

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

INTEROFFICE COMMUNICATION

June 30, 2012

TO: File for Hydrotreated Middle Distillate (CAS No. 64742-46-7)  
FROM: Michael Depa, Air Quality Division, Toxics Unit  
SUBJECT: Initial Threshold Screening Level

The following references or databases were searched to identify data to determine the ITSL: EPA's Integrated Risk Information System (IRIS), Registry of Toxic Effects of Chemical Substances (RTECS), American Conference of Governmental and Industrial Hygienists (ACGIH) Threshold Limit Values (TLVs), National Institute of Occupational Safety and Health (NIOSH) Pocket Guide to Hazardous Chemicals, Environmental Protection Bureau Library, International Agency for Research on Cancer (IARC) Monographs, Chemical Abstract Service (CAS) Online (1967 – April 8, 2012), National Library of Medicine (NLM), Health Effects Assessment Summary Tables (HEAST), and National Toxicology Program (NTP) Status Report.

The CAS Registry file for "64742-46-7" defines "distillate middle" as:

A complex combination of hydrocarbons obtained as the raffinate from a solvent extraction process. It consists predominantly of aliphatic hydrocarbons having carbon numbers predominantly in the range of C11 through C25 and boiling in the range of approximately 35 C to 190 C (95 F to 374 F).

There are occupational exposure limits (OELs) for Mineral Oil Mist of 5 mg/m<sup>3</sup>:  
<http://www.osha.gov/SLTC/healthguidelines/oilmist/recognition.html>

The Permissible Exposure Limit documentation specifically lists the CAS No. for hydrotreated middle distillate (HMD) as 64742-46-7. Furthermore, it lists the NIOSH REL and ACGIH TLV for Mineral Oil Mist as the basis for the OEL of 5 mg/m<sup>3</sup>. Pursuant to Rule 232(1)(c): The ITSL shall equal the OEL/100. Therefore, the ITSL is calculated as:

$$\begin{aligned} \text{ITSL} &= \text{OEL}/100 \\ \text{ITSL} &= 5 \text{ mg/m}^3 / 100 \\ \text{ITSL} &= 0.05 \text{ mg/m}^3 \\ \text{ITSL} &= 50 \text{ } \mu\text{g/m}^3 \end{aligned}$$