

INTRODUCTION

India Lead Zinc Development Association (ILZDA), in association with National Referral Centre for Lead Absorption in India (NRCLAI), St. John's National Academy of Health Sciences, Indian Battery Manufacturers Association, The Indian Institute of Metals, Vinit Enterprise and Mysore Thermo Electric P Ltd organized the above seminar which, by all accounts, turned out to be an informative and successful event. There was a participation of 90 delegates on the first day and 65 delegates on the second day representing the battery industry, recycling units, state pollution control board, research institutes, technical bodies, equipment suppliers etc., Sixteen technical papers were presented on health issues, environment protection and Lead recycling technologies through three technical sessions spread over two days. The highlight of the seminar was the Panel Discussion Session during the pre-lunch session on the first day when industry issues, govt's policies, future strategies etc., were discussed threadbare, to identify strategies for action.

The seminar was inaugurated by Mr J Alexandar, IAS & MLA, Chairman, Karnataka State Pollution Control Board (KSPCB) in the distinguished presence of Dr Abraham M George, The George Foundation, Rev. Fr Dr Thomas Kalam, Director, St. John's National Academy of Health Sciences, Mr Ashok Soota, President, Confederation of Indian Industry and Prof. Clark Scott, University of Cincinnati,. Mr Alexandar, in his inaugural address, complimented the organizers for taking the initiative in holding such an educative programme at Bangalore and assured the participants that KSPCB would adopt the recommendations emerging from the seminar deliberations.

The distinguishing feature of the Bangalore seminar was the whole - hearted involvement and commitment from KSPCB, the battery manufacturers, recycling industry, equipment suppliers, National Referral Centre for Lead Absorption in India (NRCLAI), Central Electrochemical Research Institute (CECRI) and ILZDA in working together as a consortium for creating eco-friendly, healthy operations and practices in the battery and recycling industry in the state of Karnataka. Capitalising on this favourable mood and attitude, this document **“Karnataka Model”** has been developed, giving a summary of the recommendations and follow-up actions for implementation in a time bound manner.

RECOMMENDATIONS

(1) Awareness Creation

Though Ministry of Environment and Forests (MoEF), Govt of India has taken a number of measures like (a) notification regulating auctions of non-ferrous scrap (b) constitution of Registration Committee to identify eco- friendly recyclers in the country and (c) the Battery (Management & Handling) Rules 2001, the popular awareness of these forward - looking measures is very limited in the country. By and large, only the concerned battery industry knows about these and the public at large is totally unaware of these steps.

Therefore KSPCB should initiate massive publicity efforts in the state through media like English & Kannada newspapers, television, radio, movie theatres etc., urging the battery users to return the old Lead batteries to the dealers or the original manufacturers or nearby eco-friendly Lead recyclers (a list of such units registered with Ministry of Environment & Forests can be downloaded from their website www.envfor.delhi.nic.in). Since the environmental and health issues mainly emanate from the battery dealers, assemblers/ reconditioners and backyard smelters, KSPCB may immediately bring out a special notification aimed at these units. **(2003)**

To supplement the efforts of KSPCB, the members of IBMA as well as the medium & small battery manufacturers in the state should also step up their publicity efforts by distributing suitable literature alongwith the warranty cards to the buyers of new batteries, display of posters at the dealer points, advertisement hordings etc., as well as a printed sticker on the batteries, for their safe return to them when they become scrap/old.

(2003)

2) Technology Upgradation

It is well known that the big battery manufacturers have been duly certified by ISO 9000, ISO 14001 schemes etc., yet they may critically look at all their existing operations and processes so as introduce improvements, wherever possible, from manufacture to transportation, with due care to pollution prevention, personal protection and packaging. **(2003)**

The medium and small scale units have to go in for technology upgradation immediately even if by incremental steps and any investment here should not be a deterrent for such immediate improvements. There are suitable fund support schemes from agencies like Small Industry Development Bank of India (SIDBI), financial institutions, banks etc.,

(2003)

Any specific request from the industry for a review/reduction of the existing taxes, duties etc., should be justified strongly with tangible benefits to the society, industry, govt etc. It is possible to recommend such well-justified proposals either to the State or Central govts for further supports. Vague proposals would not yield any results. **(2003)**

CECRI would certainly like to help units looking for modernisaton/technical upgradation. ILZDA would also be very happy to assign a consultant / supplier of pollution prevention equipment to work very closely with such units in the state of

Karnataka, desiring to introduce eco-friendly operations.

