TOXIC ORGANICS MANAGEMENT PLAN & CERTIFICATION (TOMP)

A. In accordance with 40 CFR 413.03, 433.12 and 469.13, an acceptable TOMP must specify the toxic organic compounds used, the method of disposal used (instead of discharge into wastestreams), and procedures for ensuring that toxic organics do not routinely spill or leak into wastewater discharged to the POTW or surface waters. A TOMP should include the following information:

1. 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 supplier.

2. A pollution prevention assessment for TTOs.

3. A description of the methods of disposal other than discharge to wastewaters, such as reclamation, contract hauling, or incineration.

4. The procedures for ensuring that the regulated toxic organic pollutants do not spill or routinely leak into process wastewaters, floor drains, noncontact cooling water, groundwater, surface waters, sanitary sewers or any other location which allows the discharge of the compounds.

5. The identities and determinations or best estimates of approximate quantities of toxic organic pollutants used in and discharged from the regulated processes. Compounds present in the wastestreams that are discharged to sanitary sewers or surface waters may be a result of regulated processes or disposal, spills, leaks, rinse water carryover, air pollution control, and other sources.

B. Initial Sampling. All toxic organic compounds, as indicated on the list included in the appropriate categorical standard, should be sampled and analyzed; however, industries in the Electroplating and Metal Finishing categories may sample for only those toxic organics present if demonstrated to the control authority's satisfaction that only certain toxic organic compounds are present (See 40 CFR 413.03 and 433.12). This can be demonstrated by providing Material Safety Data Sheets or other information from the supplier, or by providing an accurate inventory of organics on the premises. The control authority requests that it be provided the reporting form from the laboratory analyzing the sample.

C. Certification Eligibility. In order to qualify for the certification alternative, the following criteria should be met:

1. The baseline analysis should show compliance with the appropriate TTO standards;

2. An acceptable TOMP must be submitted (See 40 CFR 413.03, 433.12 and 469.13); and

3. The following certification statement must be signed by an officer of the company or manager responsible for overall plant operations, and submitted with the TOMP and each subsequent periodic compliance report wherein TOMP certification is used in lieu of TTO sampling:

"Based on my inquiry of the person or persons directly responsible for managing compliance with the standard for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no discharge or dumping of concentrated toxic organics into the wastewaters has occurred since filing the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the City of Phoenix."

D. Certification Re-Evaluation. Every two years, the TOMP should be updated and the regulated waste stream should be sampled and analyzed for the required TTOs or those toxic organic compounds expected to be present (those in the Electrical and Electronic Component Manufacturing category must sample for all toxic organics included on the list in 40 CFR 469 (40 CFR 469.13).

E. Revocation of Certification Eligibility. The certification eligibility may be revoked if independent sampling reveals violations or results inconsistent with the values reported by the entity or for other cause. Furthermore, if any production process is modified, or if conditions change that affect the use and/or storage of toxic organics, the control authority should be notified. The control authority may require that additional sampling be performed.

TOXIC ORGANIC MANAGEMENT PLAN PROCEDURES:

The TOMP is submitted only when certifying for TTO. The TOMP is not intended to supersede any local, state, or federal regulation. Many of the TOMP requirements and elements may already be required for other regulations, especially RCRA (40 CFR 262, 264 and 265), the "Emergency Planning and Community Right-To-Know Act", Title III of the Superfund Amendments and Reauthorization Act (SARA) and environmental certifications like ISO 9001 or ISO 14001. The TOMP objective is to provide assurance that toxic organics are properly used, minimized, and/or otherwise disposed of instead of being discharged to surface waters/sewers.

The following areas should be addressed in a TOMP:

A. Organic Inventory.

1. List all toxic organic chemicals used, generated, or stored 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 total toxic organics (TTO), consult the following sources:

Electroplating	40 CFR 413
Metal Finishing	40 CFR 433
Electrical and Electronic Components	40 CFR 469

2. Trade names are not acceptable because specific toxic organics used must be specified (40 CFR 413.03, 433.12 and 469.13). The applicant should consult material safety data sheets and/or technical bulletins for the organic constituents. Materials safety data sheets or technical bulletins should not be submitted in lieu of listing the organic constituents, unless specifically requested by the control authority.

