

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

TO: File for Carbon Black (CAS No. 1333-86-4)

FROM: Cathy Simon, Air Quality Division

DATE: December 19, 2012

SUBJECT: Screening Level Update

The initial threshold screening level (ITSL) for carbon black has been changed from 35 $\mu\text{g}/\text{m}^3$ (8-hour averaging time) to 30 $\mu\text{g}/\text{m}^3$ (8-hour averaging time). This change is being made as part of a project to update ITSLs that are derived from outdated occupational exposure limits. The evaluation of data being done as part of this project is limited to identifying the most recent occupational exposure limit, and does not include a review of all the available scientific literature.

The original ITSL for carbon black was set in 1993 and was derived from the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) of 3.5 mg/m^3 (MDNR, 1993). This TLV of 3.5 mg/m^3 was first adopted by the ACGIH in 1967. The new ITSL is based upon the most recent TLV of 3 mg/m^3 , which was adopted by the ACGIH in 2011, and represents the most up to date and scientifically based TLV available from the ACGIH. The new ITSL was derived as follows:

$$ITSL = \frac{TLV}{100} = \frac{3 \text{ mg}/\text{m}^3}{100} = 0.03 \text{ mg}/\text{m}^3 = 30 \text{ }\mu\text{g}/\text{m}^3$$

The above ITSL of 30 $\mu\text{g}/\text{m}^3$ (8-hour averaging time) was derived pursuant to Rule 229(2)(b) of the Michigan Air Pollution Control Rules, and is consistent with the methodology of Rules 232(1)(c) and 232(2)(a).

References

ACGIH. 2011. Carbon Black. Documentation of the Threshold Limit Values and Biological Exposure Indices for Chemical Substances. 7th Edition. American Conference of Governmental Industrial Hygienists. Cincinnati, OH.

MDNR. 1993. *Memo from Gary Butterfield to Carbon Black File (CAS # 1333-86-4). Subject: ITSL for Carbon Black.* June 25, 1993. Michigan Department of Natural Resources, Air Quality Division.

CS:lh