CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 94-037
NPDES PERMIT NO. CA0037575

WASTE DISCHARGE REQUIREMENTS FOR:

NAPA SANITATION DISTRICT
NAPA COUNTY

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

1. The Napa Sanitation District (hereinafter called discharger), submitted a Report of Waste Discharge dated September 15, 1992 for reissuance of waste discharge requirements and a permit to discharge secondary-treated wastewater from its treatment plant located near Ratto Landing to the Napa River, a water of the State and the United States, under the National Pollutant Discharge Elimination System (NPDES).

2. This discharge is presently regulated by Waste Discharge Requirements in Order No. 88-094, adopted by the Board on June 15, 1988.

3. Discharges of reclaimed effluent to land are presently regulated by Water Reclamation Requirements in Order No. 91-093, adopted by the Board on June 17, 1991.

4. The wastewater to be discharged is a mix of domestic and industrial wastewater that is treated and discharged in various manners, depending on the source of the wastewater and the time of year. A treatment process schematic diagram is included as Attachment C. The wastewater is treated and discharged as follows:

   a. Wastewater from the City of Napa and adjacent unincorporated areas serving a current population of 63,000 persons is conveyed to the Imola Treatment Plant south of the City of Napa where it receives primary clarification. The Imola Treatment Plant is a modified primary treatment plant, operated by the Napa Sanitation District, and can treat up to 14 million gallons per day (mgd) during the wet weather flow period.

   b. Wastewater from the City of American Canyon and its immediate vicinity is conveyed to the City's Wastewater Treatment Facility where it receives primary treatment in four ponds. The four ponds are operated by the City, serve a population of approximately 8,000 persons, and presently discharge an average dry weather flow of approximately 0.7 mgd. The pond effluent and raw wastewater

that bypasses the City's pond system is pumped to the Napa Sanitation District's treatment facilities, described below under part 4c. The City of American Canyon is a temporary customer of the discharger while the City determines whether it will send its wastewater to facilities operated by the City of Vallejo or upgrade their own treatment facilities and secure an NPDES permit for their discharge.

c. Secondary treatment is provided to the wastewater by four stabilization ponds at the Soscol Treatment Plant, operated by the Napa Sanitation District. Effluent from the Imola plant is conveyed 3.5 miles south to the Soscol plant. Raw wastewater and primary effluent from the American Canyon ponds is conveyed 5 miles north to the Napa Sanitation District's ponds located at the Soscol plant site. Approximately one-fourth of the flow from the City of Napa, south of Imola Avenue (mostly from industrial parks), flows directly to the Soscol ponds without primary treatment. The Soscol ponds have a total surface area of 342 acres and are operated in series. The ponds provide between 65 and 150 days of detention time.

d. During the six-month wet weather period (typically November 1 through April 30), secondary effluent from the Soscol ponds is discharged to the Napa River after receiving algae removal at the 15.4 mgd physical-chemical plant which employs polymer coagulation, sedimentation, and disinfection. This discharge does not consistently receive a minimum initial dilution of 10:1. The Napa Sanitation District operates the physical-chemical plant.

e. During the dry weather period (typically May 1 through October 31), disinfected secondary effluent from the Soscol plant is recycled for use on nearby farmlands and golf courses, for irrigation of industrial park landscaping and vineyards, and for other reclamation uses as regulated by the Board through Order No. 94-039.

f. Sludge generated at the various plants is currently being applied to District- or County-owned adjacent farmlands per the Federal Regulations in 40 CFR 503.

5. The U.S. Environmental Protection Agency (USEPA) and the Board have classified this discharge as a major discharge.

6. During the six-month wet weather period (typically November 1 through April 30), treated wastewater is discharged into the Napa River adjacent to the physical-chemical treatment plant located at the Soscol Ferry Road near Ratto Landing (Latitude 38°, 14', 9" N; Longitude 122°, 17', 10" W).

7. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on December 17, 1986. The Board amended its Basin Plan on September 16, 1992, and the State Board approved it on April 27, 1993, with approval from Office of Administrative Law pending. The Board amended the Basin

Plan on October 21, 1992 to adopt a site-specific water quality objective of 4.9 μg/l for copper for San Francisco Bay. The State Board has not yet approved this amendment. The Basin Plan identifies beneficial uses and water quality objectives for surface and ground waters in the region, as well as effluent limitations and discharge prohibitions intended to protect beneficial uses.

The Board further amended the Basin plan on June 16, 1993 to adopt a wasteload allocation for copper (Resolution 93-61). The State Board has not yet approved this amendment. The mass loading limit for copper in this permit is from the region-wide waste load allocation for copper, developed to implement the site-specific concentration limit by requiring reductions in copper mass discharged from riverine, non-point discharges, and municipal and industrial dischargers throughout the San Francisco Bay-Delta Estuary.

The copper wasteload allocation calls for the discharger to limit its mass loading of copper to 80 pounds per year, equivalent to the baseline loading value, calculated based on 1991-1992 average concentration and 1986-1990 average flow. Copper mass reduction is not required by the discharger, because its effluent copper concentration is consistently below 13 μg/l.

8. Effluent limitations in this permit are based on the plans and policies of the Basin Plan, EPA Water Quality Criteria, EPA guidance for NPDES permit issuance, and Best Professional Judgement.

9. The Basin Plan contains water quality objectives and beneficial uses for the Napa River and contiguous waters. The beneficial uses of the Napa River downstream from the point of discharge are:

   - Navigation
   - Water Contact Recreation
   - Non-contact Water Recreation
   - Warm fresh water habitat
   - Cold fresh water habitat
   - Wildlife Habitat
   - Preservation of Rare and Endangered Species
   - Fish Migration
   - Fish Spawning

10. The Basin Plan prohibits the discharge of wastewater which has characteristics of concern to beneficial uses at any point at which the wastewater does not receive a minimum initial dilution of at least 10:1, or into any non-tidal water, dead-end slough, similar confined waters, or any immediate tributaries thereof. Discharge of treated wastewater to the Napa River is contrary to this prohibition because it does not always receive a 10:1 dilution.

11. The Basin Plan allows exceptions to the above prohibition for discharges approved as part of a reclamation project. The discharge of disinfected secondary effluent from the Soscol plant to the Napa River during the six-month wet weather period has been approved by the Board under Order 88-094 as part of a reclamation project in dry weather months.

12. The Napa Sanitation District currently reclaims all dry weather effluent on lands of the 290-acre Somky Ranch, 330 acres of irrigated pasture on the 628-acre Jameson Canyon Reclamation site, the 320 irrigable acres on the Chardonnay Golf Club and Vineyards, as well as other small reclaimed water users during the dry weather discharge prohibition period (typically May 1 through October 31). As the inflow increases, the discharger will continue to proceed with expansion of its water reuse program in order to meet its need of additional reclamation capacity. The discharger also has available for irrigation, if necessary, 150 irrigable acres of the 768-acre Napa County Airport.

