMMARY

Example 2:

[NAME] produces flexible molded and integral skin PUF for automotive and furniture industries and high density rigid PUF structural components. It will phase out 20 tonnes CFC-11 from flexible molded foam operations by converting to water blown technology and 16 tonnes and 8 tonnes CFC-11 from the integral skin and rigid foam respectively by switching to HCFC-141b. The company has one high pressure and one low pressure dispenser which are proposed to be retrofitted at total cost of US\$ 30,000 and 90 epoxy molds which are not conditioned. Other costs include mold heating system (US\$ 10,000), technology transfer, training and trials (US\$ 30,000) and incremental operational cost (US\$ 54,000).

IMPACT OF PROJECT ON COUNTRY'S MONTREAL PROTOCOL OBLIGATIONS:

When implemented as scheduled, CFC consumption eliminated from the foam sector which currently constitutes 50% of the country's CFC consumption, will contribute to the country's 1999 CFC consumption freeze

COMMENTS TO THE STANDARD COVER SHEET

Project Title:

The project title should include:

- (a) the name of the ODS to be phased-out
- (b) the substitute technology or substitute blowing agent selected
- (c) the name of the beneficiary enterprise

Examples of Project Title

The Title must include the technology used after conversion and name of the beneficiary company:

- (i) The phase-out of CFC-11 in the manufacture of flexible molded polyurethane foam through the use of water-blown technology at [NAME];
or
- (ii) Replacement of CFC-11 foam blowing agent with HCFC-141b and CFC-12 refrigerant with HFC-134a in the manufacture of domestic refrigerators at [NAME]; or

- (iii) Conversion of CFC-11 to water-blown technology in the manufacture of rigid polyurethane foam blocks at [NAME].

Project Status in Business Plan – The project can not be submitted unless part of the business plan for the year.

Sector/Sub-Sector - Indicate the sector as well as the sub-sector where applicable e.g. Foam/Rigid Polyurethane or Refrigeration/Domestic refrigeration.

ODS Use in Sector - Provide the reference year, e.g. ODS USE IN SECTOR [YEAR].

All article 5 countries are reporting sector consumption annually to the Secretariat, the project document must include the latest reported consumption figure for the sector.

As the concept of residual consumption has now been adopted, the coversheet should also clearly show the residual eligible consumption in the sector.

Project Impact - This should be the quantity of ODS to be actually phased out as a result of the project. It should be indicated even if the project impact is the same as ODS use at the enterprise. It is especially important when a transitional substitute with residual ODP is used. Please note that ODS impact and ODS consumption by enterprise must be based on the same period.

Status of Counterpart Funding (Decision 22/63) - Commitment letter must be attached to the project document. See annex 6.

Project Monitoring Milestones (Decision 23/7) – Without milestones, the project will not be reviewed by the Secretariat. Check yes if milestones for project monitoring have been included in the project document in accordance with the Executive Committee decision on monitoring and evaluation. See template for standard milestones.

Project Summary - This should include as much technical information as possible, e.g. ODS to be phased out (broken down by sub-sector, where there is more than one sub-sector), range of products, outline of baseline equipment used, equipment to be retrofitted or replaced and major costs associated with them. Other relevant information that could clarify the project and its needs.

The summary must specify aim of project, ODS phased out, substitute technology and implementation time frame.

Impact of Project on Country's Montreal Protocol Obligations (Decision 22/20) - Describe the impact of the project on the country's 1999 freeze.

1. PROJECT OBJECTIVES:

Brief description of the project, objectives and its implementation. Specify if the project has already been implemented and is retroactively funded. Also confirm that the project will totally eliminate the use of ODS (except ODP consumption related to HCFC) by the enterprise.

(UNEP/Ozl.Pro/ExCom/7/30)

2. SECTOR BACKGROUND:

1. Include recent growth trends, latest available official information on the sector and residual consumption in the sector. Ensure that the ODS used in the Sector reflects latest information submitted by the government to the Secretariat of the MLF. If sector background must reflect present status.

Please note that each country report annually (in September) its ODS consumption for the previous year to the MLF Secretariat. (UNEP/Ozl.Pro/ExCom/17/60)

2. Description of all major manufacturers in the sector.

(List of approved projects in the sub-sector)

Enterprise	ExCom Project Number	ODS impact	Completed (Y/N0)

Table as annex if more than 10 companies.

