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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: THAILAND

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

PROJECT EVALUATION SHEET

COUNTRY OR REGION:	Thailand
PROJECT TITLE:	Conversion to CFC-free technology in the manufacture of aerosol products at; a) Sanit & Sons Co. Ltd. b) Packserv Co. Ltd.
INCREMENTAL COSTS:	a) US $670,120 b) US $675,255
ODS PHASE-OUT:	a) 194 MT b) 155 MT
COST EFFECTIVENESS[1]:	a) US $3.45 per kg ODP saved b) US $4.36 per kg ODP saved
PROJECT DURATION:	a) 1.5 years b) 6 months
IMPLEMENTING AGENCY:	UNDP
NATIONAL COORDINATING AGENCY:	Department of Industrial Works
TECHNICAL REVIEW COMPLETED:	YES __X__ NO____

SECRETARIAT'S COMMENTS

1. The project proposal relates to the conversion of two aerosol contract filling plants from CFCs to hydrocarbon propellant (HAP). In total, 349 tonnes of CFCs will be phased out when the projects become operational.

2. In the last four years, Sanit and Sons has been progressively converting to HAP fillings. The project proposes to complete the phase out process in the plant by providing two small pneumatic aerosol filling machines (20-30 can/min), water bath for testing, an explosion proof gassing modular room, safety equipment and training.

3. After discussion with UNDP, requests for plant modification (move walls, ant-spark coat floors, ventilation, etc.), explosion proof lighting, piping and gas detection system costs were

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

PROJECT EVALUATION SHEET

COUNTRY OR REGION:	Thailand
PROJECT TITLE:	KRIENG THAVORN CONTAINERS CO., LTD. phaseout of the use of CFCs in the manufacture of rigid PUF foam for Thermoware
BUDGET:	US $505,000
INCREMENTAL COSTS:	Capital Costs: US $360,000 Operating Costs: US $145,000
ODS PHASE-OUT:	65 MT
COST EFFECTIVENESS[2]:	US $7.77 per kg. ODP saved
PROJECT DURATION:	1.5 years
IMPLEMENTING AGENCY:	UNDP
NATIONAL COORDINATING AGENCY:	Hazardous Substances Control Division Department of Industrial Works (DIW)
TECHNICAL REVIEW COMPLETED:	YES __X__ NO _____

SECRETARIAT'S COMMENTS

1. Krieng Thavorn manufactures insulated containers. In the current production process, CFC-11 is separately blended by hand with a pre-mixed system.

2. The company will phase out the use of CFC-11 by the use of all water blown technology. However, it intends in a short interim period to use HCFC-141b, while technical problems related to the all water blown technology are being addressed.

3. Capital cost of conversion relates to the cost of replacing the existing low pressure machines with those of high pressure. The project will also incur incremental operational cost. Following discussion between the Secretariat and UNDP, the material losses due to manual blending were taken into account in the calculation of operational costs by reducing the price of HCFC by equivalent percentage, resulting in over 50 per cent reduction in operational costs.

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

SECRETARIAT'S RECOMMENDATIONS

4. The Secretariat recommends approval of the project to be funded at the cost of US $430,000 and US $55,900 support costs.