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

Seventeenth Meeting
Montreal, 26-28 July 1995

PROJECT PROPOSALS: ALGERIA

This document includes the Comments and Recommendations from the Fund Secretariat.

PROJECT EVALUATION SHEET

COUNTRY OR REGION: Algeria

PROJECT TITLE: Investment project for phasing out CFCs at Enterprise Nationale des Detergents (Enad)

BUDGET: US \$1,407,835¹

INCREMENTAL COSTS: US \$1,407,835

ODS PHASE-OUT: 400 MT

COST EFFECTIVENESS²: US \$3.51 per kg. ODP saved

PROJECT DURATION: 18 months

IMPLEMENTING AGENCY: UNIDO

NATIONAL COORDINATING AGENCY: National Commission for Ozone, Ministry of Interior and Environment

TECHNICAL REVIEW COMPLETED: YES X NO

SECRETARIAT'S COMMENTS

1. The proposal is to replace the use of 400 tonnes of CFC with hydrocarbon aerosol propellant (HAP) in the manufacture of cosmetic products.
2. In reviewing the proposal the Secretariat identified the following issues: (i) lack of data on CFC consumption by type of product being filled at Enad; (ii) technology upgrade associated with the replacement of technology and equipment proposed was not considered in the calculation of incremental costs; and (iii) operational savings due to the use of a cheaper propellant were not included.
3. Enad used to produce an average of 5 million cans per year with a total CFC consumption of 400 tonnes. In 1989, production reached 7 million cans. In 1994-1995, due to

¹ Including contingency (10 per cent).

² Determined as the ratio of incremental costs to the estimated annual saving of ODP (\$/ODPkg).
For CFC-11, ODS=ODP.

the economic crisis and market downturn in Algeria, total production was only 3.2 million cans with a total CFC consumption of 150 tonnes.

4. UNIDO reviewed the proposal accordingly in discussions with the Secretariat, and adjusted the capital costs to US \$889,650 to reflect the current CFC consumption and technology upgrades.

5. UNIDO has also calculated the net operating savings on the basis of the difference in costs per can when filling with CFC or HAPs. Operating saving were estimated at US \$274,800 for a four-year period.

6. The adjusted cost-effectiveness value is US \$4.09/kg ODP.

SECRETARIAT'S RECOMMENDATIONS

7. The Secretariat recommends final approval of this project and funding in the amount of US \$614,850.

8. To approve US \$79,930 as support cost to UNIDO.

PROJECT EVALUATION SHEET

COUNTRY OR REGION: ALGERIA

PROJECT TITLE: Investment Project for Phasing Out CFCs
at Enterprise Nationale des Detergents
(ENAD)

BUDGET: US \$227,500

INCREMENTAL COSTS: US \$227,500³

ODS PHASE-OUT: 15 MT

COST EFFECTIVENESS⁴: US \$18.96 per kg. ODP saved

PROJECT DURATION: 1 year

IMPLEMENTING AGENCY: UNIDO

NATIONAL COORDINATING AGENCY: National Commission for Ozone

TECHNICAL REVIEW COMPLETED: YES X NO

SECRETARIAT'S COMMENTS

1. This proposal is for replacement of CFC-113 used in the manufacture of razor blades. It is the first proposal to come forward in this industrial sub-sector. The CFC-113 is used as the carrier solvent to spray a teflon coating on to the razor blades at the end of the manufacturing process.

2. The company operates two production lines. The first has been in production for some years and consumes 7 metric tonnes of CFC-113 per year for a production level of some 160 million blades per year. The second line has a potential capacity of some 200 million blades per year, but has just been installed and is only at the pilot production stage with production in 1994 of around 25 million blades. Total production for the plant in 1994 was 185 million blades. The ODS consumption of 8 metric tonnes at full production, claimed for the second line, is not eligible as it is based on the prospective consumption when the line reaches full production capacity, not the actual consumption in 1994.

³ Including contingency (10 per cent)

⁴ Determined as the ratio of incremental costs to the estimated annual saving of ODP (\$/ODPkg).
For CFC-113, ODP=0.8.

3. The implementing agency agreed with this analysis and withdrew the request for conversion of the second line. Project costs now sought are for the conversion of the first production line only.
4. The company proposes to replace the current proprietary teflon/CFC-113 mixture with a proprietary non-ODS mixture based on iso-propyl alcohol (IPA) as the solvent. IPA is flammable. No technology transfer fee is involved. However the supplier will only provide the new chemical product if the enterprise also purchases and installs new application equipment, that is, a designed-to-purpose automatic spray booth, to replace the automatic spray booth now used.
5. The technical reviewer suggested that water-based technologies, available from the same technology supplier either now or very soon, might be more cost effective. The implementing agency advises that if water-based technology were to be used, expensive drying techniques would be needed at a higher cost to avoid corrosion problems due to the carbon content in the steel.
6. There are no incremental operating costs. Inquiries with the implementing agency indicate that the enterprise is 100 per cent locally owned and does not export its production.
7. Project costs sought are for the purchase, installation and training for one only automatic spray booth. Total incremental costs are US \$109,900 giving a cost-effectiveness ratio for the project of US \$19.62/kg. The cost effectiveness threshold for the sub-sector is US \$19.73/kg.

SECRETARIAT'S RECOMMENDATIONS

8. The Secretariat recommends final approval of the project and funding in the amount of US \$109,900, plus 13% agency support costs for UNIDO of US \$14,300.