3. Current Status of Regulatory Action, policy changes, etc.:

Include restrictions on ODS use, or tariff or revenue measures recently announced.

4. Project on ODS consumption for 2005 50% MP reduction requirements:

Table on ODS consumption and estimated impact of approved projects to be provided by the country (UNEP/Ozl.Pro/ExCom/19/64). Due to normal growth of market and as the actual impact of ongoing projects are not known, no estimates should be given regarding remaining consumption. (anyhow covered by the annual consumption reporting by the country)

3. ENTERPRISE BACKGROUND

Following the Executive Committee's Decision 23/7, the project document must include the following baseline data for the enterprise as point of reference for determining the eligible funding and measuring the degree to which the project achieves its objectives.

A clear description of the enterprise's existing baseline equipment and ODS consumption for past three years must be included

The changes required and their eligibility must be provided in the project document. In line with the terminology used for monitoring and evaluation the section **Enterprise Background** should include all necessary **Enterprise Baseline Data**. Baseline data should be summarized in tables in annex 5.

In line with the Committee's decision, project proposals should include enterprise baseline information:

- 1. Brief introduction of the enterprise and its production:**
- 2. Percentage of domestic ownership
(UNEP/Ozl.Pro/ExCom/7/30 and UNEP/Ozl.Pro/ExCom/7/30 Annex VI)**
- 3. Export to non article 5 countries in percentage of total annual production**
Decision: UNEP/Ozl.Pro/ExCom/15/45
This includes percentage of export to Article 5 and Non-Article 5 countries. For both categories provide names of countries if possible.
- 4. Production details:**
 - (a) actual ODS consumption by enterprise for the three years prior to the submission of the project. Ensure consistency between production figures and ODS consumption data. Check ODS consumption data against typical average unit consumption. Also, if possible, check procurement records for e.g. 6 month to 1 year.
 - (b) In case of doubt about eligibility of the enterprise due the decision regarding enterprises established or expanding capacity after July 1995, it is necessary to verify ODS consumption before July 1995.
 - (c) For enterprises which was in operation before July 1995, but bought new equipment later, capacity and production level before July 1995 should be established and used. Newer equipment bought after July 1995 can normally handle both ODS and substitutes. However, minor retrofits might be necessary.

The enterprise baseline production information should include a table which shows the annual production over last three years. The table should include both production figures (e.g., number of units, kg or m³). For the refrigeration sector, number of units produced, ODS consumption, compressor model/sizes used for each refrigerator model produced should be provided. For foam projects, the present densities of foam products presently produced are essential.

The information could be presented in tables as shown below:

EXAMPLES:**Three year average :**

Foam projects

Items	1994*	1999	2000	2001	3 year average
Annual foam production (MT)					
CFCs procured**					
CFC consumption (MT)					

* If needed to verify production before July 1995. ** by invoices; *** by units produced

Domestic and commercial refrigeration projects

Items	1995	1999	2000	2001	3 year average
Total number of refrigeration units produced					
CFCs procured (CFC-11 and CFC-12)					
CFC-11 consumption					
CFC-12 consumption					

The ODS consumption must be adjusted for losses during production. Only CFC used for the products (plus normal losses [of 10%] based on industrial norms) counts when calculating the eligible CFC consumption. As information on ODS consumptions get more and more critical, the following information would be valuable. a) the way the enterprise procure and store ODS and substitutes. (E.g. small 25 kg containers, 1,000 tons containers, premixed polyols). b) how often do they buy ODS, c) what level of stock of ODS does the enterprise normally carry etc.

In order to determine actual consumption, the following table should be included in the PD

**Last Year (calendar year) of production
(Example from a refrigeration project document)**

Model	Description	Units Produced	Foam Operation		Refrigeration Operation	
			Foam/unit	CFC-11/unit	Compressor	CFC-12/unit
1852	185 liters, two doors	105,615	5,450 gm	570 gm	110 watts	180 gm
2002*	200 liters, two doors	11,931	5,680 gm	630 gm	110 watts	200 gm
2502	250 liters, two doors	26,848	5,960 gm	750 gm	120 watts	180 gm
2503	250 liters, three doors	9,243	5,960 gm	750 gm	120 watts	180 gm
<u>3102</u>	<u>310 liters, two doors</u>	<u>13,529</u>	<u>6,420 gm</u>	<u>810 gm</u>	<u>120 watts</u>	<u>190 gm</u>
3503	350 liters, three doors	10,030	6,810 gm	860 gm	140 watts	190 gm
3504	350 liters, four doors	1,244	6,980 gm	880 gm	140 watts	190 gm
Total/Weighted Average		178,440	5,729 gm	647 gm	NA	182 gm

* Except for this model all other models are frost-free.

