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Executive Committee of
the Multilateral Fund for the
Implementation of the Montreal Protocol

Twenty-second Meeting
Nairobi, 28-30 May 1997

PROJECT PROPOSALS: CROATIA

This document includes the comments and recommendations from the Fund Secretariat on the following projects:

Aerosol

- Phasing out CFCs at Pliva d.d. UNIDO

Foam

- Phasing out CFC-11 at Oriolik Co. flexible polyurethane foam plant UNIDO

SECTOR:	AEROSOL	ODS use in sector (1996)	15 ODP tonnes
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Sub-sector cost-effectiveness threshold: 4.4 US \$/kg

Phasing out CFCs at Pliva d.d.

Project Data	AEROSOL
	Pliva d.d. Aerosols
ODS phase-out (ODP tonnes)	10.6
Proposed project duration (Yrs)	1.17
Incremental capital cost (US \$)	179,500
Contingency (%)	10
Incremental operational cost (US \$)	(64,577)
Total project cost (US \$)	114,923
Local ownership (%)	100
Export component (%)	0
Amount requested (US \$) {Original}	\$114,923
{Revised}	89,779
Cost effectiveness (US \$/kg)	8.47
National Coordinating Agency	State Directorate for Environment
Implementing Agency	UNIDO
Technical review completed?	Yes

Secretariat's Recommendations:	
Amount recommended (US \$)	89,779
Project impact (ODP tonnes)	10.6
Cost effectiveness (US \$/kg)	8.47
Implementing Agency support cost (US \$)	11,671
Total cost to Multilateral Fund (US \$)	101,450

PROJECT DESCRIPTION

1. Pliva, the largest pharmaceutical and cosmetic manufacturing company in Croatia, is currently consuming 15 tonnes of CFCs as aerosol propellant, 10 tonnes of which were used in cosmetic products and 5 tonnes in pharmaceutical products.
2. The proposed project will result in the complete phase-out of CFCs used in the production of cosmetic aerosols, when it becomes operational in mid 1998. Thus, this project is considered by the Government as a cost-effective contribution towards meeting the 1999 freeze target.
3. The project will convert the CFC filling line to hydrocarbon aerosol propellant (HAPs) for the manufacture of cosmetic products. The aerosol filling process under operation utilises one automatic filling machine and one automatic water bath.
4. Conversion to HAPs entails installation of hydrocarbon gas storage and purification systems, safety and fire protection systems, including leakage control of the manufactured products. Conveyor system, explosion-proof lighting and ventilation systems are also requested.
5. Technical assistance will be provided for performance and supervision of engineering designs, equipment installation and commissioning of the plant. Training in production, quality control and safety procedures will also be provided.

COMMENTS

1. In 1992, the enterprise used 250 tonnes of CFCs for the production of about 4 million aerosol products. Due to internal conflicts in the country, the production volume became substantially reduced. The average annual consumption of CFCs for the period 1994-1996 amounted to 29.0 tonnes used for the production of 415,000 cosmetics aerosol products.
2. In order to contribute to meeting Croatia's obligations under the Montreal Protocol, Pliva decided to substitute some of the trademark aerosol products with manual pump systems. Since the new products have not been accepted by consumers, the company is switching back to propellant-based products.
3. The original project proposal submitted by the Government of Croatia through UNIDO, was to convert the entire production line at Pliva, consisting of air fresheners, hair sprays, deodorants and insecticides, with a total CFC consumption estimated at 29 tonnes.
4. The Fund Secretariat and UNIDO discussed the eligibility of the conversion of the entire production line at Pliva, in light of decisions adopted by the Executive Committee, and agreed that only the filling line producing cosmetic products consuming 10.6 tonnes of CFCs was eligible since the other products have already been converted to a non-ODS technology. Subsequently, UNIDO reviewed the project proposal covering only the conversion of the cosmetic products line.

5. The capital costs of conversion are US \$114,500 which include the basic equipment required to convert to HAPs technology. The operational savings (NPV) for four years are US \$24,721.

6. The enterprise will finance costs associated with civil works in connection with installation of a LPG tank and purification system, establishment of a quality control laboratory, and a deluge system, estimated at US \$310,000. The Secretariat has not reviewed these costs, some of which would not be eligible.

RECOMMENDATION

1. The cost effectiveness of the revised project is US \$8.47/kg above the threshold value (US \$4.40/kg). Taking into consideration that Croatia is a low-ODS consuming country (consumption of 244 tonnes in 1996), and that the project will completely phase out CFC consumption used for the production of cosmetic products leading to the elimination of 67% of the CFCs used in the aerosol sector, the Fund Secretariat recommends approval of the project at the funding level indicated below:

<u>Project Title</u>	<u>Project Cost</u> <u>US \$</u>	<u>Support Cost</u> <u>US \$</u>	<u>Implementing</u> <u>Agency</u>
Phasing out CFCs at Pliva d.d.	89,779	11,671	UNIDO

SECTOR:	Foams	ODS use in sector (1996):	25 ODP tonnes
Sub-sector cost-effectiveness thresholds:	Slabstock		6.23 US \$/kg

Phasing out CFC-11 at Oriolik Co. flexible polyurethane foam plant.

Secretariat's Recommendations:	
Amount recommended (US \$)	110,780
Project impact (ODP tonnes)	25
Cost effectiveness (US \$/kg)	4.43
Implementing Agency support cost (US \$)	14,401
Total cost to Multilateral Fund (US \$)	125,181

PROJECT DESCRIPTION

Phasing out CFC-11 at Oriolik Co. flexible polyurethane foam plant

1. Oriolik is the only company in the flexible foam sector in Croatia, manufacturing foam for the furniture industry. It operates a Viking maxfoam low pressure machine installed in 1977. Its installed capacity is 6,000 tonnes with current output at 2,500 tonnes.
2. It will phase-out the CFC-11 through substitution with methylene chloride. Capital cost of conversion includes the cost of methylene chloride pumping system (US \$15,000), process and cure area ventilation (US \$62,000) and safety devices (US \$5,000).

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. The Fund Secretariat and UNIDO agreed on the project concepts and costs.

Impact of the Project on Meeting the 1999 Freeze

2. The project document indicates that: "The implementation of the proposed project will contribute to the achievement of the freeze target of 1999 by the country, because the project will be completed in 1998 when 25 tonnes of CFC-11 will be phased out."

RECOMMENDATION

1. The Fund Secretariat recommends blanket approval of the project with the funding level and associated support costs as indicated below.

<u>Project Title</u>	<u>Project Cost</u> <u>US \$</u>	<u>Support</u> <u>Cost US \$</u>	<u>Implementin</u> <u>g Agency</u>
Phasing out CFC-11 at Oriolik Co. flexible polyurethane foam plant	110,780	14,401	UNIDO