

# BEST News

Better Environmental Sustainability Targets (BEST)

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### CDC Advisory Board Revises Recommendations for Childhood Lead Poisoning Prevention

An advisory committee to the Centers for Disease Control (CDC) recently voted to revise the blood lead level at which health care providers respond to childhood lead exposures. The new recommendations eliminate the use of the term "level of concern" and acknowledge that based on a comprehensive review of the scientific literature, there is no known safe level of exposure to children. Therefore the committee is calling for specific response actions for children with blood lead levels in the upper 2.5 percent of the U.S. population (currently 5 ug/dl). These lower levels impact approximately 450,000 children in the U.S. and many millions more in developing countries. Repeated studies have demonstrated that at these levels children's school performance and intellectual capacity are irreversibly impacted.



This is the first recommended change in CDC guidelines on childhood lead poisoning prevention since 1991 when the blood lead level of concern was lowered from 25 ug/dl to 10 ug/dl. The new guideline calls for CDC to prioritize primary prevention to reduce all lead exposures instead of just responding to children who are already over-exposed. Perry Gottesfeld of OK International is a member of the ACCLPP and served as co-chair of the subcommittee that formulated these recommendations.

[CDC Advisory Board Revises Recommendations for Childhood Lead Poisoning Prevention](#)

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### NY Times Article Based on OK International's Investigation of Used Lead Battery Exports to Mexico

On December 9<sup>th</sup>, 2011, the New York Times published a front page article based on our report outlining the hazards of increased lead battery exports to Mexico. The article quotes Perry Gottesfeld and our partners at Fronteras Comunes indicating that the recent increase in used battery exports is posing a threat to children in the vicinity of recycling plants south of the border. Our report found that emissions from battery recycling facilities in Mexico are approximately 20 times higher than from U.S. plants. Subsequent radio news stories quoting our research appeared on British Broadcasting Corporation (BBC), Canadian Broadcasting Corporation (CBC), and CBS Broadcasting, Inc (CBS) and was reported widely in other media.



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OK International worked closely with the New York Times in their six month investigation of lead battery recycling practices. The article reported that the U.S. exported 20% of all used lead batteries to Mexico in 2010 – up from 6% in 2007. The disparity in environmental regulations between the U.S. and Mexico was highlighted in the article.

Our report, along with advocacy from our partners at Fronteras Comunes, led an advisory committee to the Commission for Environmental Cooperation (CEC) under NAFTA to call for an investigation into U.S. exports of used lead batteries. A full report is expected from the CEC at their next meeting in July.

The New York Times article is available at:

<http://www.nytimes.com/2011/12/09/science/earth/recycled-battery-lead-puts-mexicans-in-danger.html?pagewanted=all>



## EPA Issues Final Regulations for Lead Smelters

EPA published its final amendments to the primary and secondary lead smelting provisions under the National Emissions Standard for Hazardous Air Pollutant (NESHAP) regulation. The amendments lower stack emission limits for lead, and impose new work practice standards to minimize fugitive dust emissions in primary smelters. The new limit on main stack emissions of 0.97 pounds of lead per ton of lead produced is a 3% reduction from the existing standard. The Doe Run Herculaneum smelter is currently the only U.S. facility covered under this standard and it is scheduled to shut down by the end of 2013. See the Federal Register for more detail:



<http://www.gpo.gov/fdsys/pkg/FR-2011-11-15/pdf/2011-29287.pdf>

The amendments to the secondary lead smelting rule impact 16 lead recycling plants. The rule published on January 5, 2012 lowers stack and fugitive emissions, adds a requirement to separate plastics from automotive batteries to prevent dioxin emissions and a work practice standard to minimize mercury emissions. The new lead stack emissions standard is 0.2 mg/dscm per stack at new facilities and an average of 0.2 mg/dscm (with a maximum of 1 mg/dscm) at each stack for existing facilities. The new limit is ten times lower than the standard it replaces that was set in 1997. See the Federal Register: <http://www.epa.gov/ttn/atw/lead2nd/fr05ja12.pdf>

## Cameroon Paint Study

In December 2011, our partner in Cameroon, The Centre for Research and Education Development (CREPD), released the results of our paint study. The study reported that 67% of paints tested from retail outlets in Cameroon were found to be lead paint. Within a week of the release, the Cameroon Agency for Standards and Quality (ANOR) publicly committed in the Cameroon Tribune, the official government newspaper, to develop a national standard on lead levels in paint in 2012. In addition, the paper also reported that the Prime Minister had approved the suggestion of ANOR to issue a standard to limit the amount of lead in paint and called this effort a priority.

