

Comments by David Tundermann
on behalf of
US Magnesium LLC
to the
EPA Science Advisory Board
on the
Reanalysis of Key Issues Related to Dioxin Toxicity
and Response to NAS Comments

October 27, 2010

Thank you for the opportunity to comment at the Science Advisory Board meeting on EPA's Reanalysis of Key Issues Related to Dioxin Toxicity and Response to NAS Comments ("Draft Reanalysis").¹ On behalf of US Magnesium LLC I wish to offer comments on the practical side of the Draft Reanalysis.

The SAB Panels' comments from the July meeting² identify important scientific shortcomings in the Draft Reanalysis including, among other subjects, weak justification for a linear, non-threshold dose-response model and the absence of a quantitative uncertainty analysis. Ms. Laurie Haws from ToxStrategies on behalf of US Magnesium and other speakers, including those from the American Chemistry Council and Dow Chemical Company, amplify the deficiencies in EPA's dioxin science. Some of the most important of them from US Magnesium's perspective are the findings that soil dioxin concentrations do not translate into lower dioxin serum levels at residential concentrations below 1,000 ppt TCDD (TEQ). Further, lifetime exposure to the EPA cancer oral slope factor ("OSF") and non-cancer reference dose ("RfD") in the Draft Reanalysis would result in serum concentrations well below background, indicating that if the EPA OSF and RfD are correct, then everyone is essentially at risk, a conclusion which seems implausible. Moreover, EPA's proposed OSF and RfD values portend a situation where virtually all areas of the country could theoretically require cleanup.

EPA's science deficiencies and its headlong race to alter clean-up standards for dioxin based on poorly supported assumptions and analysis, both in the draft Preliminary Remediation Goals and in the Draft Reanalysis, portend enormous adverse practical consequences, including misleading the public over misplaced concerns about dioxin and wasting substantial public and private resources to investigate and remove soils with trace dioxin concentrations. All this disruption would occur with no known health benefits in reducing dioxin serum levels.

Regarding the particulars of US Magnesium, it is the sole producer of magnesium in the United States. USM's plant is in a desert environment on the western shore of the Great Salt Lake in Utah. US Magnesium employs about 400 workers. US Magnesium inadvertently produces chlorinated hydrocarbons ("CHCs"), including dioxins and furans, because operating conditions include reactions between chlorine and carbon at high temperatures.

¹ Docket ID No. EPA-HQ-ORD-2010-0395.

² Science Advisory Board, Compilation of Individual Comments from Panel Members (October 12, 2010).

Due to union and EPA concerns about potential worker exposure to CHCs, US Magnesium and the union representing workers at the plant requested NIOSH to perform a Health Hazard Evaluation in 2004, including blood sampling of the 30 most exposed workers. NIOSH reported its results in October 2005. The report concluded that blood samples of the workers revealed that levels of dioxins and furans were well below levels associated with observable health effects. Accordingly, workers there are not at risk from dioxins and furans.

Were EPA to adopt its more stringent OSF and RfD for dioxins and to reduce its recommended dioxin cleanup levels in soils based on its deficient science, many unintended adverse consequences would follow, including:

- a. Alarming workers and their families about exaggerated health risks from exposure to dioxins;
- b. Exposing workers to potentially higher levels of airborne dioxins resulting from excavation, transport and disposal of dioxin-containing soils and sediments; and
- c. Expending substantial public and private resources in sampling, analyzing and removing dioxin-containing soils.

Based on the science, these adverse consequences would likely not be accompanied by any reduction in dioxin serum levels, and accordingly, by any improvement in public or worker health.

US Magnesium appreciates the SAB's charge is scientific rather than regulatory. However, the practical and economic consequences of permitting EPA's flawed science and hasty Draft Reanalysis to go forward uncorrected would be substantial and very unfortunate from a scientific, public health and economic perspective.

US Magnesium urges the SAB to report the deficiencies noted by Panel members and other commenters, and to urge EPA to respond to them and to respond more fully to the 2006 NAS comments.

Thank you for the Panel's consideration.

David W. Tundermann
Parsons Behle & Latimer
Counsel to US Magnesium LLC

DWT