## MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

## INTEROFFICE COMMUNICATION

December 3, 1997

TO: Solvent-refined heavy paraffinic distillates file(CAS # 64741-88-4)

FROM: Gary Butterfield, Toxics Unit, Air Quality Division

SUBJECT: Initial Threshold Screening Level (ITSL) for Solvent-Refined Heavy Paraffinic Distillates

Solvent-refined heavy paraffinic distillates (CAS # 64741-88-4) is also know as solvent-extracted lubricant base oil. Materials under this CAS number are described in the EPA ToSCA inventory as being a complex mixture of saturated hydrocarbons having carbon numbers in the range of C20 to C50, and is a finished oil with a viscosity of at least 100 SUS at 100F. Other sources have reported the boiling point for this material being at 315 to 485C.

A November 6, 1997 CAS on-line search got no hits for this CAS number. The National Library of Medicine search found several hits with unpublished information submitted under the EPA's ToSCA program. Along with the unpublished studies were a couple of published articles with results from some long term dermal painting studies. One of these long term skin painting studies (Gerhart et al 1988) found no evidence of this material being carcinogenic.

There is an American Conference of Governmental Industrial Hygienists Threshold Limit Value (ACGIH TLV) for oil mist of 5 mg/m3. The above description for solvent-refined heavy paraffinic distillates is consistent with the description for ACGIH oil mist, as far as carbon numbers of the hydrocarbon chains, boiling point and oil description, in addition to the absence of cancer production in the long term skin paint studies. It can therefore be recommended that the ITSL for solvent-refined heavy paraffinic distillates be based on the ACGIH TLV for oil mist. The ITSL can be calculated based on the TLV as described in Rule 232(c), and will result in an ITSL of 50 ug/m3 with an 8 hour averaging time.

## **REFERENCES:**

ACGIH. 1991. Documentation of the threshold limit values and biological exposure indices, 6th edition.

Gerhart et al. 1988. Tumor initiation and promotion effects of petroleum streams in mouse skin. Fund Appl Toxicol 11:76-90.

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