Verify the ODS consumption against ODS procured during the same period.

5. Baseline production equipment and machines:

- (a) all equipment to be replaced (and subsequently destroyed, de-commissioned or rendered unusable) or retrofitted, by model number, serial number and control, as pertinent. (This information together with (c), (d), and (e) should be provided in Annex V)
- (b) Supplier (local or international), model type and the year of manufacture
- (d) date of installation and commissioning of the equipment
- (e) Design capacity where applicable
- (f) Applicable national or international safety standard; the baseline safety at the enterprise in the case of the use of hydrocarbon substitute technology.

Baseline equipment and disposal plan to be included in Annex 5.

4. PROJECT DESCRIPTION

Existing equipment should be briefly described in text (other details relevant to the proposal should be found in Annex 5). This should be followed by a description of the

necessary changes (new/retrofit as applicable). If costs of replacement is requested, justification must be provided in the project document.

The project description should describe inter alia:

- (a) current production process. (In foam projects, in the case of “hand mixing” process, for instance, it is not enough to just state that foam is produced by hand mixing. It is necessary to describe what operations take place during premixing of the formulations and foaming of the foam products).
- (b) proposed production process using the substitute technology (safety issues to be addressed).
- (c) relevant or critical process parameters of the current and proposed technologies and their effects.
- (d) relevant factors which result in production losses and gains and their effects.
- (e) actions to be taken on equipment.
 - (i) If equipment is to be retrofitted, what is involved in the retrofit?
 - (ii) If equipment is to be replaced, what is the basis for such replacement? What is the capacity of the replacement equipment and how is this justified?
- (f) cost estimates and the basis for such cost estimates.
- (g) technical upgrade to be addressed in accordance with ExCom decisions.

Plant layout: In some instances for larger projects, a schematic plant layout indicating production equipment and other facilities and their relative locations would clarify the project proposals. Whenever possible a schematic plant layout should be attached under Annex 5.

Example Baseline Situation

Capacity

The installed capacity as on date and as of the date of commencement of commercial production (February 1993) is about 300,000 units per annum. There are two production lines for pre-foaming operations (cabinet seal and liner assembly) and two production lines for foaming & post-foaming operations (cabinet and door foaming and refrigeration circuit assembly and testing.). The nominal capacity of each production line is about 500 units/8-hour shift. In 1996, during a plant re-layout, two new drum units for door foaming were installed, replacing the earlier 40 Nos. carousel-mounted door foaming fixtures. Also, one of the refrigeration circuit assembly lines, which was earlier located on the first floor level was moved to the ground floor and some new equipment added (details follow in relevant sections).

Foam Operation

Chemical Storage : Incoming polyurethane chemicals and CFC-11 are stored in drums and cylinders respectively, in a separate air-conditioned area. Chemicals are procured from [NAME].

Premixing Station : The blending of CFC-11 with polyol is carried out in a batch-type mechanical pre-mixer (make Cannon, 1992), comprising of a storage-cum-mixing tank (1000 liters capacity) fitted with an agitator, level control, valves fittings and temperature control system. The polyol-CFC-11 blend and MDI are fed to the two foam dispensers from this pre-mixing system from a distance of about 5 m.

Refrigeration Operation

[NAME], presently procure hermetic compressors for all their models, from [NAME], a sister enterprise of the [NAME] group, as per the details earlier stated. The compressors are supplied complete with lubricant. There were two refrigeration assembly lines (installed February 1993), one on the ground floor and the other on the first floor. The assembly line on the first floor was shifted to the ground floor during a factory re-layout in 1995/96. At that time it was also upgraded with the addition of some equipment. The lines on date are as described below :

Evacuation: The evacuation is carried out with a total of 93 vacuum pumps as below :

- Line 1 : 52 Nos, make [NAME], capacity 325 lit/min (1992)
- Line 2 : 41 Nos, make [NAME], model E2M18, capacity 342 lit/min (1996)

Charging : The charging is carried out with two automatic charging units as below :

- Line 1 : 1 No., make [NAME], model [NAME] (December 1992)
- Line 2 : 1 No., make [NAME], model [NAME] (June 1995)

Conversion

[NAME], propose to phase out the usage of CFC-11 and CFC-12 in its manufacture of domestic refrigerators, by converting the foam operations to HCFC-141b based systems and refrigerant operations to HFC-134a. The conversion technology and expertise will be partly acquired from [NAME], and partly developed in-house with the assistance of chemical and equipment suppliers.