13. The discharger is planning to expand its reclamation project in 1994-95 to include additional reclaimed water users located within the Los Carneros Water District. Further, in order to expand its customer base, the discharger plans to upgrade the quality of its reclaimed water from disinfected secondary effluent to tertiary quality effluent that meets the California Code of Regulations (CCR) Title 22 unrestricted use criteria. Design of these facilities will occur in 1994, with construction to begin in late 1994 or early 1995.

14. The Board finds that the water reuse program implemented by the discharger complies with the exception provision of the Basin Plan, and hereby grants an exception to the discharge prohibition for wet weather discharges to the Napa River for a six-month period each year. In a typical year, this period will be from November 1 through April 30, but depending on rainfall, it may begin as early as October 1, extending through March 31, or begin as late as December 1, extending through May 31.

15. The 1986 Basin Plan initiated the Effluent Toxicity Characterization Program (ETCP) in which dischargers were required to monitor their effluent using critical life stage toxicity tests to generate information on toxicity test species sensitivity and effluent variability to allow development of appropriate chronic toxicity effluent limitations. Chronic toxicity effluent limitations are included in this permit based on the best professional judgment of Board staff.

    The discharger detected chronic toxicity in the treatment plant effluent during the course of the ETCP Variability Phase Study and will perform toxicity identification evaluations (TIE) as determined by the Executive Officer.

16. The Basin Plan specifies that for discharge to waters with salinities between the marine and fresh categories, or to tidally influenced fresh waters, effluent limitations

shall be the lower of the marine or fresh water limitations. Therefore, the effluent limitations specified in this Order for discharge to the Napa River are the lower of the marine and fresh water limitations.

17. Federal Regulations for storm water discharges were promulgated by the U.S. Environmental Protection Agency on November 19, 1990. The regulations [40 Code of Federal Regulations (CFR) Parts 122, 123, and 124] require specific categories of industrial activity (industrial storm water) to obtain a NPDES permit and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to control pollutants in industrial stormwater discharges.

18. At the Imola plant, the storm water flows from the wastewater treatment facility process areas are directed to the wastewater treatment plant headworks and treated along with the wastewater discharged to the treatment plant. These storm water flows constitute all industrial storm water at this facility and consequently this permit regulates all industrial storm water discharges at this facility.

    At the Soscol plant, not all of the storm water flows from the wastewater treatment facility process areas are directed to the headworks and treated along with wastewater discharged to the plant. As part of the scheduled capital improvement project to produce tertiary quality effluent (late 1994 or early 1995), the storm water facilities at the Soscol plant will be upgraded so that all storm water flows will be directed to the headworks of the plant. In the interim, the discharger will implement BAT and BCT pursuant to Federal regulations (40 CFR 122, 123, and 124) as part of a Storm Water Pollution Prevention Plan (See Provision F.11, below).

19. The discharger's sewerage collection system contains 7 pump stations. The stations have adequate alarms, pump capacity and redundancy, and provision for emergency power. The discharger has a continuous program of maintaining and upgrading these pump stations to ensure reliability of the collection system.

20. The discharger has implemented and is maintaining an USEPA approved pretreatment program in accordance with Federal pretreatment regulations (40 CFR 403) and this Board's Order No. 89-179.

21. An Operations and Maintenance Manual is maintained by the discharger for purposes of providing plant, collection system, and regulatory personnel with a source of information describing all equipment, recommended operation strategies, process control monitoring, and maintenance activities. In order to remain a useful and relevant document, the manual must be kept updated to reflect significant changes in treatment and collection facility equipment and operation practices.

22. This Order serves as an NPDES Permit, adoption of which is exempt from the

provisions of Chapter 3 (commencing with Section 21000) of Division 13 of the Public Resources Code [California Environmental Quality Act (CEQA)] pursuant to Section 13389 of the California Water Code.

23. 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.

24. 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 discharger shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. Discharge of treated wastewater at a location or in a manner different from that described in Finding No. 4 is prohibited.

2. 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.

3. The average dry weather flow discharge shall not exceed 15.4 mgd. The average dry weather flow shall be determined over three consecutive dry weather months each year.

4. Discharges of water, materials, or wastes other than storm water, which are not otherwise authorized by this NPDES permit, to a storm drain system or waters of the State are prohibited.

5. Storm water discharges shall not cause pollution, contamination, or nuisance.

6. Discharge to the Napa River is prohibited during the dry weather period each year. The beginning of the dry weather period is determined each year as six months after the beginning of the wet weather season, which is dependent on rainfall totals in October through November. For instance, if rainfall is negligible through the end of November, the discharger may choose to begin the wet weather discharges as late as December 1, in which case discharge to the Napa River would be authorized through May 31, and the dry weather period would begin on June 1. Alternatively, the discharger may choose to

begin wet weather discharges as early as October 1 if rainfall is significant at that time, in which case discharge to the Napa River would be authorized through March 31, and the dry weather period would begin on April 1. Discharge to the Napa River before November 1 is prohibited without concurrence from Board staff and California Department of Fish and Game.

Discharge to the Napa River prior to October 1 or later than May 31 may be authorized by the Executive Officer, for a specified period not to exceed one month, based on written request from the discharger documenting that adequate dilution is available at the discharge point and/or normally planned disposal to land is not feasible due to wet weather conditions. Similarly, discharge to the Napa River for more than six consecutive months may be authorized by the Executive Officer based on the same type of written request. In these cases, the discharge shall comply with the effluent limitations prescribed in B(iii) of this Order.

B. EFFLUENT LIMITATIONS

The term "effluent" refers to the fully treated wastewater effluent from the discharger's wastewater treatment facility, as discharged to the Napa River. These limits apply only during the wet weather discharge period.

(i) ***For discharges which receive a river to wastewater dilution of at least 10:1,***

1. Conventional Pollutants Effluent Limitations

The effluent discharged to the Napa River during the wet weather period determined each year (typically November 1 through April 30) shall not exceed the following limits:

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
a. Biological Oxygen Demand (BOD_5, 20°C)	mg/l	30	45		
b. Total Suspended Solids	mg/l	30	45		
c. Oil & Grease	mg/l	10	--	20	
d. Settleable Matter	ml/l-hr	0.1	--	0.2	
e. Chlorine Residual[1]	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 240 MPN/100ml nor a maximum of 10,000 MPN/100ml.			

[1] Requirement defined as below the limit of detection in standard test methods defined in *Standard Methods for the Examination of Water and Wastewater.*

2. The pH of the discharge shall not exceed 9.0 nor be less than 6.0.

3. 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 at approximately the same times during the same period (85 percent removal).

4. Effluent Toxicity

a. Acute Toxicity

Representative samples of the effluent shall meet the following limits for acute toxicity:

The survival of organisms in undiluted effluent shall be an eleven (11) sample median value of not less than 90 percent survival, and an eleven (11) sample 90 percentile value of not less than 70 percent survival. The eleven sample median and 90th percentile effluent limitations are defined as follows:

11 sample median: A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if five or more of the past ten or less bioassay tests show less than 90 percent survival.