3. The above information may be given in tabular form. For example:

ORGANIC INVENTORY – STORAGE			
Product Name	**TTO Constituent**	**Max. Daily Amt.**	**Min. Daily Amt.**
Easy Clean	*Toluene*	*110 gals.*	*55 gals.*

B. TTO Analysis.

The following steps should be taken to evaluate the wastewater:

1. Collect samples and have analysis done using USEPA approved methods, see 40 CFR 136;

2. The control authority should receive a copy of the reporting form from the laboratory analyzing the wastestream samples;

3. The step(s) in the regulated process in which toxic organics are used should be described;

4. The source where toxic organics could be introduced into the wastestream besides number 3 above (e.g., floor drains) should be described;

5. A flow schematic showing all of the sources and pathways where toxic organics could enter the wastestream should be provided;

6. The approximate quantities (e.g., gallons/day) of each toxic organic chemical used at each step in the regulated process should be listed; and

7. Evaluate any regulated TTO found in the effluent, but not on the TTO inventory listed in part A and determine if they are formed as reaction products or byproducts, raw materials, impurities, equipment corrosion or other sources.

C. Pollution Prevention Assessment.

Evaluate pollution prevention options that could be implemented to minimize or eliminate the discharge of toxic organics introduced into the wastestream. These options include, but are not limited to, the following.

1. Material Substitution - Evaluate replacing existing toxic organic materials with nontoxic organic materials. Non-toxic materials may not be covered under the regulated TTO parameter list and will vastly simplify TOMP preparation requirements. Substitutes for toxic organics are available for many cleaning, metal working and coating applications. For example, aqueous cleaners and other non-toxic organic materials may be effective replacements for cleaning solvents containing regulated organics. Alternative coatings for painting that do not contain toxic organics, such as water-based coatings, may also be a viable option.

2. Improved Operating Practices - Evaluate practices to eliminate or minimize the use or loss of toxic organics that are discharged to the wastestream. For example, consider implementing sound inventory control practices to reduce loss of toxic organics due to poor storage practices. These practices include using toxic organics prior to shelf-life expiration and storing toxic organics according to manufacturers' recommendations to prevent degradation or contamination. Consider implementing appropriate procedures and training staff to ensure that minimal amount of toxic organics are used to do a task. For example, consider manual pre-cleaning methods (such as wiping or brushing) prior to using solvents containing toxic organics. Evaluate process control options (including monitoring for specific gravity, conductivity, pH, biological activity, etc.) for minimizing toxic organics loss to the wastestream from poor management of metal working fluids.

3. Technology Changes - Evaluate new technologies and improved equipment to eliminate or minimize the use or discharge of toxic organics. New technologies may eliminate toxic organic use completely and vastly simplify TOMP preparation requirements. For coating activities, consider technologies such as powder coating and ultraviolet (UV) curable coating. To reduce toxic organic loss from coating activities such as painting, consider improved transfer efficiency using electrostatic spraying or high volume low pressure (HVLP) spraying. For cleaning, consider technologies such as aqueous cleaning systems and media blasting (dry ice, plastic, abrasives, etc.).

4. Recycling - Evaluate recycling opportunities for toxic organics. Environmentally sound recycling practices for toxic organics will help prevent material loss and reduce raw material costs. Cleaning solvents containing toxic organics can be recovered for reuse using solvent distillation. Metal-working fluids and wastewater from paint water curtains, which may contain toxic organics, can be recovered using recycling equipment such as filtration and centrifugation. Other recycling opportunities could include using waste exchanges to find buyers for unwanted toxic organics. Once the pollution prevention opportunities are identified, a technical and economic evaluation of viable options should be conducted to select options/projects that are technically and economically feasible. Management commitment and funding should be secured for the selected options/projects and a schedule of implementation should be developed. Finally, a measurement system to track the success of the implemented project should be developed and adjustments made to it on an ongoing basis, as needed.

