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

Nineteenth Meeting
Montreal, 8-10 May 1996

PROJECT PROPOSAL: INDONESIA

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

Foam

- Investment project for phasing out ODS at PT Naviri Kencana Perdana

UNIDO

PROJECT EVALUATION SHEET INDONESIA

SECTOR: FOAM ODS use in sector (1993): 1,025 ODP tonnes

Sub-sector cost-effectiveness thresholds: Integral skin US \$16.86/kg

Project Title:

Investment project for phasing out ODS at PT Naviri Kencana Perdana.

Project Data	Integral Skin
	PT Naviri Kencana Perdana
ODS phase-out (ODP tonnes)	47.8
Proposed project duration (Yrs)	1.5
Incremental capital cost (US\$)	629,750
Contingency (%)	10
Incremental operational savings (US\$)	(170,466)
Total project cost (US\$)	459,284
Local ownership (%)	100
Export component (%)	0
Amount requested (US\$) {Original	459,284
{Revised	
Cost effectiveness (US\$/kg)	9.62
National Coordinating Agency	Ministry of Environment
Implementing Agency	UNIDO
Technical review completed?	Yes

<i>Secretariat's Recommendations</i>	
Amount recommended (US \$)	377,382
Project impact (ODP tonnes)	47.8
Cost effectiveness (US \$/kg)	7.9
Implementing Agency support cost (US\$)	49,060
Total cost to Multilateral Fund	426,442

PROJECT DESCRIPTION

Investment project for phasing out ODS at PT Naviri Kencana Perdana.

1. Naviri Kencana Perdana (NKP) produces integral skin semi-flexible foam (ISSF) products for the automobile industry, which include door protection strips, arms and head rests. It also produces high resilience (HR) moulded foam for office chair seats and backs.

2. NKP's output of ISSF is 720 tonnes/year. It consumes about 48 tonnes of CFC-11 per year for the ISSF production.

3. The company operates two low pressure machines for the production of ISSF and one high pressure machine for HR moulded foam production using water blown technology.

4. The company proposes to phase out the use of CFC-11 by substitution with n-pentane as auxiliary blowing agent. This will require:

- replacement of the two low pressure dispensers with high pressure dispensers
- provision of storage and handling system for n-pentane
- provision of safety and fire protection infrastructure, including sprinkler system at the n-pentane storage tank, ventilation improvements at production and product storage areas, gas sensors and detector systems.

5. The capital cost of conversion relate to the cost of the above facilities and costs relating to technology transfer and training. This could be broken down as follows:

Production related equipment	US \$	225,000
Safety related equipment	US \$	225,000
Technology transfer related cost	US \$	55,000
Training (production and safety)	US \$	47,500

6. The total capital cost of the project was US \$629,750 including 10 per cent contingency. The project would incur incremental operational savings on account of lower price of n-pentane. The savings occurring from cessation of solvent flushing during the use of low pressure machines were also taken into account in the project cost calculation.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. The elements of the project costs were discussed between the Fund Secretariat and UNIDO and certain rationalizations of cost items were agreed to. These included:

- (a) Elimination of the training costs (US \$47,500)
- (b) Consolidation of the technology transfer related costs, i.e. costs for Expert in ODS (US \$15,000), Expert in Safety and Security (US \$15,000), Consultant for Ventilation Survey (US \$10,000) and Expert in Production (US \$15,000).
- (c) Technology transfer and training costs to be budgeted at US \$35,000.

2. UNIDO also agreed to reappraise the level of requirements and cost of the sensors and gas detector systems as well as the ventilation fans and duct work at the entire factory during project implementation, with the view to saving costs where feasible.

3. Consequently the total incremental capital cost (including 10 per cent contingency) was revised from US \$629,750 to US \$555,500, while the incremental operating savings were revised from US \$170,466 to US \$178,118, resulting in eligible project cost of US \$377,382

RECOMMENDATIONS

1. The Fund Secretariat recommends approval of the project with associated support cost and the funding level shown below.

	Project Cost US \$	Support Cost US \$	Cost Effectiveness US \$/kg.
Investment project for phasing out ODS at PT Naviri Kencana Perdana.	377,382	49,060	7.9

2. The approval is subject to the following condition:

- UNIDO will reappraise the level of requirements and cost of the sensors and gas detector systems as well as the ventilation fans and duct work at the entire factory during project implementation, and will report the result to the Executive Committee following implementation of the project.