

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

ORDER NO. 92 - 062

NPDES PERMIT NO. CA0037966

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 also called the Discharger) submitted a permit application dated October 18, 1991 for reissuance of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES).
2. The Discharger owns and operates the Dunaweal Wastewater Treatment Plant which provides tertiary-level treatment of municipal wastewater from domestic and commercial sources within the City of Calistoga.
3. During the wet weather period of October through May, treated effluent is discharged intermittently to the Napa River, a water of the State and of the United States, provided the discharge receives adequate river-to-wastewater dilution.
4. Treated effluent is discharged to a non-tidal reach of the Napa River through two submerged outfalls extending from the eastern bank of the river, both located at 38° 33' 34" North Latitude, and 122° 33' 28" West Longitude. Outfall E-1 is used for discharge of tertiary-treated effluent, with at least a 10:1 river to wastewater dilution. Outfall E-2 is used for discharge of secondary-treated effluent, with at least a 50:1 river to wastewater dilution.
5. The discharge of treated wastewater to the Napa River is governed by NPDES Permit No. CA0037966, currently in the form of Waste Discharge Requirements in Order No. 87-028 adopted by the Board on April 15, 1987. The reissuance of this NPDES permit is the subject of this Order.
6. During the dry weather season, May through September, discharge to the Napa River is prohibited and treated effluent is either stored in the treatment plant ponds, or disposed to land through a reclamation program. Reclaimed water discharges to land are governed by Water Reclamation Requirements in a separate Order, currently Order No. 88-060 adopted by the Board on April 20, 1988.

7. **The City of Calistoga** is located in Napa County, in northern Napa Valley, at the junction of State Highways 29 and 128. The City is about 25 miles northwest of the City of Napa, and about 40 miles north of San Pablo Bay. The City has a current population of about 4,500 and encompasses roughly 2.5 square miles of land. The majority of the City lies in the generally level, gently sloping floor of the Napa Valley between 340 and 380 feet elevation above sea level. Along the southwest boundary, the City area extends partly up the valley slopes to elevations of 800 feet.
8. **The Napa River** traverses the City in a northwest-southeast direction, with city development on both sides of the river. Tributaries to the river within the city area include: Blossom Creek and Cyrus Creek from the southwest and Garnett Creek from the north. The City's wastewater treatment plant is located about two miles south of city center, on the eastern bank of the Napa River, to the north of Dunaweal Lane.
9. The climate is characterized by warm, dry summers and cool, moist winters. Annual average precipitation is about 45 inches, occurring primarily during the period of October through April.
10. **Treatment Plant Capacity:** The Discharger's treatment plant has a current permitted treatment capacity of 0.62 million gallons per day (MGD). The plant design flows are: 0.4 MGD Average Daily Flow; 0.8 MGD Maximum Daily Flow; 2.0 MGD Peak Primary Treatment; 2.0 MGD Peak Secondary Treatment; 1.0 MGD Peak Tertiary Treatment.
11. **Treatment Plant Flows:** Influent flows over the past five years have been at an annual average of 0.69 MGD, and an average dry weather flow of 0.63 MGD. Effluent flows over the past five years have been at an annual average of 0.67 MGD, and an average dry weather flow of 0.63 MGD.
12. **Discharges to Napa River:** The treatment plant discharges to the Napa River intermittently during the permitted wet weather discharge season, dependent on available river flow dilution. During 1991, effluent was discharged on 186 of the 227 permitted discharge days. A total of about 77 million gallons was discharged during 1991, an average of 0.37 MGD over the permitted discharge period.
13. **Treatment Process:** The treatment process includes a headworks; primary clarification; secondary treatment by two oxidation ponds; tertiary treatment by coagulation, clarification and filtration; disinfection; and disposal either to reclamation or to the Napa River. Descriptions of these facilities are given below. A map of the facilities is included as an Attachment of this Order.

14. **Headworks & Primary Treatment:** Wastewater from the collection system enters the plant above grade via an 18-inch diameter gravity main. Flow is diverted through a grit removal chamber and then returned to the headworks channel. The headworks channel is equipped with a muffin monster grinder, pH and flow monitoring. Influent flow is measured by a 9-inch Parshall flume and sonic water level detector. The wastewater then flows by gravity to a single 35-foot diameter, 10-foot deep primary clarifier. Primary clarifier effluent flows by gravity to the two oxidation ponds.
15. **Oxidation Ponds:** Flow typically enters Pond 1, at the north end of the pond, and overflows by gravity to Pond 2. Pond 1 is equipped with four 10-horsepower mechanical aerators. Flow from the clarifier can also be routed into Pond 2 directly, if necessary. Pond effluent is withdrawn from the south end of Pond 2, and pumped either to the tertiary treatment facilities, or through the Pond 2 chlorination and dechlorination facilities for discharge to the Napa River through outfall E-2.
16. **Pond Characteristics:** The physical characteristics of the ponds are tabulated below:

Pond No.	Pond Type	Surface Area (Acres)	Depth (Feet)	Volume	
				(Ac-Ft)	(MG)
1.	Oxidation	4.8	5	24.0	7.82
2.	Oxidation	<u>4.0</u>	<u>4</u>	<u>16.0</u>	<u>5.21</u>
Totals ----->		8.8		40.0	13.03

17. **Tertiary Treatment:** Tertiary facilities include alum addition; flocculation in an 8-foot square tank; final clarification in a 35-foot diameter clarifier; filtration in two 8-foot diameter, 20-foot long multi-media pressure filters; pH adjustment by caustic soda addition; disinfection by chlorination; and dechlorination by sulfonation. Final effluent is monitored for pH, turbidity, and flow and sampled for laboratory analyses prior to discharge either by gravity to the Napa River through Outfall E-1, or by pumping to reclamation project sites.
18. **Wastewater Solids:** Settled grit is removed from the headworks by a screw-type conveyor, and deposited to bins for off-site disposal. Primary clarifier sludge is pumped to the anaerobic digester for stabilization. Digested solids are dried in on-site sludge drying beds, and ultimately removed for off-site disposal at an authorized disposal facility. Solids from the final clarifier are either returned to the primary clarifier, or discharged to a small aeration pond for aerobic digestion and drying in the sludge drying beds. The existing solids handling facilities have limited capacity to provide adequate and reliable solids handling. The Discharger is in the process of upgrading these facilities.

