Workshop Report of the

Workshop on Available Alternatives for Cleaning and Flushing in lieu of HCFC 141 b as a cleaning agent used in Refrigeration and Air Conditioning Sector

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1. Background

Sri Lanka as a party to the Montreal protocol for the protection of Ozone layer is one of the most successful nations in the world in implementing its obligations. In 2007 Sri Lanka has been awarded the implementers award by the Secretariat of Montreal Protocol recognizing Sri Lanka’s success in implementation of Montreal Protocol, efficiently and effectively.

HCFCs has been classified as a class II substance in the control list of chemicals of the Montreal protocol due to its Ozone Depletion Potential (ODP) of 0.01 to 0.1. In order to accelerate the phasing out of HCFCs as per the advice and guidance of the Montreal protocol the UN agencies in particular countries assisted to prepare HCFC Phase-out management Plan (HPMP) as a priority requirement. Hence HCFCs phase out management plan (HPMP) in Sri Lanka has been launched on 31st March 2011 in order to facilitate the accelerated implementation of the HCFCs phase out requirements and to comply with the obligations in Sri Lanka, to freeze consumption of HCFCs from 1st of January 2013 total phase out by 2030 January.

As an accelerated programme in the HCFC’s phase-out schedule, HCFC 141 b has been identified as a chemical that could be phased out earlier time schedule and to be switched on for alternatives. HCFC 141 b is widely used as a solvent for cleaning purposes in electronics, glass, metal, textile, RAC servicing sectors and as a foam blowing agent in RAC manufacturing.

The workshop was aimed to promote alternative substances, technologies and practices used in the RAC service sector that serves the environment friendly, among the various stakeholders in this sector in Sri Lanka.
2. **Preparatory Work**

A concept note was prepared to initiate the workshop activities (Refer Annex I).

A paper advertisement (Refer Annex II) and an announcement in the web site of the National Ozone unit Sri Lanka were published in advance requesting interested participants to register with the NOU for the workshop. Further the stakeholders who were present at the previous HCFC phase out workshop, were invited.

Press release (Annex III ) has been issued in order to give the publicity and create awareness among the stakeholders, and general public about the importance of this event.

3. **Objectives of the Workshop**
   i. To obtain the collaborative assistance from the RAC sector personnel towards the implementation activities of HCFC Phase out management Plan (HPMP).
   ii. To make aware on the environmental impacts of HCFC 141b as a cleaning solvent
   iii. Introduce alternative chemicals / technologies for HCFC 141b
   iv. Safe use of solvents
   v. Demonstrate the cleaning of refrigeration/ air conditioning system with HCFC 141 b and its recommended alternatives

4. **List of Invitees**
   Representatives of UNDP, UNEP, the policy/ decision makers, technical personal representing various government, private sector organizations, consultants, engineers, trainers, the technical college authorities, the importers and suppliers who are directly involved in the refrigeration and air conditioning sectors in Sri Lanka.

5. **Workshop Agenda**

6. **Inaugural Session**
   **Lightening of the traditional oil lamp**
   Keeping the historical tradition, Mr B.M. U. D Basnayake, Secretary, Ministry of Environment, Ms Razina Bilgrami- Deputy country director Programme UNDP, Professor W.L Sumathipala- Senior Technical Advisor to the Ministry of Environment, Mr Janaka Gumnawardana-Director National Ozone Unit, Mr Asitah Senevirathne, Additional Secretary- Ministry of Industries & Commerce, Mr Anshu Kumar- Consultant UNEP, Mr ….. - Controller, Department of Import and Export Control, ….. were invited for the lightening of the traditional oil lamp to mark the commencing of the workshop.

   **Playing Ozone song and the video on Ozone depletion & Climate change**

   **Welcome speech**
Opening Remarks

Ms Rizina Bilgrami, Deputy Country Director Programme, UNDP made the opening remarks on behalf of the United Nations Development Programme which is the lead agency in ….

Ms Bilgrami conveyed her best wishes to Ministry of Environment, particularly National Ozone Unit for its performances, achievements, in implementing multilateral agreements of many the UNDP is a partner as implementing agency

Fig. 2: Lighting of traditional Oil Lamp

Fig. 3: Ms Razina Bilgrami, UNDP addressing the participants
Key Note Address

Key Note Address delivered by the Secretary Ministry of Environment, Mr B. M. U. D Basnayake stressed the importance of addressing the environmental issues for the well being of the present as well as the future generation. He further explained the responsibility or the role of the government in conserving the environment.

Objective of this workshop was presented by Mr Anshu Kumar who was the Key Resource Person. His presentation was based on basic technical facts of Ozone depletion, adverse effect of it, using HCFCs particularly HCFC 141 b for cleaning purpose. His presentation was very informative and was well received by the audience.
Vote of Thanks

Mr. M. M. Senevirathne, on behalf of the National Ozone Unit, Ministry of Environment expressed his sincere thanks to the ……. in the note of vote of thanks at the conclusion of the inaugural session of the workshop.

7. Technical Session I: Theoretical Session
Theoretical Session was conducted by Mr. Ansur Kumar, Consultant, UNEP explaining more on theoretical concepts of using HCFC 141 b. Two detailed presentations (Annex IV, Annex V) consisted mainly to explain the usages of HCFC 141 b and its alternatives, the safe use of alternatives to HCFC 141b. The information disseminated to the technical personnel who are directly involved and engaged in the air conditioning and refrigeration servicing sectors was beneficial.

The collaborative effort by providing the translations on the slide explanations in Sinhala language by Mr. M. M. Senevirathne, Consultant, National ozone Unit in parallel with Mr Anhu Kumar’s presentations to pass the knowledge most effectively even to the grass root level participants was advantageous through out the session.
8. **Technical Session II : Practical Session**

The expected outcomes of the practical session were briefed by the Director NOU. The demonstrations on environmental friendly alternatives to the HCFC 141 b was very productive and impressed by the technical persons who use HCFC 141 b for cleaning of refrigeration and air conditioning parts. The benefit received was tremendous. Participants were able to identify effective, economically viable alternatives such as Hexane and Methyl Chloride.

The importance of adopting good servicing practices, adopting the safety aspects throughout the maintenance process in RAC sector were stressed.

The participants were actively involved in the demonstration activities

The on hand practical experiences to the participants itself was a great opportunity to be familiarized with the modern…… The Questions and answer session was an opportunity to clarify some of the technical issues among the participants.

Finally Director, NOU has requested the implementers to join hand with the national effort in phasing out of HCFCs as early as possible. 75% of the participants agreed to stop HCFC 141 b as a cleaning agent immediately and rest to be complied before the end of 2013. This the success of the workshop and noteworthy to record.
Remarks

Secretary of the Ministry of Environment has appreciated and advices to follow as a token of…, the setup of the agenda items and specially the inaugural session with the audio visuals on the life protecting ozone layer and the general presentation discussing the background information for the workshop, the importance of ozone layer, the ozone depleting substances, Montreal protocol obligations on HCFCs phaseout programme making aware the participants thoroughly before reaching/beginning the technical session.

The daily newspapers and the TV channels highlighted the workshop as a main news item in their broadcasts.