

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 01-068
NPDES NO. CA0037648

WASTE DISCHARGE REQUIREMENTS FOR:

CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CONTRA COSTA COUNTY

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

Central Contra Costa Sanitary District (hereinafter the Discharger, or **CCCSD**), submitted an application for the reissuance of National Pollutant Discharge Elimination System (**NPDES**) Permit No. CA0037648. The application, referred to as Report of Waste Discharge, consists of: a completed U.S. Environmental Protection Agency (**USEPA**) Form 3510 (Form 1 – General Facility Information), Form 2C (Wastewater Discharge Information), and attachments.

FACILITY DESCRIPTION

1. The Discharger owns and operates a municipal wastewater treatment plant (hereinafter the **WWTP**). The **WWTP**, which is located at 5019 Imhoff Place in the City of Martinez, serves a population of about 421,000 in central Contra Costa County. The current permitted average dry weather flow (**ADWF**) capacity is 45 million gallons per day (**MGD**). **Figure 1** shows the locations of the **WWTP** and the discharge outfall.
2. In 1999, the Discharger conducted a Treatment Plant Capacity Analysis. The analysis determined reliable capacity rating for each unit process and identified any process limitations and bottlenecks. The result of the analysis indicates that the **WWTF** and outfall system currently have sufficient daily capacity to fully treat and discharge flow in excess of 53.8 **MGD ADWF**. No physical changes to the existing treatment or outfall system are necessary to accommodate the requested effluent discharge amount of 53.8 **MGD ADWF**.

EXISTING PERMIT

3. On May 9, 2000, the Board issued a letter continuing the terms and conditions of Board Order No. 95-108 (hereinafter the **Previous Order**) to regulate the discharge of treated wastewater from the facility.

MAJOR DISCHARGER

4. The State and the **USEPA** have classified **CCCSD** as a major discharger.

WASTEWATER DISCHARGE

5. The Report of Waste Discharge, recent self-monitoring reports, and other relevant available

information describe the discharge as follows:

- a. **Waste 001** consists of domestic, commercial, and industrial wastewater collected within a number of cities, towns, and unincorporated areas in central Contra Costa County. Based on the effluent flow data collected from 1995 through 2000, the Discharger estimates that the average dry-weather and annual-average daily discharge rates of treated Waste 001 are 40.06 MGD and 46.01 MGD, respectively. The maximum daily discharge rate during the period of 1998-1999 is 106.6 MGD. Treated Waste 001 is discharged into Suisun Bay, a water of the State and the United States, through a submerged outfall (**E-001**) equipped with a multi-port diffuser at a location about 1,600 feet off shore and at a depth of about 24 feet below mean low water (lat. 38°02'44", long. 122°05'55").
- b. The Discharger has to drain and inspect its outfall approximately every five years. The inspection including verification of pipe alignment and assessment of physical integrity of pipe joints, bracing, and air release valves, is a critical part of the plant operation and maintenance to keep the outfall in healthy running status. During the inspection and repair period, which normally requires approximately two to four weeks, the secondary treated effluent is discharged to Pacheco Slough, which is tributary to Walnut Creek and ultimately, Suisun Bay. If a major joint repair is required, up to an additional eight weeks may be required. The Discharger usually carries out the outfall inspection and repair work during the low flow period in dry seasons.

WASTEWATER AND SLUDGE TREATMENT UNITS

6. The WWTP consists of headworks, screening facilities, primary sedimentation, an "anaerobic" selector, an activated sludge biological treatment process, secondary clarification, and ultra-violet (UV) disinfection. **Figure 2** is a flow diagram of the WWTP.
7. Waste activated sludge is withdrawn from the clarifiers and thickened via flotation thickeners. Lime is added to the sludge-blending tank to assist in subsequent dewatering with centrifuges. The combined primary and thickened waste activated sludge is dewatered prior to being incinerated in two multiple-hearth furnaces. Ash produced from the incineration process is reused as a soil amendment or building material. In the event that the incinerators are not usable, the Discharger may choose to dispose of sludge at a landfill. This practice is to ensure that the WWTP will be able to handle and dispose of sludge in the event that the incinerators are not usable.

STORMWATER FLOWS

8. The Discharger owns and operates 22 pumping station facilities, which are located in the west, north, and southeast parts of the service area. These pumping stations vary widely in size and capacity. These facilities are categorically exempted from stormwater regulations by the USEPA, as was acknowledged by the Board in a February 11, 1994 letter to the Discharger. The Discharger continues to implement efforts to minimize the impact of runoff from these pumping stations. Some pumping stations have either all or some portion of the rainwater that falls on the site, collected and drained into the station's wet well, which is pumped to the WWTP. Housekeeping that minimizes pollutant runoff from these facilities is an ongoing focus by the pumping station crewmembers, who perform both maintenance and

operation duties, as well as cleanup tasks. This Order regulates all industrial stormwater discharges at the WWTP.

WET WEATHER FLOW MANAGEMENT

9. There are three holding basins for temporary storage of wet weather flows in excess of the WWTP's capacity. Surplus wastewater, mostly primary effluent, is routed from these basins back to the plant when the capacity of the treatment units becomes available. These basins are designated as Holding Basins A-North, B, and C, and their combined volume is 140 million gallons. The hydraulic retention time provided by the three-basin system is on the order of a few days, which allows for additional biological and physical treatment of the wastewater prior to any emergency discharge. Discharge from these basins has not occurred since 1998; prior to that the last discharge was in 1986.
10. Wet weather flow in excess of the overall capacity of these basins may be discharged at a point (E-002) near the northwest corner of Holding Basin C to an unnamed drainage channel, which is tributary to Pacheco Slough and Walnut Creek. Such a discharge, however, is not authorized by this Order. In case that a discharge from E-002 occurs, the Discharger confirms that it would be primarily settled wastewater that may contain disinfected influent raw sewage, primary effluent, secondary effluent, or a combination of any of the three. In most cases, the discharge would be primary effluent.
11. A fourth basin, located near Basin B, is used to hold and dry water treatment residual (alum sludge) produced by the Contra Costa Water District (CCWD). The practice was discontinued in 1987 and restarted in 1998. The dry alum sludge is hauled off site by CCWD for final disposal.

WASTEWATER RECLAMATION

12. The Discharger began reclaiming a portion of its treated effluent in 1995. The reclamation project consists of tertiary treatment of a portion of the secondary treated effluent, and delivery of reclaimed wastewater to industrial and urban landscape clients in the Discharger's service area. The amount of reclaimed wastewater supplied since 1997 has been increasing annually. In 1999 and 2000, the Discharger reclaimed and delivered to clients a total of 93.4 and 175 million gallons, respectively. Presently the Discharger is expanding its reclamation effort to broaden its client base.

PRETREATMENT

13. The Discharger has implemented a pretreatment program that was approved by the USEPA in accordance with Federal Pretreatment Regulations (40 CFR 403) and the requirements contained in **Attachment H** of this Order.

POLLUTANT MINIMIZATION/POLLUTION PREVENTION

14. The Discharger has established a Pollution Prevention Program under the requirements specified previously by the Board. The purpose of the program is to reduce pollutant loadings to the treatment plant and subsequently to the receiving water. Constituents of potential concern have included, but are not limited to, copper, mercury, tributyltin,

organopesticides, organophosphates, and diazinon. The Discharger has submitted reports documenting its efforts, evaluating the program's accomplishments, and identifying future actions to further enhance its pollution prevention efforts. Board staff intends to require an objective third party to establish baseline programs, and to review program proposals and reports for adequacy.

15. The Discharger has constructed and now operates a permanent Household Hazardous Waste Collection Facility at the WWTP to collect hazardous wastes from households and small businesses in central Contra Costa County. The intent of this program is to minimize the amount of hazardous waste that could otherwise eventually enter the Discharger's collection system. These Programs, together with the approved Pretreatment Program, have resulted in a significant reduction of toxic pollutants discharged to the treatment plant and receiving water. This reduction is reflected in the Discharger's influent and effluent monitoring data.
16. In May 2000, the State Board issued the "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (hereinafter the **State Implementation Policy**) specifying the situations and types of priority pollutants that the Discharger is required to conduct a Pollutant Minimization Program. There may be some redundancy between the existing Pollution Prevention Program and the Pollutant Minimization Program, if the latter is required. To the extent where the requirements of the two programs overlap, the Discharger is allowed to continue/modify/expand its existing Pollution Prevention Program to satisfy the Pollutant Minimization Program requirements.

REGIONAL MONITORING PROGRAM

17. On April 15, 1992, the Board adopted Resolution No. 92-043 directing the Executive Officer to implement the Regional Monitoring Program (**RMP**) for the San Francisco Bay. Subsequent to a public hearing and various meetings, Board staff requested major permit holders in this region, under authority of section 13267 of California Water Code, to report on the water quality of the estuary. These permit holders, including the Discharger, responded to this request by participating in a collaborative effort, through the San Francisco Estuary Institute (formerly the Aquatic Habitat Institute). This effort has come to be known as the San Francisco Bay Regional Monitoring Program for Trace Substances. The RMP involves collection of data on pollutants and toxicities in water, sediment and biota of the estuary. RMP data collected during 1993-1998 are used to establish ambient background concentrations in this Order.

CHRONIC TOXICITY

18. The Discharger submitted a "Final Report on Effluent Chronic Toxicity Screening Study" in its NPDES Permit renewal application. Results from the three-tier screening phase tests indicate that both red abalone (*H. rufescens*) and mysid (*M. bahia*) exhibited higher chronic toxicity units than Echinoderm. Although Echinoderm is the current compliance test species as specified in the Previous Order, the study shows that it is a less sensitive species to the effluent as discharged. The screening study also concludes that red abalone is the appropriate species for future chronic toxicity testing. Abalone is a representative marine mollusk species and supports a popular recreational fishery along and throughout the state. It is also an important food source for sea otters, lobsters, and octopods. The test methodology for this species has been approved by the USEPA, and is described in "Short-

Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms" (USEPA/600/R-95/136). This Order requires the Discharger to use red abalone as the species for chronic toxicity compliance test. On occasions when good quality of red abalone (*H. rufescens*) is not seasonally available, the Discharger is allowed to use mysid (*M bahia*) as an alternative for the chronic toxicity test.

ACUTE TOXICITY TEST PROTOCOLS

19. The Discharger has conducted a few toxicity tests using the USEPA's "Methods For Measuring the Acute Toxicity of Effluents and Receiving Water to Fresh Water and Marine Organisms, Fourth Edition, August 1993" (hereinafter the **4th Edition**). Based on the current test fish of Stickleback, the Discharger has identified the following concerns:
 - a. The required effluent recycle rate through the test chamber cannot be achieved;
 - b. Under flow-through test conditions, there is difficulty to contain the 1-14 days old fish, which are smaller fish than the current 3rd Edition requirements, in the test chamber;
 - c. No available fish suppliers can certify the age of the stickleback in the required range of 1-30 days, as sticklebacks are caught from the wild;
 - d. The 4th Edition protocols do not provide the necessary details of the flow-through bioassay test conditions for the required young-life stage of stickleback or any other test species, as the 4th Edition protocols were mainly developed, tested, and approved using static removal bioassay techniques; and
 - e. Several test conditions such as fish holding, shipping, handling, control of dissolved oxygen and temperature, ammonia toxicity artifacts in the effluent testing, and feeding regimes, if not standardized, can substantially impact the test results.
20. The Discharger needs to develop and standardize or adopt standardized techniques from other dischargers for successful performance of the required acute toxicity test. Since there are currently no standard procedures to achieve the full compliance with the 4th Edition protocols, the Discharger requests a minimum of 12 months to allow the switchover from the current practice of using 3rd Edition protocols to the 4th Edition protocols. During this 12-month period, the Discharger will explore new test species including fathead minnows, and develop and standardize test conditions for conducting flow-through acute bioassay tests using 4th Edition protocols.

APPLICABLE PLANS, POLICIES AND REGULATIONS

21. *Water Quality Control Plan*. On June 21, 1995, the Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (**Basin Plan**), which was subsequently approved by the State Board and the Office of Administrative Law on July 20, and November 13, respectively, of 1995. The Basin Plan identifies beneficial uses and water quality objectives (**WQOs**) including narrative toxicity objectives for surface waters in the region, as well as effluent limitations and discharge prohibitions intended to protect those uses. This Order implements the plans, policies, and provisions of the Board's Basin Plan.

22. The listed beneficial uses of Suisun Bay and its tributaries are, in part or in entirety:
- a. Industrial Service Supply
 - b. Navigation
 - c. Water Contact Recreation
 - d. Non-Contact Recreation
 - e. Ocean Commercial and Sport Fishing
 - f. Wildlife Habitat
 - g. Preservation of Rare and Endangered Species
 - h. Fish Migration and Spawning
 - i. Estuarine Habitat
 - j. Shellfishing
23. *California Environmental Quality Act*. The reissuance of waste discharge requirements for the discharge is exempt from the provisions of Chapter 3 (commencing with section 21100 of Division 13) of the Public Resources Code pursuant to section 13389 of the California Water Code.
24. *Federal Clean Water Act*. Effluent limitations and toxic effluent standards established pursuant to sections 301, 304, 306, and 307 of the Federal Water Pollution Control Act and amendments thereto (hereinafter the CWA) are applicable to the discharge herein.
25. *California Toxics Rule*. On April 29, 2000, USEPA approved the final rule for Water Quality Standards: Establishment of Numerical Criteria of Priority Toxic Pollutants for the State of California (hereinafter the **California Toxics Rule**, or **CTR**). The final rule was promulgated in Federal Register on May 18, 2000, and numerical water quality criteria (**WQCs**) were incorporated in 40 CFR Part 131.
26. *State Implementation Policy*. On May 1, 2000, the State Board adopted the State Implementation Policy, or SIP. The SIP is the state water quality control policy that is applicable to discharges of toxic pollutants into inland surface waters, enclosed bays, and estuaries of California, including the San Francisco Bay and its tributaries. The SIP establishes: implementation provisions for priority pollutant criteria promulgated in the National Toxics Rule (**NTR**) that apply in California and **CTR**, and for priority pollutant objectives established by the Board in the Basin Plan; monitoring requirements for 2,3,7,8-tetrachlorodibenzodioxin (**TCDD**) equivalents; and chronic toxicity control provisions. The SIP, except as provided in section 4, supersedes Basin Plan provisions to the extent that they apply to implementation of water quality standards for priority pollutants and they regard the same subject matters as that addressed in the SIP with respect to priority pollutant standards.
27. *USEPA Regulations*. USEPA developed secondary treatment regulations for discharges from publicly owned treatment works. These technology-based regulations are contained in 40 CFR Part 133, and define the minimum levels of effluent quality attainable by secondary treatment in terms of biochemical oxygen demands (**BOD₅**), total suspended solids (**TSS**), and pH. These regulations also prescribe the minimum mass removal efficiencies for **BOD₅** and **TSS**. Effluent limitations for pollutants not subject to secondary treatment standards are based on one of the following: best professional judgment of best conventional pollutant control technology or best available technology economically achievable; current treatment plant performance; or, they are water-quality based effluent limitations (**WQBELs**).

RECEIVING WATER SALINITY

28. The Previous Order describes the receiving water for treated Waste 001 as marine. This Order uses the salinity threshold values specified in 40 CFR Parts 131.38(c)(3)(i), (ii) and (iii) to determine the applicable WQCs and WQOs for the discharge. The RMP data collected from two nearby locations (Pacheco Creek and Davis Point) show that the receiving water for the discharge is neither a freshwater nor a saltwater body. According to 40 CFR Part 131.38(c)(3)(iii), the applicable WQCs and WQOs are the more stringent of the freshwater or saltwater criteria and objectives.

BACTERIAL INDICATORS

29. The Previous Order specifies bacterial effluent limitations for fecal coliform. It also includes an alternative total coliform limitation in case if fecal coliform is considered inadequate for protection of beneficial uses of the receiving water. The Discharger has been using fecal coliform as the bacterial indicator since the UV-disinfection system was started in 1997.