19. **Plant Improvement Plans:** Over the past five years the Discharger has identified various plant modifications intended to maintain and improve treatment and disposal facilities. The Discharger's consultant prepared a plan, Disposal Facility Improvement Plan, for plant improvements over a 10-year period. The Plan was developed in 1987, and revised in 1988 and 1989. Some of the planned improvements have been completed, while other remain in progress.
20. **Plant Improvements:** Plant improvements completed over the past several years include: New grit blower, Flow meter and pH monitoring in the headworks; Two new mechanical aerators in Pond 1; Drying and sludge removal from Pond 2; Chlorine-contact pipe chamber in Pond 2 and upgraded disinfection equipment for river discharge of pond effluent; Larger recirculation pump for tertiary treatment feed; New irrigation pump for reclamation flow pumping; Effluent pH control equipment including caustic soda storage tank, feed pump, and pH meter with alarms; Increased alum storage in a new 9,000 gallon tank. Improvements still in progress include renovation of the sludge drying beds; securing additional reclamation areas for dry-weather effluent disposal; and Drying and removal of accumulated solids from Pond 1.
21. **Flow Increase:** The Discharger has requested an increase in the permitted plant flows. Over the past five years the plant has had difficulty achieving consistent compliance with waste discharge requirements, both in terms of effluent quality and limited dry-weather disposal capacity. Authorization of increased plant flows does not appear to be warranted at this time. At such time as consistent compliance, and adequate treatment and disposal capacity are demonstrated, the Board will consider permitting increased plant flows. Conditions for consideration of a flow increase are identified in Provision F.6. of this Order.
22. **The California Inland Surface Waters Plan** was adopted by the State Water Resources Control Board (State Board) April 11, 1991. This Plan identifies water quality objectives for all inland freshwaters in the state, which includes the Napa River, and a strategy for implementation of the objectives.
23. A revised **Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan)** was adopted by the Regional Board on December 11, 1991. State Board approval is pending.
24. **The Basin Plan** identifies beneficial uses and water quality objectives for surface waters in the region, including the Napa River, as well as effluent limitations and discharge prohibitions intended to protect beneficial uses.
25. **This Order** implements the plans, policies and provisions of the Board's Basin Plan and the State Board's California Inland Surface Waters Plan, and future amendments thereto.

26. **Beneficial Uses of the Napa River in the vicinity of the discharge, as identified in the Basin Plan, include:**
- a. **Municipal and Domestic Water Supply**
 - b. **Agricultural Water Supply**
 - c. **Navigation**
 - d. **Contact and Non-Contact Water Recreation**
 - e. **Warm and Cold Fresh Water Habitat**
 - f. **Wildlife Habitat**
 - g. **Preservation of Rare and Endangered Species**
 - h. **Fish Migration and Spawning**
27. **The Basin Plan prohibits the discharge of wastewater which has characteristics of concern to beneficial uses into any nontidal water, dead-end slough, or other confined water areas or their immediate tributaries. The Basin Plan allows exception to this prohibition to be considered where the discharge is approved as part of a reclamation project.**
28. **The Napa River is a nontidal water in the vicinity of the treatment plant discharges described in Findings 3 and 4 of this Order. The Discharger has an active water reclamation program for land disposal of all effluent during the dry weather season, and thus complies with criteria for considering an exception to the discharge prohibition described above.**
29. **This Order grants an exception to the prohibition against discharge to non-tidal waters, and allows the discharge of disinfected, tertiary or secondary treated wastewater from the Discharger's treatment plant to the Napa River during the wet weather season, in accordance with this Order.**
30. **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, recommended operation strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, the manual shall be kept updated to reflect significant changes in treatment facility equipment and operation practices.**
31. **Storm Water Discharge regulations were published by the United States Environmental Protection Agency (EPA) on November 16, 1990. The regulations require NPDES Permit coverage for all facilities which discharge stormwater associated with industrial activities, either directly or indirectly through a conveyance system, to surface waters. Dischargers are required to control pollutants in stormwater discharges through implementation of Best Technology Economically Available (BAT) and Best Conventional Pollutant Control Technology (BCT).[40 CFR Parts 122, 123 and 124].**

32. **Storm Water Discharge Provisions:** The State Board adopted NPDES General Permit No. CAS000001, for Discharges of Storm Water Associated with Industrial Activities, Water Quality Order No. 91-13-DWQ, November 19, 1991 (General Permit). Industrial facility storm water discharges are required to be covered under the General Permit, or other acceptable permit. This Order includes provisions, consistent with the General Permit, to regulate storm water discharges associated with the Discharger's wastewater treatment facility.
33. 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 (California Environmental Quality Act) pursuant to Section 13389 of the California Water Code.
34. The Discharger and interested parties have been notified of the Board's intent to reissue requirements for the existing discharge and have been provided a public hearing and the opportunity to submit their written views and recommendations.
35. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED, pursuant to the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and to the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, that the **City of Calistoga** (Discharger) shall comply with the following:

