

ORDINANCE NO. 2004-09

**AN ORDINANCE OF THE CITY COUNCIL
OF THE CITY OF AMERICAN CANYON
AMENDING CHAPTER 14.16
OF THE CITY OF AMERICAN CANYON MUNICIPAL CODE
REGARDING LOCAL LIMITS AND ACCEPTABLE DISCHARGES
TO THE CITY OF AMERICAN CANYON SEWER SYSTEM**

WHEREAS, the City of American Canyon develops and enforces specific limits to discharges to the City's sewer system of toxic pollutants and their maximum concentration allowable (the "Local Limits") so as to protect the wastewater treatment plant from adverse impacts of those discharges from industrial (non-domestic) users; and

WHEREAS, the existing Sewer Use Regulations contained in Chapter 14.16 of the American Canyon Municipal Code reference Local Limits established by the Napa Sanitation District prior to the operation by the City of its own wastewater treatment facility; and

WHEREAS, the City of American Canyon Public Works Department commissioned a study entitled "Development of Technically Based Local Limits," dated May 2002, to ensure compliance with state water quality laws, federal requirements under the Clean Water Act, and the wastewater discharge permit issued by the California Regional Water Quality Control Board; and

WHEREAS, the study recommended Local Limits different from those contained in the existing Section 14.16.220 of the American Canyon Municipal Code; and

WHEREAS, the existing Section 14.16.080 of the American Canyon Municipal Code establishes the physical, chemical, and biological characteristics of domestic sanitary sewage and sets concentration limits for residential users; but establishes no similar limits for industrial users; and

WHEREAS, the capacity of the wastewater treatment facility for handling Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) is limited by the design of the treatment facility; and

WHEREAS, the maximum concentration of BOD and TSS should be established for industrial users;

Section 2: Existing Section 14.16.220 of the City of American Canyon Municipal Code is hereby amended as follows:

14.16.220 Local Limits - Toxic Substances

Any waters or wastes containing a toxic or poisonous substance in sufficient quantities to injure or interfere with or create any hazard in the sewage treatment process, effluent quality, sludge quality, or receiving water quality requirements to humans, animals or plant life. The following "local limits" comprise a partial list of toxic pollutants of concern (and others designated pursuant to Section 307 (a)(1) of the Act) and their maximum concentration allowable by any discharger for admission into the sewerage system:

- 1) Any Industrial User who discharges directly into the City of American Canyon Service Area or jurisdiction of the City of American Canyon shall not exceed the following discharge limits:

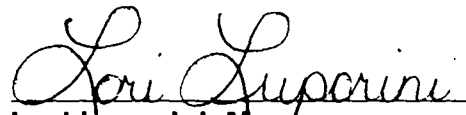
**Maximum Allowable Concentration
Milligrams/Liter**

Toxicant	
Ammonia	47.43
Arsenic	0.2
Cadmium	0.16
Chromium – Total	3.5
Copper	0.87
Cyanide	1.0
Dissolved Sulfide	0.10
Lead	0.45
Mercury	0.00020
Nickel	0.30
Oil and Grease (petroleum based)	50.00
Oil and Grease (vegetable and animal based)	75.00
pH	6.0 – 9.0
Phenol	29.59
Polynuclear Aromatic Hydrocarbons (PAH)	0.92
Selenium	—
Silver	0.30
Volatile Organic Compounds (VOC)	10% LEL
Zinc	3.2

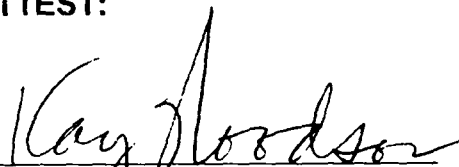
The forgoing Ordinance was introduced and read at a regular meeting of the City Council of the City of American Canyon, State of California, on the 17th

day of June, 2004 and was approved and adopted at a regular meeting of the City Council of the City of American Canyon, State of California, held on the 1st day of July, 2004, by the following vote:

AYES:	Luporini, Shaver, Anderson, Colcleaser, Garcia
NOES:	None
ABSTAIN:	None
ABSENT:	None


Lori Luporini, Mayor

ATTEST:


Kay Woodson, City Clerk

APPROVED AS TO FORM:


William D. Ross, City Attorney
SewerOrdinance.RevisedLocalLimits.June04

Development of Technically Based Local Limits City of American Canyon

May 2002

Prepared by:



Science Engineers, Inc.



For each condition, pollutants were selected that would best illustrate the realistic variation in input parameters. The results of the analyses are summarized in Table 4-3. Sensitivity analyses spreadsheets are included in Appendix G.