30. The Discharger has indicated as part of application for permit renewal its intent to change the fecal coliform to the enterococci standard. The Discharger's intent is based on USEPA's 1986 Ambient Water Quality Criteria for Bacteria, which recommends enterococci and/or *E. coli*, in lieu of fecal or total coliform, as the basis for bacterial water quality standards. According to USEPA, these bacterial indicators provide a higher degree of association with gastrointestinal (GI) disease than the fecal coliform bacteria, and enterococci were the most predictive indicator for enteric disease symptoms. The Basin Plan has also included enterococci and *E. coli* as part of the water quality objectives for the identification of pollution sources and to supplement objectives for water contact recreation.

31. In anticipation that the USEPA is moving in the direction of replacing total or fecal coliform effluent limitations with a better water quality indicator such as enterococci in the future, the Discharger has developed expertise in performing the enterococci enumeration test using the most recent USEPA-approved methods. Additionally, the Discharger has taken a proactive role in monitoring enterococci in receiving water, local creek discharge, local marina and effluent for a few years. The monitoring results confirmed that the likelihood of primary water-contact recreational use of the receiving water in the vicinity of the discharge point is low, and the ambient enterococci concentrations are typically higher than those in the WWTP effluent (see table below). A similar trend was also observed for fecal coliform and total coliform.

Location	Enterococci Count (colony per unit or CPU, per 100 ml sample)						
	Suisun Bay around E-001 (based on 5 monitoring stations)	Suisun Bay upstream of E-001	Walnut Creek upstream of E-001	E-001 discharge			
	AM	GM	GM	AM	GM	AM	
Wet weather average	74.5	20.2	83.4	22.2	1173	239	<2.3
Dry weather average	7	4.9	<11.4	<5.4	192.7	51.3	<3.6

Annual average	38.7	9.6	<45.3	<10.5	654	106	<3.1	<2.2
Daily Maximum	295		400		7,000		14	

AM: Arithmetic mean.

GM: Geometric mean.

32. This Order establishes bacterial effluent limitations based on enterococci, which serve as a better bacterial indicator associated with GI diseases caused by human contact with water bodies receiving treated sewage. Due to the low frequency of primary recreational contact use of the receiving water, the proposed enterococci effluent limitation consists of a steady-state 5-sample geometric mean value, and a single sample maximum allowable density corresponding to a lightly used area criterion. Since the effluent limitation based on enterococci would not be less stringent than the previous limit, the proposed change does not cause backsliding. The Order also requires the Discharger to continuously monitor total and fecal coliform, as well as enterococci in the receiving water.

CYANIDE AND ITS SOURCES

33. The CTR specifies that the saltwater Criterion Chronic Concentration (CCC) of 1 µg/l for cyanide is applicable to Suisun Bay. This CCC value is below the SIP's minimum level (ML), which is 5 µg/l. The Previous Order specified a daily average effluent limitation of 25 µg/l for cyanide pursuant to the Basin Plan. That limitation was based on the 1986 Basin Plan's WQO of 5 µg/l, which was set at the limit of detection, and the consideration that cyanide does not persist in the environment, as indicated by the lack of detected cyanide in the Bay.
34. The Discharger performed a study during 1995 through 1999 finding that the on-site sludge incinerators produce cyanide as a byproduct of high temperature oxidation. Cyanide present in the exhaust stream from the incinerators is removed in the wet scrubbers, and eventually shows up at elevated levels in the wastewater stream that is routed back to the treatment plant for process. Historically, the Discharger has used Standard Methods Part 4500-CN C and Part 4500-CN I for total and weak acid dissociable cyanide measurements, respectively, in the effluent samples. It appears that there are certain unknown constituents in the effluent that interfere the measured results. Recently, the Discharger has switched to USEPA Method OI 1677, which is a continuous-flow, amperometric method. This method is known to be free from all the interferences common to Standard Methods Part 4500-CN C and 4500-CN I. By this method, the Discharger discovered that sulfide, sulfite, and certain other reducing substances could cause false positive cyanide results. The Discharger and other parties have committed resources for a national study sponsored by Water Environmental Research Federation to evaluate the existing cyanide test methods and the fate and transport of cyanide in wastewater treatment, as well as investigate the appropriateness of the USEPA saltwater cyanide water quality objectives. The work on this project is ongoing, and the study results are expected within the next two to three years.
35. Due to the highly variable cyanide results, the Discharger believes it may have difficulty complying with an effluent limitation based on the CTR's CCC of 1 µg/l. The Discharger has expressed an interest in developing a site-specific objective for cyanide. Information from a previous study for Puget Sound, Washington, was submitted as part of the Discharger's application for permit renewal. The Puget Sound study used four species of

West Coast cancrivora crabs. The study result showed that these West Coast crabs were on average less sensitive than the East Coast cancrivora crab used by USEPA in deriving the national cyanide water quality criteria. As part of Washington State Department of Ecology (WDOE)'s final review process prior to accepting the data for use in deriving a site-specific standard for cyanide, WDOE contacted Dr. Gary Chapman of USEPA Region X Office and asked for senior review of the toxicity testing reports. Based on USEPA Region X Office's review result, WDOE accepted the test data and the results of that study, which find that site-specific water quality criteria of 9.4 µg/l and 2.9 µg/l for cyanide are considered protective of marine life for acute and chronic toxicity.

DIOXINS AND FURANS

36. Dioxins and Furans refer to 2,3,7,8-TCDD and other sixteen congeners, as specified in **Attachment C** of this Order. These constituents are bioaccumulative. The CTR establishes a standard for 2,3,7,8-TCDD of 0.014 picograms per liter for the protection of human health from consumption of aquatic organisms. Although the CTR establishes numerical standards for only one of the seventeen dioxin congeners, its preamble states that “[f]or California waters, if the discharge of dioxin or dioxin-like compounds has reasonable potential to cause or contribute to a violation of a narrative criterion, numeric water quality-based effluent limits for dioxin or dioxin-like compounds should be included in NPDES permits and should be expressed using a TEQ [toxicity equivalence] scheme”. The Previous Order contains an effluent limitation of 0.00012 µg/l for 2,3,7,8-TCDD Equivalent.
37. The SIP establishes the implementation policy for dioxins and furans. It specifies that the Board shall establish interim numeric limitations for priority pollutants for which TMDLs are being developed. For bioaccumulative pollutants that are included in the 303(d) list, the SIP suggests that the Board should consider mass loading limit for the pollutants to implement the applicable water quality standard. Additionally, the SIP also requires monitoring for a minimum of three years by all major NPDES dischargers for the other sixteen dioxin and furan compounds.
38. The Basin Plan specifies a narrative objective for bioaccumulative substances as follows:

“Many pollutants can accumulate on particles, in sediments, or bioaccumulate in fish and other aquatic organisms. Controllable water quality factors shall not cause a detrimental increase in concentrations of toxic substances found in bottom sediments or aquatic life. Effects on aquatic organism, wildlife, and human health will be considered”.
39. The Basin Plan's narrative toxicity objective is applicable to dioxins and furans, since these constituents accumulate in sediments and bioaccumulate in the fatty tissue of fish and other organisms. Although 2,3,7,8-TCDD is not detected in the WWTP effluent, four detected congeners (1,2,3,4,6,7,8-heptaCDD, OctaCDD, 1,2,3,4,6,7,8-heptaCDF, and OctaCDF) are determined to cause reasonable potential to exceed the Basin Plans' narrative objective, as expressed in 2,3,7,8-TCDD Equivalent, which are based on the CTR criterion for 2,3,7,8-TCDD and the application of the Toxic Equivalence Factors (TEFs) adopted by World Health Organization in 1998. This Order establishes interim mass limitation for 2,3,7,8-TCDD Equivalent based on the above four detected congeners.
40. The Board recognizes that the primary source of dioxins and furans in the Bay Area is air

emissions from combustion sources. Dioxins and furans in wastewater are mainly attributed to domestic waste and storm runoff, especially the latter that entrains these pollutants as a result of air deposition. The root cause of dioxin detected is beyond the Discharger's control. CCCSD operates a well-maintained secondary treatment plant. Despite this, dioxins and furans concentrations cannot be further reduced without significant upgrades to the facility. Thus, further dioxin reduction in the effluent by any means of advanced treatment will be overly burdensome and is not cost-effective relative to the benefits.

41. To assist the Board and US EPA in developing TMDL, the Discharger shall participate in a special study, through the RMP, to investigate the feasibility and reliability of different methods of increasing sample volumes to lower the detection limits for these dioxin and furan compounds. Furthermore, the Discharger shall have the preferred method approved by US EPA.

MERCURY

42. Mercury is a persistent and bioaccumulative pollutant. Its chronic criterion is intended to limit the bioaccumulation of methyl-mercury in fish and shellfish to levels that are safe for human consumption. Although the ambient background mercury concentrations are below WQOs for protection of both fresh and saltwater aquatic species, Suisun Bay is still listed as impaired for mercury because of fish tissue level exceedances. The impairment of Suisun Bay indicates that the WQOs specified in the Bain Plan may not be adequate to ensure safe levels of mercury in fish tissue. In calculating WQBELs for mercury, no dilution credit was considered in light of its bioaccumulative nature and being as an impairing pollutant. The calculated WQBELs are not attainable by the current treatment plant performance. Thus, this Order establishes interim concentration and mass loading limits; and requires the Discharger to continue its existing pollution prevention and pretreatment programs to maximize practicable control over influent mercury sources.

303(D)-LISTED POLLUTANTS

43. On May 12, 1999, the USEPA approved a revised list of impaired waterbodies prepared by the State. The list (hereinafter the **303(d) list**) was prepared in accordance with section 303(d) of the CWA to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. Suisun Bay is listed as one of these impaired water bodies. The 303(d)-listed pollutants impairing Suisun Bay include copper, mercury, nickel, selenium, exotic species, PCBs total, dioxin and furan compounds, chlordane, DDT, Dieldrin, Diazinon, and dioxin-like PCBs.
44. State Board Order WQ 2001-06 indicates that the listing of San Francisco Bay as impaired does not necessarily mean that the individual segment of the Bay lacks assimilative capacity. Local specific water quality data may indicate that the ambient background concentration is below the applicable WQO or WQC, suggesting that dilution credit may be allowable for some 303(d)-listed pollutants.
45. Despite the listing of copper and nickel as impairing pollutants for most of the San Francisco Bay, a coalition of permit holders, including the Discharger, believes that additional monitoring data and scientific research may support the de-listing of these two pollutants.

These permit holders, in conjunction with the Board and through the San Francisco Estuary Institute, are gathering data towards the de-listing. In addition, the information gathered may lead to a site-specific objective for copper, which might alter the Discharger's future effluent limitation for copper.

TOTAL MAXIMUM DAILY LOADS AND WASTE LOAD ALLOCATIONS

46. Based on the 303(d) list of pollutants impairing Suisun Bay, the Board plans to adopt Total Maximum Daily Loads (TMDLs) for these pollutants no later than 2010, except dioxin that its TMDL will be adopted no later than ten years from the date of this Order. However, future review of the 303(d) list for Suisun Bay may result in revision of the schedules and/or provide schedules for other pollutants.
47. The TMDLs will establish waste load allocations (WLAs) and load allocations for point sources and non-point sources, respectively. The TMDLs are intended to result in the achievement of water quality standards for the waterbody. The final effluent limitations for the discharge authorized by this Order will be based on WLAs that are derived from the TMDLs.
48. The Board request Dischargers collectively assist in developing and implementing analytical techniques capable of detecting 303(d)-listed pollutants to at least their respective levels of concern or WQOs/WQCs. The Board will require Dischargers to characterize the pollutant loads from their facilities into the water-quality limited waterbodies. The results will be used in the development of TMDLs, but may also be used to update/revise the 303(d) list and/or change the WQOs for the impaired waterbodies including Suisun Bay.
49. The Board has received, and anticipates continuation to receive, resources from federal and state agencies for the development of TMDLs. To ensure the timely development of TMDLs, the Board intends to supplement these resources by allocating development costs among Dischargers through the RMP or other appropriate funding mechanisms.

REASONABLE POTENTIAL

50. USEPA regulations and the State SIP require that a discharge be characterized to determine its reasonable potential to cause or contribute to an excursion of numeric or narrative WQCs/WQOs. When a discharge causes, has the reasonable potential to cause, or contributes to an excursion above a narrative or numeric objective/criterion within a State water quality standard, federal law and regulations require the establishment of WQBELs that will protect water quality. The WQBELs in this Order are based on the Basin Plan, SIP, other State Plans and policies, CTR, and other applicable USEPA water quality criteria.
51. Section 1.3 of the SIP describes the approach and procedures in determining a pollutant's reasonable potential to cause, or contribute to an excursion above its applicable water quality criterion or objective. In summary, the reasonable potential analysis (RPA) involves identifying the observed maximum effluent concentration (MEC) for each constituent and comparing it with the lowest applicable WQC or WQO, which has been adjusted for appropriate pH, hardness, and translator values. If the MEC is greater than the adjusted lowest applicable WQO or WQC, then the reasonable potential for that pollutant exist. If the MEC is less than the adjusted WQO or WQC, then the observed maximum ambient

concentration (**B**) of the concerned pollutant is compared with the adjusted lowest applicable WQO or WQC. Reasonable potential exists for that pollutant if B is greater than the adjusted lowest applicable WQO or WQC. If B is less than the adjusted lowest applicable WQO or WQC, reasonable potential may still exist upon consideration of certain circumstances, as described in the SIP.

52. Effluent data collected from March 1998 to February 2001 for inorganic constituents were evaluated against their WQOs and WQCs specified in the 1995 Basin Plan and the CTR, respectively. For mercury, the Basin Plan's WQO of 0.025 ppb is used. For cyanide, the lowest applicable water quality standard is the CCC in CTR, since there is no corresponding WQO in the Basin Plan. For all organic constituents except dioxins and furans, effluent data collected since 1997 were evaluated to determine their reasonable potential. The RPA for dioxins and furans is based on effluent data collected since 1996 and the TEFs as shown in **Attachment C** of this Order. Most of the organic constituents in the CTR do not have ambient background data. Ambient background water quality data are required according to the SIP to complete the RPA and to determine WQBELs, where applicable. The Discharger is required to investigate alternative analytical procedures that result in lower detection limits. This may occur either through participation in new RMP special studies, or through equivalent studies conducted either jointly with other dischargers or by the Discharger.

RPA RESULTS

53. **Tables A and B** of this Order summarize the RPA results for the toxic and priority pollutants. The following constituents show reasonable potential to cause or contribute to exceedance of the relevant WQOs and WQCs in the receiving water:

Copper, Cyanide, Lead, Mercury, Acrylonitrile, bis(2-ethylhexyl)Phthalate, 4,4'-DDE, Dieldrin, 2,3,7,8-TCDD Equivalent, and Tributyltin.

54. For those pollutants with no applicable WQOs or WQCs (such as Diazinon, Chlorpyrifos), or showing no reasonable potential to cause or contribute to exceedance of applicable WQOs or WQCs, WQBELs are not established. Instead, monitoring for these pollutants is required in this Order to provide additional effluent data for future re-evaluation of their reasonable potential.
55. For those pollutants with limited data such that their reasonable potential could not be determined, the Discharger is required to continue to monitor using analytical methods that provide the lowest possible detection limits reasonably achievable. If detection limits of these analytical methods improve to the point where it is feasible to evaluate compliance with the applicable WQOs or WQCs, their reasonable potential will be re-evaluated to determine if there is a need to add numeric effluent limitations to this Order or to continue monitoring.
56. For those pollutants exhibiting reasonable potential to exceed the applicable WQOs or WQCs, WQBELs are established in this Order. If a pollutant is also contained in the 303(d) list of impaired water body, the Board plans to develop and adopt the required TMDL to ensure that the applicable WQO in the Basin Plan or WQC in the CTR can be met in the receiving water. However, time is needed to develop a TMDL. When a TMDL is complete, the Board will adopt final effluent limitations based on the derived WLA. If authorized, a

time schedule may be included in the revised permit to require compliance with the final effluent limitations.