90th percentile: A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit, if one or more of the past ten or less bioassay tests show less than 70 percent survival.

b. Chronic Toxicity

For discharges which receive a river to wastewater dilution of at least 10:1, the discharge is classified as a *deep water discharge*. The chronic toxicity effluent limitation is based on a dilution ratio of at least 10:1.

The effluent from the treatment plant as discharged, shall meet both of the following chronic toxicity limitations:

(1) an eleven sample median value[1] of 10 TUc[2]; and
(2) a 90 percentile value[3] of 20 TUc[2].

[1] A test sample showing chronic toxicity greater than 10 TUc represents consistent toxicity and a violation of this limitation, if five or more of the past ten or less tests show chronic toxicity greater than 10 TUc.

[2] A TUc equals 100/NOEL. The NOEL is the no observable effect level, determined from IC, EC, or NOEL values.

These terms and their usage in determining compliance with the limitations are defined in Attachment E of this Order. The NOEL shall be based on a critical life stage test using the most sensitive test species as specified by the Executive Officer. The Executive Officer may specify two compliance species if test data indicate that there is alternating sensitivity between the two species. If two compliance test species are specified, compliance shall be based on the maximum TUc value for the discharge sample based on a comparison of TUc values obtained through concurrent testing of the two species.

3 A test sample showing chronic toxicity greater than 20 TUc represents consistent toxicity and a violation of this limitation if one or more of the past ten or less samples shows toxicity greater than 20 TUc.

5. Toxic Substances Effluent Limitations:

The effluent shall not exceed the following limits:

Table 1

(All limits in μg/l) (a, f)

	Constituent	Monthly Average(b)	Daily Average(b)
1.	Arsenic	50	200
2.	Cadmium	100	10.7
3.	Chromium (VI) (c)		110
4.	Copper		37
5.	Lead		23 (g)
6.	Mercury	0.084	21
7.	Nickel		65 (g)
8.	Selenium	100	50 (g)
9.	Silver		23
10.	Zinc		580 (g)
11.	1, 2 Dichlorobenzene (d)	27000	
12.	1, 3 Dichlorobenzene	4000	
13.	1, 4 Dichlorobenzene	99	
14.	2, 4 Dichlorophenol	3	
15.	2, 4, 6 Trichlorophenol	3.4	
16.	4-chloro-3-methylphenol	30000	
17.	Aldrin	0.0013	
18.	α-BHC	0.039	
19.	Benzene	3.4	
20.	β-BHC	0.14	
21.	Chlordane (d)	0.00081	0.043
22.	Chloroform	1000	

	Constituent	Monthly Average(b)	Daily Average(b)
23.	Cyanide (e)		25
24.	DDT (d)	0.0059	0.01
25.	Dichloromethane	46	
26.	Dieldrin	0.0014	0.019
27.	Endosulfan (d)	9	0.087
28.	Endrin (d)	8	0.023
29.	Fluoranthene	420	
30.	γ-BHC (Lindane)	0.19	0.8
31.	Halomethanes (d)	1000	
32.	Heptachlor	0.0016	0.036
33.	Heptachlor Epoxide	0.0007	
34.	Hexachlorobenzene	0.0066	
35.	PAHs (d)	0.028	150
36.	PCBs (Total) (d)	0.0007	0.14
37.	Pentachlorophenol (g)	2.8	79
38.	Phenol	500	
39.	TCDD Equivalents (d)	1.3E-07	
40.	Toluene	100,000	
41.	Toxaphene	0.0067	0.002 (g)
42.	Tributyl tin	0.2	0.4

Footnotes to Table 1:

a. These limits are based on marine and fresh water quality objectives, and are intended to be achieved through secondary treatment and, as necessary, pretreatment and source control. The discharger shall demonstrate compliance with the indicated limits according to the compliance time schedule developed in accordance with Provisions F.4 and F.5 of this Order.

b. Limits apply to the average concentration of all samples collected during the averaging period (Daily - 24-hour period; Monthly - Calendar month).

c. The discharger may meet this limit as total chromium.

d. See California Enclosed Bays and Estuaries Plan, April 1991, Definition of terms.

e. The discharger may demonstrate compliance with this limitation by measurement of weak acid dissociable cyanide.

f All analyses shall be performed using current USEPA Methods, as specified in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," SW-846, Third Edition. Detection limits, practical quantitative levels, and limits of quantitation will be taken into account in determining compliance with effluent limitations.

g. Effluent limitation may be met as a 4-day average. If compliance is to be determined based on a 4-day average, then concentrations of four consecutive 24-hour composite samples shall be reported, as well as the average of four.

(ii) For discharges which receive a river to wastewater dilution of less than 10:1,

1. Conventional Pollutants Effluent Limitations

The effluent discharged to the Napa River during the wet weather period determined each year (typically November 1 through April 30) shall not exceed the following limits:

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
a. Biological Oxygen Demand (BOD_5, 20°C)	mg/l	30	45		
b. Total Suspended Solids	mg/l	30	45		
c. Oil & Grease	mg/l	10	--	20	
d. Settleable Matter	ml/l-hr	0.1	--	0.2	
e. Chlorine Residual[1]	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.			

[1] Requirement defined as below the limit of detection in standard test methods defined in *Standard Methods for the Examination of Water and Wastewater.*

2. The pH of the discharge shall not exceed 8.5 nor be less than 6.5.

3. 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 at approximately the same times during the same period (85 percent removal).

4. Effluent Toxicity

   a. Acute Toxicity

   Representative samples of the effluent shall meet the following limits for acute toxicity:

   The survival of organisms in undiluted effluent shall be an eleven (11) sample median value of not less than 90 percent survival, and an eleven (11) sample 90 percentile value of not less than 70 percent survival. The eleven sample median and 90th percentile effluent limitations are defined as follows:

11 sample median: A bioassay test showing survival of less than 90 percent represents a violation of this effluent limit, if five or more of the past ten or less bioassay tests show less than 90 percent survival.

90th percentile: A bioassay test showing survival of less than 70 percent represents a violation of this effluent limit, if one or more of the past ten or less bioassay tests show less than 70 percent survival.

b. Chronic Toxicity

For discharges which receive a river to wastewater dilution of less than 10:1, the discharge is classified as a *shallow water discharge*. The chronic toxicity effluent limitation is based on a dilution ratio of at least 10:1.

The effluent from the treatment plant as discharged, shall meet both of the following chronic toxicity limitations:

(1) an eleven sample median value[1] of 1 TUc[2]; and
(2) a 90 percentile value[3] of 2 TUc[2].

1 A test sample showing chronic toxicity greater than 1 TUc represents consistent toxicity and a violation of this limitation, if five or more of the past ten or less tests show chronic toxicity greater than 1 TUc.

