

Green Lead Project

Project Summary

Beginning in 2003, the Green Lead Project was created with the following [vision](#): “mining, processing, transporting, treating, manufacturing, storing, using and recycling lead – with zero harm from lead exposure to people and the environment.” The goals were to identify the environmental and social impacts related to lead, establish standards to control those impacts, and create a certification system for organizations and lead products to achieve the standards.

Project Description

Towards the end of 2003, BHP Billiton, a resource extractives firm, and Ecofutures, an international policy firm, gave a series of presentations and reports throughout Asia and Europe on the use of lead in batteries, product stewardship, and lead recycling. They sought to create a system for the lead industry to analyze and then streamline the lead life-cycle to promote safety and environmental safeguards at each step in the supply chain. These presentations created an appetite among others, both within the lead industry and other interested stakeholders, to launch the Green Lead initiative.

In April 2004, the first Green Lead workshop was held in London. It sought to develop a shared vision for a Green Lead program that could garner worldwide support from actors at all steps in the supply chain. The focus was on downstream steering (product stewardship) and upstream steering (customer demand), as well as increasing supply chain transparency to facilitate development of solutions. Following this meeting, participants determined that a broader range of stakeholders would be necessary to establish the standards, criteria, and methodology that would be acceptable to the entire supply chain and other interest groups. International working groups were established and tasked with drafting potential standards, identifying opportunities for pilot programs, establishing funding mechanisms and determining next steps, including another workgroup meeting with more participants.

The second workshop, held in April 2005, was attended by a broad range of interests. These groups included lead supply chain members (miners, smelters, manufacturers and recyclers); environmental NGOs; environmental auditors; and government and non-government bodies with a focus on lead. This meeting spelled out initial objectives and aims for the Green Lead pilot program, and established ten core protocols as the foundation for the Green Lead certification and brand. It established locations for the pilot programs as well as the issues that the programs would consider (e.g., cost of certification, strengthening the business case for certification, and the roles of NGOs and local community groups). It also began discussing how to establish an independent, third-party auditing system, including the need for a separation between the industry and auditors to enhance credibility.

Pilot projects targeted specific links in the supply chain. They took place at a recycling plant, a battery manufacturing plant, and a used lead acid battery collection center. They were located in diverse regions: Australia, China, Caribbean Island States and Central and South America. The results from these pilots were used to refine the initial standards and criteria and determine the structure and approach.

A certification system is still being developed, but it is expected that - to earn certification, independent, third-party assessments will be conducted, and subsequent audits conducted to retain certification. Once certified, companies will be encouraged to only purchase and sell their components and products to other Green Lead certified entities. The program would require that retailers acquire certification if they want to be able to offer certified products to the public. To be certified as a Green Lead retailer, the retailer must work with local governments and organizations to incentivize the return and recycling of lead products.

The Green Lead initiative seeks to persuade major consumers (such as auto manufacturers) to purchase only Green Lead products. To further encourage uptake, the initiative also seeks to educate citizens and communities of the environmental effects of a poorly managed lead life-cycle.

Nature of Supply Chain, Products and Issues

Lead is a high-density metal that resists corrosion and generally has a low cost as compared to other materials. These characteristics make it well suited for a variety of purposes, such as in building construction, lead-acid batteries, bullets and shot, weights, and as a component in a variety of products. Unfortunately, lead is also quite toxic, and was previously used in household products for years, released unchecked into the air from motor vehicles and industrial sources, and entered drinking water through lead-based plumbing materials. It has a range of negative health effects, such as behavioral problems or learning disabilities, seizures, and even death. Children under six years old are most at risk, with the most common sources of [lead poisoning](#) occurring from deteriorating lead-based paint, lead contaminated dust, and lead-contaminated residential soil.

Although use of lead in paint and plumbing materials has been phased out, the auto industry continues to use lead in a number of ways. Cars manufactured today contain approximately 27 pounds of lead in various components; the lead acid battery, accounts for the majority of current [global lead use](#). It is estimated that over one million metric tons of lead go into auto manufacturing annually, with over 90% going to conventional lead-acid vehicle batteries. Despite the existence of recycling processes and facilities, it is believed that more than 40,000 metric tons of lead is lost each year to landfills.

Lead risks occur at each phase of the supply chain: mining, manufacturing, and recycling or the improper disposal of lead products. The Green Lead initiative recognizes that, as there are potential health and environmental consequences with exposure to even small amounts of lead, it

is extremely important that processes are utilizing best practices to minimize or eliminate exposure and thus harmful effects.