WATER-QUALITY BASED EFFLUENT LIMITATIONS

57. WQBELs are calculated for pollutants exhibiting reasonable potential, using the procedures in section 1.4.B of the SIP. In calculating the WQBELs, ambient background water quality data collected from two central San Francisco Bay (Central Bay) RMP stations were used. These background water quality data are also used in the reasonable potential analysis. In response to the State Board's recent recommendations in its Order No. WQ 2001-06, Board staff has evaluated the assimilative capacity of the receiving water for 303(d) listed pollutants. The evaluation included review of RMP data gathered at local and the two Central Bay stations, effluent data, and WQOs. It is determined that, based on the evaluation, the assimilative capacity is highly variable due to the complex hydrology of the receiving water. Therefore, there is uncertainty associated with the representiveness of the appropriate ambient background data to conclusively quantify the assimilative capacity of the receiving water. "Pursuant to Section 1.4.21. of the SIP, "dilution credit may be limited or denied on a pollutant-by-pollutant basis..." For bioaccumulative impairing pollutants like mercury, dioxin, dieldrin, bis(2-ethylhexyl)phthalate, and 4,4'-DDE, based on best professional judgment, no dilution is considered for calculating their WQBELs in this Order, even if the corresponding ambient water concentrations may be lower than the applicable water quality objectives. For non-bioaccumulative impairing pollutant such as copper, dilution is allowed in calculating the WQBELs in this Order, as the corresponding ambient water concentrations of copper in the two Central Bay stations are lower than the applicable water quality objectives. This dilution credit consideration is consistent with the abovementioned State Board Order No. WQ 2001-06.
58. A MEC for 4,4'-DDE and Dieldrin, respectively, could not be determined because these pollutants were not detected in the effluent, and all of the detection limits are higher than the lowest applicable WQCs. As indicated above, the RPA for 4,4'-DDE and Dieldrin was performed by comparing the lowest applicable WQCs with the RMP ambient background concentration data gathered using research-based sample collection, concentration, and analytical methods. The RPA indicates that 4,4'-DDE and Dieldrin have reasonable potential, and therefore numeric WQBELs are required.
59. The current 303(d)-list includes the Suisun Bay as impaired for DDT and Dieldrin. 4,4'-DDE is chemically linked to the presence of DDT in that it is a degradation product of DDT. The Regional Board intends to develop a TMDL that will lead towards overall reduction of 4,4'-DDE and Dieldrin. The WQBELs for these two pollutants as specified in this Order may be changed to reflect the WLAs from the TMDLs. To assist the Board in developing TMDL, the Discharger shall participate in a special study, through the RMP, to investigate the feasibility of improving the analytical methods for the detection limits for 4,4'-DDE and Dieldrin. Furthermore, the Discharger shall work with the Regional Board and USEPA for appropriate approval of such improved analytical methods.

INTERIM EFFLUENT LIMITATIONS

60. When the Discharger cannot immediately comply with a new and more stringent effluent limitation, the SIP and the Basin Plan authorize a compliance schedule in the permit. To

qualify for a compliance schedule, both the SIP and the Basin Plan require the Discharger to demonstrate that it is infeasible to achieve immediate compliance with the new effluent limitation. The SIP and Basin Plan require the following information be submitted to the Regional Board to support a finding of infeasibility:

- Documentation that diligent efforts have been made to quantify pollutant levels in the discharge and sources of the pollutant in the waste stream, including the results of those efforts;
- Documentation of source control and/or pollution minimization efforts currently under way or completed;
- A proposed schedule for additional or future source control measures, pollutant minimization or waste treatment; and
- A demonstration that the proposed schedule is as short as practicable.

61. Pursuant to Section 2.1.1 of the SIP, "the compliance schedule provisions for the development and adoption of a TMDL only apply when: ...(b) the discharger has made appropriate commitments to support and expedite the development of the TMDL. In determining appropriate commitments, the RWQCB should consider the discharge's contribution to current loadings and the discharger's ability to participate in TMDL development." The Discharger has agreed to assist the Board in TMDL development. One mechanism to demonstrate the commitment maybe for the Discharger to enter into agreement with the Board staff to provide specific work products to complete TMDLs.

62. On May 23, 2001, the Discharger submitted a report "Feasibility Analysis and Request for Compliance Schedule". Based on the information contained in the report, Board staff determined that the Discharger has demonstrated its infeasibility to achieve immediate compliance with some of the calculated WQBELs and has fulfilled all of the above requirements. The Discharger thus is eligible for compliance schedules for cyanide, mercury, 2,3,7,8-TCDD Equivalent, acrylonitrile, bis(2-ethylhexyl)phthalate, and tributyltin. This Order establishes a five-year compliance schedule for calculated WQBELs that are based on CTR or NTR criteria, and a compliance schedule of maximum ten years for calculated WQBELs that are based on the Basin Plan objectives. These compliance schedules are as short as practicable. These compliance schedules both exceed the life of the permit, therefore, these calculated limits are intended as a point of reference for the feasibility demonstration and are only included in the findings by reference. Additionally, the actual final limits for these pollutants (e.g. copper, mercury, etc.) will likely be based on either SSO or TMDL/WLA as described in other findings specific to each of the pollutants.

63. This Order establishes an interim monthly average concentration limitation for mercury based on staff's analysis of the performance of over 20 secondary treatment plants in the Bay Area. This analysis is described in a Board staff draft report titled "Staff Report - Statistical Analysis of Pooled Data from Regionwide Ultraclean Mercury Sampling For Municipal Dischargers" dated June 11, 2001. The objective of the analysis is to provide an interim concentration limitation that characterizes regional facility performance using only ultra-clean data and, by maintaining this current performance, will ensure no further degradation of receiving water quality as a result of the discharge. As indicated in a Board staff's report titled "Watershed Management of Mercury in the San Francisco Bay Estuary: Total Maximum Daily Load Report to U.S. EPA," dated June 30, 2000, municipal sources are a very small contributor of the total mercury load to the Bay. Because of this, it is unlikely

that the TMDL will require reduction efforts beyond source controls.

64. Interim mass limits are also included in this Order to control the discharge of 303(d)-listed bioaccumulative pollutants to their current loadings until the TMDLs and WLAs are adopted. These interim mass limits, which are established for mercury and 2,3,7,8-TCDD Equivalent, are also based on the recent treatment plant performance.
65. There are no ambient background data available for acrylonitrile, bis(2-ethylhexyl)phthalate and tributyltin. Therefore, an exact WQBEL cannot be calculated for each of these constituents using methods prescribed in section 1.4 of the SIP. This Order contains a provision requiring the Discharger to conduct a study to collect ambient background data. The Discharger is required to submit the study results to the Board by May 18, 2003. The Board intends to include as enforceable limits, in a subsequent permit revision, revised WQBELs based on the required study. However, if the Discharger requests and demonstrates that it is infeasible to comply with the revised WQBELs, the permit revision will establish compliance schedules of maximum five-year for acrylonitrile and bis(2-ethylhexyl)phthalate, and maximum ten-year for tributyltin, respectively. In the meantime, the interim limits are based on the past performance.
66. The background data for cyanide were very limited and the detection limits of the analytical methods used for cyanide are high. There were only six dissolved and six total data points gathered by RMP for the two Suisun Bay Stations in 1993. These data were all below the detection limit of 1 µg/l. The assumed non-detect value at 1 µg/l equals to the lowest applicable WQC of 1 µg/l, resulting in the dilution portion of the WQBEL calculation equation to be mathematically muted. Thus, no dilution is allowed in estimating the WQBELs for cyanide. The calculated WQBELs, as presented in the Fact Sheet, are only a point of reference for the Discharger to conduct a feasibility study for immediate compliance.
67. Pursuant to SIP (Section 2.2.2, Interim Requirements for Providing Data), in the case where available data are insufficient (e.g. acrylonitrile, bis(2-ethylhexyl)phthalate cyanide, and tributyltin), this Order contains a provision with data collection period that will expire on May 18, 2003. This is established for each of these pollutants so that the Discharger shall conduct a study of ambient background water for these pollutants. The Board intends to include, in a subsequent permit revision, a revised WQBEL based on the study result as an enforceable limit. However, if the Discharger requests and demonstrates that it is infeasible to comply with the revised WQBEL, the permit revision will establish a maximum five-year compliance schedule for acrylonitrile, bis(2-ethylhexyl)phthalate and cyanide, and a ten-year compliance for tributyltin. During the data collection period, interim limits are included. The Board may take appropriate enforcement actions if interim limits and requirements are not met.
68. As the Discharger satisfies the conditions specified in Finding 61, and the fact that there is a lack of adequate ambient background data and low detection-limit method for cyanide, a data collection period is set for May 18, 2003. Considering the Discharger's intent to participate in a site-specific objective (SSO) study for cyanide and to collect additional ambient data using the improved method detection levels, the estimated WQBELs may be revised based on improved ambient background data and the SSO development. The data collection period allows time for the Discharger to implement and evaluate the effectiveness

of additional source control measures, collect ambient background data with improved analytical procedures, and develop a SSO. The calculated WQBELs may also be revised based on the cyanide SSO. Considering that the development of a new improved analytical procedure and the development of a SSO will require additional time and considering the unpredictable and often times contentious nature of setting new standards, the compliance schedule is as shortest as possible.

69. The SIP has no MLs for the dioxin and congeners. The Discharger is determined to be infeasible to achieve immediate compliance with the calculated WQBELs. While a TMDL will be developed to address control of dioxin levels in San Francisco Bay, the Discharger's dioxin loading to the receiving water will be held at its current level by the requirement of complying with a performance-based mass emission limitation. This Order specifies an interim performance-based mass emission limitation for dioxin expressed as 2,3,7,8-TCDD Equivalent. The USEPA's 303(d)-list highlights the need for a region-wide cross-media assessment of the problem. This integrated assessment should result in a more balanced, and more effective limitation for the Discharger. The interim mass limitation specified in this Order may be changed to reflect the WLAs from this TMDL. However, based on staff report "Dioxin in the Bay Environment – A Review of the Environmental Concerns, Regulatory History, Current Status, and Possible Regulatory Options" dated February 1998, and the USEPA report "Status of Dioxin Reassessment and Policy Response" of 2000, municipal sources are a very small contributor of the dioxins and furans to the Bay, and the dominant sources are from current and historical air emissions. Thus, it is unlikely that the TMDL will require reduction efforts beyond the controls required by this Order.

DELETION OF EFFLUENT LIMITS

70. Based on the RPA results, the following pollutants do not exhibit reasonable potential to cause, or contribute to an excursion above any numeric or narrative WQOs. Thus no WQBELs are needed for these pollutants. Thus the following existing effluent limitations are excluded from this Order:
- a. Monthly average concentration limits for Chloroform, Halomethanes, PAHs, and PCBs;
 - b. Daily average effluent concentration limits for Arsenic, Cadmium, Chromium, Nickel, Selenium, Silver, Zinc, and Phenol; and
 - c. Both daily average and monthly average concentration limits for gamma-BHC.

PLANS AND PROCEDURES UPDATE

71. Operating and maintenance procedures of the WWTP and its satellite pump stations are maintained by the Discharger for the purpose of providing plant and regulatory personnel with a source of information describing all equipment, recommended operation strategies, process control monitoring, and maintenance activities. These procedures, together with the Contingency Plan, as required by Board Resolution No. 74-10, are required to be reviewed and updated as necessary to reflect changes in treatment equipment, operation practices, and management planning for the WWTP and the pump stations.

OPTIONAL MASS OFFSET

72. This Order contains requirements that seek to prevent further degradation of the impaired waterbody. Such requirements include the adoption of interim performance-based mass limits, provisions for pollutant minimization/pollution prevention, pretreatment, wastewater reclamation, and treatment plant optimization. After implementing these efforts, the Discharger may find that further net reductions of the total mass loadings of the 303(d)-listed pollutants to the receiving water can be achieved through a mass offset program. The Discharger have the option of proposing a Mass Offset program that would offset their pollutant loads with source reductions which are not already required elsewhere in the system.

NOTIFICATION

73. The Board notified the Discharger and interested agencies and persons of its intent to re-issue waste discharge requirements for the discharge, and has provided them with an opportunity for a public hearing and to submit their written views and recommendations.

74. The Board, in a public hearing, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Discharger, in order to meet the provisions of Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, shall comply with the following:

A. DISCHARGE PROHIBITIONS

1. The discharge of treated Waste 001 to Suisun Bay at any point at which the effluent does not receive a minimum initial dilution of at least 10:1 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, unless specified otherwise.
3. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, tributaries of Suisun Bay, or waters of the State are prohibited.
4. The existing average dry weather flow discharge shall not exceed 45 MGD. The Discharger has presented an antidegradation study, which affirms that an increase in the effluent discharge flow rate to 53.8 MGD to accommodate planned growth in the service area conforms to the federal and state Antidegradation Policy requirements. Upon the Executive Officer's approval on the antidegradation study report, the permitted average dry weather treatment effluent flow will increase to 53.8 MGD. The average dry weather flow shall be determined over three consecutive dry weather months each year.

B. EFFLUENT LIMITATIONS

The effluent¹ discharged via outfall E-001 to Suisun Bay shall not exceed the following limits:

1. *Conventional pollutants*

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Daily Maximum</u>
a. CBOD ₅ , 20°C ²	mg/l	25	40	50
b. TSS ³	mg/l	30	45	60
c. Oil & Grease	mg/l	10	--	20
d. Settleable Matter	ml/l-hr	0.1	--	0.2

e. Monthly average mass loading removal: For CBOD₅, 20°C and TSS, each minimum removal rate shall be at least 85 percent of the respective monthly average mass loadings in influent samples, which are collected at approximately the same time as for effluent samples in each calendar month.

f. pH value: not less than 6.0 nor greater than 9.0.

2. *Bacteriological indicators*

Enterococci: The 30-day geometric mean shall not exceed 33 colonies per 100 ml of effluent sample, nor shall a single effluent sample exceed a maximum value of 108 colonies per 100 ml sample, as verified by a follow-up sample taken within 24 hours.

3. *Toxicity*

a. Acute: The survival of fishes in 96-hour flow-through bioassay test for undiluted effluent as discharged shall be an eleven-sample median value of not less than 90-percent survival⁴, and an eleven-sample 90-percentile value of not less than 70-percent survival⁵. Test fishes shall be specified in the Self-Monitoring Program.

b. Chronic⁶: An eleven-sample median of 10 TUC⁷, and a 90-percentile value of 20

¹ The term "effluent" means the fully treated wastewater effluent from the Discharger's WWTP, as discharged to Suisun Bay.

² CBOD₅, 20°C means Carbonaceous Biochemical Oxygen Demand measured at 20°C, 5 days after test started.

³ TSS means Total Suspended Solids.

⁴ A bioassay test survival of less than 90-percent represents a violation of this effluent limitation, if five or more of the past ten or less bioassay tests show less than 90-percent survival.

⁵ 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 tests shows less than 70-percent survival.

⁶ If the Discharger demonstrates to the satisfaction of the Executive Officer that toxicity exceeding the levels cited above is caused by ammonia and that the ammonia in the discharge is not adversely impacting receiving water quality or beneficial uses, then such toxicity will not constitute an exceedance of the toxicity limits specified above.