A. Discharge Prohibitions

1. The bypass or overflow of untreated or partially treated wastewater to waters of the State, either at the treatment plant or from the collection system or pump stations tributary to the treatment plant is prohibited.
2. Average dry weather flow to the treatment plant greater than 0.62 million gallons per day is prohibited. Average dry weather flow shall be determined over a period of three consecutive dry weather months each year. Amendment of this Prohibition, to allow increased wastewater treatment plant flows, may be considered by the Board in accordance with the conditions set forth in Provision F.6. of this Order.
3. Discharge of wastewater at any point where it does not receive a minimum initial dilution of 10 to 1 (10:1), river to wastewater flow, is prohibited.
4. Discharge to the Napa River is prohibited during the period from May 16 through September 30 of each year. Discharge to the river for a specified period beyond May 15 may be authorized by the Executive Officer, based on a written request from the Discharger documenting abnormally high rainfall and resultant lack of demand for reclaimed water.

B. EFFLUENT LIMITATIONS

The following limitations apply to the wastewater treatment facility effluent, as discharged to the Napa River.

1. For a river to wastewater dilution of at least 10:1 but less than 50:1, effluent shall not exceed the following limits:

<u>Constituent</u>	<u>Daily Maximum</u>	<u>Monthly Average</u>	<u>Units</u>
a. Biochemical Oxygen Demand (BOD ₅ , 20°C)	20	10	mg/l
b. Total Suspended Solids	30	15	mg/l
c. Oil and Grease	10	5	mg/l
d. Settleable Matter	0.2	0.1	ml/l-hr
e. Turbidity	10	--	NTU

f. Total Chlorine Residual*:	0.0 mg/l, Instantaneous Maximum		
g. Total Coliform Organisms:	2.2 MPN/100 ml, Moving Median of any seven consecutive samples;		

and: 240 MPN/100 ml, Maximum in any
single sample.

2. For a river to wastewater dilution of at least 50:1, the effluent shall not exceed the following limits:

<u>Constituent</u>	<u>Daily Maximum</u>	<u>Weekly Average</u>	<u>Monthly Average</u>	<u>Units</u>
a. Biochemical Oxygen Demand (BOD ₅ , 20°C)	60	45	30	mg/l
b. Total Suspended Solids	60	45	30	mg/l
c. Oil and Grease	20	--	10	mg/l
d. Settleable Matter	0.2	--	0.1	ml/l-hr

e. Total Chlorine Residual*:	0.0 mg/l, Instantaneous Maximum			
f. Total Coliform Organisms:	23 MPN/100 ml, Moving Median of any five consecutive samples;			

and: 240 MPN/100 ml, Maximum in any
single sample.

* Total Chlorine Residual requirement defined as below the limit of detection in standard test methods.

3. **pH:** The pH of the effluent shall not be less than 6.5, nor greater than 8.5.
4. **Toxicity (Bioassays):** Representative samples of the effluent shall meet the following limit for acute toxicity:

The survival of organisms in undiluted effluent shall be at least 70 percent survival in each bioassay.
[Provision F.7. of this Order applies to these bioassays.]

5. **85 Percent Removal, BOD & TSS:** The arithmetic mean of the Biochemical Oxygen Demand (five-day, 20°C) and Total Suspended Solids values, by weight for effluent samples collected in each calendar month shall not exceed 15 percent of the arithmetic mean of the respective values, by weight, for influent samples collected during the same period.
6. **Selected Toxic Constituents:** Representative samples of the effluent shall not exceed the following limits (1):

<u>Constituent</u>	<u>Daily Average(2)</u>	<u>Monthly Average(2)</u>	<u>Units</u>
a. Arsenic	20	--	ug/l
b. Cadmium	10.7	--	ug/l
c. Chromium(VI) (3)	10	--	ug/l
d. Copper	78	--	ug/l
e. Lead	23	--	ug/l
f. Mercury	2	0.08	ug/l
g. Nickel	200	--	ug/l
h. Selenium	50	--	ug/l
i. Silver	40	--	ug/l
j. Zinc	500	--	ug/l
k. Cyanide	52	--	ug/l
l. Phenols	1,000	--	ug/l
m. PAHs (4)	--	0.03	ug/l

- (1) These limits are intended to be achieved through secondary treatment and, as necessary, pretreatment. All values in micrograms per liter (ug/l).
- (2) Limits apply to the average concentration of all samples collected during the averaging period (Daily = 24-hour period; Monthly = Calendar month).
- (3) The Discharger may meet this limit as total chromium.
- (4) Polynuclear Aromatic Hydrocarbons. This limit applies to the summation of detected levels of individual constituent PAHs, as identified by EPA Method 610 (i.e. Total PAHs).

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 wildlife, waterfowl, or aquatic biota, 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 at any place within one foot of the water surface:
 - a. Dissolved Oxygen: 7.0 mg/l, minimum.

The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, then the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.
 - b. Dissolved Sulfide: 0.1 mg/l, maximum.
 - c. pH: Variation from normal ambient pH by more than 0.5 pH units.
 - d. Un-ionized Ammonia: 0.025 mg/l as N, annual median;
 0.16 mg/l as N, maximum.
 - 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 objective or 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.

