CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2005-XXXX
NPDES NO. CA0082961

WASTE DISCHARGE REQUIREMENTS FOR PACIFIC COAST SPROUT FARMS, INC. SACRAMENTO FACILITY SACRAMENTO COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Board) finds that:

1. The Pacific Coast Sprout Farms, Inc. (hereafter Discharger) submitted a Report of Waste Discharge, dated 5 June 2003, and applied for a permit renewal to discharge waste under the National Pollutant Discharge Elimination System (NPDES) from the Discharger's Sacramento facility.

2. The facility is on property owned by Johann and Karuna Piff and is located at 5649 Warehouse Way, Sacramento, California within Section 24, T8N, R5E, MDB&M as shown on **Attachment A**, a part of this Order. The Discharger discharges process water from growing and washing sprouts. The wastewater is discharged from Outfall 001 to the storm drain system that is owned and operated by the City of Sacramento. The storm drain ultimately discharges to Morrison Creek, a water of the United States and a tributary to the Sacramento-San Joaquin River Delta as defined by Section 12220 of the California Water Code. Outfall 001 and applicable receiving waters are shown in **Attachments A and B**, incorporated herein and made part of the Order.

3. The facility produces 3.5 million pounds per year of organic mung bean sprouts. Supply water is provided by an on-site water supply well. The water is used to irrigate and cool the bean sprouts during the growing stage, and to wash the bean sprouts upon completion of the growing cycle. Some additional washwater is produced during washing of equipment used for sprout growing. The facility may generate up to 104,000 gallons per day (gpd) of wastewater from irrigation and bean sprouts cooling, and 20,000 gpd of washwater from beans and equipment washing. A schematic of the process flow is included in **Attachment C**, incorporated herein and made part of this Order. The Discharger requested on 24 July 2001, a modification of its previous Order, Order No. 98-120, to address the need to add chlorine to its supply water. The Regional Board then on 25 January 2002 adopted Order No. R5-1998-0120-R01, modified to include effluent limitations and weekly monitoring for chlorine residual. Since requesting the modification, the Discharger has determined that its water supply does not need to be chlorinated. Thus, no chemicals are used in the growing process and only a small amount of chlorine is used during equipment cleaning.

4. Based on the Report of Waste Discharge and monitoring data provided by the Discharger between the period of 1998 and 2004 the discharge can be described as follows:

Constituent/Parameter	Maximum Reported	Units
Daily Flow	0.124	million gallons per day (mgd)
Monthly Flow	0.124	mgd
Temperature[1]	68.8	ºF
pH[1]	7.76	ºF
Biochemical Oxygen Demand (BOD)[1,2]	14	mg/L
Total Suspended Solids (TSS)[1]	9.0	mg/L
Electrical Conductivity (EC)[1]	323	µmhos/cm
Dissolved Oxygen[1]	6.9	mg/L
Aluminum	0.9	µg/L
Arsenic	3.7	µg/L
Barium	50.2	µg/L
Chloride	12	mg/L
Chromium	3	µg/L
Copper	1.8	µg/L
Fluoride	0.19	mg/L
Hardness	149	mg/L
Manganese	3.3	µg/L
Mercury	0.0018	µg/L
Nickel	1	µg/L
Nitrate	1.6	mg/L
Sulfate	14	mg/L
Sulfide	6.8	mg/L
Total Dissolved Solids (TDS)	240	mg/L
Zinc	5.8	µg/L

[1] Data for the period (quarter/semiannual/annual) ending 30 September 2004.
[2] 5-day, 20°C BOD.

5. The Regional Board adopted a *Water Quality Control Plan, Fourth Edition, for the Sacramento and San Joaquin River Basins* (hereafter Basin Plan). The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve water quality objectives for all waters of the Basin. These requirements implement the Basin Plan.

6. United States Environmental Protection Agency (USEPA) adopted the *National Toxics Rule* (NTR) on 22 December 1992, which was amended on 4 May 1995 and 9 November 1999, and the *California Toxics Rule* (CTR) on 18 May 2000, which was amended on 13 February 2001. These Rules contain water quality standards applicable to this discharge. The SWRCB adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Policy or SIP) on 2 March 2000, which contains policies and procedures for implementation of the NTR and the CTR.

7. USEPA and the Regional Board have classified this discharge as a minor discharge.

BENEFICIAL USES OF THE RECEIVING STREAM

8. The Basin Plan at page II-2.00 states: *"Existing and potential beneficial uses which currently apply to surface waters of the basins are presented in Figure II-1 and Table II-1. The beneficial uses of any specifically identified water body generally apply to its tributary streams."* The Basin Plan does not specifically identify beneficial uses for Morrison Creek outside the boundaries of the Sacramento-San Joaquin River Delta (Delta), but does identify beneficial uses for Morrison Creek once it enters the Delta, which occurs within 10 miles from the discharge point, and thus is considered a tributary to the Delta. Morrison Creek once it enters the Delta flows into the Bufferlands area, which includes Upper and Lower Beach Lakes. There is no direct access of Morrison Creek to the Sacramento River. In order for Morrison Creek to reach the Sacramento River, it must do so via a lift station and pump (Sump 90 operated by the City of Sacramento) since there is a continuous levee separating the Sacramento River from Morrison Creek.

The Basin Plan identifies the following beneficial uses for the Sacramento-San Joaquin Delta: domestic and municipal supply (MUN), agricultural supply irrigation and stock watering (AGR), industrial service supply (IND), industrial process supply (PRO), water contact recreation (REC-1), non-contact water recreation (REC-2); navigation (NAV); warm freshwater habitat (WARM), cold freshwater habitat (COLD), migration of aquatic organisms (MIGR), spawning (SPWN), and wildlife habitat (WILD). In addition, the SWRCB Resolution No. 88-63, incorporated into the Basin Plan pursuant to Regional Board Resolution 89-056, requires the Regional Board to assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in Table II-1.