2 A TUc equals 100/NOEL. The NOEL is the no observable effect level, determined from IC, EC, or NOEL values. These terms and their usage in determining compliance with the limitations are defined in Attachment E of this Order. The NOEL shall be based on a critical life stage test using the most sensitive test species as specified by the Executive Officer. The Executive Officer may specify two compliance species if test data indicate that there is alternating sensitivity between the two species. If two compliance test species are specified, compliance shall be based on the maximum TUc value for the discharge sample based on a comparison of TUc values obtained through concurrent testing of the two species.

3 A test sample showing chronic toxicity greater than 2 TUc represents consistent toxicity and a violation of this limitation if one or more of the past ten or less samples shows toxicity greater than 2 TUc.

5. Toxic Substances Effluent Limitations:

The effluent shall not exceed the following limits:

Table 2
(All limits in μg/l) (a,f)

	Constituent	Monthly Average(b)	Daily Average(b)
1.	Arsenic	5	20
2.	Cadmium	10	1.1
3.	Chromium (VI) (c)		11
4.	Copper		4.9
5.	Lead		3.2 (g)
6.	Mercury	0.012	1
7.	Nickel		7.1 (g)
8.	Selenium	10	5.0 (g)
9.	Silver		2.3
10.	Zinc		58.0 (g)
11.	1, 2 Dichlorobenzene (d)	2700	
12.	1, 3 Dichlorobenzene	400	
13.	1, 4 Dichlorobenzene	9.9	
14.	2, 4 Dichlorophenol	0.3	
15.	2, 4, 6 Trichlorophenol	0.34	
16.	4-chloro-3-methylphenol	3000	
17.	Aldrin	0.00013	
18.	α-BHC	0.0039	
19.	Benzene	0.34	
20.	β-BHC	0.014	
21.	Chlordane (d)	0.000081	0.0043
22.	Chloroform	100	
23.	Cyanide (e)		5
24.	DDT (d)	0.00059	0.001
25.	Dichloromethane	4.6	
26.	Dieldrin	0.00014	0.0019
27.	Endosulfan (d)	0.9	0.0087
28.	Endrin (d)	0.8	0.0023
29.	Fluoranthene	42	
30.	γ-BHC (Lindane)	0.019	0.08
31.	Halomethanes (d)	100	
32.	Heptachlor	0.00016	0.0036
33.	Heptachlor Epoxide	0.00007	
34.	Hexachlorobenzene	0.00066	
35.	PAHs (d)	0.003	15
36.	PCBs (Total) (d)	0.00007	0.014
37.	Pentachlorophenol	0.28	7.9 (g)
38.	Phenol	300	
39.	TCDD Equivalents (d)	1.3E-08	
40.	Toluene	10000	
41.	Toxaphene	0.00067	0.0002 (g)
42.	Tributyl tin	0.02	0.04

Footnotes to Table 2:

See page 10 of permit.

(iii) ***For discharges before October 1 or after May 31, or beyond six consecutive months of wet weather discharge:***

Note: Discharge for over six consecutive months is prohibited, and discharge is prohibited between June 1 and September 30. The effluent limitations prescribed in this section are intended for emergency discharge cases in which extreme weather conditions have disturbed the normal summertime water reuse irrigation schedule.

Effluent discharged before October 1 or after May 31, or beyond six consecutive months of wet weather discharge shall at least meet the effluent limitations prescribed in B(ii) above, if not otherwise specified as follows:

Constituent	Units	Monthly Average	Weekly Average	Daily Maximum	Instantaneous Maximum
a. Biological Oxygen Demand (BOD_5, 20°C)	mg/l	10	15	20	
b. Total Suspended Solids	mg/l	20	30	40	
c. Oil & Grease	mg/l	10	--	20	
d. Settleable Matter	ml/l-hr	0.1	--	0.2	
e. Chlorine Residual[1]	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 2.2 MPN/100ml nor a maximum of 240 MPN/100ml.			

[1] Requirement defined as below the limit of detection in standard test methods defined in *Standard Methods for the Examination of Water and Wastewater.*

6. Mass Limits for Toxic Pollutants

a. Mass Limits for Copper

The copper wasteload allocation adopted by the Board on June 16, 1993, calls for Napa Sanitation District to limit copper mass discharges to current baseline performance. The mass limit for copper in Section B.6.b of this permit reflects this mass limit.

b. The effluent mass loadings shall not exceed the following mass loading limits:

Copper	80 lbs/yr

C. POND SPECIFICATIONS

1. Wastewater grab samples within 1 foot of the surface of all ponds shall meet the following limits at all times:

Dissolved oxygen	2.0 mg/l minimum
Dissolved sulfides	0.1 mg/l maximum

2. A minimum freeboard of two feet shall be maintained in all ponds at all times.

3. All ponds shall be protected from erosion, washout, and flooding from the maximum flood having a predicted frequency of once in 100 years.

4. The waste shall not cause significant degradation of any ground water so as to impair beneficial uses.

D. 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 to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;

   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; or

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on wildlife, waterfowl, or other 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 anyone place within one foot of the water surface:

a.	Dissolved Oxygen	5.0 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 particular water quality standard for receiving waters adopted by the Board or the State 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.

4. Storm Water Discharge

   a. Storm water discharges shall not adversely impact human health or the environment.

   b. Storm water discharges shall not cause or contribute to a violation of any applicable water quality objective for receiving waters contained in the Basin Plan.

E. SLUDGE MANAGEMENT PRACTICES

1. All sludge generated by the discharger must be disposed of in a municipal solid waste landfill, reused by land application, or disposed of in a sludge-only landfill in accordance with 40 CFR Part 503. If the discharger desires to dispose of sludge by a different method, a request for permit modification must be submitted to the USEPA 180 days before start-up of the alternative disposal practice. All the requirements in 40 CFR 503 are enforceable by USEPA whether or not they are stated in an NPDES permit or other permit issued to the discharger.

2. Sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, or result in groundwater contamination.

3. Duty to mitigate: The discharger shall take all reasonable steps to prevent or minimize any sludge use or disposal which has a likelihood of adversely affecting human health or the environment.

4. The discharge of sewage sludge shall not cause waste material to be in a position where it is, or can be carried from the sludge treatment and storage site and deposited in the waters of the State.

5. The sludge treatment and storage site shall have facilities adequate to divert surface runoff from adjacent areas, to protect boundaries of the site from erosion, and to prevent any conditions that would cause drainage from the materials in the temporary storage site. Adequate protection is defined as protection from at least a 100-year storm and protection from the highest possible tidal stage that may occur.

6. The discharger shall submit an annual report to the USEPA and the Board containing monitoring results and pathogen and vector attraction reduction requirements as specified by 40 CFR 503, postmarked February 19 of each year, for the period covering the previous calendar year.

7. Sludge that is disposed of in a municipal solid waste landfill must meet the requirements of 40 CFR 258. In the annual self-monitoring report, the discharger shall include the amount of sludge disposed of, and the landfill(s) to which it was sent.

8. Permanent on-site sludge storage or disposal activities are not authorized by this permit. Sludge storage and disposal are regulated by separate sets of requirements.