D. POND LIMITATIONS

1. Wastewater within one foot of the surface of all wastewater ponds shall meet the following limits, in any grab sample:
 - a. Dissolved Oxygen 2.0 mg/l, minimum
 - b. Dissolved Sulfide 0.1 mg/l, maximum
2. A minimum freeboard of two feet shall be maintained in the treatment plant oxidation ponds, under ordinary conditions.

E. SLUDGE HANDLING AND DISPOSAL REQUIREMENTS

1. All sludge treatment, processing, storage or disposal activities under the Discharger's control shall be in compliance with current state and federal regulations.
2. The Board may amend this Order prior to the expiration date if necessary to accomodate changes in applicable state or federal sludge regulations, or changes in the Discharger's sludge management procedures.
3. The Discharger shall notify the Board, in writing, prior to any changes in its sludge handling and disposal practices.
4. Permanent sludge storage or disposal activities are not authorized by this permit. A Report of Waste Discharge shall be filed and the site brought into compliance with all applicable regulations prior to commencement of any such activity by the Discharger.
5. Sludge handling, storage and disposal shall not create a condition of pollution or nuisance as defined in Section 13050 (l) and (m) of the California Water Code.
6. Sludge handling, storage and disposal shall not cause waste to be discharged to, or deposited in, waters of the State, nor cause degradation of groundwaters.
7. Sludge storage facilities under the Discharger's control shall be operated and maintained in such a manner as to provide adequate protection from surface runoff, erosion, or other conditions which would cause drainage from the waste materials to escape from the storage facility site(s).
8. General Provisions A.9. and A.12. of this Board's "Standard Provisions and Reporting Requirements", dated December 1986, apply to sludge handling and disposal practices.
9. The term 'sludge' as used in this permit is defined in Definition E.18 of this Board's "Standard Provisions and Reporting Requirements", dated December 1986.

F. PROVISIONS

1. Requirements prescribed by this Order supersede the requirements prescribed by Order No. 87-028. Order No. 87-028 is hereby rescinded.
2. The Discharger shall comply with all sections of this Order immediately upon adoption.
3. The Discharger shall comply with the Self-Monitoring Program for this Order, as adopted by the Board and as may be amended by the Executive Officer.
4. The Discharger shall comply with all applicable items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December, 1986.
5. **Mass Emission Rates:** Where concentration limitations in mg/l or ug/l are contained in this Permit, the following Mass Emission Rates also apply:

$$\text{Mass Emission Rate, in kg/day} = (\text{CL}) \times (3.785) \times (\text{Q})$$

where: CL = Concentration Limit, in mg/l;
Q = Discharge Flow Rate, in MGD, averaged over the time interval to which the limit applies.

6. **Permitted Treatment Plant Flows:** The Board will consider amendment of Prohibition A.2. of this Order, to allow increased wastewater plant flows, subject to the following:
 - a. Completion of improvements to wastewater collection, treatment, storage and disposal facilities necessary to accomodate existing and proposed additional flows.
 - b. Facility capacity and reliability: Documentation of adequate reliability, capability and performance of the wastewater facilities in order to maintain compliance with waste discharge requirements. Both dry weather and wet weather flows shall be considered, including evaluation of capacity for wastewater disposal through reclamation.
 - c. For any proposed increase in treatment plant discharges to the Napa River, an antidegradation analysis may be required.
 - d. Compliance with all applicable provisions of the California Environmental Quality Act (California Public Resources Code Division 13, Chapter 3, Section 21100 et seq.).
 - e. Adequate financial provisions to ensure adequate operation and maintenance of the wastewater facilities.
 - f. Documentation of completion or implementation of the above measures, to the Executive Officer's satisfaction.

7. Bioassays:

- a. Compliance with Effluent Limitation B.4. of this Order shall be evaluated by measuring survival of test fishes exposed to undiluted effluent for 96 hours in static renewal bioassays, using 24-hour composite samples representative of the effluent.
 - b. Two fish species shall be tested concurrently. These shall be the most sensitive two species determined from a single concurrent screening of the following three species: three-spine stickleback, rainbow trout and fathead minnow.
 - c. Compliance monitoring with only one fish species (the most sensitive, if known) may be allowed by the Board's Executive Officer, based on consistent compliance with acute toxicity effluent limitations, and in accordance with the 1991 Basin Plan and amendments thereto.
 - d. All bioassays shall be performed according to protocols approved by the U.S. EPA or State Board, or published by the American Society for Testing and Materials (ASTM) or American Public Health Association.
8. a. **Evaluation Program:** The Discharger shall implement a program to regularly review and evaluate its wastewater collection, treatment and disposal facilities. The purpose of the program is to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary, in order to provide adequate and reliable transport, treatment and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's service responsibilities.
- b. **Evaluation Program Status Report:** A report discussing the evaluation program status, including recommended or planned actions, shall be submitted to the Board by April 15 each year.
9. **Operations and Maintenance Manual:** Annually, the Discharger shall review, and update as necessary, its Operations and Maintenance Manual. The Manual shall be revised to address any significant facility, process or operational changes. Revisions, or a letter stating that no changes are needed, shall be submitted to the Board by April 15 of each year.
10. **Contingency Plan:** Annually, the Discharger shall review, and update as necessary, its contingency plan as required by Board Resolution No. 74-10. Discharge of pollutants in violation of this Order where the Discharger has failed to develop or implement a contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to California Water Code Section 13387. Plan revisions, or a letter stating that no changes are needed, shall be submitted to the Board by April 15 each year.