D. Methods of Disposal.

A review of the methods of disposal should include the following:

1. A description of the waste(s) being generated;

2. Information on the amount of waste being disposed and the frequency of disposal;

3. Information on the method(s) of disposal (i.e., surface impoundment, direct discharge, sanitary sewers, incineration, reclamation or contract disposal);

4. The name of the contractor(s);

5. An estimation of the maximum daily amount and the average daily amount of waste stored at your facility;

6. The above information may be given in tabular form. For example:

METHODS OF DISPOSAL				
Waste Type	**Waste Disposal Amount/Frequency**	**Disposal Method**	**Contractor**	**Waste Storage Daily Max./ Daily Avg.**
Waste Paint F003	*10 drums 2x/year*	*Incineration*	*ABC Inc.*	*10 drums/3 drums*

7. The facility's RCRA generator number, if any; and

8. A description of 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). The storage area should be designed and maintained to not allow leakage.

E. Practices to ensure that Spills or Leaks do not Routinely Occur.

The following information is generally sufficient:

1. A description of the practices to be followed, including housekeeping procedures, during the use, collection, and storage of organics to ensure that organics do not spill or leak. These practices should include, but are not limited to:

    a. Proper labeling and handling containers of toxic organics;
    b. Storing a minimal amount of organics at the site;
    c. Centralized storage area (preferably indoors or a roofed area) designed and maintained not to allow leakage;
    d. Sealing floor drains when they are in the area where toxic organics are used or stored;
    e. Overfill control equipment (sensors, alarms etc); and
    f. Secondary containment system (sump or dike) capable of holding 10 percent of the total volume stored or the volume of the largest container, whichever is greater. The containment system should be designed and maintained not to allow leakage;

2. A description of the procedure that will provide routine and detailed visual inspections to ensure the absence of leaking storage containers (i.e., tanks, drums, pipes, etc); visual inspections are recommended at least once a week;

3. A description of how all employees are trained in the proper use, collection, and storage of all chemicals they work with; and

4. A simple but complete floor plan showing the storage location of toxic organics prior to use and toxic organic waste awaiting disposal. This plan should include all floor drains, dikes, and containment areas in the storage facility.

F. Spill or Leak Notification and Containment Procedures.

The following information is generally sufficient:

1. The name of the individual responsible for implementing the TOMP;

2. The name of your facility's emergency response coordinator;

3. Notification procedures

    a. A list of agencies to be contacted during an emergency and their telephone numbers should be posted where organics are used and stored. This list should include, but is not limited to, the following:

        i. Facility's Emergency Response Coordinator;
        ii. Secondary (or backup) Facility Coordinator;
        iii. Fire Department;
        iv. Arizona Department of Environmental Quality
        v. POTW – 23rd and 91st Avenue Wastewater Treatment Plants
        vi. City of Phoenix Environmental Services Division

    b. If a spill or leak enters the wastewater and the POTW, the City of Phoenix Environmental Services Division and 23rd and 91st Avenue Wastewater Treatment Plants should be promptly notified with the following information:

        vii. Facility's name;
        viii. Receiving POTW or surface water;
        ix. Chemical and cause of the spill/leak;
        x. Quantity of the chemical(s);
        xi. Time and duration of spill/leak; and
        xii. Steps taken and/or planned to eliminate and prevent further spills/leaks;

4. A description of practices to be followed in the event of a spill or leak (i.e., containment, cleanup, treatment, disposal, etc.);

5. A description of equipment/supplies on site to contain and clean up spills and leaks

Additional Source of Information:

U.S. EPA Guidance Manual for Implementing Total Toxic Organics (TTO) Pretreatment Standards. U.S. EPA, Office of Water. 440-1-85-009-T. September 1985.

For more information contact:

City of Phoenix Environmental Services Division
2474 South 22nd Avenue, Building 31
Phoenix, Arizona 85009-6918
(602) 262-1859