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June 16, 2014

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RE: COMMENT CONCERNING:

Annex A TITLE 25. ENVIRONMENTAL PROTECTION
PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION
Subpart D. ENVIRONMENTAL HEALTH AND SAFETY
ARTICLE VI. GENERAL HEALTH AND SAFETY
CHAPTER 250. ADMINISTRATION OF LAND RECYCLING PROGRAM

APPENDIX A – TABLE 4 - RESIDENTIAL MSCs FOR VANADIUM AND ARSENIC

It is noted that the residential soil MSC for vanadium is proposed to be decreased by 100 times from 1,500 mg/kg to 15 mg/kg. This change is not practical for Pennsylvania soils, based on the literature. Vanadium background concentrations in Pennsylvania range from a minimum of 15 mg/kg to a maximum of 150 mg/kg with an average of 80 mg/kg, a standard deviation of 46, and sample size of 16 (Dragun, 2005 / USGS, 1981). It would be more practical to set the standard at the maximum background concentration of 150 mg/kg or at least a 95 percent confidence interval around the mean of some acceptable background data set, if the USGS data set is unacceptable to the Environmental Quality Board (EQB). The regulations should not become so restrictive, that essentially every property in Pennsylvania will exceed the residential MSC and associated clean fill limits for vanadium.

This same problem exists with other metals in Pennsylvania that have MSCs below regional background conditions, such as arsenic which has background concentrations ranges from 3.8 mg/kg to 31 mg/kg (Dragun, 2005 / USGS, 1981). We recommend that the EQB establish a standard for arsenic based on background studies, such as the references cited below, similar to the recommendation for vanadium.

References

Boerngen, J.G and Shacklette, H.T., *"Chemical Analysis of Soils and Other Surficial Materials of the Conterminous United States."* Open File Report 81-197. U.S. Geological Survey. 1981.

Dragun, James and Chekiri, Khaled. *"Element in North America Soils."* Amherst Scientific Publishers: Amherst, Mass. 2005.

Smith, David B. et. al. *"Geochemical and Mineralogical Maps for Soils of the Conterminous United States"* Open File Report 2014-1082. U.S. Geological Survey: Reston, Virginia. 2014.

Sincerely,

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