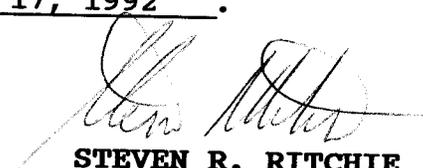
11. **Storm Water:** The Discharger shall comply with the following requirements, and any amendments thereto, in order to provide appropriate control of storm water discharges associated with the Discharger's facility. The requirements identified below are contained in the State Board's NPDES General Permit No. CAS000001 for Discharges of Storm Water Associated with Industrial Activities, adopted November 19, 1991, which is included as an Attachment of this Order.

- A. Findings 1, 4, 6, 7, 8, 10-16
- B. Discharge Prohibitions 1, 2, 3, 4
- C. Receiving Water Limitations 1, 2
- D. Provisions 2, 3, 5, 6
- E. Permit Attachments: Sections A, B, and C.

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

13. **Order Expiration:** This Order expires June 17, 1997. The Discharger must file a Report of Waste Discharge (permit application) in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date, as application for issuance of new waste discharge requirements.

I, Steven R. Ritchie, 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 June 17, 1992.


STEVEN R. RITCHIE
Executive Officer

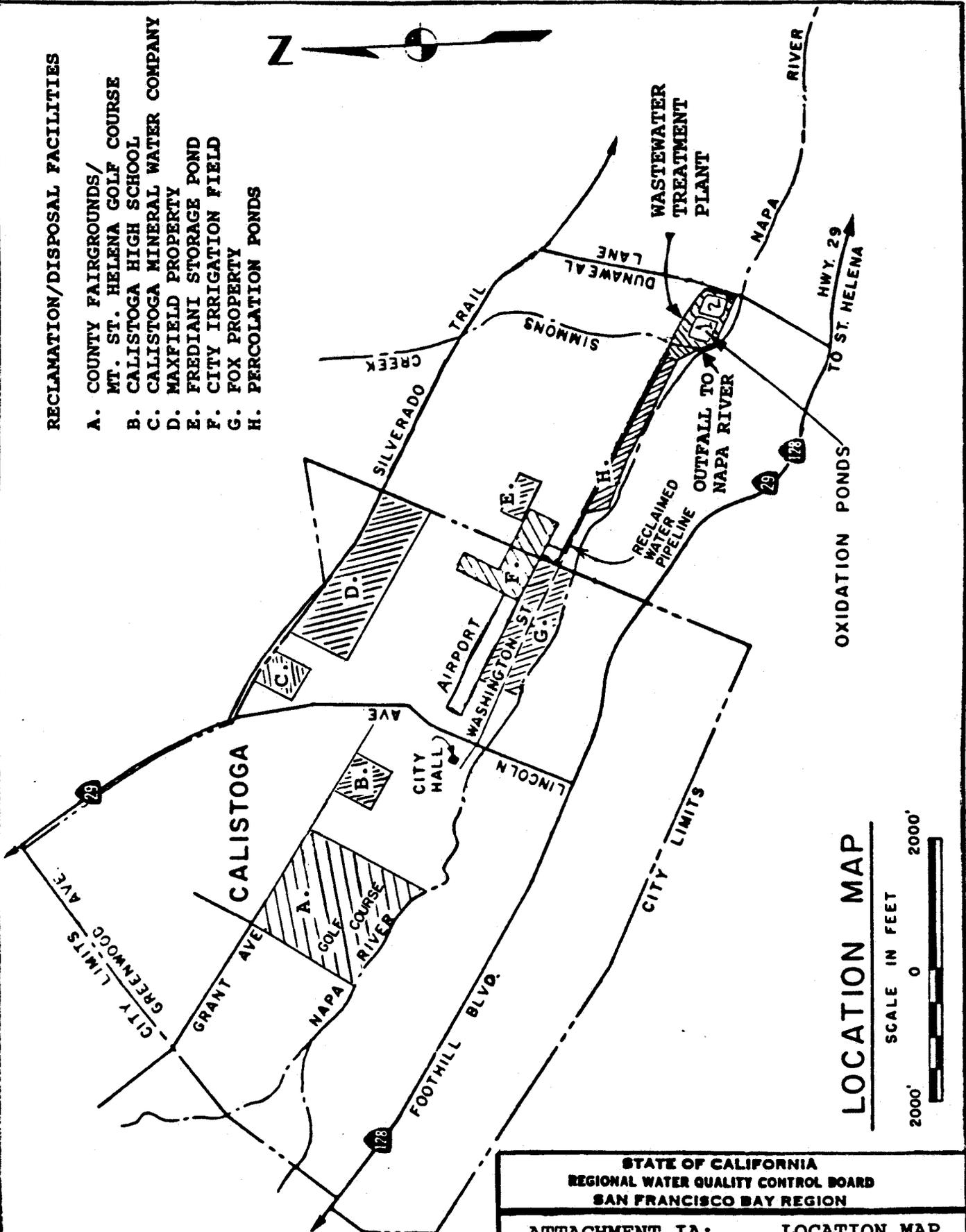
Attachments:

- I. Map of Wastewater Facilities
- II. Self-Monitoring Program
- III. Standard Provisions and Reporting Requirements, December 1986
- IV. State Board Water Quality Order No. 91-13-WQ, NPDES General Permit No. CAS000001, November 19, 1991
- V. Regional Board Resolution No. 74-10

[File No. 2139.3003]
[Originator: BDA][Reviewer: RJC]