⁷ 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 toxicity greater than 10 TUC. A TUC equals to 100/NOEL. The NOEL is the no observable effect level, determined from IC, EC, or NOEC values. These terms and their usage in determining compliance with the limitations are defined in the **Attachment A** 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

TUC⁸.4. *Toxic and Priority Pollutants*

<u>Constituent</u>	<u>Unit</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
a. Copper	µg/l	14.2	19.5
b. Lead	µg/l	3.5	8.2
c. 4,4'-DDE	µg/l	0.00059 ⁹	0.00118 ⁹
d. Dieldrin	µg/l	0.00014 ⁹	0.00028 ⁹

5. *Interim Limits:*

The interim limits shall remain in effect until May 18, 2010 for mercury, and June 30, 2011 for 2,3,7,8-TCDD-Equivalent, or until the Board amends the limits based on the WLAs in the TMDL for mercury, and the TMDL for dioxins and furans. The interim limits for acrylonitrile, tributyltin, and cyanide shall remain in effect until May 18, 2003, or until the Board amends the limits based on additional background data or site-specific objectives. The interim limit for bis(2-ethylhexyl)phthalate shall remain in effect until May 18, 2003, or until the Board amends the limit based on additional background data and evidence indicating that this constituent is not bioaccumulative. During the next permit re-issuance, these interim limits may be re-evaluated.

<u>Constituent</u>	<u>Unit</u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
a. Cyanide	µg/l	--	18
b. Mercury	µg/l	0.087	1
c. Acrylonitrile	µg/l	--	7
d. Tributyltin	µg/l	--	0.06
e. Bis(2-ethylhexyl)phthalate ⁹	µg/l	--	190

Running Annual Average

f. Mercury	lb/month	0.98	
g. 2,3,7,8-TCDD Equivalent ¹⁰	milligram/month	0.836	

C. RECEIVING WATER LIMITATIONS

1. The discharge of effluent via E-001 shall not cause the following conditions to exist in

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 obtained through concurrent testing of the two species.

⁸ 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 fewer tests show toxicity greater than 20 TUC.

⁹ Compliance determination for these constituents is based on the reported ML, as specified in Appendix 4 of the SIP.

¹⁰ Compliance with this effluent limitation is described in Part V.F of Self-Monitoring Program, Part B.

waters of the State at any place:

- a. Floating, suspended or deposited macroscopic particulate matter or foam; visible, floating, suspended or deposited oil or other products of petroleum origin;
 - b. Alteration of temperature, turbidity or apparent color beyond present natural background levels;
 - c. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affected beneficial uses; and
 - d. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl or 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 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. pH: the pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units.
 - b. Dissolved Oxygen: the concentration of dissolved oxygen shall not be less than 7.0 mg/l any time, and the median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation.
 - c. Nutrients: Waters shall not contain bio-stimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
 - d. Dissolved sulfide: 0.1 mg/l maximum.
 - e. Unionized ammonia (as N): annual median 0.025 mg/l
maximum at any time 0.16 mg/l
3. The discharge shall not cause nuisance, or adversely affect beneficial uses of the receiving water.
4. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Board or State Board. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Board may revise and modify this Order in accordance with such standards.

D. SLUDGE MANAGEMENT REQUIREMENTS

1. Sludge generated by the Discharger is incinerated in multiple hearth furnaces on the site or is disposed of at a landfill if the incinerators are not in service. If the Discharger

desires to treat and dispose of, or reuse 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 and storage, and ash disposal and 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 or ash use or disposal which has a likelihood or 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. Sludge that is disposed of in a municipal solid waste landfill must meet the requirements of 40 CFR 258.
6. Permanent on-site sludge storage or disposal activities are not authorized by this Order. A Report of Waste Discharge shall be filed by the Discharger and the site shall be brought into compliance with applicable regulations prior to commencement of any such activity.

E. PROVISIONS

1. *Permit Administration*

a. Effective Date of Permit

This Order, which rescinds the Previous Order No. 95-108, shall serve as a NPDES permit pursuant to section 402 of the CWA, or amendments thereto, and the Discharger shall comply with all effluent limitations, prohibitions, and provisions of this Order starting from July 1, 2001, provided that the Regional Administrator of the USEPA has no objections. This effective date is 10 days after the Order adoption date to accommodate the fact that some of the limits are monthly average limits. It is impractical to calculate compliance with monthly average limits that begin in the middle of a calendar month. If the Regional Administrator objects to its issuance, this Order shall not become effective until such objection is withdrawn.

b. Duty to Reapply

This Order expires on May 31, 2006. It is based on 40 CFR 122.46(a) that specifies that the term of the permit shall not exceed 5 years. The Discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code, not later than 180 days in advance of such date

c. Standard Provisions and Reporting

The Discharger shall comply with all applicable items of the attached "Standard Provisions and Reporting Requirements" of August 1993, except as mentioned

otherwise.

d. Self-Monitoring Program

Except as otherwise indicated, the Discharger shall comply with Parts A and B of the attached Self-Monitoring Program (SMP), as adopted by the Board and as may be amended by the Executive Officer.

e. Duty to Notify

The Discharger must provide adequate notice to the Board for new introduction of pollutants into the WWTP, for substantial changes in the volume or character of pollutants, and related information specified in 40 CFR 122.42(b)

f. Permit Reopener or Modification

This Order may be modified or reopened prior to the expiration date as specified in the above "Standard Provisions and Reporting", or as a result of:

- i) Monitoring of other toxic and priority pollutants indicating that either reasonable potential of exceeding the corresponding site-specific WQOs/WQCs or significant amounts of these pollutants exist in the discharge resulting in a threat of impacts to the water quality or beneficial uses of Suisun Bay; or
- ii) Board staff's review of the status of TMDL development; or
- iii) Discharger's request to reflect the necessary changes in the discharge conditions, such as the implementation of a mass offset program; or
- iv) Other factors specified in the appropriate and applicable federal and state regulations for NPDES permits.

2. *Toxicity*

a. Compliance with Acute Toxicity Effluent Limitations

Compliance with the acute toxicity limitations in Effluent Limitations B.3.a of this Order shall be evaluated by measuring the survival rate of test fishes, which are specified in the attached SMP, exposed to undiluted effluent for 96 hours in flow-through bioassays. Each test consists of ten fish exposed to undiluted effluent and control water, respectively. Each fish represents a single sample. Toxicity tests shall be performed according to the 4th edition protocols approved by the USEPA or equivalent alternatives acceptable to the Executive Officer. If the Discharger cannot fully comply with the requirements of the 4th edition protocol due to factors beyond its control, and additional time is required to either submit a modified 4th edition protocol or to resolve all difficulties associated with the full compliance with the 4th edition protocol, this Provision allows a maximum period of not more than 12 months from the date of this Order adoption for the Discharger to comply with the 4th edition protocol or equivalent requirements.

b. Compliance with Chronic Toxicity Limitations

Definitions of terms used in the chronic toxicity effluent limitations are included in **Attachment A** of this Order. Compliance with chronic toxicity in Effluent

Limitation B.4.b of this Order shall be evaluated by measuring the critical life stage toxicity tests for aquatic species as specified in the attached Self-Monitoring Report. **Attachment B** of this Order identifies the Critical Life Stage Toxicity Tests used in the chronic toxicity monitoring.

c. Toxicity Identification Evaluation / Toxicity Reduction Evaluation

If a violation of the chronic toxicity effluent limitation occurs, the Discharger shall conduct a chronic toxicity reduction evaluation (**TRE**), which shall initially involve a toxic 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. The Discharger shall use currently available TIE methodologies. As toxic constituents are identified or characterized, the Discharger shall continue the TRE and take all reasonable steps to determine the source(s) of the toxic constituent(s) and evaluate alternative strategies for reducing or eliminating the constituent(s) from the discharge, and reduce toxicity to the required level. The Board recognizes that chronic toxicity may be episodic, and 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.

d. Screening Phase Compliance Monitoring

Under the conditions specified in **Attachment B** of this Order, the Discharger shall conduct screening phase compliance monitoring in accordance with a proposal submitted to and acceptable to the Executive Officer. The purpose of the screening is to determine the most sensitive test species for subsequent compliance monitoring for chronic toxicity.

3. *Plan and Procedure Updates*

a. Contingency Plan

The Discharger shall submit no later than October 1, 2001 an updated contingency plan (**CP**) acceptable to the Executive Officer. The CP shall be consistent with the requirements of Board Resolution No. 74-10, which is included as **Attachment G** of this Order. The CP shall be site-specific to the WWTP. The Discharger shall begin implementing the updated CP within 5 working days of approval, unless otherwise directed. The CP shall be reviewed, and updated as necessary, to reflect the current management planning and operation strategies in case of one of or a combination of the contingency conditions occurs. Updated information shall be submitted within 30 days of revision. Discharging pollutants in violation of this Order where the Discharger failed to develop and implement an approved 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.

b. Operating and Maintenance Procedures

The Discharger shall review, and update as necessary, its operating and maintenance procedures, annually, or within a reasonable time period after completion of any significant facility or process changes. A report describing the review results

including an estimated time schedule for completion of any revisions determined necessary, and a description of copy of any completed revisions, shall be submitted to the Board as part of the Annual Report, as specified in Part A of the attached SMP.

4. *Existing Programs*

a. Pretreatment

The Discharger shall continue to implement and enforce its approved pretreatment program in accordance with Federal Pretreatment Regulations (40 CFR 403) and the requirements contained in **Attachment H** of this Order. The requirements in Attachment H are incorporated into this Order by reference.

b. Pollutant Minimization/Pollution Prevention

i) The Discharger shall submit an annual report, acceptable to the Executive Officer, no later than February 28th of each calendar year. The annual report shall cover January through December of the preceding year, and include at least the information contained in Items I.1 through I.10 of **Attachment F** of this Order. The requirements in Attachment F are incorporated by reference herein.

ii) If there is evidence that a reportable priority pollutant¹¹ is present in the effluent and the Discharger is notified by the Executive Officer, the Discharger shall expand its existing Pollution Prevention Program within six months upon notification by the Executive Officer to include the elements contained in Item II.1 through II.5 of **Attachment F** of this Order.

iii) To the extent where the requirements of the Pollution Prevention Program and the Pollutant Minimization Program overlap, the Discharger is allowed to continue/modify/expand its existing Pollution Prevention Program to satisfy the Pollutant Minimization Program requirements.

iv) These Pollution Prevention/Pollutant Minimization Program requirements are not intended to fulfill the requirements in The Clean Water Enforcement and Pollution Prevention Act of 1999 (Senate Bill 709).

c. Regional Monitoring Program

The Discharger shall continue to participate in the Regional Monitoring Program (RMP) to characterize the ambient background water quality of trace substances in San Francisco Bay, and to assist the Regional Board in TMDL development. The

¹¹ A priority pollutant becomes a reportable priority pollutant when (1) there is evidence that it is present in the effluent above its effluent limitation and either:

A sample result is reported as detected, but not quantified (less than the minimum level, or **ML**) and the effluent limitation is less than the reported **ML**; or

A sample result is reported as not detected (less than the method detection limit, or **MDL**) and the effluent limitation is less than the **MDL** occurs,

Or (2) if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported **ML**.

Discharger's continued participation in the RMP will offset some of the more extensive effluent and receiving water self-monitoring requirements that may otherwise be imposed.

5. *Special Studies*

a. Interim Requirements for Cyanide, Acrylonitrile, Bis(2-ethylhexyl)phthalate and Tributyltin

The Discharger shall submit the following proposals and reports acceptable to the Executive Officer within the specified time periods. Each proposal shall include detailed description of the scope of the study, along with an implementation schedule that is based on the shortest practicable time required to perform each task.

- i) A proposal for ambient background water quality characterization for acrylonitrile, bis(2-ethylhexyl)phthalate, cyanide, and tributyltin shall be submitted within 90 days of the effective date of this Order. It shall include, but is not limited to, the description of the location(s) for water quality sampling, analytical method(s) to be used, monitoring frequency, and reporting requirements.
- ii) A proposal for site-specific objective study for cyanide shall be submitted within 120 days of the effective date of this Order. It shall include, but is not limited to, the information specified in section 5.2 (1), (2), and (3) of the SIP.
- iii) Upon approval by the Executive Officer, the Discharger shall implement the proposals. Annual reports acceptable to the Executive Officer shall be submitted by January 31 of each year documenting the progress of the ambient background characterization and site-specific objective studies. Annual report shall summarize the findings and progress to date, and include a realistic assessment of the shortest practicable time required to perform the remaining tasks of the studies.
- iv) By May 18, 2003, the Discharger shall complete the ambient background water quality characterization study for acrylonitrile, bis(2-ethylhexyl)phthalate, cyanide and tributyltin, and submit a report of the results. The report may include information and discussion regarding the bioaccumulative nature of these constituents.
- v) By June 30, 2003, the Discharger shall submit a report of completion for the site-specific objective study. This study shall be adequate to allow the Regional Board to initiate the development and adoption of the site-specific objective for cyanide.

b. Dioxin Study

In accordance with the SIP, the Discharger shall conduct effluent monitoring for the seventeen dioxin congeners listed in **Attachment C** of this Order. The purpose of the monitoring is to assess the presence and amounts of the congeners being discharged to the receiving water for the development of a strategy to control these constituents in a future multimedia approach. The Discharger shall monitor these

seventeen congeners once during dry weather and once during wet weather for a period of three consecutive years. Reporting requirements of this study are specified in Part B of the SMP. In addition, the Discharger shall participate in activities leading to the development of analytical procedures or methods with improved detection limits for dioxins/furans.

6. *Optional Provisions*

a. Mass Offset

If the Discharger wishes to pursue a mass offset program, a mass offset plan for reducing the 303(d)-listed pollutants to the same watershed and drainage basin needs to be submitted for Board approval. This Order may be modified by the Board to allow an acceptable mass offset program.

I, Loretta K. Barsamian, 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 June 20, 2001.


Loretta K. Barsamian
Executive Officer

Attachments:

Tables A and B - Reasonable Potential Analysis Results

Figure 1. Site Map

Figure 2. Waste Water Treatment Schematic

A. Chronic Toxicity Definition of Terms

B. Chronic Toxicity Screening Phase Monitoring Requirements

C. Definition of Terms for Chemical Pollutants

D. Self-Monitoring Program, Parts A (August 1993) and B

E. Standard Provisions and Reporting Requirements dated August 1993

F. Requirements of Annual Pollution Prevention Report and Expanded Pollution Prevention

G. Resolution No. 74-10: Contingency Plan Requirements

H. Pretreatment Program Reporting Requirements

Table A. RPA Results for Priority Inorganic Pollutants

	As	Cd	Cr(VI)	Cu	Pb	Hg	Ni	Se	Ag	Zn	CN
Applicable C:	36	0.62	11	3.73	1.18	0.025	7.1	5	1.07	58	1
MEC (ppb)	1.6	0.2	2.3	8	3	0.3	4.9	2	0.9	39	15
RP Exist?	N	N	N	Y	Y	Y	N	N	N	N	Y

Table B. RPA Results for Priority Organic Pollutants

	TCDD Equivalent	Acrolein	Acrylonitrile	Benzene	Bromoform	Carbon Tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroethane	2-Chloroethylvinyl Ether	Chloroform	Dichlorobromomethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethylene	1,2-Dichloropropane
Applicable C:	1.4E-08	780	0.66	71	360	4.4	21000	34	-	-	-	46	-	99	3.2	39
MEC (ppb)	2.1E-07	ND	1.4	ND	ND	ND	ND	0.5	ND	ND	5.9	0.8	ND	ND	ND	ND
RP Exist?	Y	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N

	1,3-Dichloropropylene	Ethylbenzene	Methyl Bromide	Methyl Chloride	Methylene Chloride	1,1,2,2-Tetrachloroethane	Toluene	1,2-Trans-Dichloroethylene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethylene	Vinyl Chloride	2-Chlorophenol	2,4-Dichlorophenol	2,4-Dimethylphenol
Applicable C:	1700	29000	4000	-	1600	11	200000	140000	-	42	81	525	400	790	2300
MEC (ppb)	ND	ND	5.8	ND	3.2	ND	0.8	ND	ND	ND	ND	ND	ND	ND	ND
RP Exist?	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