9. Sludge Monitoring and Reporting Provisions of this Board's "Standard

Provisions and Reporting Requirements," dated August 1993, apply to sludge handling, disposal and reporting practices.

10. The Board may amend this permit prior to expiration if changes occur in applicable state and federal sludge regulations.

F. PROVISIONS

1. Requirements prescribed by this Order supersede the requirements prescribed by Order No. 88-094, which is hereby rescinded.

2. The discharger shall comply with all sections of this Order immediately upon adoption.

3. Compliance with Chronic Toxicity Effluent Limitation

   a. The discharger detected chronic toxicity in the treatment plant effluent during the course of the Effluent Toxicity Characterization Program (ETCP) Variability Phase Study and will perform toxicity identification evaluations (TIE) as determined by the Executive Officer.

   b. If there is a violation of the chronic toxicity effluent limitation, the discharger shall conduct a chronic toxicity reduction evaluation (TRE), which shall initially involve a toxicity identification evaluation (TIE). The TIE shall be in accordance with a work plan acceptable to the Executive Officer. The TIE shall be initiated within 30 days of the date of violation. The objective of the TIE shall be to identify the chemical or combination of chemicals that are causing the observed toxicity. Every effort using currently available TIE methodologies shall be employed by the discharger. As toxic constituents are identified or characterized, the discharger shall continue the TRE by determining the source(s) of the toxic constituent(s) and evaluating alternative strategies for reducing or eliminating the constituent(s) from the discharge. All reasonable steps shall be taken to reduce toxicity to the required level. The Board recognizes that identification of causes of chronic toxicity may not be successful in all cases. Consideration of enforcement action by the Board will be based in part on the discharger's actions in identifying and reducing sources of consistent toxicity.

4. Compliance With Toxic Substances Limitations

   a. The discharger shall comply with Effluent Limitations for toxic substances in B(i)5 and B(ii)5 immediately upon adoption of this Order. The discharger may request an extended compliance time schedule for

particular substances, based on the implementation of an aggressive source control and pollution prevention program, as provided for in the Enclosed Bays and Estuaries Plan, Chapter III, Part M. Justification for longer compliance periods must include, at a minimum, all of the following:

(1) Results of a diligent effort to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream;

(2) Documentation of source control efforts currently underway or completed, including compliance with the General Source Control/Pollution Prevention program described in the Basin Plan;

(3) A proposed schedule for additional source control measures or waste treatment; and

(4) A demonstration that the proposed schedule is as short as possible. In no event shall source control measures to reduce pollutant loadings be completed any later than March 1999.

b. The discharger shall initiate a monitoring program using appropriate USEPA methods and detection limits, to evaluate the compliance status for all constituents listed in Effluent Limitations in B(i)5 and B(ii)5. Compliance status may be evaluated based on existing monitoring data collected as part of the discharger's pretreatment program. Monitoring for constituents listed in Tables 1 and 2 shall be performed in accordance with the attached self-monitoring program.

5. Water Reuse, Source Control and Pollution Prevention Programs

The discharger shall submit, by **December 31, 1994**, a technical report acceptable to the Executive Officer summarizing the results of the monitoring performed pursuant to Provision F.4 above. This report shall include an evaluation of compliance with the effluent limitations for each constituent.

If the monitoring results document that the effluent cannot meet certain limits, the discharger may petition for interim limits and compliance time schedules. This petition must be based on the planning and implementation of an aggressive source control and pollution prevention program.

Water Reuse Program

The discharger shall promote and encourage increased water reuse to reduce

the amount of discharge to the Napa River during the wet weather discharge period.

Source Control / Pollution Prevention Program

a. The discharger shall continue to participate in the Pollution Prevention Program (previously known as the Waste Minimization Program) as described in the Basin Plan Chapter IV, Waste Minimization Section.

b. The discharger shall continue to implement and expand its existing Pollution Prevention Program in order to reduce the pollutant loadings to the treatment plant, and subsequently, to the receiving waters.

c. The discharger shall continue to submit annual reports by January 31 and progress reports by July 31 of each year that are acceptable to the Executive Officer. The reports should include (1) documentation of efforts and progress, (2) evaluation of the program's accomplishments, and (3) identification of specific tasks and establishment of time schedules for those future efforts. Duplicate copies of the reports shall be provided to Board staff: one to the NPDES permit case handler and one to the Pollution Prevention Coordinator.

6. The discharger shall implement and enforce its approved pretreatment program in accordance with Board Order 89-179 and its amendments thereafter. The discharger's responsibilities include, but are not limited to:

a. Enforcement of National Pretreatment Standards (e.g. prohibited discharges, Categorical Standards, local limits) in accordance with 40 CFR 403.5 and Section 307(b) and (c) of the Clean Water Act.

b. Implementation of the pretreatment program in accordance with legal authorities, policies, procedures, and financial provisions described in the General Pretreatment regulations (40 CFR 403) and its approved pretreatment program.

c. Submission of annual and quarterly reports to USEPA and the Board as described in Board Order 89-179, and its amendments thereafter.

7. The discharger shall review, and update as necessary, its Operations and Maintenance Manual, annually, or within 90 days of completion of any significant facility or process changes. The discharger shall submit to the Board, by January 31 of each year, a letter describing the results of the review process including an estimated time schedule for completion of any revisions determined necessary, and a description or copy of any completed revisions.

8. Annually, the discharger shall review and update as necessary, its Contingency Plan as required by Board Resolution 74-10. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or adequately implement a contingency plan will be the basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code. Plan revisions, or a letter stating that no changes are needed, shall be submitted to the Board by January 31 of each year.

9. The discharger shall implement a program to regularly review and evaluate its wastewater collection, treatment and disposal facilities in order 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. A Treatment Facilities Evaluation Program report discussing the status of this evaluation program, including any recommended or planned actions, shall be submitted to the Board by January 31 of each year.

10. Prior to completion of storm water collection improvements at the Soscol plant, the discharger shall implement a Storm Water Pollution Prevention Plan (SWPP Plan) for the plant in accordance with the "Standard Storm Water Provisions" in the attached Standard Provisions and Reporting Requirements. The SWPP Plan shall be reviewed and updated as appropriate by October 1, every year, until all storm water at the site is directed to the plant headworks. In the interim, full compliance with the "Standard Storm Water Provisions" at the Soscol plant shall be an enforceable requirement of this permit.

11. 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.

12. The discharger shall comply with all applicable items of the attached "Standard Provisions and Reporting Requirements" dated August 1993, or any amendments thereafter.

13. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the discharger, the discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

    To assume operation of this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order (Refer to Standard Provisions, referenced above). The request must contain the requesting entity's full legal name, the address and telephone number of the

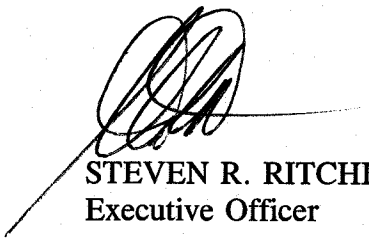
persons responsible for contact with the Board and a statement. The statement shall comply with the signatory paragraph described in Standard Provisions and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code.