RECLAMATION/DISPOSAL FACILITIES

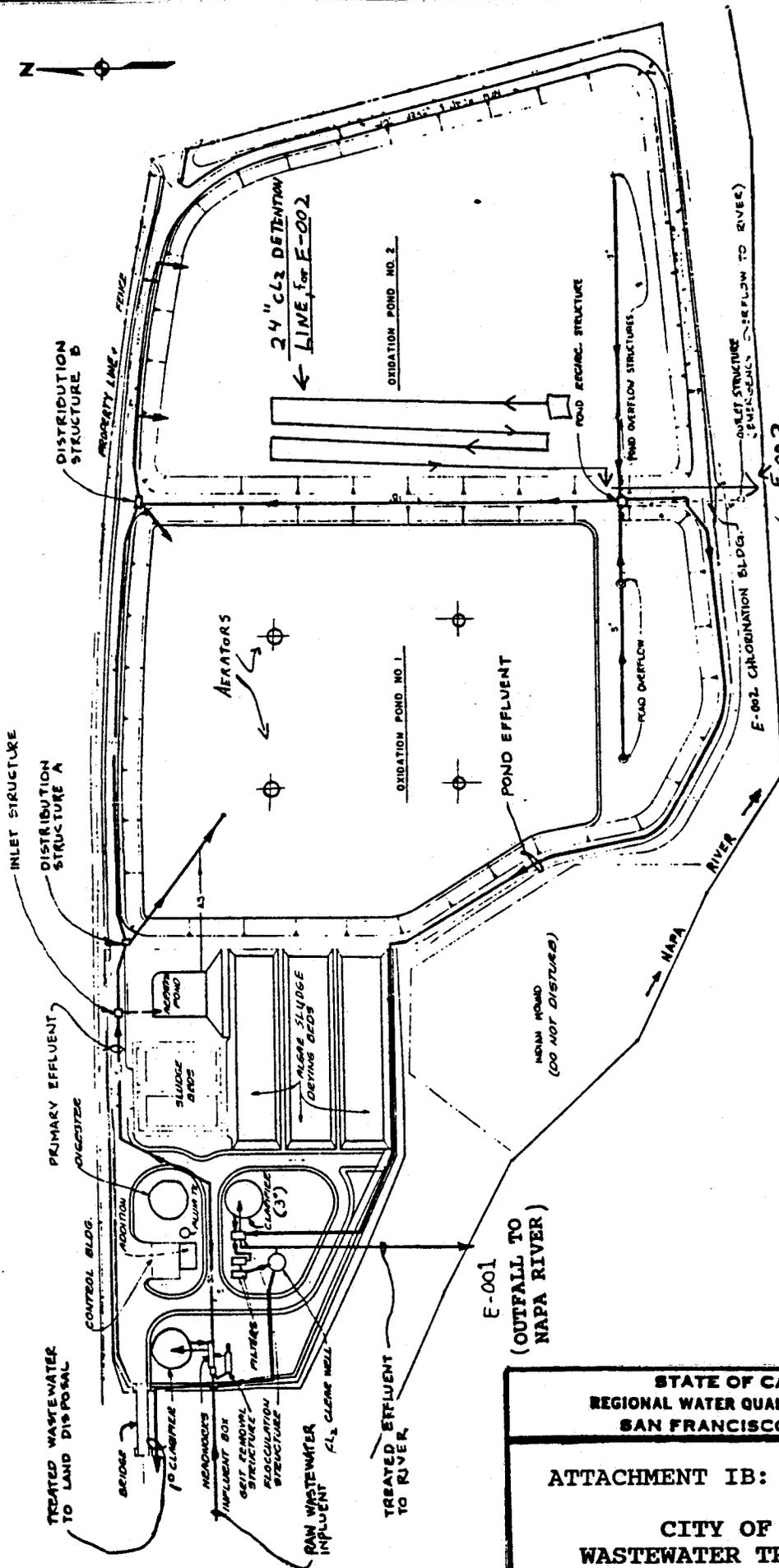
- A. COUNTY FAIRGROUNDS/
MT. ST. HELENA GOLF COURSE
- B. CALISTOGA HIGH SCHOOL
- C. CALISTOGA MINERAL WATER COMPANY
- D. MAXFIELD PROPERTY
- E. FREDIANI STORAGE POND
- F. CITY IRRIGATION FIELD
- G. FOX PROPERTY
- H. PERCOLATION PONDS



LOCATION MAP



STATE OF CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN FRANCISCO BAY REGION		
ATTACHMENT IA: LOCATION MAP		
CITY OF CALISTOGA WASTEWATER TREATMENT AND DISPOSAL FACILITIES		
DATE: 6/17/92	BDA	ORDER NO. 92-062



(OUTFALL TO
NAPA RIVER)

SEWAGE TREATMENT PLANT SITE PLAN

STATE OF CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN FRANCISCO BAY REGION	
ATTACHMENT IB:	MAP
CITY OF CALISTOGA WASTEWATER TREATMENT PLANT	
DATE: 6/17/92	BDA ORDER NO. 92-062

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

SELF-MONITORING PROGRAM

FOR

**CITY OF CALISTOGA,
NAPA COUNTY**

ORDER NO. 92 - 062

NPDES PERMIT NO. CA0037966

CONSISTS OF

PART A, dated December 1986

AND

PART B

SELF-MONITORING PROGRAM PART B

CITY OF CALISTOGA, NAPA COUNTY - NPDES Permit No. CA0037966

I. DESCRIPTION OF SAMPLING STATIONS

Station Description

A. INFLUENT

A-001
(A-1) At a point in the treatment facilities headworks at which all waste tributary to the system is present and preceding any phase of treatment.

