



NewsCasting

RAMCAR Leads the Way

By Irving C Guerrero, Vice President of Philippine Recyclers, Inc.

Ramcar, Inc. is the largest integrated manufacturer of lead-acid storage batteries in the Philippines and Southeast Asia, with subsidiary companies engaged in the manufacture of pure refined lead, low maintenance and no maintenance lead alloys, lead oxide, battery separators, polypropylene and hard rubber containers and covers. Ramcar's advanced battery manufacturing facility is located 10 miles (17 kilometers) north of Manila and close to the Company's Secondary Lead Plant at Bulacan, Philippine Recyclers, Inc.



Irving C Guerrero, Vice President of Philippine Recyclers, Incorporated (PRI)

The new storage area for used lead acid batteries

Ramcar is a member of the Independent Battery Manufacturers Association and the world's largest association of battery manufacturers the Battery Council International. The Company supplies most of the domestic market and exports to the USA, Australia, China, Saudi Arabia, Egypt, United Arab Emirates, Cameroon, and Hong Kong.

For over 70 years, from its pioneering efforts in initiating the local manufacture of storage batteries in 1919 to its growth up to the present day, Ramcar has maintained a tradition of leadership in the Philippine battery industry and today is no exception. Ramcar is currently working with the Government of the Philippines, the United Nations Conference on Trade and Development (UNCTAD) and the International Lead Management Center (ILMC) to improve the Company's environmental performance at its battery recycling plant in Bulacan and ultimately operate to world's best practice.

Since the start of the project last year the Bulacan Plant Management has endorsed improvements in surface water management, wastewater treatment, the storage of contaminated waste and commenced work on ISO 14001 accreditation.

ISO 14001 accreditation will provide an objective assessment of environmental performance and confirmation of sound recycling practices, enabling PRI to play a bigger international role in secondary lead.

Used lead acid batteries are delivered to the Secondary Plant shrink wrapped and palletized. Up to the Spring of this year the batteries were stacked on an acid resistant concrete storage area open to the elements. In the "wet" season there was the risk of surface water contamination during the heavy rainstorms



typical of Manila and Southeast Asia. Batteries are now stored under the cover of a purpose built 100 by 50 metre canopy. The new facility minimizes the risk of contamination to the surface water drainage system from battery acid. A surface drain that completely surrounds the storage area collects any leakage from the stored used batteries and the effluent is directed to the water treatment plant.

The water treatment plant has also undergone a major overall in the last six months and is now able to treat process effluent to meet the discharge consent levels set by the Philippine Government. Nevertheless, Tony Garcia, the Senior Research and Development Engineer, has been charged with the task of introducing additional improvements to the treatment process to increase reliability and further reduce the lead content of the liquid effluent.

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The ILMC Attends Moscow Workshop

Since 1996 a USA - Russian non-governmental project on Lead Pollution in Russia has worked to develop a network of scientists, environmentalists, and policy-makers to address lead pollution problems in Russia. The project, funded by the MacArthur Foundation and based at the Center for Russian Environmental Policy in Moscow, is co-directed by Dr. Valerie Thomas of Princeton University and Dr. Anna Orlova, currently Visiting Associate Professor at Johns Hopkins School of Hygiene and Public Health.

The project now includes leading Russian experts in occupational health and environmental science, representatives of key government ministries, and leading environmental activists. Participants are working to evaluate the nature and



Visiting Associate Professor at the John Hopkins School of Hygiene and Public Health, Anna Orlova.



From left to right. Wayne Matson, Nikolay F Izmerov, Valerie Thomas, Brian Wilson, James Rochow, Alexander Lazarev (ESA) and Tatiana Guseva.

extent of lead pollution in Russia, and to promote activities to effectively address these problems.

To discuss progress to date and to develop new initiatives, an international workshop was convened, hosted by the Institute of Occupational Medicine of the Russian Academy of Medical Sciences and chaired by Director Nikolai F. Izmerov. A specific aim of the workshop was to identify priorities for the Russian Federal Lead Risk Reduction Program and where possible to determine the means either to reduce or eliminate lead exposure. The workshop entitled, "Lead Pollution in Russia" was attended by Representatives from the Federal Government, Academia, Industry and the International Community, including the ILMC.