14. The Board may modify, or revoke and reissue, this Order and Permit if present or future investigations demonstrate that the discharge(s) governed by this Order are causing or significantly contributing to adverse impacts on water quality and/or beneficial uses of the receiving waters.

15. This Order expires on March 16, 1999. The discharger must file a report of waste discharge in accordance with Title 23, Division 3, Chapter 9, Article 3. of the California Administrative Code not later than 120 days before this expiration date as application for reissuance of waste discharge requirements.

16. 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, EPA, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Steven R. Ritchie, Executive Officer, do hereby certify that 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 March 16, 1994.

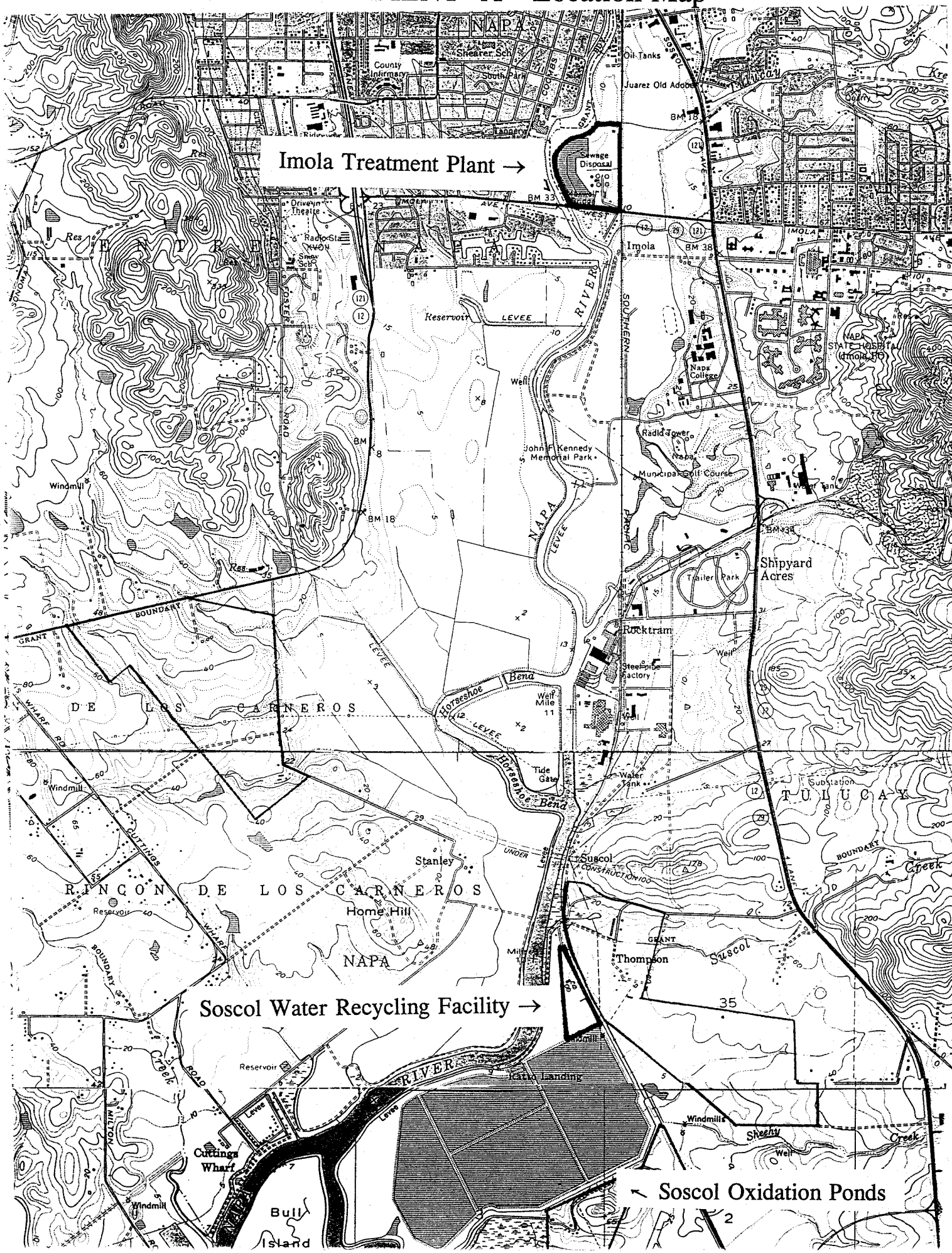


STEVEN R. RITCHIE
Executive Officer

Attachments:

A. Location/Site Maps
B. Summary of Report Due dates/Deadlines
C. Process Schematic
D. Pretreatment: Regional Water Board Order 89-179
E. Chronic Toxicity Definitions/Phase Monitoring
F. Contingency Plan - Regional Water Board Resolution No. 74-10
G. Self-Monitoring Program
H. Regional Water Board NPDES Standard Provisions and Reporting Requirements - August 1993