The Basin Plan on page II-1.00 states: *"Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning…" and with respect to disposal of wastewaters states that "...disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses."*

The federal Clean Water Act (CWA), Section 101(a)(2), states: *"it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983."* Federal Regulations, developed to implement the requirements of the CWA+, create a rebuttable presumption that all waters be designed as fishable and swimmable. Federal Regulations, 40 Code of Federal Regulations (CFR) Sections 131.2 and 131.10, require that all waters of the State be regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial, and other purposes including navigation. Section 131.3(e), 40 CFR, defines existing beneficial uses as those uses actually attained after November 28, 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 CFR Section 131.10 requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be

protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.
In reviewing whether the existing and/or potential uses of the Sacramento–San Joaquin River Delta apply to Morrison Creek (upstream of the Delta), the Regional Board has considered the following facts:

a. Municipal and Domestic Supply and Agricultural Supply

The Regional Board is required to apply the beneficial uses of municipal and domestic supply to Morrison Creek based on State Board Resolution No. 88-63 which was incorporated in the Basin Plan pursuant to Regional Board Resolution 89-056. In addition, the State Water Resources Control Board (SWRCB) has issued water rights to existing water users along Morrison Creek immediately downstream of the discharge and along the Sacramento River and other receiving waters within the Sacramento-San Joaquin River Delta downstream of the discharge for domestic and irrigation uses.

b. Water Contact and Noncontact Recreation and Esthetic Enjoyment

The Regional Board finds that the discharge flows through residential areas and there is ready public access to Morrison Creek, the Sacramento River, and the Sacramento-San Joaquin River Delta. Exclusion of the public is unrealistic and contact recreational activities currently exist along Morrison Creek and within the Delta in the Sacramento River and these uses are likely to increase as the population in the area grows.

c. Preservation and Enhancement of Fish, Wildlife, and Other Aquatic Resources

Morrison Creek flows into the Bufferlands area and to the Sacramento River within the Delta. The California Department of Fish and Game (DFG) reported that a recent study conducted by the Sacramento Regional County Sanitation District found Chinook salmon, a cold water species, in the Bufferlands area. In addition, the DFG has also verified that the fish species present in the Sacramento River and downstream waters are consistent with both cold- and warm-water fisheries and that there is a potential for anadromous fish migration, thus necessitating a cold-water designation. The Basin Plan (Table II-1) designates, the Sacramento-San Joaquin River Delta as being both a cold and warm freshwater habitat. Therefore, pursuant to the Basin Plan, the cold designation applies to Morrison Creek. The cold-water habitat designation necessitates that the in-stream dissolved oxygen concentration be maintained at, or above, 7.0 mg/L. This approach recognizes that, if the naturally occurring in-stream dissolved oxygen concentration is below 7.0 mg/l, the Discharger is not required to improve the naturally occurring level.

Upon review of the flow conditions, habitat values, and beneficial uses of Morrison Creek, and the facts described above, the Regional Board finds that the beneficial uses

identified in the Basin Plan for the Sacramento-San Joaquin River Delta are applicable to Morrison Creek.

9. CWA Section 303(d) addresses waters that have not attained the CWA national goal of "fishable, swimmable" by requiring states to identify these impaired water bodies and develop total maximum daily loads (TMDLs) for them, with oversight from USEPA. A TMDL is a quantitative assessment of water quality problems, contributing sources, and load reductions or control actions needed to restore and protect bodies of water.

10. Morrison Creek is listed as an impaired water body pursuant to Section 303(d) of the CWA. The list of pollutants for which Morrison Creek is impaired appears on a list (the "California 303(d) List"), which was updated in 2002 and approved by the State Board in February 2003. The pollutant identified on the California 303(d) List as impairing Morrison Creek is diazinon. On 10 September 2004, the Regional Board adopted Resolution No. R5-2004-0109, Establishment of Total Maximum Daily Loads of Diazinon and Chlorpyrifos in Sacramento Area Urban Creeks, which included Morrison Creek. The Resolution concluded that existing Regional Board and federal regulatory requirements (Federal Insecticide, Fungicide, and Rodenticide Act and Waste Discharge Requirements Order No. R5-2002-0206 and monitoring requirements for the County of Sacramento storm water discharges from municipal separate storm sewer systems) are sufficient to attain water quality objectives in Urban Creeks including Morrison Creek with respect to diazinon and chlorpyrifos. Based on monitoring studies conducted by the Discharger, diazinon was not found in detectable concentrations in the facility's effluent. This Order therefore does not include a requirement for the Discharger to monitor its effluent or Morrison Creek for diazinon.

EFFLUENT LIMITATIONS AND REASONABLE POTENTIAL

11. Effluent limitations, and toxic and pretreatment effluent standards established pursuant to Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the CWA and amendments thereto are applicable to the discharge.

12. The federal CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law. (33 U.S.C. § 1311(b)(1)(C); 40 CFR, § 122.44(d)(1)) NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to Federal Regulations, 40 CFR section 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that *"are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to excursion above any state water quality standard, including state narrative criteria for water quality."* Federal Regulations, 40 CFR, Section 122.44(d)(1)(vi), further provide that *"[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above narrative*

criterion within an applicable State water quality standard, the permitting authority must establish effluent limits."

13. The Regional Board's Basin Plan, page IV-17.00, contains an implementation policy ("Policy for Application of Water Quality Objectives") that specifies that the Regional Board *"will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives."* This Policy complies with 40 CFR 122.44(d)(1). With respect to narrative objectives, the Regional Board must establish effluent limitations using one or more of three specified sources, including EPA's published water quality criteria, a proposed state criterion (i.e., water quality objective), or an explicit state policy interpreting its narrative water quality criteria (i.e., water the Regional Board's "Policy for Application of Water Quality Objectives") (40 CFR 122.44(d)(1)(vi)(A),(B), or (C)). The Basin Plan contains a narrative objective requiring that: *"All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life"*. The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances that adversely affect beneficial uses. The beneficial uses include municipal and domestic supply, agricultural irrigation and stock watering, industrial service supply, industrial process and service supply, water contact recreation, non-contact water recreation including aesthetic enjoyment, warm freshwater habitat, cold fresh water habitat, warm and cold water fish migration habitat, warm spawning habitat, wildlife habitat, and navigation. The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The Basin Plan also limits chemical constituents in concentrations that adversely affect surface water beneficial uses. For waters designated as municipal, the Basin Plan specifies that, at a minimum, waters shall not contain concentrations of constituents that exceed Maximum Contaminant Levels (MCLs) in Title 22 of the California Code of Regulation (CCR). The Basin Plan further states that, to protect all beneficial uses, the Regional Board may apply limits more stringent than MCLs. When a reasonable potential exists for exceeding a narrative objective, Federal Regulations mandate numerical effluent limitations and the Basin Plan narrative criteria clearly establish a procedure for translating the narrative objectives into numerical effluent limitations.

14. Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard. **Attachment D** summarizes maximum effluent concentrations (MECs) and includes CTR aquatic life and human health criteria and Basin Plan objectives for each priority pollutant and other pollutants of concern. Based on information submitted as part of the application, in studies, and as directed by monitoring and reporting programs the Regional Board finds that the discharge does have a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for **arsenic, fluoride, nitrate, and salinity** (electrical conductivity (EC) or total dissolved solids (TDS)).

15. On 5 November 2001, the Executive Officer issued a letter, pursuant to California Water Code, Section 13267, requiring the Discharger to prepare a technical report assessing effluent and receiving water quality. The Discharger failed to provide all the required effluent and receiving water data. A copy of that letter, including its attachments is incorporated into this Order as **Attachments E through E-4**. The study/provision contained in this Order is intended to be consistent with the requirements of the technical report in requiring sampling for NTR, CTR, and additional constituents to determine if the discharge has a reasonable potential to cause or contribute to water quality impacts. This Order, therefore contains provision E2 that:

    a. require the Discharger to conduct a study to provide missing information required by the 13267 letter issued by the Executive Officer on 5 November 2001 to determine whether the discharge has the reasonable potential to cause or contribute to an in-stream excursion above a water quality standard, including Basin Plan numeric and narrative objectives and water quality standards, objectives, and criteria;

    b. if the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard, require the Discharger to submit sufficient information to calculate effluent limitations for those constituents; and

    c. allow the Regional Board to reopen this Order and include effluent limitations for those constituents.

16. ***Arsenic***— The Basin Plan includes a narrative chemical constituents water quality objective that states, "*waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses*" and also contains a narrative toxicity objective. Municipal and domestic supply is a beneficial use of the receiving stream. The USEPA Primary MCL for arsenic is10 µg/L. Pursuant to the Safe Drinking Water Act, DHS must revise the arsenic MCL in Title 22 CCR to be as low or lower than the USEPA MCL. Applying the Basin Plan's "Policy for Application of Water Quality Objectives", to protect future municipal and domestic water use, it is reasonable to apply the USEPA MCL for arsenic to the receiving stream for implementation of the basin plan chemical constituents objective. The maximum observed effluent arsenic concentration was 3.7 µg/L. Using the TSD reasonable potential analysis procedure, the maximum projected concentration of arsenic in the effluent is calculated to be 27.4 µg/L. The projected MEC for arsenic exceeds the primary USEPA MCL of 10 µg/L; therefore, there is a reasonable potential that the discharge will cause or contribute to an excursion of the Basin Plan chemical constituents objective. An effluent limitation for arsenic is included in this Order and is established as 10 µg/L as a monthly average based on protection of the MUN beneficial use, the Basin Plan chemical constituents objective and toxicity objective, and the USEPA Primary MCL. Based on the limited data submitted (only two samples), it appears that the statistically projected MEC would not comply with this effluent limitation, and a time schedule is needed. As the chemical constituents Basin Plan objective is not a new objective, a schedule of compliance for arsenic is not included in this Order. A separate Time Schedule Order shall be proposed for compliance with the arsenic effluent limitation.

17. **Chlorine Residual**. An effluent limitation for chlorine was included in the previous permit because the Discharger had indicated they were required to chlorinate the water supply used for growing and washing the sprouts for food safety purposes. The Discharger later learned that their groundwater met the potable standards and was no longer required to be chlorinated. The Discharger however still uses a minor amount of chlorine to clean and disinfect growing equipment. The applicable water quality standard that applies to chlorine is the Basin Plan narrative toxicity water quality objective. For implementation of this narrative toxicity objective, the Regional Board used the second method prescribed by 40 CFR 122.44(d)(vi) for determining reasonable potential, which relies on USEPA criteria and other information. USEPA's ambient water quality criteria for chlorine for protection of freshwater aquatic life are 11 µg/l as a 4-day average (chronic) concentration, and 19 µg/l as a 1-hour average (acute) concentration for total chlorine residual. Chlorine is known to be extremely toxic to aquatic organisms and the discharger has no processes specific to the removal of chlorine, and relies strictly on the dissipation and consumption of the chlorine residual, therefore the effluent does have a reasonable potential to exceed acute water quality criteria at the point of discharge. USEPA guidelines and the Basin Plan allow for mixing zones where water quality objectives can be exceeded, but no lethality is allowed as a result of the use of mixing zones. Therefore, since chlorine can cause acute toxicity, i.e., cause lethality, no dilution is granted and this Order includes water quality based effluent limitations for chlorine at the outfall. The effluent limitations for total chlorine residual are 0.01 mg/l as a monthly average, and 0.02 mg/l as a daily maximum, based on the USEPA's ambient criteria to protect freshwater aquatic life. As a result, this permit requires weekly monitoring of chlorine residual concentrations in the effluent when chlorine is used in any part of the sprout growing and equipment cleaning process.

18. ***Electrical Conductivity (EC)***— EC is a method of measuring salinity in water. High salinity can impact the beneficial uses of receiving waters. The Basin Plan states, on Page III-3.00 Chemical Constituents, "Waters shall not contain constituents in concentrations that adversely affect beneficial uses." The Basin Plan's "Policy for Application of Water Quality Objectives" provides that in implementing narrative water quality objectives, the Regional Board will consider numerical criteria and guidelines developed by other agencies and organizations. This application of the Basin Plan is consistent with Federal Regulations, 40 CFR 122.44(d). For EC, *Ayers R.S. and D.W. Westcott, Water Quality for Agriculture, Food and Agriculture Organization of the United Nations – Irrigation and Drainage Paper No. 29, Rev. 1, Rome (1985),* reports levels above 700 µmhos/cm will reduce crop yield for sensitive plants. This Agricultural Water Quality Goal value represents a guideline for interpreting water quality for irrigation. Agricultural irrigation is a beneficial use of Morrison Creek downstream of the discharge. This Order and the Basin Plan prohibit the discharge of chemical constituents in concentrations that impair beneficial uses and the Agricultural Water Quality Goal is a numeric criterion, which applies the Basin Plan's narrative objective to protect agricultural uses of the receiving water. The maximum reported EC level (out of 9 sample results) found in the effluent was 323 µmhos/cm. Using the TSD Reasonable Potential Analysis, the projected MEC for EC is calculated at 1,034 µmhos/cm. Based on the projected MEC, the Regional Board finds that the discharge has a reasonable potential to cause or contribute to an in-stream excursion above water quality standards for EC in Morrison Creek. As a result, this Order establishes a final effluent

limitation for EC of 700 µmhos/cm as a monthly average, based on the Agricultural Water Quality Goal, implementing the Basin Plan chemical constituents narrative objective. However, based on the data submitted (nine samples ranging between 261 µmhos/cm and 323 µmhos/cm), it appears that the effluent would be able to comply with this effluent limitation, and therefore a time schedule is not needed.

