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Executive Committee of
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Implementation of the Montreal Protocol
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PROJECT PROPOSAL: YUGOSLAVIA

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

Solvent

- Replacement of CFC-113 as solvent for dialyzer cleaning by water and steam at Hemomed Ltd. — UNIDO

PROJECT EVALUATION SHEET
YUGOSLAVIA

SECTOR: SOLVENT ODS use in sector (1995): 50 ODP tonnes

Sub-sector cost-effectiveness thresholds: CFC-113 19.73 US $/kg
TCA 38.50 US $/kg

Project Title:
Replacement of CFC-113 as solvent for dialyzer cleaning by water and steam at Hemomed Ltd.

Project Data	**CFC-113**
	Hemomed
ODS phase-out (ODP tonnes)	54.6
Proposed project duration (months)	6
Incremental capital cost (US $)	1,751,145
- including contingency (%)	Nil
Incremental operational cost (US $)	(11,919)
Total project cost (US $)	1,739,226
Local ownership (%)	70
Export component (%)	nil
Amount requested (US $) {Original}	876,062
{Revised}	608,729
Cost effectiveness (US $/kg)	11.15
National Coordinating Agency	Federal Ministry for Development, Science & Environment
Implementing Agency	UNIDO
Technical review completed?	Yes

Secretariat's Recommendations:	
Amount recommended (US $)	608,729
Project impact (ODP tonnes)	54.6
Cost effectiveness (US $/kg)	11.15
Implementing Agency support cost (US $)	79,135
Total cost to Multilateral Fund (US $)	687,864

PROJECT DESCRIPTION
(Provided by UNIDO)

Replacement Of Cfc-113 As Solvent for Dialyzer Cleaning by Water and Steam at Hemomed Ltd.

1. The project seeks retroactive funding for the phaseout 54.6 ODP tonnes of CFC-113 used by the enterprise in 1995 for the cleaning of dialysis fibers and components.

2. The cleaning process was used to remove isopropyl myristate and glycerin from the fiber surface. Rinsing of dialyzer fibers with CFC-113 was performed on two rinsing carousels.

3. The freon distillation unit (distillation columns, 2 tanks, pumps, pipelines) was disassembled in 1996. The phaseout of ozone depleting substances was accomplished by replacing the solvent based cleaning methods with a heat cleaning process (hot air) and the use of water.

4. The major costs associated with the conversion were procurement of a carousel type water-based cleaning, rinsing and sterilizing machine complete with control systems (US $458,956), water preparation system (US $282,352), equipment for compressed air (US $211,765) and ancillary equipment (US $324,292). The project has annual operating savings of US $3,760.

5. The project involved the transfer of technology from Fresenius, Germany. Hemomed is seeking funding for 50% of the eligible project cost.

6. Project impact: The project was implemented in 1996 and contributed to Yugoslavia's 1999 freeze target of 925 MT.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. The impact of this proposal is to phase out the entire solvent consumption indicated in Yugoslavia's country programme (prepared by UNIDO). However, the project document notes that one other major user of CFC-113 (which also phased out in 1996) has now been identified.

2. Extensive details of the baseline equipment and the replacement equipment are provided in the project document. However, the original project proposal sought full costs for several major capital equipment items which related to parts of the process other than solvent cleaning, for instance the new sterilizing process. The eligibility of each item was discussed, and agreement reached on the costs which corresponded to the proportion of its use for hot air cleaning and water rinsing. Minor corrections were incorporated into the calculation of incremental operating savings.

RECOMMENDATION

The Fund Secretariat recommends blanket approval of the project with associated support cost at the funding levels indicated below:

Project Title	Project Cost US $	Support Cost US $	Implementing Agency
Replacement of CFC-113 as solvent for dialyzer cleaning by water and steam at Hemomed Ltd.	608,729	79,135	UNIDO