

August 7, 2011

To: Texas Commission on Environmental Quality

From: Dr. Howard W. Mielke, Ph.D., Tulane University Center for Bioenvironmental Research, New Orleans, Louisiana

Re: Final rule-making Exide smelter

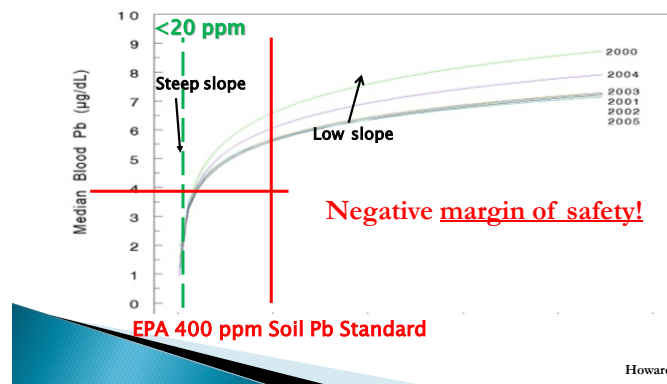
To whom it may concern:

The purpose of this letter is to outline fundamental facts regarding the release of lead emissions from the Exide facility located in the center of Frisco, TX. I have conducted original and primary research on lead in the environment and the response of children to lead. The following are emerging facts that must be carefully deliberated in making decisions about the of lead emission releases into a populated community.

- The emerging science indicates that although the CDC states there is no known safe lead level, they continue to use the 10 µg/dL guideline which was established 20 years ago. Current research indicates distinctive and replicated learning and IQ deficits at exposures of 2 µg/dL.
- Children are much more vulnerable at far lower quantities of lead in the environment than previously recognized. The vulnerability of children living in various communities is empirically based on studies in New Orleans and Syracuse, NY that evaluated the association between children's blood lead and the amount of lead accumulated in the soil environment of various neighborhoods. The emerging science is demonstrating, as illustrated in Fig. 1, children are generally exposed at or below 2 µg/dL only in communities where the soil lead is less than 20 ppm.

Figure 1.

**Children's blood lead response to lead contaminated soil demonstrates the need for clean soil**  
(response of 55,551 children to soil lead in 286 communities)



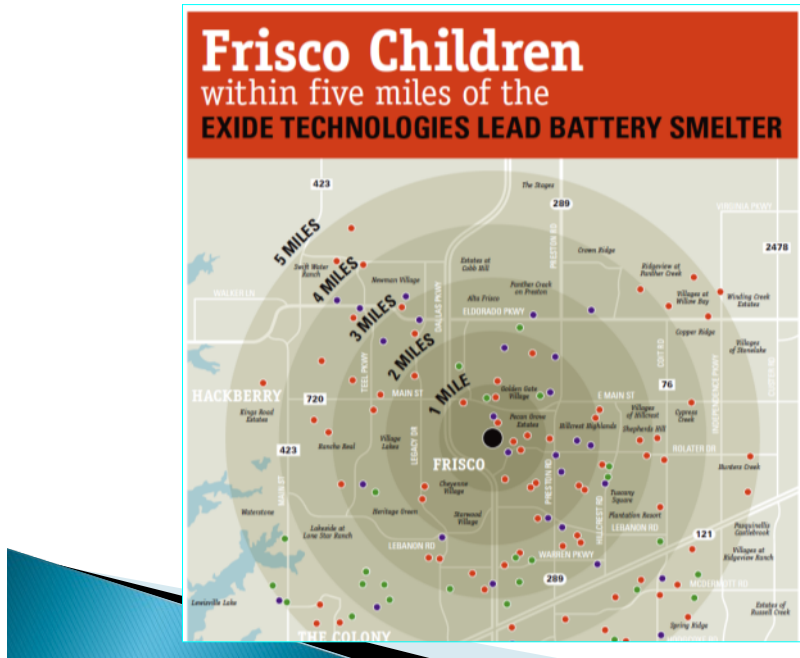
As indicated in Fig. 1 above, the larger the amount of lead in the soil of a community the higher the blood lead exposure of the young children. Particularly relevant to the Frisco, a community where the soil lead is relatively low there is an especially steep rise in blood lead. In the

communities of Frisco located within 1 mile of Exide, just meet soil lead levels of 20-100 ppm. Currently, there is a small or no margin of safety.

- Frisco, TX is a vibrant and rapidly growing town. Families with young children are relying on the city to maintain a safe and sustainable environment for their children. Figure 2 below shows the locations of major assets in Frisco that are places designed for children. Note that there are 12 childcare center, 3 playgrounds, and 7 elementary schools within a 2 mile radius of the Exide facility. These child oriented facilities are valuable community assets that must be protected from Exide’s lead emissions.

**Figure 2**

**2 mi. of Exide 12 Childcare Centers, 3 Playgrounds, 7 Elem. Schools**



- Legacy lead is an important issue for Frisco, TX. Soil on Exide property is likely to be particularly lead-contaminated and this soil is a potential source of airborne lead. During drought and late summer and early fall, when soils become dry, re-suspension of lead contaminated soil may set the low limit for controlling children’s exposure. This was an important finding within another smelter community of El Paso, TX.

**Conclusion:**

Given the emerging science of lead and the current understanding of its impact on young children, the current agreement to limit emissions to over 600 lbs of lead per year does not protect the Frisco community. Concern has been expressed that the allowable emissions are in reality being limited to 2000 lbs. per year. Given the emerging science, the prudent course of action is to regulate using only the best available technology; currently this would cut emissions of the Exide recycling facility to less than 20 lbs of lead per year. Meeting this emission would place the Frisco Exide into the ranks of a world class facility and congruent with the image of Frisco as a world class community.