

## Unleaded Clearing House Launched ILMC Delivers OECD/UNEP Initiative

In mid 1999, ILMC is launching a redesigned Internet Site, with multilingual and alternate platform options to enhance the efficiency with which the information needs of the International community are met. An important feature of the new web site will be a suite of information resources and tools designed to aid and expedite the efforts of countries to phase out leaded gasoline.

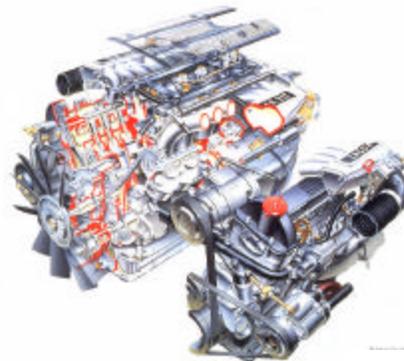
The phase out of leaded gasoline has either been completed or is ongoing in many countries. A number of regions in the world still, however, rely on lead containing gasoline additives to raise fuel octane ratings to a level compatible with their automotive fleets. In these countries automotive emissions can be a major contributor or the principle source of general population exposure to lead. The elimination of leaded gasoline is therefore assigned a high priority in many national lead risk reduction strategies.

Unfortunately, a bewildering array of policy options and technical issues can confront countries wishing to initiate the phase out of lead in gasoline. Guidance materials prepared by various agencies to assist with the planning and implementation of phase-out efforts are available, but sometimes appear to offer conflicting advice or apparently fail to address needs and issues created by local needs and circumstances.

Uncertainty with respect to the most appropriate policy options and technical tools to be employed can impede the implementation of phase-out and, or even raise, unexpected technical obstacles that reduce the pace of transition to lead free gasoline. Moreover, the fashion in which phase-out policies are integrated into public health objectives of simultaneously achieving desired improvements in overall air quality can require technical expertise and access to information resources not readily available to many countries.

In recognition of the dilemma faced by many countries attempting to formulate an effective phase-out policy, the Organization for Economic Cooperation and Development (OECD) and the United Nations Environment Program (UNEP) convened a multi-stakeholder consultative workshop in December 1997. The Stakeholders, comprising a diverse array of representatives from Industry, Intergovernmental Bodies

and Environmental Agencies met to devise a strategy and a means to meet the gasoline lead phase-out information needs of the global community. ILMC was an active participant in these early deliberations and assumed a pivotal role in facilitating these efforts.



*ILMC.....provided financial support for the preparation of a companion document detailing solutions to technical issues*

The workshop participants identified a need for "consensus white papers" that addressed key elements of phase-out efforts. ILMC has funded the preparation of documents describing and outlining policy options that can be effectively pursued to phase out lead in gasoline. ILMC similarly provided financial support for the preparation of a companion document detailing solutions to technical issues that might be encountered by countries with older vehicle fleets. ILMC was also active in the preparation of the terms of reference for the exercise and the subsequent review procedure conducted by the multi-stakeholder participants. After extensive review and comment by Stakeholders, OECD and UNEP will shortly be publishing the technical white papers.

Publication of these documents will coincide with the launch of the ILMC Clearinghouse for Information on Lead in Gasoline. As a part of this Clearinghouse, and at the request of the OECD and UNEP, ILMC has commissioned the preparation of an annotated bibliography describing other technical materials that would be useful in the implementation of phase-out policy. The bibliography compiles a listing of key reference materials prepared by different agencies and briefly describes the issues addressed in each document. Most of these materials will be available for distribution from the ILMC offices upon request.

# UNCTAD and ILMC Outline Restructuring Proposals for Philippines' Secondaries

**A**t an April workshop in Manila sponsored by the local office of the United Nations Development Program (UNDP) Ulrich Hoffmann, Economics Affairs Officer with the United Nations Conference on Trade and Development (UNCTAD) and Brian Wilson, ILMC Program Manager outlined their proposals for the restructuring of the Philippine secondary lead industry. Attending the workshop were representatives of Philippine Government Agencies, including the Environmental Management Bureau of the Department of Environment and Natural Resources, the Department of Foreign Affairs, the Trade and Industry Department and the Board of Investments. In addition there were representatives of the Development Academy of the Philippines and the Asian Institute of Management.