B. EFFLUENT

E-001
(E-1) At a point in the outfall from the tertiary treatment facilities between the point of discharge and the point at which all waste tributary to the outfall is present (May be the same as E-001-D).

E-001-D At a point in the outfall at which adequate contact with the disinfectant is assured.

E-002
(E-2) At a point in the outfall from oxidation Pond 2 between the point of discharge and the point at which all waste tributary to the outfall is present (May be the same as E-002-D).

E-002-D At a point in the outfall at which point adequate contact with the disinfectant is assured.

C. RECEIVING WATERS

C-1 At a point in the Napa River, located approximately 500 feet upstream from the point of discharge.

C-2 At a point in the Napa River, located at the point of discharge.

C-3 At a point in the Napa River, located approximately 100 feet downstream from the point of discharge.

C-4 At a point in the Napa River, located approximately 1,000 feet downstream from the point of discharge.

I. DESCRIPTION OF SAMPLING STATIONS (continued)

<u>Station</u>	<u>Description</u>
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D. LAND OBSERVATIONS

P-1 through P-'n'	Points located along the perimeter of the wastewater treatment plant, at equidistant intervals, not to exceed 500 feet.
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NOTE: A sketch showing the locations of these stations shall accompany each monthly report and the Annual report for each calendar year.

E. OVERFLOWS AND BYPASSES

OV-1 through OV-'n'	At points in the collection system including manholes, pump stations, or any other location where overflows or bypasses occur.
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NOTES: 1. A map and description of each known overflow or bypass location shall accompany the Annual report for each calendar year.

2. Each occurrence of a bypass or overflow shall be reported to the Regional Board in accordance with the reporting requirements specified in Sections G.1 and G.2. of Part A.

II. SCHEDULE OF SAMPLING, MEASUREMENTS, AND ANALYSES

A. **Routine Monitoring:** The schedule of sampling, measurements and analyses shall be that given as Table 1 (and Table 1 Footnotes).

B. **Special Monitoring:** The Discharger may be required by the Executive Officer to conduct additional effluent monitoring for selected toxic constituents identified in Table IV-B of the 1991 Basin Plan, which are not presently included in the routine monitoring program, in accordance with requirements of the 1991 Basin Plan.

III. MODIFICATIONS TO PART A

A. This monitoring program does not include the following sections of Part A: C.10., C.11., D.5., E.3. and G.4.e.

B. Paragraph C.5. of Part A is revised to read:

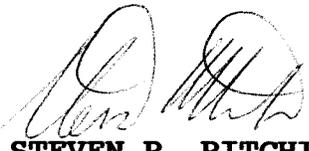
Average weekly and monthly values are calculated as the sum of all daily discharge values measured during the specified period (calendar week or calendar month), divided by the number of daily discharge values measured during that specified period.

IV. REPORTING REQUIREMENTS

- A. Self-Monitoring Reports for each calendar month shall be submitted monthly, to be received no later than the 15th day of the following month. The required contents of these reports are specified in section G.4. of Part A.
- B. An annual report covering the previous calendar year shall be submitted to the Regional Board by January 30 of each year. The required contents of the annual report are specified in section G.5. of Part A.
- C. Any overflow, bypass or other significant non-compliance incident that may endanger health or the environment shall be reported according to sections G.1 and G.2. of Part A.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

- 1. Has been developed in accordance with the procedure set forth in the 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. 92-062.
- 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.


STEVEN R. RITCHIE
Executive Officer

Effective Date 6/17/92

Attachments:

Table 1 with footnotes

TABLE 1

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

SAMPLING STATION		A	E-001		E-001-D		E-002		E-002-D		All C	All P	All OV
TYPE OF SAMPLE		C-24	G	C-24	G	C-24	G	C-24	G	C-24	G/O	0	G/O
	Foot note	1	2	2	2	2	2	2	2	2	2	1	1 & 10
Flow Rate (mgd)	3	D		D				D					E
BOD, 5-day, 20°C (mg/l & kg/day)	4	W		W				W					E
Total Suspended Solids (mg/l & kg/day)	4	W		W				W					
Settleable Solids (ml/l-hr)			D				D						
Oil and Grease (mg/l & kg/day)	5		2M				2M						
Chlorine Residual, & Dosage (mg/l & kg/day)	6				Cont, or 2H				Cont, or 2H				
Coliform, Total (MPN/100 ml)					3/W				3/W				E
Toxicity, 96-hr Bioassay (% Survival)	7				M				Y				
Turbidity (NTU)			D				W				M		
pH (units)			D			(7)	W			(7)	M		
Temperature (°C)			D			(7)	W			(7)	M		
Dissolved Oxygen (mg/l & % Saturation)			D			(7)	W			(7)	M		
Sulfides, Total & D'solved (if DO < 2.0 mg/l) (mg/l)			D				W				M		
Ammonia Nitrogen (mg/l & kg/day)				2M		(7)				(7)			
Nitrate Nitrogen (mg/l & kg/day)				2M									
Nitrite Nitrogen (mg/l & kg/day)													
Total Organic Nitrogen (mg/l & kg/day)				2M									
Total Phosphate (mg/l & kg/day)				2M									
Un-ionized Ammonia Nitrog. (mg/l as N)											M		
Total Dissolved Solids (mg/l)											M		
Chlorides (mg/l)													
Hardness (mg/l as CaCO ₃)											M		
Chlorophyll-a (ug/l)											M		
All Applicable Standard Observations			D								M	W	E

TABLE 1 (continued)