See the news article on this development in Cameroon's national press: [http://cameroon-tribune.cm/index.php?option=com\\_content&view=article&id=66385:normalisation-des-peintures-dangereuses-sur-le-marche&catid=4:societe&Itemid=3](http://cameroon-tribune.cm/index.php?option=com_content&view=article&id=66385:normalisation-des-peintures-dangereuses-sur-le-marche&catid=4:societe&Itemid=3)

## Lead Battery Technology Update

Zentric, based in Ontario, Canada, has patented a new high voltage dual electrolyte (HVDE) battery. The new technology combines metal hydride and lead-acid materials with a bipolar membrane to create batteries that have higher voltage and power than traditional lead batteries. Zentric is currently building a manufacturing facility in Jilin Province China that will be supplying batteries for electric vehicles and storage batteries for UPS applications. In December 2011, Zentric acquired Sembilan Bangun Laksana, an Indonesian lead mining company.

In past editions, we wrote of other advanced lead batteries in various processes of development including those from Atraverda, Firefly Energy, Axion Power International and Applied Intellectual Capital (AIC). Below we summarize the latest developments from each company:

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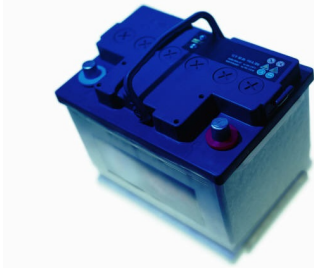
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- Atraverda has successfully developed its Ebonex® technology and is producing bipolar, valve-regulated lead acid (VRLA) batteries with 40% less lead than traditional batteries.
- Firefly had successfully developed a battery with a carbon graphite foam grid instead of a lead grid for its anode. The company declared bankruptcy in March 2010, but was subsequently bought by the Indian company, Electrotherm, in October 2010 and resumed operations as Firefly International Energy.
- Axion successfully developed PbC® technology in which a porous, activated carbon anode is used and they are now producing batteries with less lead.
- AIC is still developing their bipolar batteries targeted for hybrid electric cars and they have begun work on flow batteries, which are recharged by replacing electrolyte solution similar to refilling a fuel tank.

## Doe Run La Oroya Smelter Likely to Re-Open

The Doe Run Smelter in La Oroya, Peru entered bankruptcy and closed in 2009 after polluting the community for decades. At that time the company was under pressure from the Peruvian Government to complete the required pollution controls under their Program Compliance and Environmental Management (PAMA) agreement. The company's creditors met in January 2012 and decided to restructure rather than liquidate. Doe Run Peru will now have 60 days to submit a restructuring plan, which takes into consideration their environmental obligations. The company will also be required to seek an extension of the PAMA in order to re-open the smelter.



Doe Run Smelter in La Oroya, Peru

## EPA Updates List of Areas Not in Compliance with Lead Standard

On November 8, 2011, the Environmental Protection Agency designated 21 non-attainment areas under the air quality standard for lead of 0.15  $\mu\text{g}/\text{m}^3$  (as a 3-month rolling average). These areas include 22 partial counties in 15 states. This is an increase from the 16 nonattainment areas in 11 states that were designated in 2010. Once an area has been designated, it has three years to achieve compliance. For the complete list of these areas, see:  
<http://www.epa.gov/leaddesignations/2008standards/documents/2011-11-08/LeadNAAreaList.pdf>

## OK International's Research Highlighted in JAMA and EHP Journals

In October, 2011, the Journal of the American Medical Association (JAMA) carried a summary of our paper, "Review: Lead Exposure in Battery Manufacturing and Recycling in Developing Countries and Among Children in Nearby Communities," that was published in the Journal of Occupational and Environmental Hygiene. The article quoted our findings that children living near battery recycling facilities in developing countries have blood lead levels that are 13 times higher than children in the U.S.  
<http://jama.ama-assn.org/content/306/15.toc>

Environmental Health Perspectives (EHP) published an article summarizing OK International's investigation of lead battery exports to Mexico and mentioned the New York Times article on this issue in the January 2012 edition. This summary stressed that "advocacy groups are calling on U.S. companies to export spent batteries only to countries whose standards are as strict as those in the United States."  
<http://ehp03.niehs.nih.gov/article/fetchArticle.action?articleURI=info%3Adoi%2F10.1289%2Fehp.120-a20b>

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