19. ***Total Dissolved Solids (TDS).*** The maximum observed TDS concentration was 240 mg/l. TDS are typically correlated with electrical conductivity. Therefore, because an effluent limit has been placed on EC, an effluent limit on TDS would be redundant. An effluent limit on TDS therefore has not been placed on this discharge

20. ***Fluoride***— The Basin Plan states, on Page III-3.00 Chemical Constituents, that "[w]*aters shall not contain constituents in concentrations that adversely affect beneficial uses*." The Basin Plan's "Policy for Application of Water Quality Objectives" provides that in implementing narrative water quality objectives, the Regional Board will consider numerical criteria and guidelines developed by other agencies and organizations. This application of the Basin Plan is consistent with Federal Regulations, 40 CFR 122.44(d). The *Ayers R.S. and D.W. Westcott, Water Quality for Agriculture, Food and Agriculture Organization of the United Nations – Irrigation and Drainage Paper No. 29, Rev. 1, Rome (1985),* reports fluoride concentrations above 1000 µg/L as safe levels for irrigated agriculture use. Agricultural irrigation is designated as a beneficial use of Morrison Creek. Analytical data provided by the Discharger indicate that fluoride was detected at a maximum effluent concentration of 190 µg/L. Using the TSD Reasonable Potential Analysis, the projected MEC for fluoride is calculated at 2508 µg/L. Based on the projected MEC, the Regional Board finds that the discharge has a reasonable potential to cause or contribute to an in-stream excursion above water quality standards for fluoride in Morrison Creek. As a result, this Order establishes a final Effluent Limitation for fluoride of 1000 µg/l as a monthly average, based on the Agricultural Water Quality Goal, implementing the Basin Plan narrative water quality objective for chemical constituents. Based on the limited data submitted (only one sample), it appears that the statistically projected MEC would not comply with this effluent limitation, and a time schedule is needed. As the chemical constituents Basin Plan objective is not a new objective, a schedule of compliance for fluoride is not included in this Order. A separate Time Schedule Order shall be proposed for compliance with the fluoride effluent limitation.

21. ***Nitrate***—The Basin Plan includes a water quality objective that states "*waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses…water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs) specified in the following provisions of Title 22 of the California Code of Regulations……Tables 64431-A (Inorganic Chemicals).*" and also contains a narrative toxicity objective. MUN is a beneficial use of Morrison Creek. Title 22 CCR, Table 64431-A, includes a primary MCL of 45 mg/l for nitrate (as NO_3) which translates to 10 mg/l (as N). The maximum observed effluent nitrate concentration was 1.6 mg/L (as N). Using the TSD reasonable potential analysis, the projected MEC of nitrate is calculated to be 21 mg/L (as N). Based on the projected MEC, the Regional

Board finds that the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Primary MCL of Nitrate. As a result, an effluent limitation for nitrate is included in this Order and is established as 10 mg/l as a monthly average, based on protection of the MUN beneficial use, and the California DHS Primary MCL, implementing the Basin Plan chemical constituents objective. Based on the limited data submitted (only one sample), it appears that the statistically projected MEC would not comply with this effluent limitation, and a time schedule is needed. As the Basin Plan chemical constituent objective is not a new objective, a schedule of compliance for nitrate is not included in this Order. A separate Time Schedule Order shall be proposed for compliance with the nitrate effluent limitation.

22. The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and the SWRCB Resolution 68-16 (hereafter Resolution 68-16). Finding 16 indicates that although this Order provides for an increase in the flow volume, the mass of pollutants discharged remains unchanged from the previous permit. The increase in flow with no increase in mass of pollutants discharged will not have significant impacts on aquatic life, which is the beneficial use most likely affected by the pollutants discharged (BOD, suspended solids, chlorine residual, metals, and inorganics). The increase will not cause a violation of water quality objectives. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge.

23. Section 303(a-c) of the CWA, required states to adopt numeric criteria where they are necessary to protect designated uses. The Regional Board adopted numeric criteria in the Basin Plan. The Basin Plan is a regulatory reference for meeting the state and federal requirements for water quality control (40 CFR 131.20). State Board Resolution No. 68-16, the Antidegradation Policy, does not allow changes in water quality less than that prescribed in Water Quality Control Plans (Basin Plans). The Basin Plan states: *"The numerical and narrative water quality objectives define the least stringent standards that the Regional Board will apply to regional waters in order to protect the beneficial uses."* This Order contains Receiving Water Limitations based on the Basin Plan numerical and narrative water quality objectives for Biostimulatory Substances, Chemical Constituents, Color, Dissolved Oxygen, Floating Material, Oil and Grease, pH, Pesticides, Radioactivity, Salinity, Sediment, Settleable Material, Suspended Material, Tastes and Odors, Temperature, Toxicity, and Turbidity.

GROUNDWATER

24. The beneficial uses of the underlying groundwater, as identified in the Basin Plan, are municipal and domestic (MUN), industrial service (IND), industrial process (PRO), and agricultural supply (AGR).

STORMWATER

25. The State Water Resources Control Board (SWRCB) adopted Order No. 97-03-DWQ (General Permit No. CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, excluding construction activities, and requiring submittal of a Notice of Intent (NOI) by industries to be covered under the permit. The Discharger however,

does not fall under one of the regulated industries and coverage under the General Storm water Permit is not required. .

GENERAL

26. Monitoring is required by this Order for the purposes of assessing compliance with permit limitations and water quality objectives and gathering information to evaluate the need for additional limitations.

27. Where the Regional Board determines that it is infeasible to achieve immediate compliance with an adopted water quality objective, the Board may establish in NPDES permits a schedule of compliance. However, schedules of compliance are only authorized for those water quality objectives adopted after September 1995. The Basin Plan chemical constituents objective, which is the basis for establishing limits for arsenic, fluoride, nitrate, and salinity (specific conductance or total dissolved solids) was established prior to 1995; therefore this Order does not contain a compliance schedule for these constituents. A separate Time Schedule Order shall be proposed for compliance with the effluent limitations for arsenic, fluoride, and nitrate. No time schedule is being proposed to comply with the specific conductance limitation because based on the data available, the discharge already appears to be in compliance with this limitation.

