



**GENERAL REQUIREMENT**  
TO INSTALL AND MAINTAIN WASTEWATER TREATMENT EQUIPMENT, AND  
IMPLEMENT POLLUTION MANAGEMENT PRACTICES

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Public Works Department - Environmental Services Division - Industrial Pretreatment Program

**PHOTOGRAPHIC PROCESSORS**

Springfield Municipal Code sections 4.014 – 4.015, 4.054 – 4.055, and 4.057 authorize the City to require any industrial user to:

- (a) Install and maintain a suitable control access point to facilitate observation, sampling, and measurement of wastewater being discharged;
- (b) Allow authorized representatives of the City access at all reasonable times to all parts of the premises where wastewater related facilities are located or in which records required by the Code are kept;
- (c) Install wastewater pretreatment facilities or make plan or process modifications deemed necessary by the City Manager to meet the requirements of section 4.015 of the City Code. These facilities shall be constructed, installed, operated, and maintained at the expense of the industrial user. The industrial user shall maintain records indicating routine maintenance check dates, cleaning, and waste removal dates, and means of disposal of accumulated wastes.

In accordance with the above authority, the City is issuing the following general requirement:

is required to implement management practices for silver dischargers as described herein. These practices are based upon the *Code of Management Practice for Silver Dischargers*, Silver Coalition/Association of Metropolitan Sewerage Agencies, September 1995 and input received from local photographic processors.

Please note that an alternate acceptable management practice for silver-rich wastes is to have the wastes hauled off-site for treatment and disposal. Businesses selecting this option are required to maintain appropriate records for at least three years.

Management practices must be in place within 90 days from the date of receipt of this document. The City will periodically inspect the above business to verify that required equipment is installed and operating properly, and to verify that required records are being kept. Failure to implement required management practices will result in enforcement action by the City.

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Matt Stouder, Environmental Services Division Director

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Date

## MANAGEMENT PRACTICES FOR PHOTOGRAPHIC PROCESSORS

### **Small size photographic processing facilities**

Small photographic processing facilities that produce on average less than 2 GPD of silver-rich processing solution must use one of the following equipment options:

- Two CRCs with manufacturer specified flow control. (See note)
- One electrolytic unit plus one CRC with manufacturer specified flow control. (See note)
- One precipitation unit.
- One evaporation or distillation unit.
- Alternative technology (approved by the City) providing at least 90% recovery or management.
- Note: Very small facilities that generate less than 0.5 GPD of silver-rich processing solution require only one CRC or one electrolytic unit.

#### Operating Procedures

- Processing and holding tanks for silver-rich solutions and the silver recovery or management system must be maintained in a manner that protects the material from accidental release into the sanitary sewer system.
- If test results indicate that treatment equipment maintenance or CRC replacement is necessary, discharge shall be stopped until corrective measures are implemented. If CRC replacement is necessary, facilities with 2 CRCs may continue to discharge provided the exhausted CRC is replaced as soon as practicable, and the remaining CRC is functioning properly.

### **Medium size photographic processing facilities**

Medium photographic processing facilities that produce on average less than 20 GPD of silver-rich processing solution must use one of the following equipment options:

- Two or more CRCs with manufacturer specified flow control.
- One electrolytic unit plus one CRC with manufacturer specified flow control.
- One precipitation unit.
- One electrolytic unit plus one precipitation unit.
- One evaporation or distillation unit.
- Alternative technology (approved by the City) providing at least 95% recovery or management.

#### Operating Procedures

Processing and holding tanks for silver-rich solutions and the silver recovery or management system must be maintained in a manner that protects the material from accidental release into the sanitary sewer system.

If test results indicate that treatment equipment maintenance or CRC replacement is necessary, discharge shall be stopped until corrective measures are implemented. If CRC replacement is necessary, facilities with 2 CRCs may continue to discharge provided the exhausted CRC is replaced as soon as practicable, and the remaining CRC is functioning properly.

### **Large size photographic processing facilities**

Large photographic processing facilities that produce on average more than 20 GPD of silver-rich processing solution must use one of the following equipment options:

- One electrolytic unit plus two or more CRCs with manufacturer specified flow control.
- One electrolytic unit plus one precipitation unit.
- One evaporation or distillation unit.
- Alternative technology (approved by the City) providing at least 99% recovery or management.

### **Operating Procedures**

- Processing and holding tanks for silver-rich solutions and the silver recovery or management system must be maintained in a manner that protects the material from accidental release into the sanitary sewer system.
- In-line electrolytic desilvering units should be used in processes where possible.
- Squeegees or air knives and low-flow washes should be used on processors where possible.
- Conservation of wash water should be implemented where possible.
- If test results indicate that treatment equipment maintenance or CRC replacement is necessary, discharge shall be stopped until corrective measures are implemented. If CRC replacement is necessary, facilities with 2 CRCs may continue to discharge provided the exhausted CRC is replaced as soon as practicable, and the remaining CRC is functioning properly.

### **Analytical and record keeping requirements for photographic processing facilities**

Facilities using a **batch** and **continuous** operation for silver recovery:

- The silver concentrations in the effluent from the primary unit, and the effluent from the secondary unit (if applicable) must be checked at least weekly. The test can be performed with silver test papers, or an analytical test kit. Test results must be recorded in a silver recovery log (attached), and kept for at least 3 years.

### **Definitions:**

Silver-rich solution: A solution containing sufficient silver that cost-effective recovery can be done on-site or off-site. These solutions include used fix and bleach-fix solutions, low replenished (low-flow) washes following a fix or bleach-fix solution, and stabilizers for the washless minilab film and paper processes.

CRC: A chemical recovery cartridge which recovers silver through metallic replacement.

GPD: Gallons per day.