Foam Operation

The use of HCFC-141b as an alternative blowing agent for the insulation will result in the following :

New formulations suitable for HCFC-141b will be required. These are commercially available from indigenous as well as foreign chemical suppliers. Preliminary trials indicate that different formulations for the doors and for the cabinets will be required for optimum foaming.

Refrigeration operation

The conversion to HFC-134a as the replacement for the refrigerant, will involve the following changes :

- a) Compressors suitable for HFC-134a will be required [NAME], proposes to outsource the required HFC-134a compressors which are expected to be available at a higher cost than the present CFC-12 compressors.
- b) The chemical stability of HFC-134a and of the synthetic lubricants compatible with HFC-134a, is highly sensitive to moisture and impurities in the system, as compared to that with CFC-12. The evacuation/charging process for HFC-134a and polyolester lubricant will need to ensure the required level of cleanliness and dryness in the system.

5. JUSTIFICATION FOR SELECTION OF ALTERNATIVE TECHNOLOGY

[Standard text for the different sector available and will be circulated separately].

The main issue is the use of HCFC in new projects.

If relevant, the issue of conversion to transitional substitutes such as **HCFCs** (UNEP/Ozl.Pro/ExCom/19/64 and UNEP/Ozl.Pro/ExCom/20/72) must be fully addressed and the full justification for choosing HCFC must be included. The enterprise must verify that it has received full information and has made the decision should be explained:

Technical justification, E.g. quality of the end product, able to handle with existing equipment, safety aspects

Costs justification: E.g. lowest costs, costs of converting to a non ODS at a later stage, funding insufficient to cover conversion to hydrocarbon not possible within the present threshold

Final conversion to a non ODP: The enterprise shall commit to pay final conversion to a non ODS. Present expectation on how and when will the enterprise convert from HCFC to a non ODS substance and what will be the final solution should be given.

A suitable language could be as follows:

“The enterprise has been fully informed of the available technical options, They have also been informed that HCFCs are transitional substances. They have also been informed that under the present rules of the Multilateral Fund, they will not be able to seek additional funding from MPMF at a later date to convert to a zero-ODP technologies. Based on the above, the enterprise has decided to convert to HCFC”.

6. PROJECT COSTS

6.1 Total Project Cost

The full project costs should be stated, not only what is eligible within the present thresholds. Make reference to annex 1, 2 and 3.

Where relevant (as for salvage costs), exchange rate used should be cleared with the task manager.

Technical upgrade should be considered in the capital cost requested. The baseline information in Annex 5 should provide sufficient information to evaluate and justify the proposed costs. (UNEP/Ozl.Pro/ExCom/18/75). If equipment more than 10 years old a 10% reduction per year should be applied. See ExCom decisions on technical upgrade.

Only plants that started production before July 1995 are eligible for funding under the Multilateral Fund. If the enterprises have bought new equipment after July 1995, the pre-July production baseline capacity should be established and funding request should be based on that the 1995 baseline. (IOC calculation and ODS consumption should also be based on the pre-July 1995 level). (UNEP/Ozl.Pro/ExCom/20/72). See Annex 5

6.2 Calculation Of Incremental Operation Cost

Must be based on the last year (12 month) of production or the average of the last three years of production. (UNEP/Ozl.Pro/ExCom/16/20)

Incremental operating costs should be calculated for the full period (e.g. 6 month for domestic refrigeration sub-sector, 2 years for rigid PU foam and commercial refrigeration sub-sector, 4 years for flexible foam, solvent and aerosol sectors etc).as required by the ExCom guidelines, even if it means that the present threshold value is exceeded.

See Annex 2.

6.3 Cost Effectiveness (CE)

The costs effectiveness is calculated based on the **requested MLF funding divided by the ODP impact of the project**. See Annex 3

6.4 Proposed Multilateral Fund Grant

The requested funding should address percentage of ownership and share in output of exports to non- Article 5 countries.

