



**United Nations
Environment
Programme**



Distr.
Limited

UNEP/OzL.Pro/ExCom/28/33/Add.1
28 June 1999

ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Twenty-eighth Meeting
Montreal, 14-16 July 1999

Addendum

PROJECT PROPOSALS: JORDAN

Please insert the attached Annex I at the end of document UNEP/OzL.Pro/ExCom/28/33.

Annex I

JUSTIFICATION FOR THE USE OF HCFC-141B

(Extracts from the Project Documents)

Justifications for the use of HCFC-141b are provided for the following two companies. Since they are identical the justifications for one of the companies are reproduced below.

- (a) **Phasing out of CFC-11 by conversion to HCFC-141b and CFC-12 to HFC-134a in manufacture of commercial refrigeration equipment at the second group of Jordanian Commercial Refrigerator Manufacturers**
- (b) **Phasing out of CFC-11 by conversion to HCFC-141b and CFC-12 to HFC-134a in manufacture of commercial refrigeration equipment at the Third Group of Jordanian Commercial Refrigerator Manufacturers**

Alternative blowing agents to replace CFC-11

Foaming Agent	Ozone Depleting Potential (ODP)
HCFC -141b	0.11
HCFC -142b	0.065
HCFC -142b + HCFC 22	0.06
HFC 134a	0
Cyclopentane	0

Suitable generally for domestic refrigerator production, the use of Cyclopentane blown is less widespread in commercial equipment. All US and many European manufacturers still use HCFC-141b, though a transitional substance under the terms of the Montreal Protocol.

Cyclopentane would be a suitable foaming agent to replace CFC-11 at these companies were it not for its acute flammability. The use of this substance would require considerable investment in new foaming equipment. Rigorous training in handling this dangerous substance has to be carried out to ensure that its introduction in a factory where no dangerous substances have hitherto been used does not give rise to a tragic accident. Since the factory is situated in a populated area the local authorities are reluctant to issue license for storage and application of Cyclopentane. Thus Jamal Yussef Workshop, Al-Amal Ref.Ind., Emad Hedjawi Workshop, Al-Besani Workshop, Aqaba Al-Eslah Workshop and Lebanon Workshop Companies have decided to avoid Cyclopentane technology and will adopt HCFC-141b as a replacement for foam blowing. The companies were informed that no further assistance will be made available by the MFMP for the phase out of the transitional HCFC- 141b at a later phase.