

# **Lead contamination of Roma camps in North Mitrovica**

## **Letter to all concerned**

### **1. Presentation**

The signatory of this letter is an independent consultant with background from metallurgical and heavy chemical industry and with comprehensive experience from international consulting relating to industry, energy and environment. From 2001-2002 he was engaged as Expert in Mining and Metal Industry Pollution at the Department of Environment in Kosovo. He has taken part of information about the environmental and health situation in Roma camps in North Mitrovica and would like to make the following statements:

### **2. Analyses of lead in soil**

Lead in soil analyses have been presented and show that the whole area around the Trepca lead smelter is contaminated. Lead values are found to be in the order of magnitude 0.5 – 1 %. Specific sampling in 2 Roma camps, Zitkovac and Cesmin Lug, show even higher values.

The lead contents at Zitkovac vary between 284 and 45260 mg lead per kg soil, the higher value equal to 4.5 % lead. At this site probably the lead originates from the general contamination with addition of tailings (= deposited rests from ore concentration).

At Cesmin Lug the lead contents vary between 542 and 161800 mg lead per kg soil, the higher value equal to 16 % lead. Such high values cannot be the result of general contamination or tailings, only from dumping of waste materials with high lead content. In this case informal smelting of lead batteries is suspected as main source of contamination. Battery smelting waste deposits are not indicative that the activity is still going on or even recent, but I believe that it has occurred and that the waste will continue to have potentially disastrous effects for as long as people are permitted to come into contact with it.

Lead batteries consist of a plastic casing and inside this lead (Pb), lead oxide (PbO<sub>2</sub>), lead sulphate (PbSO<sub>4</sub>) and sulphuric acid (H<sub>2</sub>SO<sub>4</sub>). Informal smelting sites will afterwards be contaminated by lead oxide, lead

sulphate and sulphuric acid. Not only is the concentration high, but the lead compounds found are also much more dangerous than lead tied up in e.g. tailings or slag. Used Lead Acid Battery Recycling is rated among the Top 10 Worst Pollution Problems 2008<sup>1</sup>.

### **3. Results from lead in blood analyses of children**

The results studied are from tests made at Osterode, but it is reported that figures from Cesmin Lug are equally high. The children tested were born between 1990 and 2006 and the reported lead in blood values vary between 8 and 64 µg/dl. Thirteen values are even so high they are above the detection limit of the analysis. The values are in the same order of magnitude as for professional exposure and then it must be reminded that children are much more vulnerable than grownups. The section below is from the WHO report from Senegal:

Lead is a cumulative toxin that affects multiple body systems, including the neurological, haematological, gastrointestinal, cardiovascular and renal systems. Children are more vulnerable to the harmful effects of lead than adults. The adverse health effects range from death to impaired cognitive and behavioural development that can have lifelong consequences. In children, blood lead levels < 100 µg/L are already associated with cognitive impairment, levels above 450 µg/L require chelation therapy, levels over 700 µg/L constitute a medical emergency requiring immediate treatment, and levels above 1200 µg/L are considered acutely life-threatening.

Because of the difference in reporting (µg/dl respectively µg/l), the values from Osterode have to be multiplied with 10 to be compared with the WHO figures. This shows the seriousness of the situation. All children are at risk, and several are in a situation requiring immediate treatment. There is even reported an excessive mortality in the camps assigned to lead, however the signatory has no further information about this.

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<sup>1</sup> [http://www.worstpolluted.org/projects\\_reports/display/65](http://www.worstpolluted.org/projects_reports/display/65) and there are several examples worldwide of disasters with lead poisoning at sites where this is going on.

[http://www.who.int/environmental\\_health\\_emergencies/events/Senegal2008/en/index.html](http://www.who.int/environmental_health_emergencies/events/Senegal2008/en/index.html) presents a WHO report from such a site, Thiaroye Sur Mer, Dakar, Senegal

#### **4. Conclusion**

The soil analyses and the lead in blood analyses of children each alone are more than sufficient to characterize the camps as sites unfit for people. Together they constitute strong evidence that the camps should be immediately abandoned, fenced and then cleaned up. The practical problems of finding new places for the camp dwellers to live must not delay evacuation when lives of children and grownups alike are at stake.



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