

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 87-028

NPDES PERMIT NO. CA0037966

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

CITY OF CALISTOGA  
NAPA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter called the Board) finds that:

1. The City of Calistoga, hereinafter called the discharger, submitted a technical report dated October 3, 1986 and a Report of Waste Discharge dated March 10, 1987, for reissuance of NPDES Permit No. CA0037966.
2. The discharger presently collects and treats an average dry weather flow of 0.54 million gallons per day (MGD) at its tertiary wastewater treatment plant which has a designed dry weather treatment/disposal capacity of 0.62 MGD. During the wet weather months, from October 1 through May 15, treated effluent may be discharged to the Napa River, a water of the United States, through an outfall at 38° 33' 34" North latitude, and 122° 33' 28" West longitude, as long as it meets a minimum of 10:1 river to wastewater dilution. The wet weather discharge is presently governed by Waste Discharge Requirements, Order No. 84-38 which allow discharge into Napa River.
3. During the dry weather period all treated wastewater is reclaimed, and the reclamation is covered by a separate set of Waste Discharge Requirements adopted by the Board in Order No. 78-85.
4. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives for the Napa River.
5. The Basin Plan prohibits discharge of wastewater which has characteristics of concern to beneficial uses into any nontidal water. An exception can be considered for wet weather discharges having a high initial dilution where the discharge is approved as a part of a reclamation project.

The Board finds that the Napa River is a nontidal water at Calistoga; but the discharge, under the requirements of this Order, complies with the qualification for considering an exception to the prohibition against discharge to nontidal water and the Board allows the discharge.

6. The beneficial uses of the Napa River downstream from the point of discharge are:
  - a. Municipal and domestic supply.
  - b. Agricultural supply.

- c. Navigation.
  - d. Water contact recreation.
  - e. Non-contact water recreation.
  - f. Warm fresh water habitat.
  - g. Cold fresh water habitat.
  - h. Wild life habitat.
  - i. Preservation of rare and endangered species.
  - j. Fish migration.
  - k. Fish spawning.
7. An Operation and Maintenance Manual is maintained by the discharger for purposes of providing plant and regulatory personnel with a source of information describing all equipment, facilities, and recommended operating strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, this manual should be kept updated to reflect significant changes in plant facilities or activities.
  8. This Order serves as an NPDES permit, adoption of which is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.
  9. The discharger and interested agencies and persons have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided with the opportunity for a public hearing and the opportunity to submit their written views and recommendations.
  10. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, that the Discharger in order to meet the provisions contained in Division 7 of the California Water code and regulations adopted thereunder and the provisions of the Clean Water Act as amended and regulations and guidelines adopted thereunder shall comply with the following:

A. Prohibitions

1. Bypass or overflow of untreated or partially treated wastewater to waters of the States, either at the treatment plant or from any of the collection system and pump stations tributary to the treatment plant is prohibited.
2. The average dry weather flow shall not exceed 0.62 million gallons per day (MGD). Average flow shall be determined over three consecutive dry weather months each year. The Board will consider amending this prohibition once the discharger has demonstrated through a water balance that additional treatment/disposal facilities have been constructed and are operational to meet the requirements of this Order for additional dry weather flows.
3. Discharge at any point at which the wastewater does not receive a dilution of at least 10:1 (river to wastewater effluent flow) is

prohibited.

4. The discharge to the Napa River is prohibited during the period from May 16th through September 30th of each year. The Executive Officer may authorize discharge to the river for a specified period beyond May 15th based on a written request from the discharger documenting abnormally high rainfall and resultant lack of demand for reclaimed water.