Vsevolod Gavrilov, Director of the Federal Geo Information Center, outlined the Government's strategy to reduce the risk of environmental and population exposure emphasizing the need to prioritize action and target resources.

The ILMC were invited to provide an overview of the terms of the OECD Ministerial Declaration on Lead Risk Reduction, featured in the Gore / Chernomyrdin 1998 Accord. The Accord sets out the framework for the USA and the Russian Federation to address the problem of lead contamination through the offices of the US EPA (Environmental Protection Agency) and the Federation's State Committee for Environmental Protection. Also outlined were current ILMC risk reduction case study material featuring current Pilot Program activities.

..... "Lead Pollution in Russia"

Considerable interest was shown in the presentation, particularly the relevance of the Ministerial Declaration to the Accord and Russian Federation's desire for full membership of the OECD.

James Rochow, the Director of the Alliance to End Childhood Lead Poisoning, outlined the Alliance's International Action Program emphasizing the need for strategies that focus on "preventative measures" as the only certain solution to eliminating the risk of permanent neurological damage to young children.

ESA Vice President, Wayne Matson informed the conference that he was currently engaged in a childhood sampling program in Moscow and that results to date were encouraging. Most of the children sampled in Moscow had blood lead levels in the range 4 -10 mg/dL. ESA were, however, in the process of mapping areas of high lead exposure around specific point source emission sources, such as smelters and manufacturing plants. This view was supported by Associate Professor at the D. Mendeleev University, Tatiana Guseva. She urged the workshop to prioritize remediation action at industrial sites, because she believed that the Lead Industry had the means and resources to resolve those problems.

Nelya Sorkina's pragmatic view of the health issues endorsed the ILMC philosophy that lead exposure can be controlled and also made a plea to the workshop not to endorse the liberal use of childhood chelation.



*Yuri Orshanski, the
AOZT Electroziariad
Technical Director*

Electroziariad, the major Russian Secondary Lead Recycler and Battery Manufacturer presented two short papers on the Company's activities to reduce lead exposure. Boris Popov, the Manager of the Baltelectro battery manufacturer in St. Petersburg, explained that the Company had engaged specialists from the St. Petersburg Institutes of Toxicology, Health and Ecology to assist with a comprehensive study of the problems facing the plant.

Yuri Orshanski, the AOZT Electroziariad Technical Director, said that the Company had made a positive approach because the Industry believed that Federal laws applicable to the control of lead exposure should provide for -

- a) revised standards consistent with the industry's technology
- b) the compulsory recycling of lead acid batteries
- c) improved work practices and "cleaner" technologies

At the conclusion of the workshop Nikolay F Izmerov invited comments from the delegates in order to prepare a report to the Russian Federal Government, the members of the State Duma and Federation Council, and non-governmental organizations. The final agreed communication recognized the Russian Federation's proposals, but added that as:

Lead pollution is a multi-faceted problem..... Cooperative involvement of experts in all aspects of lead pollution, including physicians, environmental scientists, industry experts, non-governmental organizations, international experts, and national, regional, and local government can improve the prospects for effective development of lead management programs.

The conference agreed that current efforts should focus on:

- a) Introduction of unleaded gasoline throughout the Federation.
- b) The development of environmentally sound lead acid battery recycling
- c) Improved surveillance, measurement and reporting of population lead exposure and environmental contamination.



*The ILMC visit to the Podolsky Battery Manufacturing Works.
From left to right, Yuri Orshanski, Brian Wilson, James
Rochow, Valeri Thomas and the President of the Podolsky
Battery Manufacturing Works, Mr. S V Zubkosky.*

During the visit to the Russian Federation Brian Wilson, James Rochow, Anna Orlova and Valerie Thomas took the opportunity to visit one of Electroziariad's largest Battery manufacturing plants at Podolsk and the new innovative battery collection center for scrap automotive lead acid batteries in Ilovaiscaya Street, Moscow.