28. The Regional Board has considered the information in the attached Information Sheet in developing the Findings of this Order. The Information Sheet, Monitoring and Reporting Program No. R5-2005-___ and Attachments A through E-4 are a part of this Order.

29. The discharge is presently governed by Waste Discharge Requirements Order No. R5-1998-0120-R-01, adopted by the Regional Board on 25 January 2002.

30. The action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et seq.), requiring preparation of an environmental impact report or negative declaration in accordance with Section 13389 of the CWC.

31. The Regional Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

32. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge.

33. This Order shall serve as an NPDES permit pursuant to Section 402 of the CWA, and amendments thereto, and shall take effect upon the date of hearing, provided USEPA has no objections.

IT IS HEREBY ORDERED that Order No. R5-1998-0120-R01 is rescinded and Pacific Coast Sprout Farms, Inc., its agents, successors and assigns, in order to meet the provisions contained in Division 7 of the CWC 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. Discharge of wastewater at a location or in a manner different from that described in the Findings is prohibited.

2. The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Standard Provision A.13. [See attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements (NPDES) February 2004"].

3. Neither the discharge nor its treatment shall create a condition of pollution or nuisance as defined in Section 13050 of the CWC.

B. Effluent Limitations: Outfall 001

1. Effluent discharged from Outfall 001 shall not exceed the following limits:

Constituents	Units	Monthly Average	Daily Maximum
Biochemical Oxygen Demand (BOD)[1]	mg/L	30	45
	lbs/day[2]	31	47
Total Suspended Solids (TSS)	mg/L	30	45
	lbs/day[2]	31	47
Total Chlorine Residual	mg/L	0.01	0.02
	lbs/day[2]	0.01	0.02
Arsenic	µg/L	10	--
	lbs/day[2]	0.01	--
Fluoride	µg/L	1,000	--
	lbs/day[2]	1.0	--
Nitrate (as N)	mg/L	10	--
	lbs/day[2]	10	--
Electrical Conductivity (EC)	µmhos/cm	700	--

[1] 5-day, 20°C biochemical oxygen demand
[2] Based upon a maximum flow limit of 0.124 mgd

2. The discharge shall not have a pH less than 6.5 nor greater than 8.5.

3. The daily discharge flow shall not exceed 0.124 million gallons.

4. Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

   Minimum for any one bioassay - - - - - - - - - 70%
   Median for any three or more consecutive bioassays - - - - 90%

C. Receiving Water Limitations:

Receiving water limitations are site-specific interpretations of water quality objectives contained in the Basin Plan. As such, they are a required part of this Order. The discharge shall not cause the following in the receiving water:

1. Fecal coliform concentrations, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of 200/100 ml or more than ten percent of the total number of samples taken during any 30-day period to exceed 400/100 ml.

2. Biostimulatory substances to be present which promote aquatic growths that cause nuisance or adversely affect beneficial uses.

3. Discoloration that causes nuisance or adversely affects beneficial uses.

4. Dissolved oxygen concentrations to fall below 7.0 mg/L. The monthly median of the mean daily dissolved oxygen concentration shall not fall below 85 percent of saturation in the main water mass, and the 95th percentile concentration shall not fall below 75 percent of saturation.

5. Floating material in amounts that cause nuisance or adversely affect beneficial uses.

6. Oils, greases, waxes, or other materials that result in a visible film or coating on the water surface or on objects in the water.

7. The normal ambient pH to fall below 6.5, exceed 8.5, or change by more than 0.5 units.

8. Pesticides to be present in concentrations in the receiving water, bottom sediments, or aquatic life in concentrations that adversely affect beneficial uses or in concentrations that exceed the lowest levels technically and economically achievable.

9. Radionuclides to be present in concentrations that exceed maximum contaminant levels specified in 22 CCR; that harm human, plant, animal or aquatic life; or that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

10. Suspended sediment load and suspended sediment discharge rates to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

11. Deposition of material that causes nuisance or adversely affects beneficial uses.

12. Suspended material in concentrations that adversely affect beneficial uses.

13. Taste or odor-producing substances to impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or to cause nuisance or adversely affect beneficial uses.

14. An increase in the normal ambient temperature of waters by more than 5ºF (3ºC).

15. Toxic pollutants to be present in concentrations that adversely affect beneficial uses or that produce detrimental physiological responses in human, plant, animal, or aquatic life.

16. Except for periods of storm runoff, turbidity exceeding 10 Nephelometric Turbidity Units (NTUs) or the turbidity of receiving waters to increase over background levels by more than:

    a. 1 NTU where natural turbidity is between 0 and 5 NTUs.
    b. More than 20 percent where natural turbidity is between 5 and 50 NTUs.
    c. More than 10 NTUs where natural turbidity is between 50 and 100 NTUs.
    d. More than 10 percent where natural turbidity is greater than 100 NTUs.

    In determining compliance with the above limitations, appropriate averaging periods may be applied upon approval by the Executive Officer.

17. Aquatic communities and populations, including vertebrate, invertebrate, and plant species, to be degraded.

18. Violation of any applicable water quality standard for receiving waters adopted by the Regional Board or the SWRCB pursuant to the CWA and regulations adopted thereunder.

D. Groundwater Limitations:

1. The discharge shall not cause the underlying groundwater to be degraded.

E. Provisions:

1. The Discharger shall conduct the chronic toxicity testing specified in the Monitoring and Reporting Program. If the testing indicates that the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the water quality objective for toxicity, the Discharger initiate a Toxicity Identification Evaluation (TIE) to identify the causes of toxicity. Upon completion of the TIE, the Discharger shall submit a workplan to conduct a Toxicity Reduction Evaluation (TRE) and, after Regional Board

evaluation, conduct the TRE. This Order will be reopened and a chronic toxicity limitation included and/or a limitation for the specific toxicant identified in the TRE included. Additionally, if a chronic toxicity water quality objective is adopted by the State Water Resources Control Board, this Order may be reopened and a limitation based on that objective included.

