

**Table II: Emissions During Phase I for Packaging One Million Tons of 'Lube Oil'**

For 1 Million Tons of 'Lube Oil'		Tin	HDPE
<b>Air Emissions</b>			
CO	Ton	1352.997	51.839
CO <sub>2</sub>	Ton	21721.094	107470.6
SO <sub>x</sub>	Ton	453.435	885.052
NO <sub>x</sub>	Ton	333.495	625.858
CH <sub>4</sub>	Ton	789.858	372.986
HCl	Ton	6.318	3.034
Dust	Ton	102.389	183.332
<b>Water Emissions</b>			
Suspended Solids	Ton	28.888	132.757
Chlorides	Ton	1038.517	21.494

**Table III: Emissions During Phase III for Packaging One Million Tons of 'Lube Oil'**

Emission	gm/km	Excess Emission for Tin Cans (kg)	HDPE Cans
CO <sub>2</sub>	781.0	199545.5	Taken as Basis
CO	4.5	1149.75	Taken as Basis
HC	1.1	281.05	Taken as Basis
NO <sub>x</sub>	8	2044.00	Taken as Basis
HC+NO <sub>x</sub>	9.1	2325.05	Taken as Basis
Particulates	0.36	91.98	Taken as Basis
Total Regulated Tail Pipe Emission	13.96	3566.78	Taken as Basis

## CONCLUSIONS

Though plastics are relatively newcomers, their use in packaging of milk/atta/lube oil commodities adheres to the basic tenets of sustainable development more than alternative materials like glass, jute, tin, if one considers the consumption of energy and emission of gases. An analysis of the comparable life cycle with conventional materials clearly tells that plastics are economically affordable, socially acceptable and environmentally effective.

From this study we can claim that the overall loss to environment from plastic pouches is less than that from alternative materials. The difference seems significant. The choice of product end-of-life (work) management even strengthens this assessment.

The need of the hour is educating the public of what to do with such waste packaging materials and how to dispose them for recycle – to lessen the stress on waste management and to give proper justice to resource management.

## MOEF ENVIS H.O. Team Visits ICPE

### Technical Committee on “Chemicals, Wastes and Toxicology” of Ministry of Environment and Forests (MOEF) visits ICPE-ENVIS Node

Dr. Indrani Chandrasekharan, Director (EI), Dr. R. K. Garg, Chairman, Expert Committee – ENVIS-MOEF visited ICPE-ENVIS Node on 19th March 2004.

Dr. Indrani Chandrasekharan made some observations and made suggestions regarding upgrading and enlarging of the ICPE website.

The visiting team appreciated the fact that ICPE-ENVIS Node had remarkable number of hits during the period Dec. 2003 and Jan.-Feb. 2004 and advised ICPE to try to analyse the type of information the visitors were seeking.

The team expressed satisfaction with the performance of the ICPE-ENVIS Node and indicated that MOEF will continue to support this Node.



From L to R: Shri K. G. Ramanathan, President, Governing Council, ICPE; Dr. R. K. Garg, Chairman, Expert Committee, ENVIS; Dr. Indrani Chandrasekharan, Director (EI), MOEF; Shri Vijay Merchant, Member, Governing Council, ICPE.