Similar to most other metals, lead loses its track-ability at the smelter or recovery center as multiple sources are brought together. In addition, although a large percentage of lead mined is utilized in batteries, it is also only one small component or percentage of other products, which is quite similar to other metals used in the electronics industry.

Lead, although historically visible on the surface, is often mined in tunnels and shafts underground. The lead mining industry is attempting to utilize more mechanization due to the potential health consequences. Besides exposure at the mine site, it is in the processing and reprocessing of lead where most of the hazard exists.

Analysis

Supply Chain Complexity - Steps (*Complex*)

The supply chain is fairly complex with regard to material flow based on whether the lead ingots are being drawn from primary (mines) or secondary (recycling) sources. The sector is similarly complex to the metals that are used in electronics.

Formalization of Sector (*Formal*)

The lead sector is typically formal with regard to sources.

Material Processing, Coherence (*Mixed*)

A mixture of primary (mines) and secondary (recycling) sources results in an inability to track sources or provenance as the materials mix in processing.

Significance in Product Composition (*Varying %*)

Lead can make up a high percentage of the products it is used in. However, it can also form a relatively low percentage of a product as a component or part.

Issue/Source Geography (*Irrelevant*)

The initiative does not directly address the DRC or the primary extractives sector, but could offer useful methods or strategies tied to particular sources in the DRC. This project is not geographically relevant in that participating regions do not share developmental characteristics of conflict zones for electronics metals.

Stage of Development, Maturity (*Pilot Programs in Progress*)

The pilot schemes for site specific protocols have finished and provided data for revising some of the original protocols. Out of the ten initial protocols, five have become more definitive: Biological Monitoring & Medical Surveillance; Collecting Used Lead Acid Batteries; Battery Labels; Public Communications and Awareness; and Site Sustainability. Membership

applications and assessment forms have also been created for the piloting of the certification and auditing process, which is expected to be formalized in 2010.

Nature of Governance (*Multiple companies, multiple stakeholders*)

The Green Lead Project has representation from industry sectors, NGOs, and intergovernmental agencies. This multi-stakeholder group had a hand in designing both the initial standards and the revisions that resulted from the pilot schemes. All project decisions are consensus-based and all processes are continually monitored and improved by the multi-stakeholder group. A cross-section of members from the various work groups handles the auditing of the entities applying for certification through the Green Lead Certification Board.

Standards Breadth or Focus (*Multi-Issue: Environmental and Social Objectives, Multiple Companies with Stakeholder Input*)

The standards and criteria address multiple issues. Compliance is fostered through transparency in communication and reporting and the auditing and monitoring throughout the supply chain. The program also seeks to both educate the customer/end-users.

Nature of Standards/Program Development (*Multi-Sector Participation*)

The Green Lead Initiative has received a significant degree of credibility by involving a diverse multi-stakeholder group.

Approach to Verification (*Independent, Third-Party Auditing*)

Reports are submitted by the entity seeking certification to the Secretariat for acceptance. If accepted, it is handed to the Green Lead Certification Board, which is composed of a cross-section of members from the various Green Lead work groups. If the report is in order, a Green Lead Assessor conducts a site inspection to verify the assessment report. If accurate, the report goes to an independent auditor for a certification audit, the results of which would be sent back to the Certification Board for review. If everything is found to be in compliance, the entity may use the Green Lead logo; otherwise, there are feedback mechanisms to the entity in terms of the necessary changes or improvements that must be made in order for them to reapply for certification.

Key Findings

The Green Lead project is relevant to the supply chain for metals in electronics, although there is less health risk associated with exposure for most metals in electronics. The project illustrates that a focused initiative can create a system targeting particular metals that is both multi-issue and independently certified. Rather than tackling all environmental and social issues related to mining, the strategy employed was to first target the essential public health and environmental risk issues related to the lead sector. This focused, multi-sector, multi-stakeholder has garnered widespread acceptability.

Those participating in the Green Lead project are essentially building a more legitimized leadership group in the sector and differentiating themselves from others. This appears to be an important value given the risk associated with lead. Pilots were used early to test specific issues. This appears to have created a pragmatic, experience-based approach to the program that supported the gradual development of a business cases. The project also looks beyond the direct supply chain to the end-users and customers. It seeks to educate them to create additional momentum.