



North American Metals Council  
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September 11, 2017

Via Docket Submission

Agency for Toxic Substances and Disease Registry  
Division of Toxicology and Human Health Sciences  
Environmental Toxicology Branch  
1600 Clifton Road, N.E.  
Mail Stop F-57  
Atlanta, Georgia 30329-4027

Re: Toxicological Profile for Molybdenum; Docket Number ATSDR-2014-0002

Dear Sir or Madam:

The North American Metals Council (NAMC)<sup>1</sup> is pleased to submit these comments on the Agency for Toxic Substances and Disease Registry (ATSDR) draft Toxicological Profile (Tox Profile) for molybdenum (82 Fed. Reg. 27066 (Jun. 13, 2017)). In addition to the points set forth below, NAMC supports and incorporates by reference here the positions and views expressed in comments submitted by the International Molybdenum Association (IMOIA) in its submission to ATSDR.

As a general matter, NAMC was disappointed to learn that despite communications from IMOIA to ATSDR during the development of the molybdenum Tox Profile, ATSDR elected to exclude from the document several key studies that IMOIA had previously highlighted.<sup>2</sup> IMOIA has again noted the studies of relevance in its comments, to which we hope ATSDR will give proper consideration and include in the final document. Given

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<sup>1</sup> NAMC is an unincorporated, not-for-profit organization serving as a collective voice for the North American metals producers and users. NAMC has been a leading voice for the metals industry on science- and policy-based issues affecting metals. Our organization has worked closely with the U.S. federal and international agencies to address risk assessment issues that are unique to metals and various stages of their lifecycle -- sourcing, production, engineering, use, recycling, and recovery.

<sup>2</sup> In particular, NAMC is aware the IMOIA referenced or provided ATSDR with studies related to reproductive toxicity, dermal adsorption, and sensitization.

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our expectation that ATSDR will eventually prepare updated Tox Profiles on other metal substances, we hope that future engagement by NAMC members during the development of draft ATSDR profiles will have better success.

Specific to the draft molybdenum Tox Profile, ATSDR should clearly indicate that molybdenum is essential for maintaining proper health for humans, animals, and plants. In addition, as suggested in the IMOA comments, ATSDR should include an easy-to-comprehend explanation on the chemistries of molybdenum, with an overview as to which molybdenum forms are most relevant for health assessment purposes and which forms may be encountered by the general public. Toward that end, ATSDR should not include information on substances that are not representative of molybdates and other molybdenum compounds, such as tetrathiomolybdate (TTM).

The discussion on potential carcinogenicity of molybdenum should be revised to reflect the specific finding by the National Toxicology Program (NTP) in its assessment -- that there may be “some evidence of carcinogenic activity” for molybdenum trioxide, but no “clear evidence of carcinogenic activity.” ATSDR Tox Profiles are often used by public stakeholders and it is critical that the information provided not be misleading or confusing, particularly on health endpoints of concern like carcinogenicity.

For the draft molybdenum Tox Profile, and future metal-specific profiles, NAMC urges ATSDR to include a discussion regarding metals and bioaccumulation factors (BAF), or refer readers to the [EPA Framework for Metals Risk Assessment](#) for a comprehensive review of how potential hazards of metals should be considered from a risk standpoint. NAMC supports the proposed language offered by IMOA explaining why the use of a “fixed” BAF is not relevant for essential elements, such as molybdenum. It is widely recognized in the literature that for all metals the BAF is inversely related to the exposure concentration.

Thank you for the opportunity to submit these comments.

Sincerely,

Kathleen M. Roberts  
NAMC Executive Director