



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

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's¹ (ACC) Ethylene Oxide 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.

Ethylene Oxide Is Not Found in Public Drinking Water Systems.

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 SDWA]."² Ethylene oxide would not be expected to be found in drinking water sources.

¹ 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.

² 42 U.S.C. § 300g-1(b)(1)(B)(i)(I).



Ethylene oxide is produced by direct oxidation of ethylene with air or oxygen. The highly reactive nature of ethylene oxide indicates that it volatilizes quickly in water. The Henry's Law Constant is 1.4×10^{-4} atm-m³/mole at 20°C.³ It has been shown that the transfer rate of EO from natural waters is about 0.36 times that of oxygen under the same conditions.³ A 4-hour aeration test resulted in 100% removal from water.⁴ The EPI Suite™ software predicts the volatilization half-lives (time for 50% of the mass to evaporate) for removal from a model river and model lake are 3.4 hours and 3.9 days, respectively.⁵ Since ethylene oxide does not meet the SDWA requirements for listing, EPA should remove ethylene oxide from the CCL4.

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.”⁶ The Panel supports ACC's call for EPA to issue the 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.

* * *

The Panel appreciates EPA's consideration of our comments and would welcome working with the Agency on any issues pertaining to ethylene oxide'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.

Sincerely,

Bill Gulledge

Bill Gulledge

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Manager, Ethylene Oxide Panel

³ C. Hirose, *Bull. Chem. Soc. Jpn*, 47, No. 6, (1974), pp. 1311-1318.

⁴ J.P. Dever, K.F. George, W.C. Hoffman, H. Soo, “Ethylene Oxide”, *Kirk-Othmer Encyclopedia of Chemical Technology*, 4th ed., Vol. 9, Wiley, New York (1994), pp. 919-959.

⁵ EPI Suite software, U. S. Environmental Protection Agency, Estimation Program Interface (EPI) Suite™ v4.11, <http://www.epa.gov/opptintr/exposure/pubs/episuite.htm>

⁶ SDWA § 1457, 42 U.S.C. § 300j-17.