B. Effluent Limitations

1. The discharge of effluent from the tertiary plant outfall and the oxidation pond outfall shall meet one of the following sets of limitations based upon the river to wastewater dilutions as specified:

- (i). For a river to wastewater dilution of at least 10:1 but less than 50:1:

<u>Constituents</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Maximum</u>	<u>Instantaneous Maximum</u>
a. BOD	mg/l	10	-	20	
b. Suspended Solids	mg/l	15	-	30	
c. Oil & Grease	mg/l	5	-	10	
d. Settleable Solids	ml/l-hr	0.1	-	0.2	
e. Chlorine Residual	mg/l	-	-	-	0.0
f. Turbidity	TU			10 (for at least 95% of the time during a 24-hr period)	
g. Total Coliform Organisms	MPN/100ml	At some point in the treatment process, not to exceed a seven sample median of 2.2 MPN/100ml nor a maximum of 240 MPN/100ml.			

- (ii). For a river to wastewater dilution of at least 50:1:

<u>Constituents</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Maximum</u>	<u>Instantaneous Maximum</u>
a. BOD	mg/l	30	45	60	
b. Suspended Solids	mg/l	30	45	60	

c. Oil & Grease	mg/l	10	-	20
d. Settleable Solids	ml/l-hr	0.1	-	0.2
e. Chlorine Residual	mg/l	-	-	- 0.0
f. Total Coliform Organisms	MPN/100ml	At some point in the treatment process, not to exceed a five sample median of 23 MPN/100ml nor a maximum of 240 MPN/100ml.		

2. The pH of the discharge shall not be less than 6.5 nor greater than 8.5.
3. In any representative set of samples, the waste as discharged at either location shall meet the following limit for toxicity:

TOXICITY: The survival of test organisms acceptable to the Board in 96 hour static or flow-through bioassays of the effluent shall achieve a median of 90% survival for three consecutive samples and a 90 percentile value of not less than 70% survival for 10 most recent consecutive samples.

4. The arithmetic mean of the biochemical oxygen demand (5 day, 20°C) and suspended solids values, by weight, for effluent samples collected in any month shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected approximately the same time during the same period (85 percent removal).
5. Representative samples of the effluent shall not exceed the following limits:<sup>(1)</sup>

<u>Constituents</u>	<u>Unit of Measurement</u>	<u>6-Month Median</u>	<u>Daily Maximum</u>
Arsenic	mg/l	0.01	0.02
Cadmium	mg/l	0.02	0.03
Total Chromium	mg/l	0.005	0.01
Copper	mg/l	0.2	0.3
Lead	mg/l	0.1	0.2
Mercury	mg/l	0.001	0.002
Nickel	mg/l	0.1	0.2
Silver	mg/l	0.02	0.04
Zinc	mg/l	0.3	0.5
Cyanide	mg/l	0.1	0.2
Phenolic Compounds	mg/l	0.5	1.0
Total Identifiable Chlorinated Hydrocarbon	mg/l <sup>(2)</sup>	0.002	0.004

(1) These limits are intended to be achieved through secondary

treatment, source control and application of pretreatment standards.

- (2) Total Identifiable Chlorinated Hydrocarbons shall be measured by summing the individual concentrations of DDT, DDD, DDE, aldrin, BHC, chlordane, endrin, heptachlor, lindane, dieldrin, polychlorinated biphenyls, and other identifiable chlorinated hydrocarbons.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:
  - a. Floating, suspended, or deposited macroscopic particulate matter or foam;
  - b. Bottom deposits or aquatic growths;
  - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
  - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
  - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
  - a. Dissolved oxygen                      5.0 mg/l minimum.  
Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
  - b. Dissolved Sulfide                      0.1 mg/l maximum.
  - c. pH    Variation from natural ambient pH by more than 0.5 pH units.
  - d. Un-ionized Ammonia                    0.025 mg/l as N, annual median  
0.4 mg/l as N, maximum at any time
  - e. Nutrients                                Waters shall not contain biostimulatory substances in concentrations that

promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

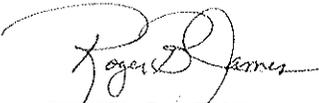
E. Provisions

1. The requirements prescribed by this Order supersede the requirements prescribed by Order 84-38. Order No. 84-38 is hereby rescinded.
2. Where concentration limitations in mg/l are contained in this permit, the following mass emission limitations shall also apply as follows:  
  
