

EPA Guidance for Toxic Organic Management Plans

4. GUIDANCE FOR THE PREPARATION OF A TOXIC ORGANIC MANAGEMENT PLAN

As previously discussed, one alternative to routine TTO monitoring is the preparation of a toxic organic management plan (TOMP). This option is available to regulated industrial users in the Electroplating, Metal Finishing, and Electrical and Electronic Components (both Phase I and Phase II) categories.

A TOMP must specify the toxic organic compounds used, the method of disposal used (instead of discharge into waste streams), and procedures for assuring that toxic organics do not routinely spill or leak into wastewater discharged to the POTW. Guidelines for preparation of a TOMP are presented below as four basic steps:

Step 1 – Process Engineering Analysis

A process engineering analysis should be conducted to determine the source and type of toxic organic compounds found in a facility's wastewater discharge, including sources and compounds that could reasonably be expected to enter the wastewater in the event of spills, leaks, etc., based on the type of operations conducted at a particular plant. Such an analysis should be based on the results of one or more analyses of the plant's wastewater for the toxic organic pollutants which are included in the definition of TTO for that industrial category and which can reasonably be expected to be present (see TTO monitoring guidance). The process engineering analysis should include:

- a. An examination of published reports on the specific industry;
- b. A water flow diagram to identify all possible wastewater sources;
- c. A list of raw materials used in the industrial processes, including chemical additives, water treatment chemicals and cleaning agents, and the waste stream that each regulated toxic organic could potentially enter;
- d. Comparison of the toxics found in the effluent with the list of raw materials and selection of the most probable wastewater source;
- e. Evaluation of the toxics found in the effluent, but not on the raw materials list and determination of those formed as reaction products or by-products;
- f. Examination of sources such as equipment corrosion or raw material impurities that could result in release to wastewaters of toxic organic pollutants.

Step 2 - Pollutant Control Evaluation

An evaluation should be made of the control options that could be implemented to eliminate the toxic compound(s) or the source or potential source of toxic organic compound introduction to the treatment system. This may include in-plant modifications, solvent or chemical substitution, partial or complete recycling, reuse, neutralization, and operational changes. The analysis should be conducted on a case-by-case basis and will often result in one or more feasible options to control each source or potential source of toxic pollutant discharge. Finally, evaluation of the available control options, including the advantages and disadvantages of each, may lead to a decision of whether a TOMP is a feasible alternative to TTO monitoring,

Step 3 - Preparation of Toxic Organic Management Plan

A toxic organic management plan should include the following items at a minimum:

- a. A complete inventory of all toxic organic chemicals in use or identified through sampling and analysis of the wastewater from regulated process operations (organic constituents of trade-name products should be obtained from the appropriate suppliers as necessary);
- b. Descriptions of the methods of disposal other than dumping used for the inventoried compounds, such as reclamation, contract hauling, or incineration;
- c. The procedures for ensuring that the regulated toxic organic pollutants do not spill or routinely leak into process wastewaters, floor drains, non-contact cooling water, groundwater, surface waters (i.e., Spill Prevention, Control, and Countermeasures (SPCC) Plan) or any other location which allows discharge of the compounds; and
- d. Determinations or best estimates of the identities and approximate quantities of toxic organic pollutants used as well as discharged from the regulated manufacturing processes. Compounds present in waste streams that are discharged to sanitary sewers may be a result of regulated processes or disposal, spills, leaks, rinse water carryover, air pollution control, and other sources.

Step 4 - Submission of Toxic Organic Management Plan and Certification Statement

The TOMP should be submitted to the Control Authority at the time the baseline monitoring report is required if the IU's initial election is to choose this option. Alternatively, an IU may submit a TOMP at any later time and request that TTO monitoring requirements be discontinued upon approval and implementation of the TOMP. A prerequisite for use of this certification approach is a fully approved, implemented, and ongoing toxic organic management plan. In addition, a certification statement must be included at the time of submission of the TOMP and with each subsequent IU report (i.e., semi-annual compliance report). It must be signed by an officer of the company or manager responsible for overall plant operations. A statement such as the following should be required.

"Based on my inquiry of the person or persons directly responsible for managing compliance with the TTO limitations, I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last report. I further certify that this facility is implementing the toxic organic pollutant management plan submitted to the Control Authority on (date to be specified)."

{date}

(Officer)

If the user is unable to make the above certification statement, the user should notify the Control Authority sixty days (60) prior to the due date for filing the compliance reports. At that time, the Control Authority should determine the appropriateness of requiring sampling and analysis for specific toxicants and notify the user accordingly.