(2003)

3) Standardization

The threshold limit values for Lead in air, blood, urine, water, effluents etc., from various countries are now available. The industry in Karnataka may immediately start adopting the following standards for a period of two years ie., upto 2005:-

- | | | | |
|------------------------|---|------------------------------|---------------|
| 1. Lead in Air | - | 0.15 mg/m ³ (max) | |
| 2. Lead in Blood | | | |
| Males | - | 60 µg/dl (max) | |
| Females | - | 30 µg/dl (max) | |
| 3. Lead in Emissions | - | 10 mg/m ³ (max) | |
| 4. Lead in the General | | | |
| Atmosphere | - | 2 µg/m ³ (max) | |
| 5. Lead in Industrial | | | |
| Effluents | - | 1.0 mg/L (max) | |
| 6. Lead in Water | - | 0.1 mg/L (max) | (2003) |

Depending on the success of implementation and involvement of the industry as a whole, the above standards can be reviewed in 2005 for further reduction possibilities.

(2005)

NRCLAI and regional office of MoEF, Bangalore could work together and develop the monitoring procedures so that they are very clear with respect to the above prescribed standards.

4) Battery Collection

It is a good sign that KSPCB is introducing a “containers scheme” at departmental stores where customers can deposit the old batteries. This scheme will be a success only when the departmental stores pay such customers the normal rebates available, when batteries are returned to the dealers/shops at present. The department stores can, in turn, recover these charges from the battery manufacturers, their dealers or approved eco-friendly recyclers.

While at the national level, MOEF is planning to nominate MSTC Ltd as a nodal collection agency and it may take some time, a consortium of KSPCB, battery industry, recycling units may deliberate on the possibility of opening “collection points” at the major cities/towns of Karnataka. These could be joint ventures or entrepreneurs could be encouraged to develop these facilities. Otherwise the storage facilities available in the

Karnataka State Warehousing Corpn could also be made use of by appropriately segregating Lead battery collection areas away from food grains, eatables etc.,

(2003

& 2004)

5) Lead Exposure & Monitoring

The battery industry and Lead recycling units in Karnataka should be strongly advised to regularly examine their operators for the Lead levels by making use of the facilities available at the National Referral Centre for Lead Absorption in India (NRCLAI) :

Dr T Venkatesh, Director,
Department of Biochemistry & Biophysics
St. John's National Academy of Health Sciences
Robert Koch Bhavan, John Nagara Post, Bangalore 560 034

Ph: 080 2065058, 5502341, Fax : 080 5520777
Email : venky_tv@hotmail.com

NRCLAI, as a service to the industry, would be willing to conduct such tests virtually on a “cost basis”.

(2003)

KSPCB may also procure such lead analyzers or advise the district authorities (wherever there is a heavy concentration of battery / backyard recyclers) or Labor Welfare Dept, Karnataka to procure this equipment for random checking purposes.

(2003 & 2004)

It will be a great help if CII and KSPCB could recommend reduction of customs duty on Lead analyzers to the Ministry of Finance.

(2003)

6) Education & Training

Since the industry needs to be updated on the health issues, environmental aspects, preventive methods etc, NRCLAI/CECRI/ILZDA should conduct either inplant training programmes wherever possible or hold seminars for a small gathering of operators from the battery/ Lead recycling units at different towns in the state on the basis of actual expenses. Either the concerned industry could pool together and foot the bill or KSPCB may consider giving some fund support to willing institutions for conducting such regional seminars and the balance can be contributed by the beneficiaries. In order to achieve the full potential of these seminars, these should not be “one - time programmes”; instead it should be held periodically say after about two years or so to evaluate the results achieved and to work for further progress in these areas.

(2003 & 2004)

As a help, ILZDA would make copies of the leaflet “Lead & You” available to the industry through a wide mailing / distribution.

(2003)

Since the young minds – today's students - should also be aware of the new legislative measures introduced in the country, these developments should form a part of the academic curriculum at the high school level itself. ILZDA, in association with CII, would approach Central Board of Secondary Education Delhi with suitable notes, literature etc., for inclusion. Likewise KSPCB may also approach the Directorate of School Education, Govt of Karnataka for incorporating these at the secondary school courses.

(2003 & 2004)