$$\text{(Mass Emission Limit in lbs/day)} = \text{(Concentration Limit in mg/l)} \times (8.34) \times \text{(Actual Flow in MGD Averaged Over the Time Interval to which the Limit Applies)}.$$
3. The discharger shall comply with all sections of this Order immediately upon adoption.
4. The discharger shall review and update his Operation and Maintenance Manual annually, or in the event of significant facility or process changes, shortly after such changes have occurred. Annual revisions, or letters stating that no changes are needed, shall be submitted to the Regional Board by April 15 of each year.
5. The discharger shall review and update by April 15 annually its contingency plan as required by Board Resolution No. 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.
6. The discharger shall comply with the self-monitoring program as adopted by the Board and as may be amended by the Executive Officer.
7. The discharger shall comply with all applicable items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December, 1986.
8. This Order expires on April 16, 1992. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3,

Subchapter 9 of the California Administrative Code no later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

9. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Roger B. James, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on April 15, 1987.



ROGER B. JAMES  
Executive Officer

Attachments:

Standard Provisions, Reporting  
Requirements and Definitions (dated December, 1986)  
Self-Monitoring Program  
Resolution 74-10

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

F I N A L  
SELF-MONITORING PROGRAM  
FOR

CITY OF CALISTOGA

NAPA COUNTY

NPDES NO. CA0037966

ORDER NO. 87-028

CONSISTS OF

PART A, dated 12/86

AND

PART B

PART B

CITY OF CALISTOGA

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

<u>Station</u>	<u>Description</u>
A-001	At any point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT

<u>Station</u>	<u>Description</u>
E-001	At any point in the outfall from the tertiary treatment facilities between the point of discharge and the point at which all waste tributary to that outfall is present. May be the same as E-001-D.
E-001-D	At any point in the disinfection facilities (clear well) for E-001 at which point adequate contact with the disinfectant is assured.
E-002-D	At any point in the disinfection facilities from the oxidation pond No. 2 overflow weir, at which point adequate contact with the disinfectant is assured. (Wet weather discharge location)

C. RECEIVING WATERS

<u>Station</u>	<u>Description</u>
C-1	At a point in the Napa River, approximately 500 feet upstream from the point of discharge (depending on the discharge point at E-001 or E-002).
C-2	At a point in the Napa River, located at the point of discharge (E-001 or E-002).
C-3	At a point in the Napa River, located approximately 100 feet downstream from the point of discharge (depending on the discharge point at E-001 or E-002).
C-4	At a point in the Napa River, located approximately 1,000 feet downstream from the point of discharge (depending on the discharge

point at E-001 or E-002).

D. LAND OBSERVATIONS

<u>Station</u>	<u>Description</u>
L-1 through L-'n'	Located along the property line at equidistant intervals not to exceed 500 feet. (A sketch showing the locations of these stations shall accompany the each report.)

E. OVERFLOWS AND BYPASSES

<u>Station</u>	<u>Description</u>
O-1 through O-'n'	Bypass or overflows from manholes, pump stations, or collection system.

Note: Initial self-monitoring report to include map and description of each known bypass or overflow location.

Reporting - Initial report by phone for each bypass or overflow. Written report shall be included in the subsequent monthly monitoring report to describe the date, time, and period of each bypass or overflow.

II. SCHEDULE OF SAMPLING, ANALYSIS AND OBSERVATIONS

The schedule of sampling, analysis and observations shall be that given in Table I.

III. MODIFICATION OF PART "A" (dated 12/86)

This monitoring program does not include the following sections of Part "A": C-11, C-12, D-5, E-3, and G-4-e.

IV. MISCELLANEOUS REPORTING

During the periods when wastewater is being reclaimed for irrigation use, User's Report shall be transmitted as part of the self-monitoring report to provide the following information:

- a. Time, date, and location of the reclamation use.
- b. Observations made during the inspection of the reclamation sites.
- c. Corrective actions taken if violations were noted.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in this

Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 87-028.