	2-Methyl-4,6-Dinitrophenol	2,4-Dinitrophenol	2-Nitrophenol	4-Nitrophenol	3-Methyl-4-Chlorophenol	Pentachlorophenol	Phenols	2,4,6-Trichlorophenol	Acenaphthene	Acenaphthylene	Anthracene	Benzidine	Benzo(a)Anthracene	Benzo(a)Pyrene	Benzo(b)Fluoranthene	Benzo(ghi)Perylene
Applicable C:	765	14000	-	-	-	7.9	5E+06	6.5	2700	-	110000	0.0005	0.049	0.049	0.049	-
MEC (ppb)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6
RP Exist?	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Table B. RPA Results for Priority Organic Pollutants (continued)

Applicable C: MEC (ppb) RP Exist?	Benzo(k)Fluoranthene	0.049	ND	N	Bis(2-Chloroethoxy)Methane	ND	N	Bis(2-Chloroethyl)Ether	170000	ND	N	Bis(2-Chloroisopropyl)Ether	5.9	53	Y	Bis(2-Ethylhexyl)Phthalate	4-Bromophenyl Phenyl Ether	5200	ND	N	Butylbenzyl Phthalate	4300	ND	N	2-Chloronaphthalene	4-Chlorophenyl Phenyl Ether	0.049	ND	N	Chrysene	Dibenzo(a,h)Anthracene	17000	ND	N	1,2-dichlorobenzene	1,3-dichlorobenzene	2600	ND	N	1,4-dichlorobenzene	2600	ND	N	3,3'-Dichlorobenzidine	0.077	ND	N	Diethyl Phthalate	120000	0.59	N								
	Applicable C: MEC (ppb) RP Exist?	Dimethyl Phthalate	2900000	1.47	N	2,4-Dinitrotoluene	9.1	ND	N	2,6-Dinitrotoluene	ND	ND	N	1,2-Diphenylhydrazine	0.54	ND	N	Fluorene	Hexachlorobenzene	370	ND	N	Fluoranthene	14000	ND	N	Fluorene	Hexachlorobenzene	0.0008	ND	N	Hexachlorobutadiene	Hexachlorocyclopentadiene	17000	ND	N	Hexachloroethane	8.9	ND	N	Indeno(1,2,3-cd)Pyrene	600	0.92	N	Isophorone	600	0.92	N	Naphthalene	ND	ND	N	Nitrobenzene	1900	ND	N			
		Applicable C: MEC (ppb) RP Exist?	Nitrosodimethylamine	8.1	ND	N	N-Nitrosodimethylamine	1.4	ND	N	Nitrosodiphenylamine	1.4	ND	N	Phenanthrene	ND	ND	N	Pyrene	11000	1.1	ND	1,2,4-Trichlorobenzene	ND	ND	N	Aldrin	0.0001	ND	N	alpha-BHC	beta-BHC	0.046	ND	N	gamma-BHC	0.063	0.033	N	Chlordane	0.0006	ND	N	4,4'-DDT	0.0006	ND	N	4,4'-DDE	0.0006	ND	Y	4,4'-DD	0.0008	ND	N	Dieldrin	0.0001	ND	Y
			Applicable C: MEC (ppb) RP Exist?	alpha-Endosulfan	0.0087	LOD	N	Endosulfan Sulfate	240	LOD	N	Endrin	0.0023	ND	N	Endrin Aldehyde	0.81	LOD	N	Heptachlor	0.00021	ND	N	Heptachlor Epoxide	0.0001	ND	N	PCB Total	0.0002	ND	N	Toxaphene	0.0002	ND	N	Tributyltin	0.005	0.076	Y																				

PROCESS FLOW SCHEMATIC - 1999

CENTRAL CONTRA COSTA SANITARY DISTRICT

(Not all Valves and Flow Shown)

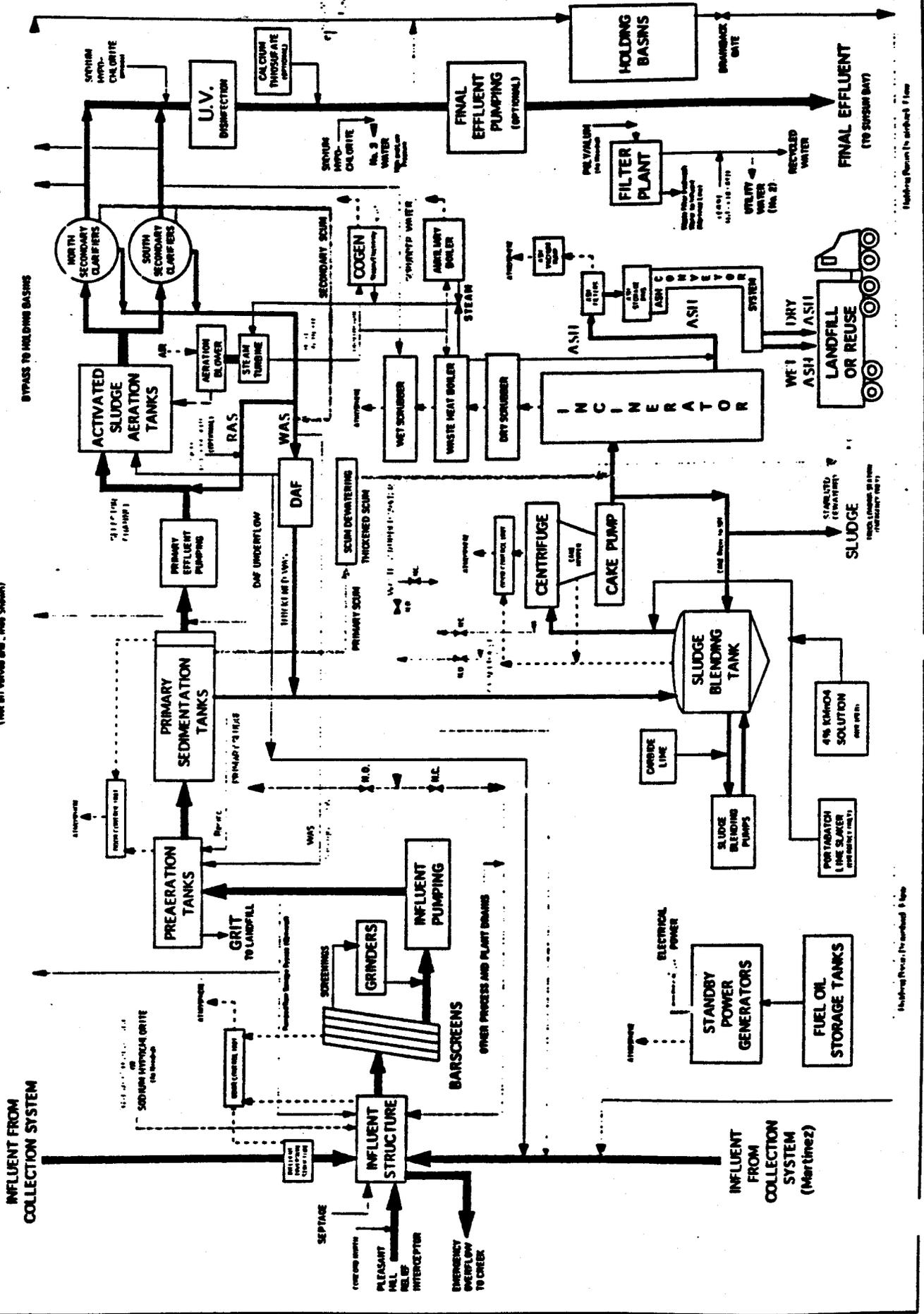


Figure 2. Waste Water Treatment Schematic

PLANT OPS TRAINING 1177

ATTACHMENT A

DEFINITION OF NO OBSERVED EFFECT LEVEL

No observed effect level (NOEL) for compliance determination is equal to IC₂₅ or EC₂₅. If the IC₂₅ or EC₂₅ cannot be statistically determined, the NOEL shall be equal to the NOEC derived using hypothesis testing.

Effective concentration (EC) is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing", response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Kärber. EC₂₅ is the concentration of toxicant (in percent effluent) that causes a response in 25% of the test organisms.

Inhibition concentration (IC) is a point estimate of the toxicant concentration that would cause a given percent reduction in a non-lethal, non-quantal biological measurement, such as growth. For example, an IC₂₅ is the estimated concentration of toxicant that would cause a 25% reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as USEPA's Bootstrap Procedure.

No observed effect concentration (NOEC) is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

ATTACHMENT B

SCREENING PHASE MONITORING REQUIREMENTS

- A. If either of the following conditions occurs, the Discharger shall perform screening phase compliance monitoring to determine the most sensitive species for future toxicity tests:
1. Subsequent to any significant change in the nature of the effluent discharged through changes in sources or treatment, except those changes resulting from reductions in pollutant concentrations attributable to pretreatment, source control, and waste minimization efforts; or
 2. Prior to permit reissuance. Screening phase monitoring data shall be included in the NPDES permit application for re-issuance. The information shall be as recent as possible, but may be based on screening phase monitoring conducted within 5 years before the permit's expiration date.
- B. Prior to commencement of the screening phase compliance monitoring, the Discharger shall submit a proposal acceptable to the Executive Officer. The proposal shall include at least the following elements:
1. Use of test species specified in the attached Tables B-1 and B-2, and use of the protocols referenced in those tables, or as approved by the Executive Officer;
 2. A two-staged study comprising:
 - a. Stage 1 that shall consist of a minimum of one battery of tests conducted concurrently with the selection of the type of test species and minimum number of tests to be based on the attached Table B-3; and
 - b. Stage 2 that shall consist of a minimum of two test batteries conducted at a monthly frequency using the three most sensitive species based on the Stage 1 test results and as approved by the Executive Officer.
 3. Appropriate controls; and
 4. Concurrent reference toxicant tests.

Table B-1. Critical Life Stage Toxicity Tests for Estuarine Waters

SPECIEIS	EFFECT	TEST DURATION	REFERENCE
alga (<u>Skeletonema Costatum</u>) (<u>Thalassiosira pseudonana</u>)	growth rate	4 days	1
red alga (<u>Champia parvula</u>)	number of cystocarps	7-9 days	3
giant kelp (<u>Macrocystis pyrifera</u>)	percent germination; germ tube length	48 hours	2
abalone (<u>Haiotis rufescens</u>)	abnormal shell development	48 hours	2
oyster (<u>Crassostree gigas</u>) mussel (<u>Mytilus edulis</u>)	abnormal shell development; percent survival	48 hours	2
Echinoderms (urchins - <u>Strongylocentrotus purpuratus</u> , <u>S. franciscanus</u>); (sand dollar - <u>Dendraster excentricus</u>)	percent fertilization	1 hour	2
shrimp (<u>Mysidopsis bahia</u>)	percent survival; growth	7 days	3
shrimp (<u>Holmesimysis bahia</u>)	percent survival; growth	7 days	2
topsmelt (<u>Atherinops affinis</u>)	percent survival; growth	7 days	2
silversides (<u>Menidia berylina</u>)	larval growth rate; percent survival	7 days	3

Toxicity Test References:

1. American Society for Testing Materials (ASTM). 1990. Standard Guide for conducting static 96-hour toxicity tests with microalgae. Procedure E 1218-90. ASTM, Philadelphia, PA.
2. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms. USEPA/600/R-95/136. August 1995
3. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. USEPA-600/4-90/003. July 1994

Table B-2. Critical Life Stage Toxicity Tests for Fresh Waters

SPECIES	EFFECT	TEST DURATION	REFERENCE
fathead minnow (<i>Pimephales promelas</i>)	survival; growth rate	7 days	4
water flea (<i>Ceriodaphnia dubia</i>)	survival; number of young	7 days	4
alga (<i>Selenastrum capricornutum</i>)	cell divisions rate	4 days	4

Toxicity Test Reference:

4. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. Third edition. USEPA/600/4-91/002. July 1994

Table B-3. Toxicity Test Requirements for Stage One Screening Phase

REQUIREMENTS	RECEIVING WATER CHARACTERISTICS		
	DISCHARGES TO COAST	DISCHARGES TO SAN FRANCISCO BAY	
Taxonomic Diversity	Ocean	Marine	Freshwater
		1 plant 1 invertebrate 1 fish	1 plant 1 invertebrate 1 fish
Number of tests of each salinity type ¹ :			
Freshwater	0	1 or 2	3
Marine	4	3 or 4	0
Total number of tests	4	5	3

Notes:

1. A waterbody is considered freshwater when its salinity is equal to or less than 1 part per thousand 95% or more of the time. When a waterbody has a salinity equal to or greater than 10 parts per thousand 95% or more of the time, it is considered marine. For waters in which the salinity is between 1 and 10 parts per thousand 95% or more of the time, it is considered estuarine. For estuarine waters, screening monitoring should include the appropriate tests for both marine and freshwater conditions.

ATTACHMENT C

DEFINITION OF TERMS FOR CHEMICAL CONSTITUENTS

Polynuclear Aromatic Hydrocarbon (PAH) consists of the following constituents:

Benz(a)Anthracene, 3,4-Benzo(b)Fluoranthene
 Benzo(k)Fluoranthene
 Benzo(g,h,i)Perylene
 Benzo(a)Pyrene
 Chrysene
 Dibenz(a,h)Anthracene
 Indeno(1,2,3-cd)pyrene

Polychlorinated Biphenyls (PCBs) shall mean the sum of chlorinated biphenyls whose analytical characteristics resemble those of Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, and Aroclor-1260.

2,3,7,8-TCDD Equivalent shall mean the equivalent concentration of 17 chlorinated dibenzodioxins (CDDs) and chlorinated dibenzofurans (CDFs) congeners. The equivalent concentration is equal to the sum of products of individual congeners and their toxicity equivalence factors (TEFs), which are shown below. (Note: These TEFs may be revised if new or updated information is available, and revision is considered appropriate.)

<u>Isomer Group</u>	<u>Toxicity Equivalence Factor</u>
2,3,7,8-TetraCDD	1
1,2,3,7,8-PentaCDD	1.0
1,2,3,4,7,8-HexaCDD	0.1
1,2,3,6,7,8-HexaCDD	0.1
1,2,3,7,8,9-HexaCDD	0.1
1,2,3,4,6,7,8-HeptaCDD	0.01
OctaCDD	0.0001
2,3,7,8-TetraCDF	0.1
1,2,3,7,8-PentaCDF	0.05
2,3,4,7,8-PentaCDF	0.5
1,2,3,4,7,8-HexaCDF	0.1
1,2,3,6,7,8-HexaCDF	0.1
1,2,3,7,8,9-HexaCDF	0.1
2,3,4,6,7,8-HexaCDF	0.1
1,2,3,4,6,7,8-HeptaCDF	0.01
1,2,3,4,7,8,9-HeptaCDF	0.01
OctaCDF	0.0001

ATTACHMENT D

SELF-MONITORING PROGRAM, PARTS A (August 1993) AND B

(Part A is available upon request)

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

CENTRAL CONTRA COSTA SANITARY DISTRICT
MARTINEZ, CONTRA COSTA COUNTY

NPDES NO. CA0037648

ORDER NO. 01-068

CONSISTS OF

PART A (dated August 1993)

AND

PART B

PART B

I. SAMPLING STATIONS

A. *Influent*

<u>Station</u>	<u>Description</u>
I-001	At any point in the treatment facility headworks at which all wastes tributary to the system are present and preceding any phase of treatment.

B. *Effluent*

<u>Station</u>	<u>Description</u>
E-001	At any point from treatment facility between the point of discharge and the point at which all flow tributary to that outfall is present.

C. *Receiving Water*

<u>Station</u>	<u>Description</u>
C-001	At a point in Suisun Bay, located within 25 feet of the point of discharge from the outfall diffuser section.
C-002	At a point in Suisun Bay, located 100 feet generally west from the offshore end of the diffuser section of the outfall line.
C-003	At a point in Suisun Bay, located 100 feet generally north from the offshore end of the diffuser section of the outfall line.
C-004	At a point in Suisun Bay, located 100 feet generally east from the offshore end of the diffuser section of the outfall line.
C-005	At a point in Suisun Bay, located 100 feet generally south from the shoreward end of the diffuser section of the outfall line.
C-R	At a point in Suisun Bay, located 2,000 feet upstream from the diffuser section of the outfall line in water of the same depth (~5 feet) as station C-001 and not located in dredged channel.

