

Best Management Practice Program for Vehicle and Equipment Washing

Introduction:

This Best Management Practice (BMP) program is intended to manage wastewater pollutants from the external washing of vehicle and equipment that use products that contain acids or caustics, i.e. hydrofluoric acid, sulfuric acid, hydrochloric acid, nitric acid, phosphoric acid, sodium hydroxide, so as to comply with federal, state, and local waste disposal regulations. Strict adherence to the procedures listed in this document will help assure compliance with the City of Tulsa’s Title 11-C Chapter 12 “Sewer Use” Ordinance and Title 11-A Chapter 5 “Pollution” Ordinance. Once approved by the City of Tulsa, this BMP becomes a fully enforceable local limit. This BMP does not relieve the subject facility of enforcement actions for any violation of any applicable regulation or from complying with all other portions of the above ordinances or state and federal regulations.

Definitions:

The definitions listed in this section apply throughout this document.

1. **Best Management Practices or BMPs.** Schedules of activities, prohibitions of practices, maintenance procedures and other management practices to implement prohibitions listed in Section 1201 of Title 11-C Chapter 12 “Sewer Use” Ordinance. BMPs include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.
2. **Impermeable.** Not allowing liquids to penetrate or pass through.
3. **pH.** A measure of the acidity or alkalinity of a solution, expressed in standard units.
4. **Pollutants .** Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, Medical Wastes, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, municipal, agricultural and industrial wastes, and certain characteristics of wastewater (e.g., pH, temperature, TSS, turbidity, color, BOD, COD, toxicity, or odor).
5. **Pollution Prevention.** The use of materials, procedures or practices that reduce or eliminate the concentration of pollutants or waste at the source. The hierarchy for the management of wastes is: Source Reduction, Recycling, Treatment, and Disposal. Source Reduction is considered to be the most desirable and Disposal the least desirable waste management practice.
6. **Pretreatment.** The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to, or in lieu of, introducing such pollutants into the POTW. This reduction or alteration can be obtained by physical, chemical, or biological processes; by process changes; or by other means, except by diluting the concentration of the pollutants unless allowed by an applicable Pretreatment Standard.

7. **Process Water.** Non-domestic water, e.g. vehicle or equipment wash water. Process water does not include wastewater from kitchens, laundry rooms, lavatories, bathrooms, toilets and similar facilities.
8. **Storm Sewer.** A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that is owned or operated by the City of Tulsa and are designed or used for collecting or conveying stormwater.
9. **Wastewater.** Liquid and water-carried industrial wastes and sewage from residential dwellings, commercial buildings, industrial and manufacturing facilities, and institutions, whether treated or untreated, which are contributed to the POTW.

BMP requirements for Compliance with Title 11-C, Chapter 12 "Sewer Use" Ordinance.

General Requirements:

1. Prior to the issuance of a certificate of BMP approval, the facility must submit Wastewater Disposal Plan and be inspected by city of Tulsa staff.
2. All process water containing soaps or other cleaning chemicals should be collected and reused or discharged to the sanitary sewer. It is prohibited for any process water to enter the storm sewer system.
3. All cleaning of vehicles and equipment shall be conducted under a covering, on an impermeable slab or pad, and designed in a way to trap all overspray and wash water to be funneled to a sanitary sewer drain, a treatment facility, or a dead end sump.
4. All process water shall be collected and treated to at least remove grit, oil and grease prior to disposal to the sanitary sewer.
5. The wash water discharged to the sanitary sewer shall not be outside the pH range of 5.0-11.0.
6. The wash water discharged to the sanitary sewer shall not exceed the applicable maximum allowable discharge standards listed in Section 1201, Title 11-C, Chapter 12 of the Tulsa Code of Revised Ordinances (See attached chart, page 5).
7. The facility must have an adequate monitoring location.
8. The facility must allow, city of Tulsa staff access to the monitoring location at all times.
9. If self-monitoring is performed by the facility, it must be in accordance with techniques set forth in 40 C.F.R. 136 and the analysis shall be performed by a laboratory certified by the Oklahoma Department of Environmental Quality.

Employee Training:

10. All facility employees are to be trained on and made aware of the requirements and recommendations of this BMP program.
11. They must know the designated location where all wastewater must be discharged. If the discharge location is to a pretreatment system, they must have knowledge of the function of that system.
12. New employees shall be initially trained within 1 week of employment. Additionally, each employee shall receive periodic refresher training at intervals not to exceed one year.

13. Documentation of this training shall be kept at the facility and readily available for review by authorized representatives of the City of Tulsa. The City of Tulsa may provide training or training guidance material upon request.

Pretreatment Requirements:

14. Oil and water separators and/or grit/sand interceptors shall comply with the guidelines set forth in the adopted City of Tulsa Plumbing Code.
15. Pretreatment systems, including but not limited to oil and water separators and/or grit/sand interceptors, shall be inspected, cleaned, and repaired regularly, as needed, by the user at their expense.
16. Pretreatment systems must be, at all times, properly operated and maintained to achieve compliance. Records of maintenance activities should be maintained on-site for 3 years.
17. Solids and other wastes removed in any pretreatment process shall be collected and disposed of by an approved/certified waste hauler.
18. Intentional diversion of wastestreams from the facility's pretreatment system is prohibited.

