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Executive Committee of
the Multilateral Fund for the
Implementation of the Montreal Protocol
Twenty-sixth Meeting
Cairo, 11-13 November 1998

PROJECT PROPOSAL: TUNISIA

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

Foam

• Phaseout of CFC-11 by conversion to liquid carbon dioxide technology in the manufacture of flexible polyurethane foam at Supermousse	World Bank

PROJECT EVALUATION SHEET
TUNISIA

SECTOR: FOAM		ODS use in sector (1996):	570 ODP tonnes
Sub-sector cost-effectiveness thresholds:		Flexible	US $6.23/kg

Project Title:

Phaseout of CFC-11 by conversion to LCD technology in the manufacture of flexible polyurethane foam at Supermousse.

Project Data	**Flexible**
	Supermousse
ODS phase-out (ODP tonnes)	93.5
Proposed project duration (months)	24
Incremental capital cost (US $)	583,500
- including contingency (%)	9
Incremental operational cost (US $)	(42,900)
Total project cost (US $)	540,600
Local ownership (%)	100
Export component (%)	0
Amount requested (US $) {Original}	540,600
{Revised}	
Cost effectiveness (US $/kg)	5.78
National Coordinating Agency	Agence National pour la Protection de l'Environnement (ANPE)
Implementing Agency	World Bank
Technical review completed?	Yes

Secretariat's Recommendations:	
Amount recommended (US $)	529,490
Project impact (ODP tonnes)	93.5
Cost effectiveness (US $/kg)	5.66
Implementing Agency support cost (US $)	68,834
Total cost to Multilateral Fund (US $)	598,324

PROJECT DESCRIPTION

Phaseout of CFC-11 by conversion to LCD technology in the manufacture of flexible polyurethane foam at Supermousse.

1. Information provided by the Agence Nationale de Protection de l'Environnement in the progress of implementation of Tunisia's country programme indicates the consumption of CFC-11 in 1997 to be 530 ODP tonnes, a 10% increase over the 1996 consumption. The flexible slabstock foam sector was reported by the World Bank in an earlier project (Sotim) submitted to the 25th Meeting to consist of six main manufacturers with two large ones (Sud Intermousse, Sotim) with consumption higher than 90 tonnes/year each. Projects approved for these six companies will result in the phase out of 329 ODP tonnes. Supermousse is the latest large consumer enterprise to be identified. With the approval of this project the remaining CFC-11 to be phased out in the sector will be 25 tonnes.

2. It is stated that the foam sector represents at least 47.4% of the total ODP being consumed in Tunisia. It is also stated that as the project will eliminate the use of 93.5 tonnes it is important in helping Tunisia to meet its obligations under the Montreal Protocol.

3. Supermousse is a 100% Tunisian owned company established in 1994. It produces flexible polyurethane foam for the local market using a Laader Berg continuous conventional machine. It produced 1,050 tonnes of mainly low density (14-16kg/m3) flexible foam in 1997/98 using 93.5 tonnes CFC-11.

4. The CFC-11 will be phased out through the use of LCD technology. The capital cost of conversion includes LCD system (US $370,000), LCD storage tank and transfer system (US $40,000), building modifications (US $30,000), license fee (US $50,000), technology transfer and training (US $30,000) and trials (US $15,000). The total capital cost amounts to (US $583,000). There are incremental operational savings of US $48,510.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. The cost of building modifications at US $30,000 (civil works) which exceeded the allowable limit of US $25,000 was adjusted, while an error in the incremental operational savings calculation concerning incremental maintenance cost was rectified.

2. The project costs have been agreed.

RECOMMENDATION

The Fund Secretariat recommends blanket approval of the Supermousse project with the funding level and associated support cost indicated below.

Project Title	Project Cost US $	Support Cost US $	Implementing Agency
Phaseout of CFC-11 by conversion to LCD technology in the manufacture of flexible polyurethane foam at Supermousse.	529,490	68,834	World Bank