N.B. The financial agent's fee is an internal World Bank matter and must not be included in calculating the proposed grant and must not appear on the coverpage.

7. PROJECT IMPLEMENTATION

The implementation schedule should include provisioning for MPEC approval, Appraisal and Sub Grant Agreement signing. It can accordingly be expanded to a 36-month time frame, though project activities can be detailed as realistically expected. First disbursement is critical as a performance indicator for the project and demonstrates that the enterprise has taken action to implement the project. The time table should indicate when the first disbursement is scheduled, with a footnote indicating aim of disbursement.

7.1 Milestones For Project Monitoring

In conformity with the Executive Committee's decision 23/7 on standard components on monitoring and evaluation, prescribed milestones for project monitoring should be provided in project proposals in addition to existing requirements. The following project milestones for project monitoring are required to be indicated by the number of months from the project approval until:

TASK	MONTH AFTER EXCOM APPROVAL OF THE PROJECT (Exact number of month after EC approval)
Approval of the project	0
Grant agreement submitted to beneficiary	1 month
Grant agreement signature	4 month
Bids prepared and bid requested	9 month
Contracts awarded	12 month
Equipment delivered	24 month
Installation completed	26 month
Commissioning by suppliers and trial runs	29 month
De-commissioning and/or destruction of redundant baeline equipment	30 month
Submission of project completion report (PCR); (the project is not completed before the PCR is submitted to ExCom)	36 month

8. PROJECT IMPACT

The description of the project impact should be modified to include the impact of the project on the country's ODS phase-out obligations. Currently it is required to discuss the impact of the project on the 1999 consumption freeze. A summary of this impact should be provided in the Sector Background, in the Project Summary box and in Annex 3.

OORG TECHNICAL REVIEW

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ANNEX 1

INCREMENTAL CAPITAL COSTS

Item	Unit Cost	Quantity	Requested Cost
Equipment costs			
A: Sub-total			
Technology transfer costs			
Technology transfer costs			
Trials			
Testing			
Training			
B: Sub-total			
Total project capital costs (A+B)			
Contingency (10%)			
Total incremental capitalcosts			

ANNEX 2

Chemical and other IOC cost components	Before conversion (USD/kg)	After conversion (USD/kg)
CFC-11		
CFC-12		
CFC based Compressors		
Cyclopentane		
HCFC-141b		
HFC-134a		
HFC-134a compressors		

INCREMENTAL OPERATING COSTS

Component	Before Conversion			After Conversion		
	Unit Consumption (kg/Unit)	Price (\$/kg)	Cost per Unit (\$/unit)	Unit Consumption (kg/Unit)	Price (\$/kg)	Cost per Unit (\$/unit)
Foam Part						
MDI						
Polyol						
CFC-11						
MDI						
Polyols						
Substitute blowing agent (HC)						
Total						
IOC per unit						

Refrigeration Part						
Component	Before conversion			After conversion		
	Unit Consumption (kg/Unit)	Price (\$/kg)	Cost per Unit (\$/unit)	Unit Consumption (kg/Unit)	Price (\$/kg)	Cost per Unit (\$/unit)
CFC-12						
CFC-12 based compressors						
Sieves						
Evaporators						
Substitute refrigerant (HFC-134a)						
Compressor						
Sieves						
Evaporators						
Total						

Requested incremental operating costs

Item	Requested
Number of unit produced (annually)	
Incremental costs per unit (USD/kg)	
Duration	
Total IOC, NPV	

** IOC for the number of month specified by the ExCom guidelines for the sector.

Justification for incremental costs requested:

1. *Compressor* : Based on the recent decision by ExCom, IOC for compressors are US\$ 2.50/unit
2. *Capillary Tube*: This has to be about 1 m longer for HCF-134a domestic systems compared to CFC-12 systems.
3. *Foam*: As described in Table I (page 3), foam consumption per unit varies from 4.76 kg per unit to 7.80 per unit, for a total consumption of 2175 MT, giving an average consumption of $(2,175,000 / 409,800)$ 5.31 kg per unit. [NAME] had previously used densities of 31 kg/m^3 , but has been requested by Matsushita to work with densities above 35 kg / m^3 . The density increase should be consistent with the OORG report on foam densities of July 2000.

