

October 19, 1979

TO: Gary Guenther, Chief
Environmental Services Division

FROM: Larry Fink, Chemist
Office of Toxic Materials Control

SUBJECT: Proposed Consolidated Permit Facility Process Evaluation for
Chemical Production Facilities in Michigan

Chemical production facilities intentionally and unintentionally discharge toxic and reactive materials to the air, water and soil of the State. Since many of the materials so discharged are environmentally persistent and mobile, the environmental contamination of any one medium often results in the subsequent contamination of the others. It is therefore impossible to fully assess the impact of a particular chemical production facility on water quality considering only direct discharges to the waters of the State under the NPDES Permit program. Indirect discharges via migration from contaminated air and soil must also be considered.

EPA has mandated that the Environmental Protection Bureau require the performance of the Facility Process Evaluation as a special condition of chemical production facility interim NPDES permits. The results of such studies will be used to identify and quantify discharges of chemicals of environmental and public health concern, to assess compliance with BPT and to assist in the development of BAT guidelines for the chemical industry. I believe that the only way to fulfill the conditions of the EPA mandate is to perform a Facility Process Evaluation in the context of the Consolidated Permit Program.

I am therefore recommending that the Environmental Protection Bureau Divisions work with the Geological Survey Division to generate a guidance document for the development of a Consolidated Permit Facility Process Evaluation protocol and format to be used by chemical production facilities in preparing, implementing, and publishing results of a Facility Process Characterization Study. In the long run such a program should minimize the duplication of effort and guarantee that a consistent approach is taken by the Environmental Protection Bureau in developing permit conditions for impacted industries. I believe that Office of Toxic Materials Control staff have the necessary expertise to coordinate the development of such a document.

I am further recommending that the first such Consolidated Permit Facility Process Evaluation (CPFPE) be performed by the Dow Chemical Company at it's Midland, Michigan facility in order to assess the impacts of its raw material and waste management practices on local environmental quality. Such a CPFPE is the ideal vehicle for identifying and characterizing the sources of TCDD contamination at the Midland facility and for quantifying and fingerprinting the TCDD isomer abundances in contaminated process effluents. With such information it should prove possible to resolve the dioxin controversy and to generate NPDES Permit conditions appropriate to the control and management of toxic materials of highest environmental and public health concern at the Dow Midland facility.

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cc: K. Zollner, Jr.

D. Sullivan ✓