*Moderator for the workshop,  
Rafaelito H. Taruc  
Director Infrastructure & Services Industries  
Department, Republic of the Philippines  
Board of Investments*

This workshop was the culmination of nearly eighteen months of investigation into the economic and environmental impact of the implementation of the proposed Basel Ban Amendment that would prevent the shipment of scrap lead batteries from OECD countries to the Philippines for recycling.

The Philippines is a rapidly industrializing non Annex VII nation with a profitable lead acid battery recycling industry and a major automotive battery manufacturing sector exporting over 500,000 batteries annually. Demand for lead outstrips domestic supplies by almost 40% and the secondary lead industry has so far been bridging this gap by importing used lead acid batteries.

Working with the Philippine Government, UNCTAD, and the Manila UNDP Office, ILMC initiated the preparation of a series of background papers that reviewed the most suitable avenues for reducing adverse adjustment costs on the import of scrap batteries, including negative environmental, economic and social implications.

The background papers covered:

- An analysis of the likely economic consequences of the Basel Ban Amendment and the options for mitigating the adverse adjustment costs
- An assessment of the current environmental and occupational performance of the secondary lead industry and the requirements for an environmentally sound recycling sector



*Chairman and host,  
Jorge L. Reyes,  
Sustainable  
Development  
Advisor, UNDP  
Office in the  
Philippines*

- The gradual transformation of hundreds of local battery reconditioners and small smelters into an effective collection infrastructure for licensed, modern lead smelters
- A review of the options for enhancing the environmental and occupational performance of the Philippine secondary lead and battery manufacturing sectors

The studies and analytical work of UNCTAD and ILMC predict that not only would the proposed Basel Ban Amendment reduce the availability of scrap from both Annex VII and non Annex VII countries, but without a complete restructuring of the sector there would be a dramatic increase in unregulated battery recycling and a drastic decline in environmental performance. There is also pressure to use more imported primary lead for battery manufacturing. Furthermore, Ulrich Hoffmann emphasized that without a restructuring of the battery recycling industry, capacity utilization would be inadequate to further improve and provide for upgrading existing environmental performance.

In order to address the adverse impact of the Basel Ban Amendment in the Philippines UNCTAD and ILMC have advised the Government Agencies:

- to consider a number of specific incentives to raise domestic collection and lead recovery rates for used lead acid batteries
- promote a range of environmental improvements to the secondary industry to attract scrap materials from those developing countries without adequate recycling facilities.

Gerri Sanes, of the Philippine Department of Environment and Natural Resources (DENR) and Section Chief of the Environmental Management Bureau stated that the UNCTAD and ILMC studies had provided a basis for the Government to review the measures necessary to ensure a viable and environmentally sound future for the secondary lead industry.

# PRI Paves the Way



*Left: The leach resistant paving produced from the waste residues and used in the test batches have been used as an integral part of the PRI landscaping program at the Bulacan Site to create a "mini-park" at the rear of the facility.*

**T**he Government of the Philippines does not permit the dumping of any smelting furnace residues to landfill sites. Indeed, there is no final disposal facility for industrial waste on any of the islands. Whilst Philippine Recyclers, Inc. (PRI), the largest secondary smelter in the Philippines, provides government approved on-site intermediate storage for furnace slags, final disposal has until now presented an unresolved challenge.

Most blast furnace slags produced in OECD countries are a valuable source of roadway hardcore and ballast, but to date this market has not been open to the Philippine secondary lead industry because of the instability of the furnace residues. PRI was therefore compelled to consider alternative uses/disposal methods for the residues in the absence of a suitable disposal site.

Edmundo Esguerra, PRI's Environmental and Process Engineer, pioneered a special cement formulation for the slag based paving stones and bricks to inhibit leaching of any residual lead and promote quick setting, strength and stability. The present formulation passes TCLP (Toxicity Characteristic Leaching Procedure) tests for lead and other metals. The encapsulated slag was formed into ornamental paving stones and bricks. These materials were then used to create a landscaped "mini-park" at the rear of the PRI smelting facility.