2. There are indications that the discharge may contain constituents that have a reasonable potential to cause or contribute to an exceedance of NTR, CTR water quality objectives, or supplemental constituents that could exceed Basin Plan numeric or narrative water quality objectives. The constituents are specifically listed in a 5 November 2001 letter issued by the Executive Officer, in conformance with California Water Code Section 13267 for submission of a technical report by 1 March 2003 and a Dioxin study report by 1 November 2004. The Discharger submitted partial Study results on 6 December 2002 and 16 September 2003; however, the data submitted was not complete. The Discharger shall comply with the following time schedule in conducting and completing a study of these constituents (listed in Attachment E2) potential effect in surface waters:

Task	Compliance Date
Submit Workplan[1] and Time Schedule	Within 30 Days after Order Adopted
Begin Study	Within 60 days after Order Adopted
Complete Study	Within one year after start of study
Submit Study Report	Within 60 days after completion of study

[1] The workplan shall include a one time monitoring event for all the constituents listed in attachment E2 and then subsequent monitoring only for the constituents that showed detectable concentrations.

This Provision is intended to be consistent with the requirements of the 5 November 2001 technical report request. The Discharger shall submit to the Regional Board on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Board by letter when it returns to compliance with the time schedule.

If after review of the study results it is determined that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective this Order will be reopened and effluent limitations added for the subject constituents.

3. The discharger currently is not required to dechlorinate its discharge due to the de-minimis use of chlorine in its operation and because chlorine has not been detected in the facility's discharge. Within 60 days of any monitoring results indicating detectable concentrations of chlorine, the Discharger shall implement appropriate technologies or methods to dechlorinate its effluent prior to discharge.

4. The Discharger shall comply with all the items of the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements (NPDES)", dated February 2004, which are part of this Order. This attachment and its individual paragraphs are referred to as "Standard Provisions."

5. The Discharger shall comply with Monitoring and Reporting Program No. R5-2005-XXX, which is part of this Order, and any revisions thereto as ordered by the Executive Officer.

   When requested by USEPA, the Discharger shall complete and submit Discharge Monitoring Reports. The submittal date shall be no later than the submittal date specified in the Monitoring and Reporting Program for Discharger Self Monitoring Reports.

6. This Order expires on **1 March 2010** and the Discharger must file a Report of Waste Discharge in accordance with Title 23, CCR, not later than 180 days in advance of such date in application for renewal of waste discharge requirements if it wishes to continue the discharge.

F. General Provisions:

1. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger shall obtain approval of, or clearance from the SWRCB (Division of Water Rights).

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

   To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Board and a statement. The statement shall comply with the signatory paragraph of Standard Provision D.6 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the CWC. Transfer shall be approved or disapproved in writing by the Executive Officer.

I, THOMAS R. PINKOS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on _____.

THOMAS R. PINKOS, Executive Officer

RDJ: 1/3/05

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. R5-2005-XXX

NPDES NO. CA0082961

FOR
PACIFIC COAST SPROUT FARMS, INC.
SACRAMENTO FACILITY
SACRAMENTO COUNTY

This Monitoring and Reporting Program is issued pursuant to California Water Code Sections 13383. The Discharger shall not implement any changes to this Program unless and until the Regional Board or Executive Officer issues a revised Monitoring and Reporting Program. Specific sample station locations shall be established under direction of the Regional Board's staff, and a description of the stations shall be attached to this Order.

EFFLUENT MONITORING – OUTFALL 001

Effluent samples shall be collected during times of discharge to the storm drain that runs into Morrison Creek. Effluent samples shall be collected downstream from the last connection through which wastes can be admitted into the outfall. Effluent samples shall be representative of the volume and quality of the discharge. Time of collection of samples shall be recorded. Effluent monitoring shall include at least the following:

Constituents	Units	Type of Sample	Sampling Frequency
Flow	gallons/day	Metered	Quarterly
20°C BOD_5	mg/L, lbs/day	Grab	Quarterly
Total Suspended Solids (TSS)	mg/L, lbs/day	Grab	Quarterly
pH	standard units	Meter	Quarterly
Temperature	°F	Grab	Quarterly
Total Chlorine Residual	mg/L, lbs/day	Grab/Metered	Weekly
Electrical Conductivity at 25°C	µmhos/cm	Grab	Quarterly
Total Dissolved Solids (TDS)	mg/L	Grab	Quarterly
Arsenic	µg/L, lbs/day	Grab	Quarterly
Chloride	mg/L,	Grab	Quarterly
Fluoride	µg/L, lbs/day	Grab	Quarterly
Nitrate	mg/L, lbs/day	Grab	Quarterly
Acute Toxicity[1]	% Survival	Grab	Annually

Constituents	Units	Type of Sample	Sampling Frequency
Priority Pollutants[2]	µg/L, lbs/day	Grab	--[2]

[1] All acute toxicity bioassays shall be performed according to EPA-821-R-02-012 *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition,* October 2002 (or latest edition) with Regional Board staff approval. Test species shall be fathead minnows (*Pimephales promelas),* with no pH adjustment, unless approved by the Executive Officer.

[2] To begin during the second year of the permit if deemed necessary subsequent to the special Priority Pollutant monitoring study required by Provision E2 of this Order. See "Priority Pollutant Monitoring" Section below.

If the discharge is intermittent rather than continuous, then on the first day of each such intermittent discharge, the Discharger shall monitor and record data for all of the constituents listed above, after which the frequencies of analysis given in the schedule shall apply for the duration of each such intermittent discharge. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule.

RECEIVING WATER MONITORING

All receiving water (Morrison Creek) samples shall be grab samples. Receiving water monitoring shall include at least the following:

Station	Description
R-1	300 ft upstream from the point of discharge from Outfall 001
R-2	300 ft downstream from the point of discharge from Outfall 001

Constituents	Units	Station	Sampling Frequency
pH	standard units	R-1, R-2	Semi-Annually
Temperature	°F	R-1, R-2	Semi-Annually
Dissolved Oxygen	mg/L	R-1, R-2	Semi-Annually
Electrical Conductivity at 25°C	µmhos/cm	R-1, R-2	Semi-Annually
Hardness	mg/L	R-1, R-2	Semi-Annually

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions, in the sampling locations. Attention shall be given to the presence or absence of:

a. Floating or suspended matter
b. Discoloration
c. Bottom deposits
d. Aquatic life
e. Visible films, sheens or coatings
f. Fungi, slimes, or objectionable growths
g. Potential nuisance conditions

Notes on receiving water conditions shall be summarized in the monitoring report.