Housekeeping:

19. Implementing appropriate storage practices for chemicals in order to reduce inventory, incompatibilities, and disposal problems.
20. All containers must be properly labeled.
21. A chemical inventory list must be maintained and MSDS must be available for every chemical onsite.
22. Create a preventive maintenance schedule for equipment.

Spill Prevention and response measures:

23. Absorbents should be kept on site and with easy access for spill clean-up.
24. Secondary containment must be in place to protect from accidental spills/discharges to the sanitary sewer and storm sewer systems.
25. Spill prevention must be considered when transferring and handling chemicals.

Procedures for immediately notifying the Industrial Pretreatment staff concerning any accidental, sludge, or accidental discharge considered a violation, including prohibited discharges under 40 CFR 403.5(b) and City of Tulsa's Title 11-C Waterworks and Sewage, Sewer Use Ordinance – Section 1201.

If a spill occurs, immediately confine spill and verbally notify city of Tulsa's Quality Assurance Office during business hours at 918-561-4378 or 918-586-6999, after hours. Once the spill cleanup has been accomplished, a follow-up written notification shall be sent to Tulsa Quality Assurance Office within five (5) days of incident. The incident report to city of Tulsa Quality Assurance Office will include:

1. A description and cause of noncompliance,
2. Exact times and dates of noncompliance, and
3. Actions taken to prevent the recurrence of the noncompliance.

Highly Recommended- Pollution Prevention Practices:

1. Water Conservation/Reduction:

- a. Low-flow nozzles
- b. Close-loop/Water Recycling:
 - i. 100% Closed-Loop Recycle System, also called a Non-Discharging/Zero Discharge System, is a total recycle system that recycles both wash water and rinse water with no discharge of wastewater to the sanitary sewer system.
 - ii. Partial Recycle systems can be divided into two categories: limited recycling (pumping stations, etc.) and multi-stage filtration systems. Limited recycling typically provides minimal filtration of water, offering approximately 50 to 80 percent wash water reuse depending on the technologies used. These systems are designed to remove the heavy solids and provide recycled wash-quality water for reuse.

More information on close-loop/recycling systems can be

found: <http://www.dep.state.fl.us/water/wastewater/docs/GuideBMPClosed-LoopRecycleSystems.pdf>

2. Product Substitution:
 - a. Use non-toxic, non-hazardous products, e.g. non-acid/caustic cleaners.
3. Solid Waste Management:
 - a. Keep all liquids in sealed containers.
 - b. Only buy as much product as is needed, or that will be entirely used up.
 - c. Reuse products/materials on-site or in process.
 - d. Recycle materials that can be recycled.
4. Energy Conservation:
 - a. Turn off electrical equipment when not in use.
 - b. Use non-heated water to clean equipment.
 - c. Make use of as much natural lighting as possible.
 - d. Use efficient fluorescent fixtures, CFL bulbs, or LED lighting.
 - e. Purchase/use ENERGY STAR labeled equipment and appliances.
5. Air Quality:
 - a. Use low-VOC solvents.

Resources:

Washington State Department of Ecology. *Vehicle and Equipment Washwater Discharges- Best Management Practices Manual*. November 2012. Publication no. WQ-R-95-

056. <https://fortress.wa.gov/ecy/publications/publications/95056.pdf>

Maximum Allowable Discharge Standards

Pollutant	Applicable Pretreatment Regulation	Maximum Allowable Discharge -- mg/l				
		For any day (mg/L)				Monthly Avg. (mg/L)
		SS	NS	HC	LBC	
Arsenic (T)	Title 11-C Chapter 12	1.5	0.3	2.0	5.0	N/A
Cadmium (T)	Title 11-C Chapter 12 / 40 CFR 433.17	0.11	0.09	0.11	0.11	0.07
Chromium (T)	40 CFR 433.17	2.77				1.71
Copper (T)	Title 11-C Chapter 12 / 40 CFR 433.17	1.7	1.7	3.38	0.9	2.07
Cyanide (T)	Title 11-C Chapter 12 / 40 CFR 433.17	1.2	1.2	0.8	0.5	0.65
Lead (T)	40 CFR 433.17	0.69				0.43
Mercury (T)	Title 11-C Chapter 12	0.04	0.0002	0.43	0.05	N/A
Molybdenum (T)	Title 11-C Chapter 12	2.7	2.7	33.8	2.75	N/A
Nickel (T)	Title 11-C Chapter 12 / 40 CFR 433.17	2.7	2.7	3.98	3.25	2.38
Oil & Grease	Title 11-C Chapter 12	100.0				N/A
Silver (T)	40 CFR 433.17	0.43				0.24
Zinc (T)	40 CFR 433.17	2.61				1.48
Total Toxic Organics (TTO)	40 CFR 433.17	2.13				N/A

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