A second reclamation project at PRI has developed a unique pneumatic gravity separation method to segregate the non-metallic hard rubber and the PVC and paper separators from crushed and shredded industrial batteries. PRI intends to utilize some of the hard rubber as a reducing agent in the smelting process and/or sell the balance to the cement industry as a fuel for use in the cement kilns. The polypropylene and PVC fractions will be recovered for reuse as battery cases and separators, leaving only the paper and PP separators for final disposal or incineration in the furnace.



*Edmundo Esguerra, right, and Ariel Sebastian, left, standing in front of the prototype separator are now planning a full size autopmated pneumatic version*

This separation process is an important procedure for many Asian secondary lead smelters because hard rubber is still widely used as a heavy duty case material in the far east and is difficult to separate completely from the more valuable polypropylene case material using only conventional battery breaking hydro-separation methods.

PRI are now designing a full scale industrial unit for installation and commissioning at the Bulacan site and then work will start in earnest to clear a huge pile of crushed waste materials arising from the battery breaker over the last few years.

# ILMC Delivers.....

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Recognizing that many countries have phased out lead in gasoline and encountered unexpected problems, ILMC has further commissioned the preparation of case studies describing the national experience of countries that have successfully undertaken lead in gasoline phase-outs. Although numerous countries have undertaken phase-out efforts via similar strategies, unique combinations of social, geographic and cultural circumstances have often combined to present unexpected obstacles. The compiled case studies provide succinct descriptions of how different countries encountered obstacles and overcame them, detailing the technical solutions and successful policy options employed. These case studies will be an invaluable tool to assist countries to anticipate, what would otherwise have been, the unexpected.

As the phase-out of leaded gasoline is a subject of international interest, ILMC has also instigated the introduction of a "Global Report Card", detailing the status of phase-out efforts around the world. The "Global Report Card" will be continuously updated to provide an index of progress being made by different countries and assist individual countries in gauging the effectiveness of their policies relative to others.

ILMC recognizes that phase-out efforts will be ongoing in metropolitan areas with high vehicle densities and may proceed within the context of a larger framework to improve urban air quality. Therefore, basic decisions regarding fuel reformulation, vehicle fleet management and public infrastructure changes must be made with due recognition to their overall impact on efforts to achieve other air quality objectives. Several countries and organizations have been developing and validating computer simulation programs that permit prediction of the impact of different technical options upon air quality under a variety of climatic and geographic scenarios. ILMC will be working towards making these tools, and the training to use them, available on the new web site to the global community.

The ILMC Clearinghouse will thus serve several important functions. The consensus white papers prepared under the UNEP/OECD consultations with ILMC funding should help countries identify policy and technical options suitable for further consideration. The compilation and dissemination of information resources will then provide countries with ready access to technical materials of assistance in the design of phase-out policies tailored to their national circumstances. The case studies being compiled will further assist government agencies to anticipate and avoid technical and/or economic obstacles that might otherwise complicate the achievement of their public health objectives. Finally, air quality management tools developed by others will afford countries the opportunity to plan and implement phase-out efforts in a fashion integrated with other policy initiatives designed to achieve other air quality improvement objectives.

# PAG Sets Strategy Options for ILMC



*The PAG: (left to right), Joe Carra, Patrick McCutcheon, Kaye Dal Bon, Bob Goyer, Francis Labro, Craig Boreiko (ILMC), and Fritz Balkau*

Following the second annual review of ILMC activities by the Policy Advisory Group (PAG), Chair, Kaye Dal Bon, met with the ILMC Board of Directors and recommended additional strategy options for consideration. The recommendations made by the PAG were in recognition of the successful risk reduction activities and pilot programs undertaken by ILMC and were designed to enhance the appeal of the methodologies adopted and devised during the industry initiative.

The PAG Chair, Kaye Dal Bon, advised the ILMC Board to:

- Broaden the ILMC Membership to include companies from Developing Countries.
- Seek more Inter Governmental partnerships.
- Provide Leadership in demonstrating and promoting best practice in environmental performance
- Expand the ILMC perspective for capacity building and outreach programs.

Key issues for future PAG review would include the implementation of new Pilot Programs in Africa and South America, documenting measurable improvements in environmental performance and reductions in lead exposure levels, both in and outside the workplace.

NewsCasting is published quarterly by the International Lead Management Center, a not-for-profit organization established by the International Lead Community in response to the need for international action on the issue of lead risk reduction. Please direct correspondence to :

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