PRIORITY AND OTHER POLLUTANTS MONITORING

The State Water Resources Control Board (SWRCB) adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Policy or SIP). The SIP states that the Regional Boards will require periodic monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established. Accordingly, the Regional Board is requiring, as part of this Monitoring and Reporting Program, that the Discharger conduct **effluent monitoring** of priority pollutants and other pollutants of concern (as shown in Attachment E2). Effluent shall be monitored at least **one time in no more than 365 days and no less than 180 days prior to expiration of this Order**. Priority pollutants is defined as USEPA priority toxic pollutants and consists of the constituents listed in Attachment II of the "13467 letter", which was issued by the Executive Officer on 5 November 2001, in conformance with California Water Code, Section 13267. The Discharger must analyze effluent **temperature, pH, and hardness** at the same time as priority pollutants.

All analyses shall be performed at a laboratory certified by the California Department of Health Services. The laboratory is required to submit the ML and the Method Detection Limit (MDL) with the reported results for each constituent. The MDL should be as close as practicable to the USEPA MDL determined by the procedure found in 40 CFR Part 136. The results of analytical determinations for the presence of chemical constituents in a sample shall use the following reporting protocols:

a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory.
b. 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.
c. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration." Numerical estimates of data quality may be by percent accuracy (+ or – a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.
d. Sample results that are less than the laboratory's MDL shall be reported as "Not Detected" or ND.

THREE SPECIES CHRONIC TOXICITY MONITORING

Chronic toxicity monitoring shall be conducted to determine whether the effluent is contributing toxicity to the receiving water. The testing shall be conducted as specified in EPA-821-R-02-013*, Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms,* Fourth Edition, October 2002. Chronic toxicity samples shall be collected at the discharge point to the storm drainage collection system prior to its entering Morrison Creek. Twenty-four hour composite samples shall be representative of the volume and quality of the discharge. Time of collection samples shall be recorded. Standard dilution water can be used if the receiving water source exhibits toxicity and is approved by the Executive Officer. The sensitivity of the test organisms to a

reference toxicant shall be determined concurrently with each bioassay and reported with the test results. Both the reference toxicant and effluent test must meet all test acceptability criteria as specified in the chronic manual. If the test acceptability criteria are not achieved, then the Discharger must re-sample and re-test within 14 days. Chronic toxicity monitoring shall include the following:

Species: Fathead minnows (*Pimephales promelas), Ceriodaphnia dubia and Selenastrum capricornutum*

Frequency: At least one time in no more than 365 days and no less than 180 days prior to expiration of this Order

Dilution Series:

	Dilutions (%)					Controls	
	100	50	25	12.5	6.25	Morrison Creek Water	Lab Water
% Effluent	100	50	25	12.5	6.25	0	0
% Dilution Water[1]	0	50	75	87.5	93.75	100	0
% Lab Water[2]	0	0	0	0	0	0	100

[1] Dilution water shall be receiving water from Morrison Creek taken upstream from the storm drain discharge point into the creek. The dilution series may be altered upon approval of Regional Board staff.
[2] Lab water shall meet EPA protocol requirements

WATER SUPPLY MONITORING

A sample station shall be established where a representative sample of the water supply can be obtained. Water supply monitoring shall include at least the following:

Constituents	Units	Sampling Frequency
Volatile Hydrocarbons[1]	µg/L (ppb)	Annually
Electrical Conductivity[2] at 25°C	µmhos/cm	Annually
Total Dissolved Solids (TDS)	mg/L	Annually

[1] All analyses of volatile hydrocarbons should be done using EPA method 601 and 602.
[2] If the water supply is from more than one source, the EC shall be reported as a weighted average and include copies of supporting calculations

REPORTING

Monitoring results shall be submitted to the Regional Board by the **1st day of the second month following each calendar quarter** (by May 1, August 1, November 1 and February1). In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample types, the

constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the discharge complies with waste discharge requirements. The highest daily maximum for the month and the monthly averages should be determined and recorded.

If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.

Annually, by the **1st of February**, the Discharger shall submit a written report to the Executive Officer containing the following:

a. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.

b. A statement certifying when the flow meter and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration (Standard Provision C.6).

The Discharger may also be requested to submit an annual report to the Regional Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the facility's compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

All reports submitted in response to this Order shall comply with the signatory requirements of Standard Provision D.6.

The Discharger shall implement the above monitoring program on the first day of the month following effective date of this Order.

Ordered by: _____
THOMAS R. PINKOS, Executive Officer

_____
(Date)

RDJ: 1/3/05

SUMMARY EFFLUENT DATA AND CRITERIA, PRIORITY POLLUTANTS

Constituent, Unit CTR # Date	**Antimony, µg/L #1**	**Arsenic, µg/L #2**	**Be, µg/L #3**	**Cadmium µg/L #4**	**Cr (III) µg/L # 5a**	**Cr (VI), µg/L # 5b**	**Cu, µg/L #6**	**Lead, µg/L #7**	**Mercury, µg/L #8**	**Nickel, µg/L #9**	**Selenium, µg/L #10**	**Silver, µg/L #11**	**Thallium, µg/L #12**	**Zinc, µg/L #13**	**Cyanide, µg/L #14**	**Asb., MFL #15**
8/14/02	<0.5	3.7	<0.5	<0.25	3.0		1.8	<5	0.0018	1.0	<2.0		<1.0	5.8	<10	
8/23/02						<10										
12/5, 17/02												<0.25				<0.2
5/16/03		3.3						<0.25	0.0006							
MEC, µg/L*	<0.5	3.7(27.4)	<0.5	<0.25	3.0	<10	1.8	<0.25	0.0018	1.0	<2.0	<0.25	<1.0	5.8	<10	<0.2
Background, µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Numeric Basin Plan Objective, µg/L (Site Specific, MCL)	MCL **6**	MCL **10**	MCL **4**	MCL 5	None	MCL 50)	None	MCL-AL 15	303d <0.0005	MCL 100	MCL 50	None	MCL 2	MCL 5000	MCL 150	MCL **7** MFL
CMC Freshwater, µg/L Total @ 51 mg/l Hardness (as $CaCO_3$)	None est.	340 i,m,w	None est.	2.1 e,i,m,w,x	1000 e,i,m,o	16 i,m,w	7.4 e,i,m,w,x	35 e,i,m	None est.	265 e,i,m,w	20	**1.3** e,i,m	None est.	68 e,i,m, w,x	22 o	None Est.
CCC Freshwater, µg/L Total @ 51 mg/l Hardness (as $CaCO_3$)	None est.	150 i,m,w	None est.	**1.5** e,i,m,w	**119** e,i,m,o	**11** i,m,w	**5.3** e,i,m,w	**1.4** e,i,m	None est.	**30** e,i,m,w	**5** q	None est.	None est.	**68** e,i,m, w	**5.2** o	None Est.
Human Health, µg/L Water + Org.	14 a,s	None Est.	n	n	n	n	1300	n	0.050 a	610 a	n	None Est.	**1.7** a,s	None Est.	700 a	7 MFL k,s
Human Health, µg/L Organisms Only	4300 a,t	None Est.	n	n	n	n	None Est.	n	0.051 a	4600 a	n	None Est.	6.3 a,t	None Est.	220,000 a,j	None Est.
Reasonable Potential	No	**Yes**	No	No	No	No	No	No	No	No	No	No	No	No	No	No