D. *Miscellaneous Discharges*

<u>Station</u>	<u>Description</u>
M-002	Discharge pipe for wet weather flow in excess of treatment plant and basin capacity, located at a point near the northwest corner of Holding Basin "B". Discharge would be directly into Walnut Creek.

<u>Station</u>	<u>Description</u>
M-003	Emergency bypass to Grayson Creek. This could occur should mechanical problems result in reduction of influent pumping capacity below influent flow. Discharge from this location would be raw sewage except as may be diluted by peak wet weather flows.
M-005	This is an emergency discharge pipeline from the first of the holding basins through a levee to Grayson Creek. Structure is not in use at present time.

Note: Discharges through M-002, M-003, and M-005 are not authorized by this Order.

E. *Land Observations*

<u>Station</u>	<u>Description</u>
P-1 thro' P-'n'	Located along the periphery of the WWTP at equidistant intervals, not to exceed 200 feet each.

F. *Overflows and Bypasses*

<u>Station</u>	<u>Description</u>
OV-1 thro' OV-'n'	At points in the collection system including manholes, pump stations, or any other location where overflows and bypasses occur.

G. *Rainfall*

<u>Station</u>	<u>Description</u>
R-1	The nearest official National Weather Service rainfall station or other station acceptable to the Executive Officer.

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. Sampling Schedule

The Discharger shall perform sampling and analysis in accordance with the requirements in **Table 1** of this Self-Monitoring Program (SMP).

B. Sampling Protocols

Sample collection, storage, and analyses shall be performed according to the requirements in the latest 40 CFR Part 136, in the Order, or other methods specified by the Executive Officer.

III. SLUDGE AND ASH ANALYSIS

The Discharger shall chemically analyze sludge as necessary to comply with requirements for landfill disposal, or for reuse and/or disposal of sludge ash.

IV. CHRONIC TOXICITY REQUIREMENTS

A. Test Species and Frequency

The Discharger shall collect 24-hour composite effluent samples on consecutive days at the compliance point station in accordance with the requirements specified in **Table 1** of this SMP for critical life stage toxicity testing as indicated below:

<u>Test Species</u>	<u>Frequency</u>
Red Abalone	Once every two months
Mysid (<i>M. bahia</i>), if good quality red abalone is not seasonally available.	

B. Conditions for Accelerated Monitoring

The Discharger shall accelerate the frequency of monitoring to monthly (or as otherwise specified by the Executive Officer) when there is an exceedance of either of the following conditions:

- a. Three-sample median value of 10 TUc, or
- b. Single-sample maximum value of 20 TUc.

C. Methodology

Sample collection, handling, and preservation shall be in accordance with USEPA protocols. The test methodology used shall be in accordance with the references cited in the Order, or as approved by the Executive Officer. A concurrent reference toxicant test shall be performed for each test.

D. Dilution Series

The Discharger shall conduct tests at 100%, 50%, 25%, 10%, 5%, and 2.5%. The "%" represents percent effluent as discharged. The 100% dilution may be omitted if the marine test species specified is sensitive to artificial sea salts.

V. REPORTING REQUIREMENTS

The Discharger shall follow section C of "Standard Provisions and Reporting Requirements, dated August 1993, unless as specified below:

A. Chronic Toxicity Reporting Requirements

Each toxicity test result for the current reporting period shall include at least the following information:

- a. Dates of sampling, test initiation, and test species;
- b. End point values for each dilution (e.g. number of young, growth rate, and % survival);
- c. NOEC value(s) in percent effluent;
- d. IC₁₅, IC₂₅, IC₄₀, and IC₅₀ values (or EC₁₅, EC₂₅... etc.) in percent effluent;

- e. TUC values (100/NOEC, 100/IC₂₅, and 100/EC₂₅);
- f. Mean % mortality and standard deviation after 96 hours in 100% effluent;
- g. NOEC, LOEC, IC₅₀ or EC₅₀ values for reference toxicant test(s); and
- h. Available water quality measurement, including but not limited to pH, dissolved oxygen, temperature, conductivity, hardness, salinity and ammonia.

B. Self-Monitoring Report

- a. Monthly self-monitoring report including transmittal letter shall be **received** by the Regional Board no later than the 15th day of the month. The Discharger shall continue to submit a hardcopy of self-monitoring report and transmittal letter for each reporting month, until further notice by Board staff. The hardcopy of the transmittal letter shall include all attachments listing summary tables for (i) chronic toxicity test results from at least twelve of the most recent tests; (ii) bioassay acute toxicity test results from at least twelve of the most recent tests; (iii) calculation results of annual running average mass loads for mercury and 2,3,7,8-TCDD Equivalent; and (iv) the required detection limits and minimum levels, as described in section C (Minimum Levels and Reporting Protocols) below.
- b. The Discharger shall record the rainfall on each day of the month.
- c. An updated legible map showing the locations of all ponds, treatment facilities, and points of waste discharge shall be submitted, if changes were made.

C. Minimum Levels and Reporting Protocols

- a. The Discharger shall report the applicable minimum level (ML) and the laboratory's current method detection limit (MDL) with each sample result. The applicable MLs are shown in **Tables 2a, 2b, 2c and 2d of the SIP**, whereas the MDLs are determined by the procedures found in 40 CFR 136, as amended.
- b. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:
 - i) Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
 - ii) Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified", or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration". The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be: percent accuracy (\pm a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- iii) Sample results less than the laboratory's MDL shall be reported as "Not

Detected", or ND.

D. Annual Reports

- a. By the last day of February each year, the Discharger shall submit an annual compliance report for its discharge in the preceding year. The required contents of the annual report are described in section F.5 of Part A of this SMP. A sketch showing the locations of these stations shall be included in the annual report.
- b. By the last day of February each year, the Discharger shall submit an annual report for its pretreatment program.
- c. By the last day of February each year, the Discharger shall submit an annual report for its pollution minimization/pollution prevention.

E. Collection System Sewage Spills/Overflows/Bypass

- a. Collection system sewage spills or overflows where the estimated quantity is over 100 gallons but less than 1,000 gallons shall be reported in each monthly report. Summary information for each spill and/or overflow shall include the date, time, duration, location, estimated volume, cause, and any sampling data collected.
- b. Any bypass, significant non-compliance incidence, or collection system sewage overflows in excess of 1,000 gallons that may endanger public health or the environment shall be reported in accordance with sections F.1 and F.2 of Part A of this SMP, as modified herein, and any additional reporting guidance as may be provided by Board staff. Written reporting requirements for collection system spills and overflows may be satisfied by submittal of summary information with the monthly report.
- c. Any discharge of 50,000 gallons or more of tertiary recycled water (2.2 total coliform) shall be reported to Board staff as soon as reasonably possible.

F. Dioxin and Furan Data

The Discharger shall determine compliance with the interim limitation of 0.836 milligram/month specified in Provision B.5.f for the four congeners, using the laboratory reported concentrations and method detection limits (as determined by the procedure found in 40 CFR 136). The reported concentration may be based on analytical data below the lowest calibration standard. This is a temporary exemption from the SIP against using such data for compliance purposes. This Permit requires the Discharger to investigate the feasibility of lowering the quantification limits to alleviate this conflict. The Part A provisions for accelerated sampling and special reporting apply to violation of this interim limit.

With each sampling event, the Discharger shall also determine and report the results of the other congeners of 2,3,7,8-TCDD, or the method detection limits as determined by the procedure found in 40 CFR 136.

If any of these other congeners are positively detected, the Discharger shall note this in the transmittal letter in the monitoring report and immediately accelerate monitoring to twice each month until either 1) at least 3 consecutive samples show levels below

detection, or 2) the Executive Officer modifies the frequency.

Additionally, 45 days after the third accelerated sampling event, the Discharger shall provide a special report that addresses whether the positive detection(s) may indicate a decline in the quality of the effluent, and describes measures to investigate the cause if that is the case. The determination of decline in performance shall consider the concentration(s) or the other congener(s) detected relative to the concentrations of the four limited congeners, and compare these proportions to past data using detection levels for non-detects. If the analysis suggests that proportions have significantly changed, this means that the congener profile of the discharge has changed and that there may have been a decline in performance. The Discharger shall investigate if this profile change is caused by factors and sources within the Discharger's control. If the proportions have not changed, and the Discharger is within the interim limit for the four congeners, the positive detection(s) may be due to normal sample variability and may be viewed as not representing a decline in performance.

VI. MODIFICATIONS TO PART A

A. Exclusions

This monitoring program does not include sections C.3, C.5, and E.3.

B. Modifications

a. The last sentence of section C.2.d. shall be modified as follows:

“... the sampling frequency shall be increased to daily until the additional sampling results show that the most recent monthly average is in compliance with the monthly average limit.”

b. The second sentence of section F.1 shall be modified as follows:

“Spills shall be reported immediately after the occurrence to the Regional Board at 510-622-2300 on weekdays during 8 a.m. to 5 p.m., and to the Office of Emergency Services at 1-800-852-7550 on weekends or when the spill occurred outside these hours.

c. Section F.1.b is revised to read: “Best estimate of volume involved...”

d. Section F.1.d is revised to read: “Cause of spill or overflow...”

e. Section F.1.i is revised to read: “Agencies or persons notified...”

f. The first sentence of section F.4 shall be modified as follows:

“Self-Monitoring Reports shall be filed regularly for each calendar month, unless specified otherwise, and the Board should receive the report no later than the fifteenth day of the following month...”

g. Section G. 14 is revised as follows:

“Overflow is defined as the intentional or unintentional spilling or forcing out of untreated or partially treated wastes from a collection or transport system (e.g. sewer system manholes, pump stations) upstream from the treatment plant headworks caused by excess flows, capacity restrictions, stoppages (obstructions, structural failure, etc.), and the actions of others.”

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in the Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Board Order No. 01-068.
2. 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.
3. Is effective on the date the permit becomes effective.



Loretta K. Barsamian
Executive Officer

Attachments:

Table 1 - Schedule of Sampling, Measurement and Analysis

Table 1 of Self-Monitoring Report, Part B - Schedule of Sampling, Measurement and Analysis

Sampling Station	I-001			E-001			M-002		L	O	C	Sludge
	C-24	Cont	G	C-24	Cont	G	C-24	G	G	G	G	G [16]
Flow Rate (MGD) [2]		D			D							
CBOD, 5-day, 20°C (mg/l & kg/d)	2/W			2/W			D [3]					
Total Suspended Solids, (mg/l & kg/d)	2/W			2/W			D [3]					
Oil and Grease (mg/l) [4]				M			D [3]					
Settleable Matter (ml/l-hr)						D	D [3]					
pH (standard unit)						D					M	
Bacteriological Indicator (colonies/100ml) [5]						5/W	D [3]				M [5]	
Acute Fish Toxicity, 96-hr (% survival in undiluted effluent) [6]				M								
Chronic Toxicity				2M								
Ammonia Nitrogen (mg/l as N)	M			M			D [3]				M	
Temperature (°F)						D					M	
Dissolved Oxygen, (mg/l & % Saturation)						D					M	
Dissolved Sulfides (mg/l) [7]						D					M	
Unionized Ammonia (mg/l as N)											M	
Conductivity (umhos/cm)											M	
Salinity (ppth)											M	
Total Hardness as CaCO ₃ (mg/l) [8]											M	
All Applicable Standard Observations [9]						D			M	E	M	
Arsenic (ppb)	M[16]			M								2/Y
Cadmium (ppb)	M[16]			M								2/Y
Chromium III and IV (ppb)	M[16]			M								2/Y
Copper (ppb)	M[16]			M								2/Y
Cyanide (ppb) [4],[10]			M[16]			M					Y	2/Y
Lead (ppb)	M[16]			M								2/Y
Mercury (ppb and kg/month) [11]	M[16]			M								2/Y
Nickel (ppb)	M[16]			M								2/Y
Selenium (ppb)	M[16]			M								2/Y
Silver (ppb)	M[16]			M								2/Y
Zinc (ppb)	M[16]			M								2/Y
4,4'-DDE	1/5Y[16]			1/5Y							Y	1/5Y
Dieldrin	1/5Y[16]			1/5Y							Y	1/5Y
Tributyltin (ppb) [12]				M							Y	
2,3,7,8-TCDD & congeners (pg/l and mg/month) [13]						2/Y [14]					Y	
All other pollutants contained in section 40 CFR 131.38(b)(1) Table of CTR, except those specified above in this table (ppb) [4], [15]				2/Y [14]							Y	
Diazinon and Chlorpyrifos (ppb)						2/Y [14]					Y	
VOC, BNA, O-Pest [16]	Q, 2/Y			Q, 2/Y								2/Y

Types of Stations

I = Treatment Plant Influent
 E = Treatment Plant Effluent
 O = Overflow and Bypass Points
 L = Pond Levee Stations
 C = Receiving Water

Frequency of Sampling

D = Once each day
 W = Once each week
 2/W = Twice per week
 Q = Once each quarter (with at least two month intervals)
 2/Y = Twice per year (one in dry season, one in wet season)

M = Once each month

Y = Once each year

E = Each occurrence

Types of Samples

C-24 = 24-hour composite
 G = Grab [4]
 Ob = Observation
 Cont = Continuous
 1/5Y = Once every five years

Notes for Table 1:

1. Grab samples shall be collected on days of composite sampling. In addition, the grab samples must be collected in glass containers. Polycarbonate containers may be used to store tributyltin samples.
2. Influent and effluent flows shall be measured continuously, and recorded and reported daily. For effluent flows, the following information shall also be reported monthly, in million gallons per day:
 - Average daily flow
 - Maximum daily flow
 - Minimum daily flow
3. Bypass sampling: During any time when bypass occurs as a result of excessive wet weather flow or due to any other reasons, thus causing discharge to Pacheco Slough, or Walnut Creek, the following sampling schedule for the duration of the discharge shall be implemented:
 - a. Daily grab samples collected, if physically possible, at locations about 500 feet upstream and 500 feet downstream from the discharge point shall be analyzed for dissolved oxygen, pH, carbonaceous biochemical oxygen demand (CBOD), total suspended solids (TSS), total coliform, fecal coliform, enterococci, and ammonia.
 - b. 24-hour composite samples of the effluent shall be collected from the discharge point(s) for CBOD and TSS when the duration of the discharge is less than 24 hours.
 - c. Grab samples of effluent shall be taken daily for the duration of the bypass event for total coliform, fecal coliform, enterococci, settleable matter, oil and grease, and ammonia. Bypass flow shall be continuously monitored
4. Grab sample shall be used for volatile organic compounds, cyanide and phenol. Any samples for oil and grease, polychlorinated biphenyls, dioxins/furans, and polynuclear aromatic hydrocarbons shall be grab samples.
5. The Discharger shall analyze the effluent sample for enterococci, using USEPA Method 1600 (Membrane Filter Test Method). The Discharger shall collect receiving water sample and monitor enterococci, total coliform and fecal coliform on a monthly basis.
6. Monitoring of the bioassay water shall include, on each day of the test, the following parameters: flow rate, water hardness, alkalinity, pH, dissolved oxygen, ammonia nitrogen, and temperature. If the fish survival rate in the effluent is less than 70% or the control fish survival rate is less than 90%, bioassay test shall be restarted with new batches of fish and continue back to back until compliance is demonstrated. Test fish species shall be three-spine stickleback. The use of alternative species of test fish shall be approved by the Executive Officer.
7. Receiving water analysis for sulfides should be run when dissolved oxygen is less than 2.0 mg/l.
8. Hardness shall be determined using the latest version of USEPA Method 130.2. Alternative

methods of analysis must be approved by the Executive Officer.

