

**STATE OF MICHIGAN  
Rick Snyder, Governor**



**DEPARTMENT OF ENVIRONMENTAL QUALITY**

**AIR QUALITY DIVISION  
Constitution Hall • 525 WEST Allegan Street • P.O. Box 30260 • Lansing,  
MICHIGAN 48909-7760  
[www.michigan.gov/air](http://www.michigan.gov/air)**

**September 13, 2017**

**Response to Public Comments for  
Isobutene (CAS # 115-11-7)**

**Summary:**

Based on public comments, the Air Quality Division (AQD) has reviewed the Initial Threshold Screening Level (ITSL) for isobutene (a.k.a., isobutylene). As a result of that review, AQD agrees with the commenter that the ITSL basis was outdated and no longer the most appropriate. Therefore, the ITSL is changed from 21 ug/m<sup>3</sup> (annual averaging time) to 110,000 ug/m<sup>3</sup> (annual averaging time).

**Background:**

Revisions to the Air Pollution Control Rules<sup>1</sup> were promulgated December 22, 2016. Subsequently, the Michigan Department of Environmental Quality (MDEQ) Air Quality Division (AQD) published toxic air contaminant screening levels and their basis as required by Rule 230(1). Pursuant to Rule 230(2), AQD solicited and received public comments on these screening levels for 60 days: February 14 through April 14<sup>th</sup>, 2017. AQD must respond to these comments within 180 days; the latest date for response is October 11<sup>th</sup>, 2017.

---

<sup>1</sup> Air Pollution Control Rules in Michigan Administrative Code promulgated pursuant to Article II Pollution Control, Part 55 (Sections 324.5501-324.5542), Air Pollution Control, of the Natural Resources And Environmental Protection Act, 1994.PA 451, as amended (NREPA)

### **Comments and Responses:**

#### **Comment:**

AQD received comments from one party regarding the ITSL for isobutene. The commenter stated that the ITSL was established in 1994, and since that time additional relevant studies and reports have become available. These include a 1998 NTP bioassay report, a 2003 OECD toxicology literature review and report, and a TCEQ literature review and risk assessment (most recently updated in 2015).

#### **Response:**

AQD obtained the recommended toxicology literature reviews and TCEQ risk assessment. AQD agrees with the data interpretation provided by the commenter, the NTP (1998), the OECD (2003) and the TCEQ (2015). AQD is thus adopting as the ITSL (with annual averaging time) the TCEQ (2015) chronic reference value (ReV) of 110,000 ug/m<sup>3</sup>.

### **Summary and Conclusions:**

Based on public comments, the Air Quality Division (AQD) has reviewed the Initial Threshold Screening Level (ITSL) for isobutene. As a result of that review, AQD agrees with the commenter that the ITSL basis was outdated and not the most appropriate. Therefore, the ITSL is changed from 21 ug/m<sup>3</sup> (annual averaging time) to 110,000 ug/m<sup>3</sup> (annual averaging time). This change is consistent with the recommendations of the commenter and the findings of TCEQ (2015).

The primary AQD reviewer for these comments was Robert Sills, AQD Toxics Unit Supervisor. The secondary (peer) reviewer was Doreen Lehner, AQD Toxicologist.

### **References:**

National Toxicology Program (NTP). 1998. NTP Technical Report on the Toxicology and Carcinogenesis Studies of Isobutene. (CAS No. 115-11-7) in F344/N Rats and B6C3F1 Mice (Inhalation Studies).

Organization for Economic Cooperation and Development (OECD). 2003. Screening Information Dataset (SID). Isobutylene. Date of last update: October 31, 2003. United Nations Environment Programme (UNEP) Publications.

Texas Commission on Environmental Quality (TCEQ). 2015. Development Support Document. Isobutene. Last revised: September 14, 2015. Prepared by: Roberta L. Grant, Ph.D., Toxicology Division.