



COBB COUNTY WATER SYSTEM

Office of Environmental Compliance
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GUIDANCE MANUAL FOR WRITING TOXIC ORGANIC MANAGEMENT PLANS

BACKGROUND

The National Pretreatment Program establishes an overall strategy for controlling the introduction of industrial wastes to publicly owned treatment works (POTWs) in accordance with the objectives of the Clean Water Act. The Act authorizes the Environmental Protection Agency (EPA) to develop pretreatment standards for new and existing industrial dischargers to POTWs. Specific standards for certain categories of industries have been developed based on the ability of these industries to remove pollutants from their wastewater using accepted treatment technologies and good housekeeping practices.

Federal Regulations require certain industries subject to the pretreatment standards to account for all organic substances used in their production operations and to provide this information to the appropriate control authority. The control authority is the Cobb County Water System which has an approved pretreatment program. The County also has the authority to require this Toxic Organic Management Plan (TOMP) be submitted by any industry which in the County's judgment has reasonably demonstrated expected toxic organics present in the industries regulated waste stream. Typical sources of organics include spent solvents used degreasing and paint stripping operations. The types and sources of organic substances vary considerably from industry to industry.

Seven specific industrial categories have pretreatment standards for total toxic organics (TTO). These categories are:

- Electroplating (40 CFR 413),
- Metal Finishing (40 CFR 433),
- Electrical and Electronic Components (40 CFR 469),
- Metal Molding and Casting (40 CFR 464),
- Coil Coating (40 CFR 465),
- Aluminum Forming (40 CFR 467), and
- Copper Forming (40 CFR 468).

The reason for a TTO limit in each of these categories is that studies have shown there is a significant potential for TTO discharge by these industries.

WHAT IS A TTO?

TTOs are defined as the sum of the masses or concentrations of specific toxic organic compounds found in an industry's process wastewater at concentrations greater than 0.01 mg/L. Each of the industrial categories listed above has its own specific list of toxic organic compounds for which it must monitor.

WHAT IS REQUIRED OF INDUSTRIES SUBJECT TO TTO LIMITS?

Industries subject to TTO monitoring, the majority of which are electroplating and metal finishing facilities, are required to perform a baseline analysis of all wastestreams, which may contain toxic organic chemicals, must show compliance with the appropriate standards. In addition, unless an industry complies with a Toxic Organic Management Plan (TOMP) and certification requirements discussed below, results of TTO analysis must be submitted with Periodic Compliance Reports.

Recognizing the expense of routine TTO analysis, EPA allows the electroplating, metal finishing and electrical and electronic components industries to submit in their Periodic Compliance Reports, in lieu of TTO monitoring data, a certification statement that no concentrated toxic organics are dumped into the wastewater. If the industry cannot certify that no toxic organics were dumped, it is required to monitor for TTOs (see the attached list). If the industry chooses to submit the certification statement, it is also required to submit a TOMP. This plan details how toxic organic chemicals are managed so as to keep them out of the industry's wastewater discharge.

The copper forming, aluminum forming and coil coating industries are required to analyze their discharges for TTOs, or indicator pollutants, and are not allowed to certify to "no dumping" of TTOs. These industries, therefore, are not required to develop a TOMP.

If, at any time, results from samples collected from an industry that has submitted a TOMP and certification statement indicate TTO levels over the allowable limits, the industry will be required to begin routine TTO sampling. The industry will not be allowed to submit a certification statement in lieu of monitoring for TTOs until monitoring data clearly indicate that the industry's TOMP is successful in controlling TTO discharges to within allowable limits.

For those industries that "do not use any toxic organics in their industrial process, or do not strip paint or clean surfaces that may be coated with toxic organic compounds," a statement certifying to the above may be submitted in place of the TOMP.

STEP #1 - Toxic Organics Inventory

- A.** Identify and list all toxic organic chemicals used at your facility. Estimate the maximum daily amount and the average daily amount of toxic organics stored at your facility. For a list of regulated toxic organics consult the following appropriate source.

- B. Trade names will not be accepted;** consult material safety data sheets and/or technical bulletins for the organic constituents. Do not attach material safety data sheets or technical bulletins in lieu of listing the organic constituents, unless specifically requested by Cobb County Water System.