9. Standard observations for receiving water include all those for the determination of compliance with the receiving water limitations C.1 through C.4 of the Order.
10. The Discharger may, at their option, analyze for cyanide as Weak Acid Dissociable Cyanide using protocols specified in Standard Method Part 4500-CN-I, USEPA Method OI 1677, or equivalent alternatives in latest edition. Alternative methods of analysis must be approved by the Executive Officer.
11. In the collection of water samples for mercury analysis, the Discharger shall comply with USEPA Method 1669 to the maximum practicable extent. Mercury shall be analyzed by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescent Spectrometry (USEPA Method 1631). However, the Discharger may use USEPA Method 245.2 to analyze mercury, provided that the quantified limit does not exceed 2 ng/l. Alternative methods of analysis must be approved by the Executive Officer.
12. To determine Tributyltin, the Discharger shall use GC-FPD, GC/MS or an USEPA approved method; the method shall be capable of speciating organotins and detecting concentrations at low limits on the order of 5 nanograms per liter. Alternative methods of analysis must be approved by the Executive Officer.
13. Chlorinated Dibenzodioxins and Chlorinated Dibenzofurans shall be analyzed using the latest version of USEPA Method 1613; the method shall be capable of detecting concentrations on the order of picogram per liter or lower. Alternative methods of analysis must be approved by the Executive Officer. Samples for dioxin and furan analysis shall be grab sample. See note 4 above.
14. These pollutants shall be monitored twice per year: one in dry season and one in wet season. If a pollutant is not detected by an analytical method that has a ML specified in the Order, the frequency of monitoring for that pollutant can be reduced to once (in dry season) per year until a new Order is reissued.
15. The Discharger shall report the analytical result for each of the seven PCB congeners, as specified in the CTR. Samples for PCB analysis shall be grab samples. See note 4 above.
16. For **pretreatment requirements**: the monitoring frequency for influent and effluent metals is monthly; for volatile organic compounds (VOC), which are to be analyzed using USEPA Method 624, and base/neutral and extractable organic compounds (BNA), which are to be analyzed using USEPA Method 625, shall be quarterly for both influent and treated effluent. The monitoring frequency for organophosphorus pesticides (O-Pest), which are to be analyzed using USEPA Method 612, shall be semiannually. For sludge, the frequency of monitoring shall be semiannual for all the pollutants that are analyzed for the influent and effluent.

Attachment E

STANDARD PROVISIONS AND REPORTING REQUIREMENTS
(AUGUST 1993)
FOR
NPDES SURFACE WATER DISCHARGE PERMITS

(Available upon request)

ATTACHMENT F

Annual Report Requirements on Pollution Minimization / Pollution Prevention

- I. Content of the annual report on pollution minimization, as required by Provision E.4.b.i of the Order, shall include at least the following information:
 1. A brief description of the WWTP, treatment processes, service area and population.
 2. A discussion of the current pollutants of concern. Periodically, the Discharger shall analyze its own situation to determine which pollutants are currently a problem and/or which pollutants may be potential future problems. This discussion shall include the reasons why the pollutants were chosen.
 3. Identification of sources for the pollutants of concern. This discussion shall include how the Discharger intends to estimate and identify sources of the pollutants. The Discharger shall also identify sources or potential sources not directly within the ability or authority of the Discharger to control, such as pollutants in the potable water supply or from air deposition.
 4. Identification of tasks to reduce the sources of the pollutants of concern. This discussion shall identify and prioritize tasks to address the Discharger's pollutants of concern. Tasks can target its industrial, commercial, or residential sectors. The Discharger may implement its own tasks or participate in group, regional, or national tasks that will address its pollutants of concern. The Discharger is strongly encouraged to participate in group, regional, or national tasks that will address its pollutants of concern whenever it is efficient and appropriate to do so. A time line shall be included for the implementation of each task.
 5. Implementation and continuation of outreach tasks for District employees. The Discharger shall implement outreach tasks for its employees. The overall goal of this task is to inform employees about the pollutants of concerns, potential sources, and how they might be able to help reduce the discharge of pollutants of concerns into the facility. The Discharger may provide a forum for employees to provide input to the Program.
 6. Implementation and continuation of a public outreach program. The Discharger shall implement a public outreach program to communicate pollution prevention to its service area. Outreach may include participation in existing community events such as county fairs, initiating new community events such as displays and contests during Pollution Prevention Week, implementation of a school outreach program, conducting plant tours, and providing public information in newspaper articles or advertisements, radio, television stories or spots, newsletters, utility bill inserts, and web site. Information shall be specific to target audiences. The Discharger should coordinate with other agencies as appropriate.
 7. Discussion of criteria used to measure the effectiveness of the program and tasks. The Discharger shall establish criteria to evaluate the effectiveness of its Pollution Prevention Program. This shall also include a discussion of the specific criteria used to measure the effectiveness of each of the tasks in items 4, 5, and 6 above.

8. Documentation of efforts and progress. This discussion shall detail all of the Discharger's activities in the Pollution Prevention Program during the reporting year.
 9. Evaluation of the effectiveness of the program and tasks. This Discharger shall utilize the criteria established in item 7 above to evaluate the effectiveness of its pollution prevention program and tasks.
 10. Identification of specific tasks and time schedules for future efforts. Based on the evaluation, the Discharger shall detail how it intends to continue or change its tasks in order to more effectively reduce the amount of pollutants to the treatment plant, and subsequently in its effluent.
- II. Additional details to be addressed by the Discharger's expansion of the existing Pollution Prevention Program as a result of the requirements specified in Provision E.4.b.ii of the Order.
1. An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling, or alternative measures approved by the Executive Officer when it is demonstrated that source monitoring is unlikely to produce useful analytical data.
 2. Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system, or alternative measures approved by the Executive Officer when it is demonstrated that influent monitoring is unlikely to produce useful analytical data
 3. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation.
 4. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy.
 5. Submit to the Board an annual status report that includes the following:
 - a. All Pollution Prevention monitoring results for the previous year;
 - b. A list of potential sources of the reportable priority pollutant(s);
 - c. A summary of all actions undertaken pursuant to the control strategy; and
 - d. A description of actions to be taken in the following year.

ATTACHMENT G

RESOLUTION NO. 74-10: CONTINGENCY PLAN REQUIREMENTS

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

RESOLUTION NO. 74-10

POLICAY REGARDING WASTE DSICARGER'S RESPONSIBILITES TO
DEVELOP AND IMPLEMENT CONTINGENCY PLANS TO ASSURE
CONTINUOUS OPERATION OF FACILITIES FOR THE COLLECTION,
TREATMENT, AND DISPOSAL OF WASTE

WHEREAS, this Regional Board has adopted policies and requirements stating its intent to protect the beneficial water uses within the San Francisco Bay Region and prohibiting the discharge of untreated or inadequately treated wastes; and

WHEREAS, conditions including process failure, power outage, employee strikes, physical damage caused by earthquakes, fires, vandalism, equipment and sewer line failures, and strikes by suppliers of chemicals, etc., or maintenance services can result in the discharge of untreated or inadequately treated wastes; and

WHEREAS, the development and implementation of contingency plans for the operation of waste collection, treatment, and disposal facilities under such conditions should insure that facilities remain in, or are rapidly returned to, operation in the event of such an incident and measures are taken to clean up the effects of untreated or inadequately treated wastes.

NOW, THEREFORE BE IT RESOLVED, that this Regional Board will require each discharger as a provision of its NPDES Permit to submit within 120 days after the adoption of the permit a contingency plan acceptable to the Regional Board's Executive Officer to include at least the following:

- A. Provision of personnel for continued operation and maintenance of sewerage facilities during employee strikes or strikes against contractors providing services.
- B. Maintenance of adequate chemicals or other supplies and spare parts necessary for continued operation of sewerage facilities.
- C. Provisions of emergency standby power.
- D. Protection against vandalism
- E. Expeditious action to repair failures of or damage to equipment and sewer lines.

- F. Report of spills and discharges of untreated or inadequately treated wastes including measures taken to clean up the effects of such discharges
- G. Programs for maintenance replacement and surveillance of physical condition of equipment, facilities, and sewer lines.

BE IT FURTHER RESOLVED, pursuant to Section 13267 and 13268, dischargers with NPDES Permits now in effect are required to develop and submit a contingency plan as described above, by December 1, 1974.

BE IT FURTHER RESOLVED, that the discharge of pollutants in violation of an NPDES Permit where a discharger has failed to develop and implement a contingency plan as described above will be the basis for considering the discharge a willful and negligent violation of the Permit and action pursuant to Section 13387 of the California Water Code.

BE IT FURTHER RESOLVED, that it is the intent of the Regional board to eventually require all waste dischargers in the San Francisco Bay Region to develop contingency plans, and those not specifically covered by this resolution are urged to voluntarily develop and implement plans including the above named elements.

I, Fred H. Dierker, Executive officer, do hereby certify the foregoing is a full, true and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on July 16, 1974.



FRED H. DIERKER
Executive Officer

ATTACHMENT H

Pretreatment Program Requirements

- a. The Discharger shall implement all pretreatment requirements contained in 40 CFR 403, as amended. The Discharger shall be subject to enforcement actions, penalties, and fines as provided in the Clean Water Act (33 USC 1351 et seq.), as amended. The Discharger shall implement and enforce their respective Approved Pretreatment Programs or modified Pretreatment Programs as directed by the Regional Board's Executive Officer or the USEPA. The USEPA and/or the State may initiate enforcement action against an industrial user for noncompliance with applicable standards and requirements as provided in the Clean Water Act.
- b. The Discharger shall enforce the requirements promulgated under sections 307(b), 307(c), 307(d) and 402(b) of the Clean Water Act. The Discharger shall cause industrial users subject to Federal Categorical Standards to achieve compliance no later than the date specified in those requirements or, in the case of a new industrial user, upon commencement of the discharge.
- c. The Discharger shall perform the pretreatment functions as required in 40 CFR Part 403 and amendments or modifications thereto including, but not limited to:
 - i) Implement the necessary legal authorities to fully implement the pretreatment regulations as provided in 40 CFR 403.8(f)(1);
 - ii) Implement the programmatic functions as provided in 40 CFR 403.8(f)(2);
 - iii) Publish an annual list of industrial users in significant noncompliance as provided per 40 CFR 403.8(f)(2)(vii);
 - iv) Provide for the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR 403.8(f)(3); and
 - v) Enforce the national pretreatment standards for prohibited discharges and categorical standards as provided in 40 CFR 403.5 and 403.6, respectively.
- d. The Discharger shall submit annually a report to the USEPA Region 9, the State Water Resources Control Board (SWRCB) and the Regional Board describing the Discharger's respective pretreatment program activities over the previous twelve months. In the event that the Discharger is not in compliance with any conditions or requirements of this permit, the Discharger shall also include the reasons for noncompliance and a plan and schedule for achieving compliance. The report shall contain, but is not limited to, the information specified in **Appendix 1 of this Attachment** entitled, "Requirements for Pretreatment Annual Reports," which is incorporated by reference herein. The annual report is due on the last day of February each year.
- e. The Discharger shall submit semiannual pretreatment reports to the USEPA Region 9, the SWRCB and the Board describing the status of their respective significant industrial users (SIUs). The report shall contain, but not is limited to, the information specified in **Appendix 2 of this Attachment** entitled, "Requirements for Semiannual Pretreatment Reports," is incorporated by reference herein. The semiannual reports are due July 31st (for the period January through June) and January 31st (for

the period July through December) of each year. The Executive Officer may exempt a Discharger from the semiannual reporting requirements on a case-by-case basis subject to SWRCB and USEPA's comment and approval.

- f. The Discharger may combine the annual pretreatment report with the semiannual pretreatment report (for the July through December reporting period). The combined report shall contain all of the information requested in Appendices 1 and 2 and will be due on January 31st of each year.
- g. The Discharger shall conduct the monitoring of its treatment plant's influent, effluent, and sludge as described in **Appendix 3 of this Attachment** entitled, "Requirements for Influent, Effluent and Sludge Monitoring," which is incorporated by reference herein. The results of the sampling and analysis, along with a discussion of any trends, shall be submitted in the semiannual reports. A tabulation of the data shall be included in the annual pretreatment report. The Executive Officer may require more or less frequent monitoring on a case-by-case basis.

APPENDIX 1 OF ATTACHMENT H (PRETREATMENT PROGRAM)

REQUIREMENTS FOR PRETREATMENT ANNUAL REPORTS

The Pretreatment Annual Report is due each year on the last day of February. [If the annual report is combined with the semiannual report (for the July through December period) the submittal deadline is January 31st of each year.] The purpose of the Annual Report is 1) to describe the status of the Publicly Owned Treatment Works (POTW) pretreatment program and 2) to report on the effectiveness of the program, as determined by comparing the results of the preceding year's program implementation. The report shall contain at a minimum, but is not limited to, the following information:

1) Cover Sheet

The cover sheet must contain the name(s) and National Pollutant Discharge Elimination Discharge System (NPDES) permit number(s) of those POTWs that are part of the Pretreatment Program. Additionally, the cover sheet must include: the name, address and telephone number of a pretreatment contact person; the period covered in the report; a statement of truthfulness; and the dated signature of a principal executive officer, ranking elected official, or other duly authorized employee who is responsible for overall operation of the POTW (40 CFR 403.12(j)).

2) Introduction

The Introduction shall include any pertinent background information related to the District, the POTW and/or the Industrial base of the area. Also, this section shall include an update on the status of any Pretreatment Compliance Inspection (PCI) tasks, Pretreatment Performance Evaluation tasks, Pretreatment Compliance Audit (PCA) tasks, Cleanup and Abatement Order (CAO) tasks, or other pretreatment-related enforcement actions required by the Regional Board or the EPA. A more specific discussion shall be included in the section entitled, "Program Changes."

3) Definitions

This section shall contain a list of key terms and their definitions that the POTW uses to describe or characterize elements of its pretreatment program.

4) Discussion of Upset, Interference and Pass Through

This section shall include a discussion of Upset, Interference or Pass Through incidents, if any, at the POTW(s) that the Discharger knows of or suspects were caused by industrial discharges. Each incident shall be described, at a minimum, consisting of the following information:

- a) a description of what occurred;
- b) a description of what was done to identify the source;
- c) the name and address of the IU responsible
- d) the reason(s) why the incident occurred;
- e) a description of the corrective actions taken; and
- f) an examination of the local and federal discharge limits and requirements for the purposes of determining whether any additional limits or changes to existing

requirements may be necessary to prevent other Upset, Interference or Pass Through incidents.

5) **Influent, Effluent and Sludge Monitoring Results**

This section shall provide a summary of the analytical results from the "Influent, Effluent and Sludge Monitoring" as specified in Appendix 3. The results should be reported in a summary matrix that lists monthly influent and effluent metal results for the reporting year.

A graphical representation of the influent and effluent metal monitoring data for the past five years shall also be provided with a discussion of any trends.

6) **Inspection and Sampling Program**

This section shall contain at a minimum, but is not limited to, the following information:

- a) Inspections: the number of inspections performed for each type of IU; the criteria for determining the frequency of inspections; the inspection format procedures;
- b) Sampling Events: the number of sampling events performed for each type of IU; the criteria for determining the frequency of sampling; the chain of custody procedures.

7) **Enforcement Procedures**

This section shall provide information as to when the approved Enforcement Response Plan (ERP) had been formally adopted or last revised. In addition, the date the finalized ERP was submitted to the Regional Board shall also be given.

8) **Federal Categories**

This section shall contain a list of all of the federal categories that apply to the POTW. The specific category shall be listed including the subpart and 40 CFR section that applies. The maximum and average limits for the each category shall be provided. This list shall indicate the number of Categorical Industrial Users (CIUs) per category and the CIUs that are being regulated pursuant to the category. The information and data used to determine the limits for those CIUs for which a combined waste stream formula is applied shall also be provided.