ATTACHMENT A - Location Map



ATTACHMENT B

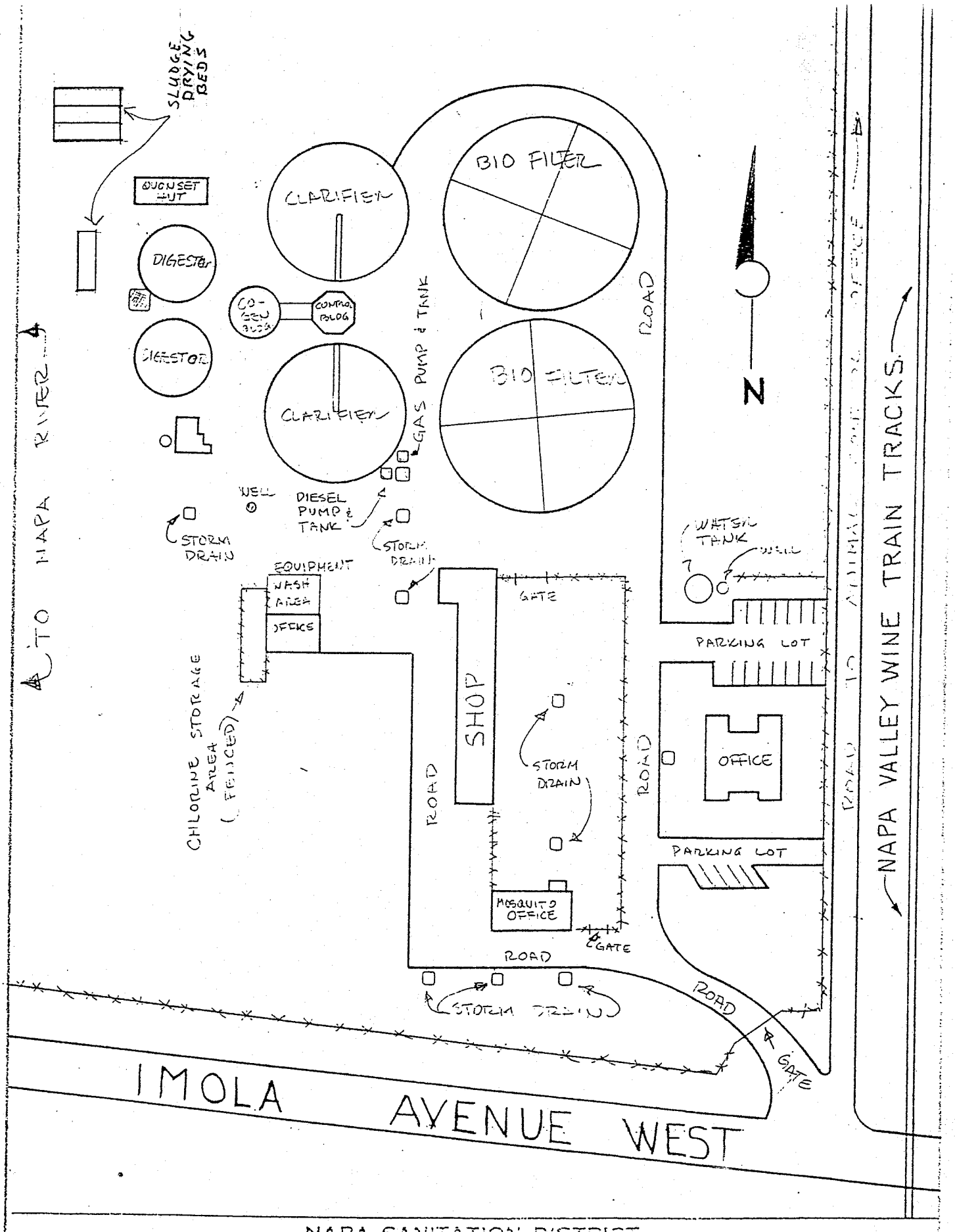
SUMMARY OF REPORT DUE DATES AND ACTION DEADLINES

ANNUAL REPORTS

Due Date to Board	Name of Report/Reference
January 31	Source Control Program/F.5.c
February 19	Sludge Monitoring/E.6
January 31	Operations & Maintenance Manual/F.8
January 31	Contingency Plan/F.9
January 31	Treatment Facilities Eval. Program/F.10
July 31	Source Control Program Progress Report/F.5.c
October 1	Storm Water Poll. Preven. Plan/F.11

SPECIAL REPORTS

Due Date to Board	Name of Report/Reference
December 31, 1994	Toxic Pollutant Compliance Evaluation Report/F.5



NAPA SANITATION DISTRICT

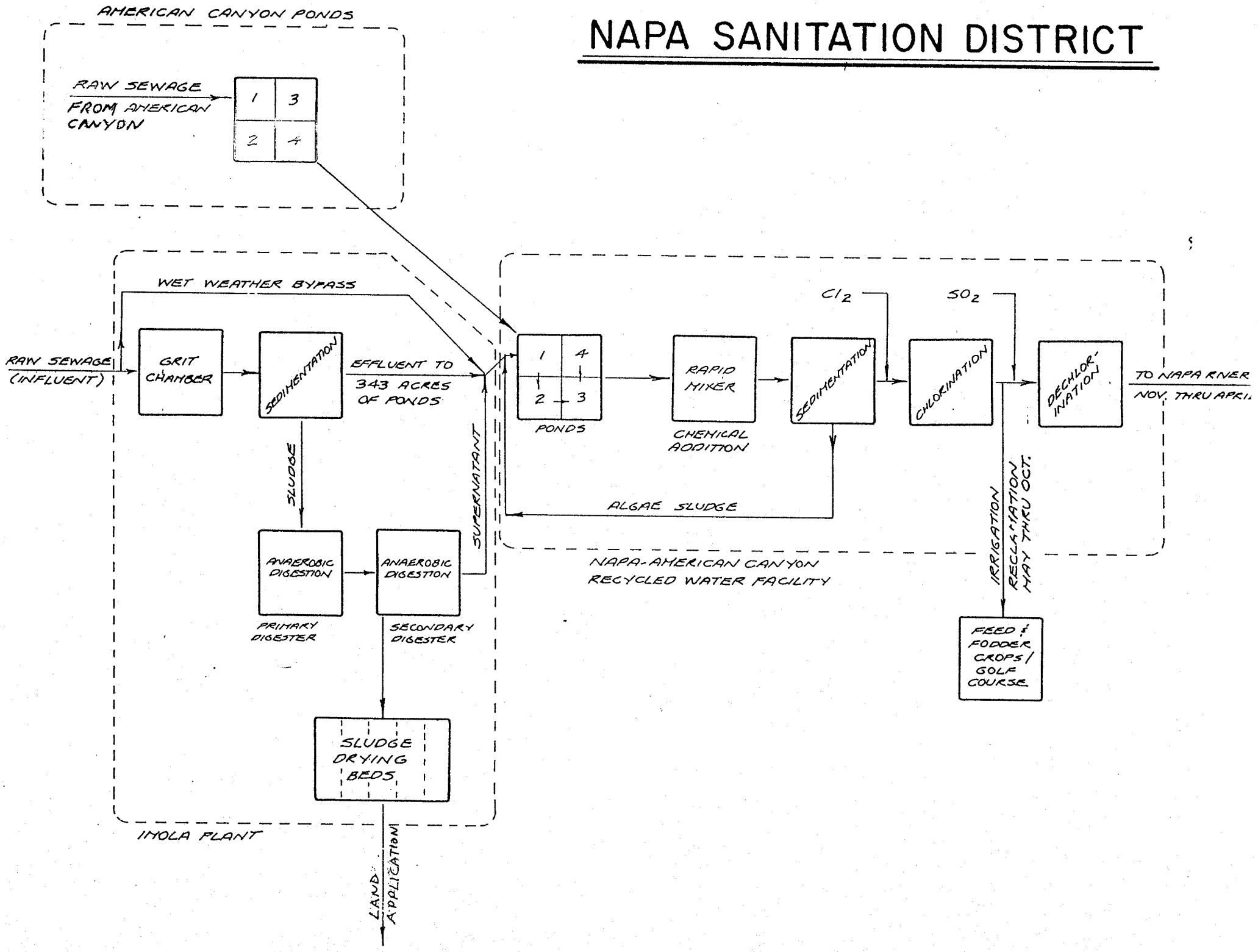
TITLE IMOLA PLANT LAYOUT

DRAWN BY RWF

DATE 10-25-90

SCALE 1" = 100'

NAPA SANITATION DISTRICT



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

NAPA SANITATION DISTRICT

NPDES NO. CA0037575

ORDER NO. 94-037

CONSISTS OF:

PART A (dated 8/93)

AND

PART B

PART B

NAPA SANITATION DISTRICT (NSD)

I. DESCRIPTION OF SAMPLING STATIONS

A. INFLUENT

Station	Description
A-002	At any point in the Napa Sanitation District treatment facilities' headworks at which all waste tributary to the system is present and preceding any phase of treatment.