Table 4-3 Local Limits Sensitivity Analyses Summary for Industrial Contributory Flow

Pollutant	Condition	Sensitivity Analysis Calculated Local Limit, mg/L	Percent Difference from Baseline
Arsenic	Baseline, with 30-percent safety factor	0.19	-13.6
Cadmium	Baseline, with 30-percent safety factor	0.14	-12.5
Chromium	Baseline, with 30-percent safety factor	3.02	-13.7
Copper	1) Baseline, with 30-percent safety factor	0.70	-19.5
	2) Decreased Removal Efficiency to 90-percent	0.17	-80.5
Lead	Baseline, with 30-percent safety factor	0.39	-13.3
Mercury	1) Baseline, with 10-percent safety factor	0.00028	-74.5
	2) Increased removal efficiency to 90-percent with no safety factor	0.00525	+377.3
	3) Decreased removal efficiency to 75-percent with no safety factor	-0.00221	NA
	4) Decreased removal efficiency to 83-percent with no safety factor	0.000131	-88.1
Nickel	Baseline, with 30-percent safety factor	0.24	-20.0
Zinc	Baseline, with 30-percent safety factor	2.6	-17.8
Cyanide	Baseline, with 30-percent safety factor	0.86	-14.0

Recommended Local Limits

Our recommendations for local limits were based on our calculations and sensitivity test results, comparison of calculated limits with ACWTP existing limits and other sanitary districts, and best professional judgement. The following is a brief discussion of how the local limit was derived for each pollutant.

Arsenic. This pollutant was detected in the uncontrollable background flow, plant headworks, and two industries, Mezzetta and Rabanco, in concentrations slightly above the background. No historical data was available for DWS Culligan and Pokka. The assumed removal efficiency through MBR was 50-percent. The limiting MAHL was the sludge quality criteria. Applying the MAIHL to the industrial contributory flow from Mezzetta and Rabanco with a 20-percent safety factor yields a local limit of 0.22 mg/L. Applying a 30-percent

Cyanide. Cyanide was detected at the plant headworks. The only IU with samples results above the detection limit was at Rabanco. No other industrial data was available. Similar to silver, the EPA Guideline median removal efficiency through activated sludge was assumed. Pass-through became the limiting MAHL. Applying the MAHL to the industrial contributory flow yields a local limit of 1.0 mg/L. A 30-percent safety factor yields a 0.9 mg/L limit. We recommend a local limit of 1.0 mg/L.

Selenium. Similar to silver, industrial samples do not indicate the presence of selenium. Although historical data is only available for Rabanco, collection system sampling at the headworks does not indicate a significant presence of this metal. Since no local limit could be calculated and most samples were non-detect at the headworks, a technically based local limit is not recommended.

A summary of the recommended local limits is included in Table 4-4.

Table 4-4 Summary of Recommended Local Limits		
Pollutant	Existing AC Local Limits, mg/L	Recommended Local Limits, mg/L
Arsenic	0.05	0.2
Cadmium	0.04	0.16
Chromium	1.91	3.5
Copper	0.15	0.87
Lead	0.10	0.45
Mercury	0.0071	0.00020
Nickel	0.06	0.30
Silver	0.30	1.0 ^a
Zinc	0.98	3.2
Cyanide	0.09	1.0
Selenium	0.13	—

- a) IU with discharges greater than this concentration should develop a City-approved program to eliminate mercury from the discharge.
- b) Limit established based on best available technology economically achievable (BAT).

Polynuclear Aromatic Hydrocarbons (PAHs)

No technically based local limit was established for PAHs. As stated earlier in the report, all City effluent sample results were below detection levels of 0.01 mg/L and there are no known industries in the City that potentially discharge these compounds. Source control methods on non-permitted light industries and commercial sources that have potential to discharge these compounds may include enforcement of the following best management practices (BMP):

- Clarifier size and design review
- Documenting regular clarifier cleaning

Sec. 506.04 Local Limits

Sec. 506.04.1 Discharge Limit Development

As required in this section and pursuant to 40CFR 403.8, the Control Authority, (The City of American Canyon) continually develops and enforces specific limits to implement the prohibitions listed in 403.5 (a) (1) and 403.5 (b) including the local limits.

Sec. 506.04.2 Toxic Substances

Any waters or wastes containing a toxic or poisonous substance in sufficient quantities to injure or interfere with or create any hazard in the sewage treatment process, effluent quality, sludge quality, or receiving water quality requirements to humans, animals or plant life. The following "local limits" comprise a partial list of toxic pollutants of concern (and others designated pursuant to section 307 (a) (1) of the Act) and their maximum concentration allowable by any discharger for admission into the sewerage system:

Sec. 506.04.3

- 1) Any Industrial User who discharges directly into the City of American Canyon Service Area or jurisdiction of the City of American Canyon shall not exceed the following discharge limits:

**Maximum Allowable Concentration
Milligrams/Liter**

<u>Toxicant</u>		
Ammonia	47.43	
Arsenic	0.05	0.2
Cadmium	0.04	0.16
Chromium – Total	1.94	3.5
Copper	0.15	0.87
Cyanide	0.09	1.0
Dissolved Sulfide	0.10	
Lead	0.10	0.45
Mercury	0.0074	0.00020
Nickel	0.06	0.30
Oil and Grease (petroleum based)	50.00	
Oil and Grease (vegetable & animal based)	75.00	
pH	6.0 – 9.0	
Phenol	29.59	
Polynuclear Aromatic Hydrocarbons (PAH)	0.92	
Selenium	0.13	—
Silver	0.30	
Volatile Organic Compounds (VOC)	10% LEL	
Zinc	0.98	3.2