- C.** If no toxic organic compounds or compounds containing such toxic organics are identified as being used or stored at your facility, then you may sign certifying that no toxic organics are used at the facility in Section I.(D5) of the Industrial Waste Discharge Permit Application. If any toxic organic compounds or compounds containing such toxic organics

are identified as being used or stored at your facility, then you must complete Steps # 2 through # 6.

STEP #2 - Identify and Approximate the Quantities of TTO in the Wastestream

- A.** Wastestreams must be sampled and analyzed using USEPA approved methods, see 40CFR 136. Sampling and analyses should be conducted for only those individual compounds reasonably expected to be present in the wastestream. The Cobb County Water System shall be provided with a copy of the reporting form from the laboratory analyzing the wastestream samples.
- B.** Describe the step(s) in the regulated process in which toxic organics are used.
- C.** Describe the sources where toxic organics may be introduced into the wastestream besides B. above (i.e., floor drains).
- D.** Provide a flow schematic showing all of the sources where toxic organics may enter the wastestream.
- E.** List the approximate quantities (i.e., gallons/day) of each toxic organic chemical used at each step in the regulated process.
- F.** Evaluate any regulated TTO found in the effluent, but not on the TTO inventory list in part A and determine if they are formed as reaction products or by-products, raw materials impurities, equipment corrosion, or other sources.

STEP #3 - Methods of Disposal

- A.** Describe the waste(s) being generated.
- B.** Provide the amount of waste being disposed of, and the frequency of disposal.
- C.** Provide the method(s) of disposal (i.e., surface impoundment, direct discharge, reclamation, or contract disposal).
- D.** Provide the name of the contractor(s) or the receiving stream.
- E.** Estimate the maximum daily amount and the average daily amount of waste stored at your facility.
- F.** Provide your facility's RCRA generator number.
- G.** Describe the storage of waste generated awaiting disposal. This should include, but is not limited to, location of storage (preferably indoors or a roofed area), the duration of storage, and the types of waste being stored (includes solvent soaked rags and absorbents/adsorbents). The storage area must be designed and maintained to not allow leakage. Incompatible wastes should not be stored together.
- H.** Evaporation of waste is not an acceptable disposal method. All waste containers should be covered.

- I. Evaluate control options that could be implemented to minimize or eliminate the discharge of toxic organics or the source or potential source where toxic organics are introduced to the treatment system. These include but, are not limited to, the following:
- in-plant modification
 - solvent / chemical substitution
 - partial or complete recycle
 - neutralization
 - operational changes

STEP #4 - Practices to Insure that Spills or Leaks do not Routinely Occur

- A. Describe the practices to be followed, including housekeeping procedures, during the use, collection, and storage of organics to insure that organics do not spill or leak. These practices should include, but are not limited to:
- properly labeling and handling toxic organic containers
 - storing a minimal amount of organics at the site
 - a centralized storage area (preferably indoors or a roofed area) designed and maintained not to allow leakage
 - sealing floor drains when they are in the area where toxic organics are used or stored
 - overflow control equipment, and containment system (sump or dike) capable of holding 10% of the total volume stored or the volume of the largest container, which ever is greater.
- B. The containment system must be designed and maintained not to allow leakage.
- C. Describe the procedures that will provide routine and detailed visual inspections to insure the absence of leaking storage containers (i.e., tanks, drums, pipes, etc.).
- D. Describe how all employees are trained in the proper use, collection, and storage of all chemicals with which they work.
- E. Describe the procedures by which employees are informed of the health risks associated with exposure to the toxic organic chemicals with which they work.
- F. Provide a simple but complete floor plan showing the storage location of toxic organics prior to use and toxic organics waste awaiting disposal.

STEP #5 - Spill or Leak Procedures

- A. Notifications procedures
1. A list of agencies to be contacted with their telephone numbers must be posted where organics are used and stored. This list includes, but is not limited to, your facility's emergency response coordinator, Fire Department, GA EPD and the Cobb County Water Systems, Office of Environmental Compliance.
 2. If a spill or leak enters the wastewater, GA EPD and the Cobb County Water Systems, Office of Environmental Compliance should be promptly notified with the following information:
 - a) your facility's name

- b) the receiving POTW (Cobb County Water System, Wastewater Treatment Plant)
- c) the chemical(s) and the cause of the spill/leak
- d) quantity of the chemical(s)
- e) time and duration of spill/leak
- f) steps being taken and/or planned to eliminate and prevent any further spill/leaks.