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS

SAMPLING STATION	A	E-001		E-001-D		E-002		E-002-D		All C	All P	All OV
TYPE OF SAMPLE	C-24	G	C-24	G	C-24	G	C-24	G	C-24	G/O	O	G/O
	Foot note	1	2	2	2	2	2	2	2	2	1	1 & 10
Arsenic (mg/l or ug/l, & kg/day)	8		2/Y					Y				
Cadmium (mg/l or ug/l, & kg/day)	8		2/Y					Y				
Chromium (mg/l or ug/l, & kg/day)	8		2/Y					Y				
Copper (mg/l or ug/l, & kg/day)	8		2/Y					Y				
Lead (mg/l or ug/l, & kg/day)	8		2/Y					Y				
Mercury (mg/l or ug/l, & kg/day)	8		2/Y					Y				
Nickel (mg/l or ug/l, & kg/day)	8		2/Y					Y				
Selenium (mg/l or ug/l, & kg/day)	8		2/Y					Y				
Silver (mg/l or ug/l, & kg/day)	8		2/Y					Y				
Zinc (mg/l or ug/l, & kg/day)	8		2/Y					Y				
Cyanide (mg/l or ug/l, & kg/day)	8		2/Y					Y				
Phenolic Compounds (mg/l or ug/l, & kg/day)	8		Y					Y				
PAHs (ug/l, & kg/day)	8		Y					Y				
River Flow (cfs or mgd)	9									D		
Volumetric Dilution, River to effluent	9		D				D			D		

LEGEND FOR TABLE:

TYPES OF SAMPLES

- Cont = Continuous
- C-24 = 24-hour composite
- G = Grab sample
- O = Observations

TYPES OF STATIONS

- A = Treatment Plant Influent
- E = Treatment Plant Effluent
- C = Receiving Waters
- L = Pond Levee Stations
- P = Plant Perimeter Stations
- OV = Overflow or Bypass Points

FREQUENCY OF SAMPLING

- D = Once each day
- W = Once each week
- M = Once each month
- Y = Once each year
- E = Each event
- 3/W = 3 days per week
- 2H = Every 2 hours
- 2M = Every 2 months
- 2/Y = 2 days per discharge year
- Cont = Continuous

* NOTE: Additional specifications regarding sampling frequency are contained in the Table I Footnotes.

TABLE I FOOTNOTES

- (1) Indicated sampling is required during the entire year.
- (2) Indicated sampling is required during the periods when effluent is being discharged to the Napa River.
- (3) **Flow Rate:** Influent flows shall be measured continuously. Effluent flows shall be measured continuously for the duration of all discharge events.
The following flow information shall be reported:
- | | |
|-----------------------------|--|
| INFLUENT & EFFLUENT: Daily: | Flow Rate (MGD) |
| | Monthly: Average Daily Flow Rate (MGD) |
| | Maximum Daily Flow Rate (MGD) |
| | Minimum Daily Flow Rate (MGD) |
| | Total Flow Volume (MG) |
- EFFLUENT: Report also the total number of calendar days when effluent discharge to the river occurred.
- (4) **BOD & TSS:**
INFLUENT: Weekly during discharge to the river.
Monthly during dry weather, no-discharge period.
EFFLUENT: Weekly during the entire year.
- (5) **Oil & Grease:**
Each Oil and Grease sample shall consist of three grab samples taken at equal intervals, no less than two hours apart, during the sampling day. Each grab sample shall be collected in a separate glass container and analyzed separately. Results shall be expressed as a weighted average of the three values, based upon the instantaneous flow rates occurring at the time of each grab sample.
- (6) (a) **Chlorine Residual:** Monitor dechlorinated effluent (E-001-S) continuously or, at a minimum, once every two hours.

Report, on a daily basis, both maximum and minimum concentrations, for samples taken both prior to, and following, dechlorination.
- (b) **Chlorine Dosage:** Report, on a daily basis, average concentration (mg/l), and total loading (kg/day).
- (7) **Bioassays:** Effluent used for fish bioassays must be dechlorinated prior to testing. Monitoring of the bioassay water shall include, on a daily basis, the following parameters: pH, Temperature, Dissolved Oxygen, and Ammonia Nitrogen.

TABLE I FOOTNOTES (continued)

(8) Selected Toxic Constituents:

- (a) If any of these constituents are found in excess of the permit limits, then sampling and analysis for the constituents which exceed the permit limits shall be repeated at least once during the river discharge season.
- (b) Polynuclear Aromatic Hydrocarbons (PAHs), as identified by EPA Method 610. If a discharge sample exceeds the effluent limitation for PAHs, the concentrations of the individual constituent PAHs shall be reported.
- (c) **Detection Limits:** Laboratory analyses shall be conducted in such a manner as to provide analytical information sufficient to determine compliance with the applicable effluent limitations specified in this Order. If the necessary analytical performance is unable to be achieved, the Discharger may request, with supporting documentation, approval from the Executive Officer to allow the use of the best achievable analytical performance.

- (9) River Flow & Volumetric Dilution:** River flow rate shall be measured at least daily during discharge. Measurement is only required at one monitoring station on the river. The monitoring station used shall be identified in the monthly monitoring report.
Volumetric Dilution ratio (river to effluent) shall be reported on at least a daily basis.

(10) Overflows:

- (a) **Flow:** For all overflow events, a best estimate of the total overflow volume (gallons) shall be reported.
- (b) **BOD & Coliform:** For any overflow event which involves discharge of wastewater to any surface water or waterway (including dry streams & drainage channels), grab samples shall be taken and analyzed for BOD, and both Total and Fecal Coliforms.