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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
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**PROJECT PROPOSAL: KOREA (DPR)**

This document consists of the comments and recommendations of the Fund Secretariat on the following project:

Solvent

- Conversion of metal cleaning processes from CTC solvent to TCE vapour degreasing at Ceramic Tools Factory (CTF) UNIDO

**PROJECT EVALUATION SHEET  
KOREA, DPR**

SECTOR: Solvent ODS use in sector (1998): 1386 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a US \$/kg

- (a) Conversion of metal cleaning processes from CTC solvent to TCE vapour degreasing at Ceramic Tools Factory (CTF)

Project Data	CTC
	Ceramic Tools Factory
Enterprise consumption (ODP tonnes)	19.80
Project impact (ODP tonnes)	19.80
Project duration (months)	12
Initial amount requested (US \$)	215,457
Final project cost (US \$):	
Incremental capital cost (a)	186,000
Contingency cost (b)	18,600
Incremental operating cost (c)	2,057
Total project cost (a+b+c)	206,657
Local ownership (%)	100%
Export component (%)	0%
<b>Amount requested (US \$)</b>	<b>206,657</b>
Cost effectiveness (US \$/kg.)	10.44
Counterpart funding confirmed?	
National coordinating agency	National Coordinating Committee for Environment
Implementing agency	UNIDO

<i>Secretariat's Recommendations</i>	
Amount recommended (US \$)	206,657
Project impact (ODP tonnes)	19.80
Cost effectiveness (US \$/kg)	10.44
Implementing agency support cost (US \$)	26,865
Total cost to Multilateral Fund (US \$)	233,522

## PROJECT DESCRIPTION

### **Conversion of metal cleaning processes from CTC solvent to TCE vapour degreasing at Ceramic Tools Factory (CTF)**

#### Sector background:

- |   |  |                    |
|---|--|--------------------|
| - | Baseline consumption of Annex A Group 1 substances (CFCs)* | 9,159.8 ODP tonnes |
| - | Latest available total ODS consumption (1997)              | Not reported       |
| - | Baseline consumption in the solvent sector (1995)          | 355 ODP tonnes     |
| - | Latest available consumption in the solvent sector (1998)  | 1,386 ODP tonnes   |

\* Baseline consumption of Annex A controlled substances refers to average of the consumption for the years 1995-1997.

1. It is reported in the project document that the consumption of CTC in the solvent sector may be about 1386 ODP tonnes, compared to a figure of 355 ODP tonnes reported in the country programme, approved in 1997. Of this figure, 399 ODP tonnes has been addressed by projects already approved. The relevant sections of the country programme need to be formally updated to reflect the sectoral consumption identified during project preparation. The 1999 freeze does not apply to CTC, the first control measure for which is an 85 percent reduction by 2005.

2. This project will phase-out the use of 19.8 ODP tonnes of CTC in metal-cleaning operations at the Ceramic Tools Factory, Pyongyang. The phase-out will be accomplished by replacing the carbon tetrachloride currently used with trichloroethylene (TCE) vapour degreasing technology. The project will provide one vapour degreasing machine, which includes solvent recycling and vacuum drying, at a cost of US \$140,000. A solvent recovery unit for extracting waste materials (US \$15,000) and some safety protection accessories are also included in the project budget. The project has incremental operating costs of US \$2,057 arising from additional electricity and the higher cost of the new solvent. The factory is located in a city with a large number of factories in the metals and machinery sector and the project document states that the project is intended to create a focal/learning point for these other factories.

## SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

### **COMMENT**

1. The capital costs were discussed with the implementing agency (UNIDO) and minor adjustments made on the basis of cost elements established in previous CTC phase-out projects for Korea.

**RECOMMENDATION**

1. The Fund Secretariat recommends blanket approval of the project with associated support costs at the funding level shown in the table below:

	<b>Project Title</b>	<b>Project Funding (US\$)</b>	<b>Support Cost (US\$)</b>	<b>Implementing Agency</b>
(a)	Conversion of metal cleaning processes from CTC solvent to TCE vapour degreasing at Ceramic Tools Factory (CTF)	206,657	26,865	UNIDO

2. Additionally, the relevant parts of the country programme should be updated by the agency which prepared it (UNEP) to reflect the CTC consumption in the sector identified during preparation of this and previous solvent projects in DPRK.