9) **Local Standards**

This section shall include a table presenting the local limits.

10) **Updated List of Regulated SIUs**

This section shall contain a complete and updated list of the Discharger's Significant Industrial Users (SIUs), including their names, addresses, and the reason why the SIU is classified as "significant." The list shall include all deletions and additions keyed to the list as submitted in the previous annual report. All deletions shall be briefly explained.

11) **Compliance Activities**

- a) **Inspection and Sampling Summary:** This section shall contain a summary of all the inspections and sampling activities conducted by the Discharger over the past year to gather information and data regarding the SIUs. The summary shall include:
- (1) the number of inspections and sampling events conducted for each SIU;
 - (2) the quarters in which these activities were conducted; and
 - (3) the compliance status of each SIU, delineated by quarter, and characterized using all applicable descriptions as given below:
 - (a) in consistent compliance;
 - (b) in inconsistent compliance;
 - (c) in significant noncompliance;
 - (d) on a compliance schedule to achieve compliance, (include the date final compliance is required);
 - (e) not in compliance and not on a compliance schedule;
 - (f) compliance status unknown, and why not.
- b) **Enforcement Summary:** This section shall contain a summary of the compliance and enforcement activities during the past year. The summary shall include the names of all the SIUs affected by the following actions:
- (1) Warning letters or notices of violations regarding SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.
 - (2) Administrative Orders regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.
 - (3) Civil actions regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.
 - (4) Criminal actions regarding the SIUs' apparent noncompliance with or violation of any federal pretreatment categorical standards and/or requirements, or local limits and/or requirements. For each notice, indicate whether it was for an infraction of a federal or local standard/limit or requirement.

- (5) Assessment of monetary penalties. Identify the amount of penalty in each case and reason for assessing the penalty.
- (6) Order to restrict/suspend discharge to the POTW.
- (7) Order to disconnect the discharge from entering the POTW.

12) Baseline Monitoring Report Update

This section shall provide a list of CIUs that have been added to the pretreatment program since the last annual report. This list of new CIUs shall summarize the status of the respective Baseline Monitoring Reports (BMR). The BMR must contain all of the information specified in 40 CFR 403.12(b). For each of the new CIUs, the summary shall indicate when the BMR was due; when the CIU was notified by the POTW of this requirement; when the CIU submitted the report; and/or when the report is due.

13) Pretreatment Program Changes

This section shall contain a description of any significant changes in the Pretreatment Program during the past year including, but not limited to: legal authority, local limits, monitoring/ inspection program and frequency, enforcement protocol, program's administrative structure, staffing level, resource requirements and funding mechanism. If the manager of the pretreatment program changes, a revised organizational chart shall be included. If any element(s) of the program is in the process of being modified, this intention shall also be indicated.

14) Pretreatment Program Budget

This section shall present the budget spent on the Pretreatment Program. The budget, either by the calendar or fiscal year, shall show the amounts spent on personnel, equipment, chemical analyses and any other appropriate categories. A brief discussion of the source(s) of funding shall be provided.

15) Public Participation Summary

This section shall include a copy of the public notice as required in 40 CFR 403.8(f)(2)(vii). If a notice was not published, the reason shall be stated.

16) Sludge Storage and Disposal Practice

This section shall have a description of how the treated sludge is stored and ultimately disposed. The sludge storage area, if one is used, shall be described in detail. Its location, a description of the containment features and the sludge handling procedures shall be included.

17) PCS Data Entry Form

The annual report shall include the PCS Data Entry Form. This form shall summarize the enforcement actions taken against SIUs in the past year. This form shall include the following information: the POTW name, NPDES Permit number, period covered by the report, the number of SIUs in significant noncompliance (SNC) that are on a pretreatment compliance schedule, the number of notices of violation and administrative orders issued against SIUs, the number of civil and criminal judicial actions against

SIUs, the number of SIUs that have been published as a result of being in SNC, and the number of SIUs from which penalties have been collected.

18) Other Subjects

Other information related to the Pretreatment Program that does not fit into one of the above categories should be included in this section.

Signed copies of the reports shall be submitted to the Regional Administrator at USEPA, the SWRCB and the Regional Board at the following addresses:

Regional Administrator
United States Environmental Protection Agency
Region 9, Mail Code: WTR-7
Clean Water Act Compliance Office
Water Division
75 Hawthorne Street
San Francisco, CA 94105

Pretreatment Program Manager
Regulatory Unit
State Water Resources Control Board
Division of Water Quality
1001 I Street
Sacramento, CA 95814

Pretreatment Coordinator
NPDES Permits Division
SF Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

APPENDIX 2 OF ATTACHMENT H (PRETREATMENT PROGRAM)

REQUIREMENTS FOR SEMIANNUAL PRETREATMENT REPORTS

The semiannual pretreatment reports are due on July 31st (for pretreatment program activities conducted from January through June) and January 31st (for pretreatment activities conducted from July through December) of each year, unless an exception has been granted by the Board's Executive Officer. The semiannual reports shall contain, at a minimum, but is not limited to, the following information:

1) Influent, Effluent and Sludge Monitoring

The influent, effluent and sludge monitoring results shall be included in the report. The analytical laboratory report shall also be included, with the QA/QC data validation provided upon request. A description of the sampling procedures and a discussion of the results shall be given. (Please see Appendix 3 for specific detailed requirements.) The contributing source(s) of the parameters that exceed NPDES limits shall be investigated and discussed. In addition, a brief discussion of the contributing source(s) of all organic compounds identified shall be provided.

The Discharger has the option to submit all monitoring results via an electronic reporting format approved by the Executive Officer. The procedures for submitting the data will be similar to the electronic submittal of the NPDES self-monitoring reports as outlined in the December 17, 1999 Regional Board letter, Official Implementation of Electronic Reporting System (ERS). The Discharger shall contact the Regional Board's ERS Project Manager for specific details in submitting the monitoring data.

If the monitoring results are submitted electronically, the analytical laboratory reports (along with the QA/QC data validation) should be kept at the discharger's facility.

2) Industrial User Compliance Status

This section shall contain a list of all Significant Industrial Users (SIUs) that were not in consistent compliance with all pretreatment standards/limits or requirements for the reporting period. The compliance status for the previous reporting period shall also be included. Once the SIU has determined to be out of compliance, the SIU shall be included in the report until consistent compliance has been achieved. A brief description detailing the actions that the SIU undertook to come back into compliance shall be provided.

For each SIU on the list, the following information shall be provided:

- a. Indicate if the SIU is subject to Federal categorical standards; if so, specify the category including the subpart that applies.
- b. For SIUs subject to Federal Categorical Standards, indicate if the violation is of a categorical or local standard.
- c. Indicate the compliance status of the SIU for the two quarters of the reporting period.

- d. For violations/noncompliance occurring in the reporting period, provide (1) the date(s) of violation(s); (2) the parameters and corresponding concentrations exceeding the limits and the discharge limits for these parameters and (3) a brief summary of the noncompliant event(s) and the steps that are being taken to achieve compliance.

3) POTW's Compliance with Pretreatment Program Requirements

This section shall contain a discussion of the Discharger's compliance status with the Pretreatment Program Requirements as indicated in the latest Pretreatment Compliance Audit (PCA) Report, Pretreatment Compliance Inspection (PCI) Report or Pretreatment Performance Evaluation (PPE) Report. It shall contain a summary of the following information:

- a. Date of latest PCA, PCI or PPE and report.
- b. Date of the Discharger's response.
- c. List of unresolved issues.
- d. Plan and schedule for resolving the remaining issues.

The reports shall be signed by a principal executive officer, ranking elected official, or other duly authorized employee who is responsible for the overall operation of the Publicly Owned Treatment Works (POTW) (40 CFR 403.12(j)). Signed copies of the reports shall be submitted to the Regional Administrator at USEPA, the State Water Resources Control Board and the Regional Board at the following addresses:

Regional Administrator
United States Environmental Protection Agency
Region 9, Mail Code: WTR-7
Clean Water Act Compliance Office
Water Division
75 Hawthorne Street
San Francisco, CA 94105

Pretreatment Program Manager
Regulatory Unit
State Water Resources Control Board
Division of Water Quality
1001 I Street
Sacramento, CA 95814

Pretreatment Coordinator
NPDES Permits Division
SF Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612

APPENDIX 3 OF ATTACHMENT H (PRETREATMENT PROGRAM)

REQUIREMENTS FOR INFLUENT, EFFLUENT AND SLUDGE MONITORING

The Discharger shall conduct sampling of their respective treatment plant's influent, effluent and sludge at the frequency as shown in Table 1 of the Self-Monitoring Program.

The monitoring and reporting requirements of the POTW's Pretreatment Program are in addition to those specified in the individual POTW's NPDES permit. Any subsequent modifications of the NPDES requirements shall be adhered to and shall not affect the requirements described in this Appendix unless written notice from the Regional Board is received. When sampling periods coincide, one set of test results, reported separately, may be used for those parameters that are required to be monitored in both the Discharger's NPDES permit and Pretreatment Program. Monitoring reports required by this Order shall be sent to the Pretreatment Coordinator.

1. Influent and Effluent Monitoring

The Discharger shall monitor for the parameters using the required test methods listed in Table 1 of the Self-Monitoring Program. Any test method substitutions must have received prior written Regional Board approval. In addition, unless instructed otherwise in writing, the Discharger shall continue to monitor for those parameters at the frequency stated in Table 1 of the Self-Monitoring Program. Influent and Effluent sampling locations shall be the same as those sites specified in the POTW's Self-Monitoring Program as set forth in its NPDES permit.

The influent and effluent sampled should be taken during the same 24-hour period. All samples must be representative of daily operations. Grab sample shall be used for volatile organic compounds, cyanide and phenol. Any samples for oil and grease, polychlorinated biphenyls, dioxins/furans, and polynuclear aromatic hydrocarbons shall be grab samples. For all other pollutants, 24-hour composite samples must be obtained through flow-proportioned composite sampling. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto. For effluent monitoring, the reporting limits for the individual parameters shall be at or below the minimum levels (MLs) as stated in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2000) [also known as the State Implementation Policy, or SIP]; any revisions to the MLs shall be adhered to. If a parameter does not have a stated minimum level then the Discharger shall conduct the analyses using the lowest commercially available and reasonably achievable detection levels.

The following standardized report format should be used for submittal of the influent and effluent monitoring report. A similar structured format may be used but will be subject to Regional Board approval. The monitoring reports shall be submitted with the Semiannual Reports.

- A. Sampling Procedures – This section shall include a brief discussion of the sample locations, collection times, how the sample was collected (i.e., direct collection using vials or bottles, or other types of collection using devices such

as automatic samplers, buckets, or beakers), types of containers used, storage procedures and holding times. Include description of pre-chlorination and chlorination /dechlorination practices during the sampling periods.

- B. Method of Sampling Dechlorination – A brief description of the sample dechlorination method prior to analysis shall be provided.
- C. Sample Compositing – The manner in which samples are composited shall be described. If the compositing procedure is different from the test method specifications, a reason for the variation shall be provided.
- D. Data Validation – All quality assurance/quality control (QA/QC) methods to be used shall be discussed and summarized. These methods include, but are not limited to, spike samples, split samples, blanks and standards. Ways in which the QA/QC data will be used to qualify the analytical test results shall be identified. A certification statement shall be submitted with this discussion stating that the laboratory QA/QC validation data has been reviewed and has met the laboratory acceptance criteria. The QA/QC validation data shall be submitted to the Regional Board upon request.
- E. A tabulation of the test results shall be provided.
- F. Discussion of Results – The report shall include a complete discussion of the test results. If any pollutants are detected in sufficient concentration to upset, interfere or pass through plant operations, the type of pollutant(s) and potential source(s) shall be noted, along with a plan of action to control, eliminate, and/or monitor the pollutant(s). Any apparent generation and/or destruction of pollutants attributable to chlorination /dechlorination sampling and analysis practices shall be noted.

2. Sludge Monitoring

Sludge should be sampled in the same 24-hour period during which the influent and effluent are sampled except as noted in (C) below. The same parameters required for influent and effluent analysis shall be included in the sludge analysis. The sludge analyzed shall be a composite sample of the sludge for final disposal consisting of:

- A. Sludge lagoons – 20 grab samples collected at representative equidistant intervals (grid pattern) and composited as a single grab, or
- B. Dried stockpile – 20 grab samples collected at various representative locations and depths and composited as a single grab, or
- C. Dewatered sludge- daily composite of 4 representative grab samples each day for 5 days taken at equal intervals during the daily operating shift taken from a) the dewatering units or b) from each truckload, and shall be combined into a single 5-day composite.

The USEPA manual, POTW Sludge Sampling and Analysis Guidance Document, August 1989, containing detailed sampling protocols specific to sludge is recommended as a guidance for sampling procedures. The USEPA manual Analytical Methods of the National Sewage Sludge Survey, September 1990, containing detailed analytical protocols specific to sludge, is recommended as a guidance for analytical methods.

In determining if the sludge is a hazardous waste, the Dischargers shall adhere to Article 2, "Criteria for Identifying the Characteristics of Hazardous Waste," and Article 3, "Characteristics of Hazardous Waste," of Title 22, California Code of Regulations, sections 66261.10 to 66261.24 and all amendments thereto.

Sludge monitoring reports shall be submitted with the appropriate Semiannual Report. The following standardized report format should be used for submittal of the report. A similarly structured form may be used but will be subject to Regional Board approval.

- A. Sampling procedures – Include sample locations, collection procedures, types of containers used, storage/refrigeration methods, compositing techniques and holding times. Enclose a map of sample locations if sludge lagoons or stockpiled sludge is sampled.
- B. Data Validation – All quality assurance/quality control (QA/QC) methods to be used shall be discussed and summarized. These methods include, but are not limited to, spike samples, split samples, blanks and standards. Ways in which the QA/QC data will be used to qualify the analytical test results shall be identified. A certification statement shall be submitted with this discussion stating that the laboratory QA/QC validation data has been reviewed and has met the laboratory acceptance criteria. The QA/QC validation data shall be submitted to the Regional Board upon request.
- C. Test Results – Tabulate the test results and include the percent solids.
- D. Discussion of Results – The report shall include a complete discussion of test results. If the detected pollutant(s) is reasonably deemed to have an adverse effect on sludge disposal, a plan of action to control, eliminate, and/or monitor the pollutant(s) and the known or potential source(s) shall be included. Any apparent generation and/or destruction of pollutants attributable to chlorination/dechlorination sampling and analysis practices shall be noted.

The Discharger shall also provide any influent, effluent or sludge monitoring data for non-priority pollutants that the permittee believes may be causing or contributing to Interference, Pass Through or adversely impacting sludge quality.



California Regional Water Quality Control Board San Francisco Bay Region



Winston H. Hickox
Secretary for
Environmental
Protection

Internet Address: <http://www.swrcb.ca.gov>
1515 Clay Street, Suite 1400, Oakland, California 94612
Phone (510) 622-2300 FAX (510) 622-2460

Gray Davi
Governor

CERTIFIED MAIL No. 70993220000146713990
RETURNED RECEIPT REQUESTED

Date: JUN 25 2001
File No.: 2119.1008 (ES)

Mr. James Kelly
Central Contra Costa Sanitary District
5019 Imhoff Place
Martinez, CA 94553-4392

Dear Mr. Kelly:

Notice: The item indicated by an "X" is enclosed herewith:

- A. One certified copy of an Order adopted by the Board on the date shown therein.
- B. Attachment to Order containing Requirements and Recommendations of other agencies.
- C. One copy of Executive Officer Summary Report which was considered by the Board on the date shown therein. The Motion(s) recommended therein was (were) adopted by the Regional Board on that date.
- D. Other - Copy of a Tentative Order.

Sincerely,

Loretta K. Barsamian
Executive Officer

cc: Greg Walker, RWQCB
Terry Oda, USEPA Region 9, WTR-5

Sheryl Freeman, OCC

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at <http://www.swrcb.ca.gov>



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