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

Twentieth Meeting
Montreal, 16-18 October 1996

PROJECT PROPOSALS: ALGERIA

This document includes the Comments and Recommendations from the Fund Secretariat on the following projects:

Aerosol

• Phasing out CFCs at Vague de Fraicheur	UNIDO
• Phasing out CFCs at Laboratoire Bendi	UNIDO
• Phasing out CFCs at Ets Cophyd	UNIDO
• Phasing out CFCs at Ets Wouroud	UNIDO
• Phasing out CFCs at Etablissement Has Mohamed	UNIDO

PROJECT EVALUATION SHEET
ALGERIA

SECTOR: **AEROSOL** ODS use in sector (1993): 559 ODP tonnes

Sub-sector cost-effectiveness thresholds: 4.4 US $/kg

Phasing out of CFCs at: (a) Est Cophyd
(b) Laboratoire Bendi
(c) Etablissement Has Mohamed
(d) Est Wouroud
(e) Vague de Fraicheur

Project Data					
	Est Cophyd	**Bendi**	**Has Mohamed**	**Est Wouroud**	**Vague de Fraicheur**
ODS phase out (ODP tonnes)	15.0	19.2	22.5	47.0	51.4
Proposed project duration (Yrs)	1	1	1	1	1
Incremental capital cost (US$)	89,800	114,000	147,000	301,000	262,000
Contingency (%)	10	10	10	10	10
Incremental operational cost (US$)	(36,776)	(57,210)	(64,982)	(113,228)	(97,377)
Total project cost (US$)	53,024	56,790	82,018	187,772	164,623
Local ownership (%)	100	100	100	100	100
Export component (%)	-	-	-	-	-
Amount requested (US$) {Original	64,024	80,290	98,518	202,772	185,623
{Revised	53,024	56,790	82,018	187,772	164,623
Cost effectiveness (US$/kg.)	3.53	2.96	3.64	3.99	3.20
National Coordinating Agency	- Direction Générale de l'Environnement -				
Implementing Agency	UNIDO	UNIDO	UNIDO	UNIDO	UNIDO
Technical review completed?	Yes	Yes	Yes	Yes	Yes
Secretariat's Recommendations					
Amount recommended (US $)	53,024	56,790	82,018	187,772	164,623
Project Impact (ODP tonnes)	15.0	19.2	22.5	47.0	51.4
Cost effectiveness (US $/kg)	3.53	2.96	3.64	3.99	3.20
Implementing Agency support cost (US$)	6,893	7,383	10,662	24,410	21,401
Total cost to Multilateral Fund	59,917	64,173	92,680	212,182	186,024

PROJECT DESCRIPTION

1. The Algeria country programme identified two large enterprises (Asmidal and Enad) and 90 small plants manufacturing aerosol products, with a total CFC consumption of 559 tonnes. A project for the conversion of Enad plant to hydrocarbon aerosol grade propellant (HAP) was approved by the Executive Committee at its Eighteenth Meeting.

2. The Government of Algeria has submitted five new project proposals for replacement of CFCs with hydrocarbon propellant in aerosol plants. Implementation of these five projects together with the Enad project, will lead to the elimination of 305 tonnes of CFCs, equivalent to 55% of the total consumption in the sector.

3. For the remaining of the small and medium-sized aerosol fillers in the country, UNIDO is planning to develop an umbrella project to be submitted in 1997, in light of the decision on residual sectoral consumption and umbrella projects that the Executive Committee might take.

4. The five enterprises produce different sized presentations of deodorants and hair sprays, with the following annual production: Ets Cophyd, 136,500 cans; Bendi, 394,000 cans; Has Mohamed, 250,000 cans, Ets Wouroud, 940,000 cans; and Vague de Fraicheur, 970,000 cans.

5. The enterprises will convert to HAPs technology, using the open air filling room method. Conversion entails installation of an open air filling station, a water bath for testing filled cans, HAP storage and purification system, gas detectors and a fire control system. In addition semi-automatic gas filling machine with propellant handling system are requested for Has Mohamed, Est Wouroud and Vague de Fraicheur.

6. Technical assistance will be provided for performance and supervision of engineering designs, installation of equipment and commissioning of the plant, training in production, quality control and safety procedures.

SECRETARIAT'S COMMENTS

1. UNIDO reviewed the project proposals in accordance with discussions with the Fund Secretariat. Cost of some pieces of equipment, including the water baths, gas detection systems and LPG purification systems, were adjusted according to the size of the enterprises. Consultancy service fees were also adjusted as a lump sum to cover the services for the five aerosol plants.

2. The capital costs of conversion and the operating savings (NPV) for four years are as follows:

Enterprise	Capital costs (US$)	Operating savings (US$)
Est Cophyd	89,800	36,776
Bendi	114,000	57,210
Has Mohamed	147,000	64,982
Est Wouroud	301,000	113,228
Vague de Fraicheur	262,000	97,377

3. The enterprises will finance costs associated with land acquisition for gas storage and open air filling room, civil works including construction of the pump house and water storage tanks, estimated at US $440,000 for each Ets Cophyd and Bendi; US $350,000 for Has Mohamed, US $390,000 for Ets Wouroud, and US $500,000 for Vague de Fraicheur. The Fund Secretariat has not reviewed these costs, some of which would not be eligible.

SECRETARIAT'S RECOMMENDATIONS

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

Project	Project Cost (US $)	Support Cost (US $)	Implementing Agency
Phasing out CFCs at Est Cophyd	53,024	6,893	UNIDO
Phasing out CFCs at Laboratoire Bendi	56,790	7,383	UNIDO
Phasing out CFCs at Etablissement Has Mohamed	82,018	10,662	UNIDO
Phasing out CFCs at Est Wouroud	187,772	24,410	UNIDO
Phasing out CFCs at Vague de Fraicheur	164,623	21,401	UNIDO