ANNEX 3
COST EFFECTIVENESS

Base line consumption - ODP Impact of the project				
ODS Substances and substitutes	Actual year	ODP	Consumption (kg)	ODP (kg)
Total ODP before conversion		1.0		
CFC-11:				
Total ODP:				
Total ODP after conversion				
HCFC, HFC, Hydrocarbon, etc				
Total ODP:				
ODP Impact of project (taking into account HCFC)				
Remaining ODP consumption:				

Calculation of Cost Effectiveness			
Project costs	Requested		
A. Incremental Capital Costs			
B. Contingency			
C. Incremental Operating Costs			
D. Total Incremental Project Costs (A + B + C)			
Adjustments			
E. Adjustment for Non-Article 5 ownership		%	
F. Adjustment for export to non Article 5 countries		%	
G. Adjustment for technical upgrade			
H. Total adjustment (E+F+G)			
I Total incremental costs (D-H)			
Requested MLF funding			
J. MLF funding			
*State if the maximum funding is requested with the threshold			
ODP impact			
K: ODP impact of the project			
Cost Effectiveness			
L. Actual costs effectiveness of the project (I/J)		US\$/kg/y	
M. Threshold for Sector		US\$/kg/y	

ANNEX 4**ENVIRONMENTAL ASSESSMENT**

The following licenses and approvals will be asked for. If relevant, should address the following: a) HFCs GWE impact, b) Additional energy consumption, c) Waste water handling d) Justification for the use of HCFCs. e) has all the necessary consents such as pollution control approval etc. for its existing operations. Modifications, if any, shall be applied for as and when necessary.

The use of **HCFC**-shall be justified and cost estimates for non-ODS/non-HCFC alternatives done in accordance with ExCom decisions on the use of HCFC as a transitional substance.

The use in each project shall be endorsed by the Ozone Unit **BEFORE** submission of the project to the secretariat.

ANNEX 5

ENTERPRISE BASELINE INFORMATION AND DISPOSAL PLAN

List of equipment to be rendered unusable/retrofitted		Implementation of disposal plan			
CFC based Equipment	Description/ specification	Type of action*	Planned date of disposal	To be implemented by**	To be certified by

* E.g. reused, retrofitted, to be rendered unusable for CFC uses, to be scraped

** Provide name of organization

*** Provide name of organization.

ANNEX 6

COMPANY LETTER OF COMMITMENT

Modify as necessary.

_____ ("COMPANY"), represented by _____, hereby confirms having received a copy of an ODS phaseout project, prepared on its behalf and on behalf of the Government of (COUNTRY) by the World Bank. (COMPANY) hereby acknowledged the following:

- a) It agrees that the World Bank will submit this project to the Executive Committee of the Multilateral Fund of the Montreal Protocol (MPTC) with the objective to receive funding as described in the project document, for which (COMPANY) will be the beneficiary;
- b) It will completely phase-out the use of CFCs upon project completion.
- c) WHEN USING HCFCs as substitutes: It has been informed about all replacement technologies, and has independently chosen HCFC-141b as an interim solution in the rigid foam application, realizing that later conversion to a fully non-ODS substance at its own costs will be required; The reasons for this choice are 1) It is commercially available locally and reasonably priced. 2) It at least gives better insulation property when compared to other commercial materials. 3) Other rival competitors in same business are changing to FCFC 141b. 4) The use of other HCFCs as gaseous needed an extensive and expensive equipment modifications.
- d) It will dispose of any equipment that has been replaced under this project in compliance with the stipulations that have been drawn up in the project document;
- e) It will provide the necessary counterpart funding as given in this project document and necessary for the conversion. (Counterpart funding might be needed due to reduction of funding due to export to Non Article 5 countries, foreign ownership, technical upgrade and/or funding limitation due to the CE threshold)
- f) It will provide funds for items that are included in this project but are specifically excluded from funding by the Multilateral Fund of the Montreal Protocol (MLF) due to eligibility issues as well as for items included in this project and required for a successful completion but that, while eligible, exceed the available budget and contingencies;
- g) It will allow monitoring inspections by the World Bank or designate during project implementation and thereafter to verify proper implementation and subsequent operation without the use of CFCs.

(DATE)

(NAME OF OFFICER)

ANNEX 7

National Ozone Unit endorsement of the use of HCFC as a transitional substance for the project

World Bank User
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