Joint Exhibit 74

EPA OALJ Docket No. FIFRA-HQ-2022-0002

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

June 27 2016

PC Code: 078701
DP Barcode: 432677

MEMORANDUM

SUBJECT: **DCPA:** Response to Waiver Request for the Chronic Sediment Toxicity Study with *Leptocheirus plumulosus*

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The Environmental Fate and Effects Division (EFED) reviewed the following waiver request for chronic sediment toxicity testing on the estuarine/marine invertebrate *Leptocheirus plumulosus*. The study was requested under the DCI for Registration Review.

- MRID 49865803. Freedlander, D. (2016) Proposed Waiver for Dacthal (DCPA) Chronic Study Testing on *Leptocheirus plumulosus*. Project Number: 100/AQU/028, 246A/115, 246A/116A. Unpublished study prepared by Amvac Chemical Corporation. 10p.

The arguments set forth in the waiver request are summarized below, followed by a response from EFED. Based on this response, EFED does not recommend granting the waiver request for chronic sediment toxicity testing with DCPA on an estuarine/marine invertebrate.

Waiver Request Summary

1. Sediment-dwelling organisms (*i.e.*, *Hyalella azteca*, *Chironomus dilutus*) show only minor toxicological effects from exposure to DCPA at levels approaching the solubility limit.

Freshwater amphipods (*H. azteca*) appear to be less sensitive to DCPA than midges (*C. dilutus*).

The study report for *H. azteca* (MRID 49865801) reports no effects up to 92 mg a.i./kg sediment and 0.34 mg/L pore water, the highest concentration tested. The study report for *C. dilutus* (MRID 49865802) reports effects on eggs per egg mass, egg masses per mated female, and eggs per mated female at 86 mg a.i./kg sediment and 0.25 mg/L pore water, the highest concentration tested (NOAEC = 30 mg a.i./kg sediment and 0.21 mg/L pore water).

2. Sediment-dwelling aquatic organisms have been shown to display a much lower level of sensitivity to DCPA compared to water column-dwelling organisms (*i.e.*, *Daphnia magna, Americamysis bahia*). Therefore, ecological assessments of invertebrate effects due to possible DCPA exposure should be based on water-column species.

   The NOAEC for *D. magna* is 0.27 mg/L and effects were seen at 0.54 mg/L on growth and reproduction. The NOAEC for *A. bahia* is 0.021 mg/L and effects were seen on growth and reproduction at 0.039 mg/L and 0.076 mg/L, respectively.

3. DCPA only manifests toxicological effects on aquatic invertebrates at water concentrations that are unlikely to occur in the environment. DCPA has a water solubility of approximately 0.5 mg/L at 25°C.

4. Testing of *L. plumulosus* has proven difficult due to study validation issues.

EFED Response

While EFED has not yet reviewed the submitted chronic freshwater sediment toxicity studies, the statements in #1 and #2 are consistent with the study reports.

Regarding #3, modeled EECs and monitoring data for DCPA presented in the last risk assessment[1] conducted by EFED show water concentrations close to the solubility limit. Modeled EECs reached the solubility limit of 0.5 mg/L, and the maximum reported concentration of DCPA in surface water monitoring data was 0.1 mg/L. Additionally, risks exceeded the levels of concern for aquatic invertebrates. Therefore, EFED cannot reasonably make the assumption that *L. plumulosus* would not be impacted at concentrations of DCPA expected to occur in the environment.

EFED is aware of the challenges some laboratories have experienced running the chronic sediment toxicity test with *L. plumulosus*. As an alternative, the Agency will allow Amvac to conduct an OCSPP 850.1740 study, (10-day Whole Sediment Acute Toxicity Invertebrates, Marine) in the interim. EPA encourages the registrant to conduct the study as expeditiously as possible so the results can be considered in the forthcoming ecological risk assessment for Registration Review. Allowing a registrant to conduct the 10-day 850.1740 study instead of the

[1] U.S. EPA. 2009. Risks of DCPA Use to Federally Threatened California Red-legged Frog (*Rana aurora draytonii*). Environmental Fate and Effects Division, Office of Pesticide Programs, Washington, DC. February 19, 2009. Available at: https://www3.epa.gov/pesticides/endanger/litstatus/effects/redleg-frog/dcpa/analysis.pdf

28-day study does not constitute a change in the EPA's policy or data requirements. The 28-day study will remain an outstanding DCI requirement since it includes effects on growth and reproduction which are not part of the 10-d study. This memo does not constitute a waiver of the estuarine/marine chronic sediment toxicity data requirement. A waiver may be considered at a later date pending the results of the 10-d study and any other supporting data. This approach is also described in EFED's 2014 *Toxicity Testing and Ecological Risk Assessment Guidance for Benthic Invertebrates* guidance document.[2]

[2] https://www.epa.gov/sites/production/files/2015-08/documents/toxtesting_ecoriskassessmentforbenthicinvertebrates.pdf