



April 6, 2015

U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue NW  
Washington, DC 20460  
Attention Docket ID No. EPA-HQ-OW-2012-0217

Via electronic submission: [www.regulations.gov](http://www.regulations.gov)

**RE: Drinking Water Contaminant Candidate List 4—Draft, Docket ID No. EPA-HQ-OW-2012-0217, February 4, 2015, 80 Fed. Reg. 6076-6084**

To the Docket:

The American Chemistry Council's<sup>1</sup> (ACC) Ethylene Glycols Panel (Panel) appreciates the opportunity to comment on the U.S. Environmental Protection Agency's (EPA) Notice of Drinking Water Contaminant Candidate List 4 (CCL4)—Draft under the Safe Drinking Water Act (SDWA), Docket ID No. EPA-HQ-OW-2012-0217, published in the *Federal Register* on February 4, 2015 at 80 Fed. Reg. 6076-6084.

The Panel supports the development of drinking water standards that protect public health and reflect the best available scientific evidence and EPA's commitment to a sound science approach to the development of National Primary Drinking Water Standards (NPDWS).

Under separate cover, ACC has submitted overall comments on the draft CCL4, which are incorporated herein by reference.

### **I. Ethylene Glycol's Occurrence as a Drinking Water Contaminant is Scientifically Implausible by Virtue of its Physiochemical Properties**

Under Section 1412(b)(1)(B) of the SDWA, as amended, EPA is required to publish every five years "a list of contaminants which, at the time of publication, are not subject to any proposed or promulgated national primary drinking water regulation, which are known or anticipated to occur in public water systems, and which may require regulation under [the

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<sup>1</sup> ACC represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people's lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care®, common sense advocacy designed to address major public policy issues, and health and environmental research and product testing. The business of chemistry is an \$812 billion enterprise and a key element of the nation's economy. It is the nation's largest exporter, accounting for twelve percent of all U.S. exports. Chemistry companies are among the largest investors in research and development. Safety and security have always been primary concerns of ACC members, and they have intensified their efforts, working closely with government agencies to improve security and to defend against any threat to the nation's critical infrastructure.



SDWA].”<sup>2</sup> Ethylene glycol would not be expected to be found in drinking water sources. When released to the aquatic compartment, ethylene glycol will not tend to partition to air because it has a relatively low vapor pressure (8.0 Pa at 20°C). Furthermore, ethylene glycol is unlikely to partition strongly to soils or sediments because it has a log Kow of -1.36.<sup>3</sup> Ethylene glycol is unlikely to persist in the aquatic compartment because it is *very* rapidly biodegraded, showing 90-100 % removal after 10 days in an OECD ready biodegradability study.<sup>4</sup> Rapid biodegradation has also been observed in natural river water samples. In samples of river water dosed with ethylene glycol at up to 10 mg/L and incubated at 20 and 8°C, Evans & David (1974) observed that primary biodegradation was complete after 3 and 14 days, respectively.<sup>5</sup> The biodegradation of ethylene glycol in groundwater and soils is also comparably fast, with a half-life of 22 hours observed in groundwater, 16.5 hours in sandy loam soil and 6 hours in sandy silt.<sup>6</sup> Therefore, it can be concluded that ethylene glycol rapidly biodegrades; and as such, the substance cannot persist in a drinking water supply long enough to meet the SDWA requirements for listing.

Ethylene glycol is not known to occur in drinking water, and indeed, neither the National Contaminant Occurrence Database (NCOD) nor any other source of finished water or ambient water occurrence data, reflect any detections of ethylene glycol in water. In October 2014, EPA concluded that ethylene glycol had no occurrence at levels >1/2 the health reference level (HRL) and, therefore, was not proceeding to the next phase of the CCL3 regulatory determination process.<sup>7</sup> The conclusion to not proceed to the next phase under CCL3 and the decision to list ethylene glycol on CCL4 are inconsistent. EPA should remove ethylene glycol from the CCL4

## II. EPA Should Clarify Its Safe Drinking Water Act Authority.

Under SDWA section 1457, EPA has discretionary authority to designate chemicals for screening under the Endocrine Disruptor Screening Program (EDSP) based on their occurrence in drinking water. Under the statute, EPA may provide for screening of “any other substance that may be found in sources of drinking water if [EPA] determines that a substantial population may be exposed.”<sup>8</sup> Despite the Panel’s extensive comments showing that ethylene glycol does not meet the criterion that “a substantial population may be exposed,” EPA included ethylene glycol on the Final EDSP List 2. Therefore, the Panel supports ACC’s call for EPA to issue the

<sup>2</sup> 42 U.S.C. § 300g-1(b)(1)(B)(i)(I).

<sup>3</sup> ATSDR. 2010. Toxicological Profile for Ethylene Glycol (available at <http://www.atsdr.cdc.gov/toxprofiles/tp96.pdf>); Hansch, C., Leo, A., Hoekman, D. 1995. Exploring QSAR: Vol. 2: Hydrophobic, Electronic, and Steric Constants. Washington, DC, American Chemical Society.

<sup>4</sup> BASF AG. 1996. Pruefung der biologischen Abbaubarkeit von Ethylenglykol im DOC-Abnahme (Die-Away) Test. Unpublished data. Testing laboratory: Department of Ecology. Report No.: 96/0109/21/1.

<sup>5</sup> Evans, W.H., David, E.J. 1974. Biodegradation of mono-, di-, and triethylene glycols in river waters under controlled laboratory conditions. *Water Research*, 8(2):97-100.

<sup>6</sup> McGahey, C., Bouwer, E.J. 1992. Biodegradation of ethylene glycol in simulated subsurface environments. *Water Science and Technology*, 26:41-49.

<sup>7</sup> Announcement of Preliminary Regulatory Determinations for Contaminants on the Third Drinking Water Contaminant Candidate List. 79 Fed. Reg. 62716 (Oct. 20, 2014).

<sup>8</sup> SDWA § 1457, 42 U.S.C. § 300j-17.



scientific criteria relevant to establishing that a substance “may be found in sources of drinking water” and “that a substantial population may be exposed” for purposes of SDWA section 1457.

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The Panel appreciates EPA’s consideration of our comments and would welcome working with the Agency on any issues pertaining to ethylene glycol’s proposed listing on the CCL4. Should you have questions, please contact me by phone at (202) 249-6714 or by e-mail at [bill\\_gulledge@americanchemistry.com](mailto:bill_gulledge@americanchemistry.com).

Sincerely,

*Bill Gulledge*

Bill Gulledge

Senior Director, Chemical Products & Technology Division

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