(A-001 station has been eliminated)

B. EFFLUENT

Station	Description
E-001	At any point in the outfall from the 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-001D).
E-001D	At any point in the disinfection facilities for Waste E-001 at which point adequate contact with the disinfectant is assured.

C. RECEIVING WATERS

Station	Description
CC-1	At a point in the Napa River, located by the Southern Crossing Bridge approximately 2,000 feet upstream from the point of discharge from outfall E-001.
CC-2	In the Napa River, the area located within a 100-foot radius from the point of discharge from the bypass facilities for the NSD pump station near Soscol Creek.
CC-3	In the Napa River, the area immediately above the diffuser system for outfall E-001.
CC-4	At a point in the Napa River, located approximately 1,000 feet downstream from the point of discharge for outfall E-001.

CC-5	At a point in the Napa River, located approximately 2,000 feet downstream from the point of discharge for outfall E-001.

D. GROUND WATERS

Station	Description
G-2	A well located at northeast corner of pond 1, on District property easterly of the Napa River.

(G-1 station has been eliminated)

E. LAND OBSERVATIONS

Station	Description
L-1 through L-n	Located at the corners and midpoints of the perimeter around the treatment facilities of the Napa Sanitation District (includes the Imola plant, Soscol ponds and physical-chemical plant). A sketch showing the locations of these stations should accompany the first report.

F. STABILIZATION PONDS

Station	Description
P-1 through P-n	Located at the corners and midpoints of each of the stabilization ponds at the Soscol plant site.

G. OVERFLOWS AND BYPASSES

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

II. SCHEDULE OF SAMPLING, ANALYSES, AND OBSERVATIONS

The Schedule of sampling, analyses, and observations shall be that given in Table 1 of this self-monitoring program.

III. MISCELLANEOUS REPORTING

During the periods when wastewater is being reclaimed, self-monitoring reports should be submitted according to the Water Reuse Requirements.

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 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. 94-037.

2. Has been amended and ordered by the Board on March 16, 1994.

3. May be revised by the Executive Officer pursuant to federal regulations (40 CFR 122.36); other revisions may be ordered by the Board.

STEVEN R. RITCHIE
Executive Officer

Attachments:

Table 1
Part A, dated August 1993

TABLE 1
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS[1]
Napa Sanitation District

Sampling Station	A-002	E-001[2]			E-001D[2]			CC-3[2]	all other CC sta.[2]	G-2
Type of Sample	C-24	G	C-24	cont.	G	C-24	cont.	G	G	G
Flow Rate (mgd)	D			D						
BOD_5 at 20°C (mg/l and kg/day)	5/W[3]		5/W							
Chlorine Residual & Dosage (mg/l & kg/day)							cont. or 2H			
Settleable Matter (ml/l-hr.)		M								
Total Suspended Solids (mg/l & kg/day)	5/W[3]		5/W							
Oil & Grease (mg/l & kg/day)[4]			M							
Total Coliform (MPN/100ml)					3/W			M		2/Y
Acute Toxicity 96-hr. survival in undiluted effluent							M[5]			
Ammonia Nitrogen (mg/l & kg/day)			M					M		2/Y
Nitrate Nitrogen (mg/l)										2/Y
Nitrite Nitrogen (mg/l)										2/Y
Total Organic Nitrogen (mg/l)										2/Y
Total Phosphate (mg/l)										2/Y
Turbidity (Jackson turbidity units)			2/M					M	M	
pH (units)		D						M	M	2/Y

TABLE 1 (cont.)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS[1]
Napa Sanitation District

Sampling Station	E-001[2]			CC-3[2]	all other CC[2]	G-2	all L & P	all O
Type of Sample	G	C-24	Cont.	G	G	G	O	O
Dissolved Oxygen (mg/l & % Saturation)	D			M	M			
Temperature (°C)	D			M	M			
Apparent Color (color units)				M	M			
Chlorides (mg/l)		M		M	M			
Sulfides (if DO < 5 mg/l), Total and Dissolved (mg/l)	D			M	M			
Arsenic (µg/l & kg/day)		W						
Cadmium (µg/l & kg/day)		W						
Chromium VI (µg/l & kg/day)		W						
Copper (µg/l & kg/day)		W						
Cyanide (µg/l & kg/day)		W						
Lead (µg/l & kg/day)		W						
Mercury (µg/l & kg/day)		W						
Nickel (µg/l & kg/day)		W						
Selenium (µg/l & kg/day)		W						
Silver (µg/l & kg/day)		W						
Zinc (µg/l & kg/day)		W						

TABLE 1 (cont.)
SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS[1]
Napa Sanitation District

Sampling Station	E-001[2]			CC-3[2]	all other CC[2]	G-2	All L & P	All O
Type of Sample	G	C-24	Cont.	G	G	G	O	O
Organic Priority Pollutants including Phenols and PAHs (μg/l & kg/day)		2/Y						
All Applicable Standard Observations				M	M		W	E
Chlorophyll *a* (mg/l)				M				
Un-ionized Ammonia as N (mg/l)				M				
River Flow (cfs)				D				
Volumetric Dilution, River to Effluent		D						
Total Dissolved Solids (mg/l)						2/Y		

TYPES OF SAMPLES

G = grab sample
C-24 = 24-hour composite sample
Cont. = continuous sampling
O = observation

TYPES OF STATIONS

A = treatment facility influent stations
E = waste effluent stations
CC = receiving water stations
L = treatment facilities perimeter stations
P = basin and/or pond levee stations
G = ground waters stations
O = overflow and bypass stations

FREQUENCY OF SAMPLING

E = each occurrence
D = once each day
W = once each week
2W = every two weeks
M = once each month
Cont. = continuous
2/H = twice per hour
3/W = three days per week
5/W = five days per week
2/Y = once in March, once in December

FOOTNOTES FOR TABLE 1

1. During any day when bypassing occurs from any treatment phase(s) in the plant, the monitoring program for the effluent shall include the following in addition to the above schedule for sampling, measurements, and analyses:

   A. When bypassing occurs from any primary or secondary treatment unit(s), composite sample for BOD_5, total suspended solids, oil and grease (influent and effluent), grab sample for settleable matter, and continuous monitoring for flow.

   B. When bypassing chlorination, grab sample for coliform (total and fecal), and continuous monitoring for flow.

   C. When bypassing dechlorination, grab sample for chlorine residual (continuous or every two hours), and continuous monitoring for flow.

   Under any of the above situations, daily receiving water sampling and observations shall occur 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.

3. Influent analyses for BOD_5 and total suspended solids are required five days a week during the wet weather discharging period. During the discharge prohibition period, weekly analyses for BOD_5 and total 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.