

## Approved Wastewater Methods and Holding Times for CCCSD Required Parameters

Effective April 11, 2007, all laboratories had to switch from the EPA-approved wastewater methods to their new equivalents for analytical procedures. The District's 2008 updated table below is for demonstrating compliance with Local Discharge Limits, applicable federal Categorical Pretreatment Standards, and Source Control Ordinance.

Constituent	US EPA Approved Methods (40 CFR 136) <sup>1</sup>	Holding Time (Preserved)
Antimony (Sb)**	SM 3111 B or C (flame AA); SM 3113 B (furnace AA); 200.7 (ICP); 200.8 (ICP-MS); 200.9 (STGFAA)	6 months
Arsenic (As)**	200.2 (hydride AA); SM 3113 B (furnace AA); 200.7 (ICP); 200.8 (ICP-MS); 200.9 (STGFAA)	6 months
Cadmium (Cd)**	SM 3111 B or C (flame AA); SM 3113 B (furnace AA); 200.7 (ICP); 200.8 (ICP-MS); 200.9 (STGFAA)	6 months
Chromium (Cr)***, Total	SM 3111 B or C (flame AA); SM 3113 B (furnace AA); 200.7 (ICP); 200.8 (ICP-MS); 200.9 (STGFAA)	6 months
Copper (Cu)**	SM 3111 B or C (flame AA); SM 3113 B (furnace AA); 200.7 (ICP); 200.8 (ICP-MS); 200.9 (STGFAA)	6 months
Lead (Pb)**	SM 3111 B or C (flame AA); SM 3113 B (furnace AA); 200.7 (ICP); 200.8 (ICP-MS); 200.9 (STGFAA)	6 months
Mercury (Hg)**	245.1 or 245.2 (cold vapor AA); 245.7 (fluorescence)	28 days
Nickel (Ni)**	SM 3111 B or C (flame AA); SM 3113 B (furnace AA); 200.7 (ICP); 200.8 (ICP-MS); 200.9 (STGFAA)	6 months
Selenium (Se)**	200.2 (hydride AA); SM 3113 B (furnace AA); 200.7 (ICP); 200.8 (ICP-MS); 200.9 (STGFAA)	6 months
Silver (Ag)**	SM 3111 B or C (flame AA); SM 3113 B (furnace AA); 200.7 (ICP); 200.8 (ICP-MS); 200.9 (STGFAA)	6 months
Thallium (Tl)**	200.7 (ICP); 200.8 (ICP-MS); 200.9 (STGFAA)	6 months
Zinc (Zn)**	SM 3111 B or C (flame AA); 289.2 (furnace AA); 200.7 (ICP); 200.8 (ICP-MS)	6 months
Phenol***	420.1 or 420.4 revision 1 from 1993 (colorimetric)	28 days
Total Toxic Organics (TTO)****	624 (gas chromatography/mass spectrography)	14 days
	625 (gas chromatography/mass spectrography)	47 days
	608 (gas chromatography/mass spectrography)	47 days
Oil & Grease (mineral)	1664 or SM 5520 B & F (gravimetric)	28 days
Oil & Grease (animal/vegetable)	1664 or SM 5520 B & F (gravimetric)	28 days
Biochemical Oxygen Demand (CBOD)*	405.1 or SM 5210 B (dissolved oxygen depletion)	48 hours
Chemical Oxygen Demand (COD)	410.3 or SM 5220 C (titrimetric)	28 days
Total Suspended Solids (TSS)	SM 2540 B (gravimetric non-filterable residue)	7 days
Total Dissolved Solids (TDS)	SM 2540 C (gravimetric filterable residue)	7 days
Cyanide***	335.4 revision 1 from 1993 or SM 4500-CN E (colorimetric); SM 4500-CN D (titrimetric) or F (electrode)	14 days
pH	SM 4500-H <sup>+</sup> B or 150.2 (glass electrode meter)	15 minutes
Radioactivity	900 (proportional or scintillation counter)	6 months
Organophosphate Pesticides (Diazinon)	614 (gas chromatography)	1 year
Tributyltin	None specified (gas chromatography/mass spectrography)	None stated
Sulfide	SM 4500-S <sup>2-</sup> E or F (titrimetric), D (colorimetric), or G (electrode)	7 days
Dioxin (TCDD)	1613 (gas chromatography/mass spectrography)	1 year
Total Petroleum Hydrocarbons (TPH)	None specified (8015 - gas chromatography)	14 days
BTEX (including MTBE)	624 (gas chromatography/mass spectrometry)	14 days

— Notes on Reverse.

**Notes:**

<sup>1</sup>In addition to the methods listed, Standard Methods (SM) are approved wastewater methods

\*Biochemical oxygen demand must be analyzed as CBOD<sub>5</sub>, or 5-day Carbonaceous Biochemical Oxygen Demand

\*\*Initial digestion required

\*\*\*Initial distillation required (e.g., SM 4500-CN C for cyanide)

\*\*\*\*TTO includes the EPA list of organic priority pollutants itemized under EPA methods 624, 625, and 608 on a separate table. Check permit to see which methods apply.

Alternate methods may be substituted if approved by EPA specifically for wastewater.

For metals, EPA 200.8 is now approved (ICP-MS). So is 200.9 (STGFAA). So is a cold vapor atomic fluorescence method for mercury (245.7).

For cyanide, EPA 335.3 is now replaced by 335.4 with a footnote on removing sulfide interference. Standard Methods 4500-CN-F is now approved (ion selective electrode).

For organics, method 625 can no longer be used for the three dichlorobenzenes, but laboratories can continue to analyze them with methods 624 and 602.

For oil and grease, all the Freon methods (i.e., everything except EPA 1664 and Standard Methods 5520 B) have been withdrawn.

The big change in preservation is that the new regulations stress that preservation is supposed to take place within 15 minutes of either the grab sample, if analyzed individually, or the last sample in a composite sample compositing automatically, or the compositing process, if composited manually after collected. The methods now allow samples to be preserved up to 6 degrees C, instead of just 4 degrees C.

The regulations also recommend the addition of thiosulfate, ascorbic acid or other reducing agent for cyanide to remove interferences. But the sample preservation shouldn't add too much of those chemicals, or they will create their own interference.