Brian Wilson also meet with representatives of the Russian Federal Government, including Michael Gaygerov the Deputy Director of Ecological Programs, Nikolay Bobrov the Head of the Department of Industrial Ecology and the Russian Lead Program and Vselolod Gavrilov, Deputy Director of the Federal Geological Information Center.

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"Lead Pollution in Russia"

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In 1996 the Russian Federal State Committee for Environmental Protection with financial support from US AID published a "white paper" highlighting the extent of lead exposure and contamination in the Federal Republic. It was this collaboration between the US agencies and the Russian Joint Commission on Economic and Technological Cooperation that led to the Gore - Chemormyrdin Accord signed in Washington on March 11th this year.



At the joint meeting with the State Committee of the Russian Federation on Environmental Protection, present were: back row, Brian Wilson, Nikolay Bobrov, Head of the Department of Industrial Ecology and the Lead Risk Reduction Program, Vselolod Gavrilov, Deputy Director of the Federal Geological Information Center, Vitaly Chibachevich from the International Department, Michael S Gaygerov, the Deputy Director of the Department for Ecological Programs and James Rochow.

Front row, Anna Orlova, Ellanya Labonova, Federal Geo Information Center, Valerie Thomas and Wayne Mattson.

The Gore - Chemormyrdin Accord sets out the framework to address the problem of lead contamination and guarantees the support of the US Center for Disease Control and Prevention (US CDC) and the Russian Sanitary Epidemiological Service and prioritizes the need to eliminate childhood exposure. The Accord is consistent with existing multilateral initiatives and makes specific reference to the OECD Declaration on Lead Risk Reduction of February 1996.

Following his return to the USA Brian Wilson has had two meetings with US EPA in Washington to explore areas of mutual interest that might provide opportunities for the ILMC and the US EPA to work together on the Russian Federation Lead Risk Reduction Project. Further meetings are planned between the ILMC, Representatives of the US EPA, Gary Waxmonsky, Executive Secretary for the US - Russia Environment Committee, Sylvia Correa, the International Lead Program Manager and Vselolod Gavrilov, Deputy Director of the Federal Geological Information Center.

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Environmental Engineers, Rosa Diokno and Edmundo Esguerra have been conducting laboratory trials on the feasibility of stabilizing discard residues, using cement and chemical binders. Tests on the encapsulated residues demonstrate successful slag stabilization using pozzolan cement and pass the American Society of Testing Materials (ASTM) standard for lead leaching.

Meanwhile, until the residues are encapsulated they will be stored in the new double lined concrete bunker designed to US Environmental Protection Agency (USEPA) Standards for the containment of contaminated waste material.

Recently, a delegation from RAMCAR and PRI visited Lead Production plants in the USA. The team were tasked to study technologies and operating techniques that would enable PRI to further improve environmental controls and eliminate the production of unstable by-products and residues.

RAMCAR Senior Vice President and President of Philippine Recyclers, Jacob Targorda, Assistant Smelting Manager, Lito Sans Luis and Tony Garcia spent 10 days in the US visiting both Primary and Secondary Lead plants. The first week was spent at the Saunders battery reprocessing plant in Birmingham Alabama. The purpose of this visit was to examine ways of improving baghouse control systems to improve process hygiene controls and reduce occupational exposure.

In addition the team were also interested in the smelting operations to ascertain those conditions that consistently produce stable non-leachable slags.

This theme was continued into the second week of the program which started with discussions with the ILMC Program Manager, Brian Wilson and continued with site visits in Missouri to the ASARCO Primary Smelter at Glover and the Doe Run Plant at Herculaneum. Improved dust free refining techniques applicable to the Secondary industry were of particular interest to PRI as were the first class liquid effluent treatment facilities at both primary smelters.

On their return to the Philippines the team have set about preparing a plan for the next phase of the Company's environmental improvement program. It is anticipated that there will be proposals to implement changes to the mode of operations in the recycling process to reduce lead levels in waste residues, improve occupational hygiene and enhance the treatment of liquid effluent.

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