B. Describe the practices to be followed in the event of a spill or leak (i.e., containment, treatment, disposal, etc.).

C. Describe the equipment / supplies on site to contain a rupture in the largest container.

D. Describe how employees will be trained in the procedures to follow in the event of a spill or leak of a toxic organic.

STEP #6 – Certification Statement for Facilities Using or Storing Total Toxic Organics

“Based on my inquiry of the person or persons directly responsible for managing compliance with the standards for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastestream has occurred since filing the last Periodic Report on Continued Compliance. I further certify that this facility is implementing the current Toxic Organic Management Plan which is on file with the Cobb County Water System, Office of Environmental Compliance.”

Signature of Authorized Representative

Date

Authorized Representative Name (print or type)

Title

**REGULATED TOXIC ORGANICS FOR
ELECTROPLATING, METAL FINISHING, AND ELECTRICAL AND ELECTRONIC
COMPONENTS INDUSTRIES**

Acenaphthene
Acrolein
Acrylonitrile
Benzene
Benzidine
Carbon tetrachloride (tetrachloromethane)
Chlorobenzene
1,2,4-Trichlorobenzene
Hexachlorobenzene

4,6-Dinitro-o-cresol
N-nitrosodimethylamine
N-nitrosodiphenylamine
N-nitrosodi-n-propylamine
Pentachlorophenol
Phenol
Bis (2-ethylhexyl) phthalate
Butyl benzyl phthalate
Di-n-butyl phthalate

1,2-Dichloroethane
1,1,1-Trichloroethane
Hexachloroethane
1,1-Dichloroethane
1,1,2-Trichloroethane
1,1,2,2-Tetrachloroethane
Chloroethane
Bis (2-chloroethyl) ether
2-Chloroethyl vinyl ether (mixed)
2-Chloronaphthalene
2,4,6-Trichlorophenol
Parachlorometa cresol
Chloroform (trichloromethane)
2-Chlorophenol
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
3,3-Dichlorobenzidine
1,1-Dichloroethylene
1,2-Trans-dichloroethylene
2,4-Dichlorophenol
1,2-Dichloropropane
1,3-Dichloropropylene (1,3- dichloropropene)
2,4-Dimethylphenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
1,2-Diphenylhydrazine
Ethylbenzene
Fluoranthene
4-Chlorophenyl phenyl ether
4-Bromophenyl phenyl ether
Bis (2-chloroisopropyl) ether
Bis (2-chloroethoxy) methane
Methylene chloride (dichloromethane)
Methyl chloride (chloromethane)
Methyl bromide (bromomethane)
Bromoform (tribromomethane)
Dichlorobromomethane
Chlorodibromomethane
Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
2-Nitrophenol
4-Nitrophenol
2,4-Dinitrophenol
Di-n-octyl phthalate
Diethyl phthalate
Dimethyl phthalate
1,2-Benzanthracene (benzo(a)anthracene)
Benzo(a)pyrene (3,4-benzopyrene)
3,4-Benzofluoranthene (benzo(b)fluoranthene)
11,12-Benzofluoranthene (benzo(k)fluoranthene)
Chrysene
Acenaphthylene
Anthracene
1,12-Benzoperylene (benzo(ghi)perylene)
Fluorene
Phenanthrene
1,2,5,6-Dibenzanthracene (dibenzo(a,h)anthracene)
Indeno(1,2,3-cd) pyrene (2,3-o-phenylene pyrene)
Pyrene
Tetrachloroethylene
Toluene
Trichloroethylene
Vinyl chloride (chloroethylene)
Aldrin
Dieldrin
Chlordane (technical mixture and metabolites)
4,4-DDT
4,4-DDE (p,p-DDX)
4,4-DDD (p,p-TDE)
Alpha-endosulfan
Beta-endosulfan
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide(BHC-hexachloro- cyclohexane)
Alpha-BHC
Beta-BHC
Gamma-BHC
Delta-BHC
(PCB-polychlorinated biphenyls)
PCB-1242 (Arochlor 1242)
PCB-1254 (Arochlor 1254)
PCB-1221 (Arochlor 1221)
PCB-1232 (Arochlor 1232)
PCB-1248 (Arochlor 1248)
PCB-1260 (Arochlor 1260)
PCB-1016 (Arochlor 1016)
Toxaphene
2,3,7,8-Tetrachlorodi- benzo-p-dioxin (TCDD)