

BEST News

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Improving Lead Battery Recycling in Vietnam

OK International is working with the International Finance Corporation (IFC) to consult on Vietnam's lead battery recycling requirements and to conduct a pilot program to collect used batteries with key stakeholders. This project will build on OK International's previous work in Vietnam to advise government policy makers on alternative approaches to regulating the collection of used lead batteries. Recently we visited



Lead Batteries being Dismantled for Recycling in Vietnam

two new recycling plants with pollution controls that have started up over the last year, but unfortunately they are operating well below capacity because of the difficulty in competing with informal sector recyclers to obtain used batteries. Many used batteries are also reportedly exported via the land border to China.

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Report Finds the Collection of Used Lead Batteries Inadequate



Lead Plates from Used Batteries in one of Kolkata, India's Recycling Plants

OK International released a report investigating the collection of used lead batteries in India. The report found that most of India's lead battery producers are not in compliance with the 2001 Indian Battery Management and Handling Rules that require manufacturers to collect a minimum of 90% of the batteries they sell through dealers.

OK International obtained individual company reports through the Right to Information Act from the Indian government. Only one of the 22 manufacturers for which data was received, is collecting batteries at the required rate of 90 percent. Most large lead battery manufacturers are taking back only a small percentage of their total sales including Amara Raja (26%), TAFE (11%), Tudor (39%) and GNB (0%). There is no central effort to collect information on compliance with the Battery Management and Handling Rules and there is no penalty for manufacturers who fail to meet the regulatory requirement. See the full report at <http://www.okinternational.org/docs/Lead%20Battery%20Recycling%20in%20India.pdf>.

Congresswoman Barbara Lee Highlights OK International's Innovative Programs

In a recent letter to the Director of the Center for Disease Control and Prevention (CDC), Congresswoman Barbara Lee cited OK International as an example of an organization implementing innovative, science-based programs to reduce emissions in mining, smelting, and recycling industries. She also complimented CDC on their response to the mass lead poisoning in Nigeria last year. Congresswoman Lee urged the CDC and other U.S. government agencies to employ prevention-based approaches to reduce the threat of lead poisoning around the world. She indicated that such a program would be far more effective than to just respond after reported deaths and environmental contamination have already occurred. The Congresswoman cites research indicating that for every \$1 spent on reducing lead hazards there is a net-economic benefit of \$17 to \$220.

EPA Designates Areas Not in Compliance with the Lead Standard

On November 16, 2010, the U.S. EPA designated parts of 17 counties in 11 States as "nonattainment areas" for the 2008 national air quality standard for lead. Five of the 16 areas are home to Exide Technologies lead battery manufacturing and recycling facilities. Other battery manufacturing and recycling companies cited as the source of



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lead emissions include Gopher Resources Corporation (Minnesota), East Penn Manufacturing Company (Pennsylvania), and The Doe Run Company (Missouri).

Since this revised air standard has gone into affect, most lead recycling plants have invested in improved pollution controls. For example, the Quemetco lead battery recycling plant in Industry, California reported 24 pounds of lead air emissions in 2009 -- a 91 percent drop from the 266 pounds reported for 2008 (as per the Toxic Release Inventory).

State and local governments for the nonattainment areas have until December 31, 2015, to develop plans outlining how these areas will come into compliance with the air quality standard for lead. These areas are required to meet the standards within five years of being designated. For more information on the EPA nonattainment areas see: <http://epa.gov/leaddesignations/2008standards/documents/2010-11-16/table1.html>

National Human Rights Commission of India Issues Recommendations on the Prevention of Silicosis

The National Human Rights Commission of India (NHRC) recently released their recommendations for the prevention of silicosis and compensation of silicosis victims. Among the suggested measures, the NHRC is asking State governments to encourage the development of dust control technologies and worker protection to prevent exposure to silica dust. The NHRC is also calling for increased awareness among workers, employers, and medical professionals through training programs and publicity campaigns. As silica is also a significant risk factor for Tuberculosis (TB), the document also indicates that a silica control program should be integrated with the existing Revised National Tuberculosis Control Program (RNTCP).

While the NHRC's recommendations primarily address prevention activities as the way forward, the document also outlines a suggested formula for compensating workers with silicosis based on the loss of earnings. The document is available at: http://www.nhrc.nic.in/recomm_silicosis.pdf

China Poisonings Persist in 2011

Since our last edition in October, there have been three more reports of widespread lead poisoning incidents around battery plants in China's Anhui, Jiangsu, and Shandong Provinces, affecting at least 300 children and adults. In Anhui Province, the Borui Battery Co. Ltd. and another unnamed battery manufacturing plant were closed after testing confirmed that over 200 children living in the surrounding community had elevated BLLs. Press reports indicate that 24 of the children with moderate to severe lead poisoning required hospitalization. In the incident in Jiangsu, the Jiangsu Chaowei Battery Company is only 200 meters from the affected residential area.

Stop-Start Lead Battery Market Gaining Traction

Lead battery manufacturing companies are hoping that automobile manufacturers adopt new battery technologies being offered to improve gas mileage but will also increase demand for lead. Johnson Controls Inc., Exide technologies and other major manufacturers are offering lead batteries that can be used to stop and start engines at red lights and in heavy traffic. These batteries are considerably larger than standard lead batteries in comparable vehicles. Referred to as stop-start technology, this system shuts down the car's engine when the vehicle is stationary but automatically powers on when the driver engages the gas, thus reducing fuel consumption and emissions. This technology is already being offered by European automakers including BMW, Hyundai, Citroen, and Volvo and is expected to be deployed in vehicles in the U.S. and Asia within the next few years. Such technologies may significantly increase the demand for lead if they are widely adopted. Battery manufacturers are also developing lithium ion batteries and other chemistries that may be better suited for stop-start technology but potentially at greater cost (see Li-ion Battery story below).

Li-ion Battery Prices Not Expected to Decrease

While major players in the automotive and battery industry indicate that the mass production of lithium ion batteries will drive down prices on electric vehicles (EVs), many researchers and automotive engineers are skeptical. Currently, electric vehicles are more expensive than gasoline vehicles due to the high cost of these batteries. However the push to reduce oil consumption and greenhouse gas emissions has encouraged the development of new battery technologies for electric and hybrid cars. In order for the EV industry to scale up, the prices of lithium ion batteries must be significantly reduced. In the mean time, lead batteries are sometimes being offered on lower priced models of the same electric car.

Experts and engineers interviewed in a recent *Wall Street Journal* article predict that significant price reductions of lithium ion batteries may not be reached for at least ten years and prices for the metals used in these batteries may even rise with the demand for this material. This is a far cry from the U.S. Department of Energy's stated goal of reducing the cost of batteries for EVs by 70 percent by 2014. See the *Wall Street Journal* article here:

<http://online.wsj.com/article/SB10001424052748703735804575536242934528502.html>

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