2. Is effective on the date shown below.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer.



ROGER B. JAMES  
Executive Officer

Effective Date: April 17, 1987

Attachments: Table I



TABLE 1 (continued) (1)													
SCHEDULE FOR SAMPLING, MEASURE ENTS, AND ANALYSIS													
Sampling Station	(2) A	(2) E-001		(2) E-00 D	(2) E-002-D		All 'C'	All 'L'	Reclamat. Waste- Water Use	All 'O'			
TYPE OF SAMPLE	G	G	Cont	C-24	G	G	C-24	G	O	G	C-24	O	G
Mercury (mg/l & kg/day)				Y									
Nickel (mg/l & kg/day)				Y									
Zinc (mg/l & kg/day)				Y									
Phenolic Compounds (mg/l & kg/day)				Y									
All Applicable Standard Observations								M	W			E	
Boron, (mg/l & Kg/day)													
Total Ident. Chlor. Hydro- carbons (mg/l & kg/day)				Y									
Chlorophyll a (mg/l)								M					
Unionized Ammonia as N (mg/l)								M					
River Flow cfs								D					
Volumetric Dilution River to effluent			D				D						
Total Dissolved Solids mg/l & kg/day													

LEGEND FOR TABLE

TYPES OF SAMPLES

- G = grab sample
- C-24 = composite sample - 24-hour
- C-X = composite sample - X hours  
(used when discharge does not  
continue for 24-hour period)
- Cont = continuous sampling
- DI = depth-intergrated sample
- BS = bottom sediment sample
- O = observation

TYPES OF STATIONS

- I = intake and/or water supply stations
- A = treatment facility influent stations
- E = waste effluent stations
- C = receiving water stations
- P = treatment facilities perimeter stations
- L = basin and/or pond levee stations
- B = bottom sediment stations
- G = groundwaters stations

FREQUENCY OF SAMPLING

- E = each occurrence
- H = once each hour
- D = once each day
- W = once each week
- M = once each month
- Y = once each year

- 2/H = twice per hour
- 2/W = 2 days per week
- 5/W = 5 days per week
- 2/M = 2 days per month
- 2/y = once in March and  
once in September
- Q = quarterly, once in  
March, June, Sept.  
and December
- 7/W = 7 days per week
- 3/W = 3 days per week

- 2H = every 2 hours
- 2D = every 2 days
- 2W = every 2 weeks
- 3M = every 3 months
- Cont = continuous
- 2M = every 2 months

FOOTNOTES FOR TABLE I

- (1) During any day when bypassing occurs from any treatment phase(s) (primary, secondary, chlorination, and dechlorination) in the plant, the monitoring program for the effluent shall include the following in addition to the above schedule for sampling, measurement and analyses:
  - a. When bypassing occurs from any primary or secondary treatment unit(s), composite sample for BOD, total suspended solids, oil and grease (influent and effluent), grab sample for settleable matter, and continuous monitoring of flow.
  - b. When bypassing chlorination process, grab sample for coliform (total and fecal), and continuous monitoring of flow.
  - c. When bypassing dechlorination process, grab sample for chlorine residual (continuous or every two hours), and continuous monitoring of flow.

Under any of the above situations, daily receiving water sampling and observations shall begin until it is demonstrated that no adverse impact on the receiving water is detected.

- (2) Sampling is required only during the periods when discharge is being made to the river. The sampling location depends upon the actual discharge point (E-001 or E-002) at the time of the sampling. If both E-001 and E-002 are discharging, separate samples shall be taken for each waste stream .
- (3) Influent samples and analyses for BOD and Suspended Solids required weekly during the period when discharge is being made to the river. During the no discharge period when wastewater is being stored or reclaimed, monthly sampling and analyses of BOD and Suspended Solids for influent samples is required.
- (4) Each Oil and Grease sample shall consist of three grab samples taken at two-hour intervals during the sampling date, with each grab being collected in a glass container and analyzed separately. Results shall be expressed as a weighted average of the 3 values based upon the instantaneous flow rates occurring at the time of each grab sample.
- (5) Effluent samples for fish bioassays must be dechlorinated prior to testing.