Notes: Footnotes, abbreviations, and other notations from Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, 40 CFR Part 131, FR/Vol. 65, No. 97, May 18, 2000/Rules and Regulations. *Values in parenthesis are projected MECs calculated by multiplying appropriate multiplier of (7.4 in the case of arsenic) by actual MEC when RP is based on a non-CTR stringent criterion.

Constituent, Unit CTR # Date	2, 3, 7, 8-TCDD (Dioxin), µg/L # 16	Acrolein, µg/L # 17	Acrylonitrile, µg/L # 18	Benzene, µg/L # 19	Bromoform, µg/L # 20	Carbon Tetrachloride, µg/L, # 21	Chlorobenzene (Monochloro-benzene), µg/L, # 22	Chlorodibromo-methane, µg/L # 23	Chloroethane, µg/L # 24	2-Chloro-ethylvinyl Ether # 25
5/16/03		<5.0	<2.0	<0.5	<2.0	<0.5	<2.0	<0.5	<2.0	
6/23/03				<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
MEC, µg/L										
Background, µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BP Obj, µg/L	MCL 3.0E-08	Aquatic Toxicity **21**		MCL **1**	MCL THM 80	MCL 0.5	MCL **70**	MCL THM 80		Aquatic Toxicity 122
CMC Freshwater, µg/L	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, µg/L	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, µg/L Water +Org Only	1.3E-08 c	320 s	0.059 a,c,s	1.2 a,c	**4.3** a,c	**0.25** a,c,s	680 a,s	**0.41** a,c	None Est.	None Est.
Human Health, µg/L Org Only	1.4E-08 c	780 t	**0.66** a,c,t	71 a,c	360 a,c	4.4 a,c,t	21,000 a,j,t	34 a,c	None Est.	None Est.
Reasonable Potential	No	No	No	No	No	No	No	No	No	No

Constituent, Unit, CTR # Date	Chloroform, µg/L # 26	Dichlorobromo-methane, µg/L # 27	1,1-Dichloroethane, µg/L # 28	1,2-Dichloro-ethane, µg/L # 29	1,1-Dichloro-ethylene, µg/L # 30	1,2-Dichloro-propane, µg/L #31	1,3-Dichloro-propylene, µg/L # 32	Ethylbenzene, µg/L # 33	Methyl Bromide (Bromomethane), µg/L, # 34	Methyl Chloride (Chloromethane), µg/L, # 35
5/16/03	<0.5	<1.0	<0.5	<0.5	<1.0	<0.5	<1.0	<2.0	<1.0	<1.0
6/23/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
MEC, µg/L										
Background, µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BP Obj, µg/L	OEHHA **1.1**	MCL 5	MCL **5**	MCL 0.5	MCL 6	MCL 5	MCL **0.5**	MCL **300**		
CMC Freshwater, µg/L	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, µg/L	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, µg/L Water +Org Only	(CTR reserved)USEPA 5.7	**0.56** a,c		**0.38** a,c,s	**0.057** a,c,s	**0.52** a	10 a,s	3,100 a,s	**48** a	n
Human Health, µg/L Org Only	(CTR reserved)USEPA 470	46 a,c		99 a,c,t	3.2 a,c,t	39 a	1,700 a,t	29,000 a,t	4,000 a	n
Reasonable Potential	**No**	No	No	No	No	No	No	No	No	No

Notes: Footnotes, abbreviations, and other notations from Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, 40 CFR Part 131, FR/Vol. 65, No. 97, May 18, 2000/Rules and Regulations.

Constituent, Unit CTR # Date	Methylene Chloride, µg/L # 36	1,1,2,2-Tetra-chloroethane, µg/L # 37	Tetrachloro-ethylene, µg/L # 38	Toluene, µg/L # 39	1,2-Trans-Dichloro ethylene, µg/L # 40	1,1,1 - Trichloro-ethane, µg/L # 41	1,1,2-Trichloro-ethane, µg/L # 42	Trichloro-ethylene, µg/L # 43	Vinyl Chloride, µg/L # 44	2-Chloro-phenol, µg/L # 45
8/14/02										<5.0
5/16/03	<1.0	<0.5	<0.5	<2.0	<1.0	<2.0	<0.5	<1.0	<0.5	<2.0
6/23/03	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
MEC, µg/L										
Background, ug/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BP Obj, µg/L	MCL 5	MCL 1.0	MCL 5	MCL **150**	MCL **10**	MCL **200**	MCL 5	MCL 5	MCL **0.5**	
CMC Freshwater, µg/L	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, µg/L	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, µg/L Water +Org Only	**4.7** a,c	**0.17** a,c,s	**0.8** c,s	6,800 a	700 a	n	**0.60** a,c,s	**2.7** c,s	2 c,s	**120** a
Human Health, µg/L Org Only	1,600 a,c	11 a,c,t	8.85 c,t	200,000 a	140,000 a	n	42 a,c,t	81 c,t	525 c,t	400 a
Reasonable Potential	No	No	No	No	No	No	No	No	No	No

Constituent, Unit CTR # Date	2, 4 Dichlorophenol, µg/L # 46	2,4-Dimethyl – phenol, µg/L # 47	2-Methyl 4,6-Di-nitrophenol, µg/L # 48	2,4-Dinitrophenol, µg/L # 49	2-Nitrophenol, µg/L # 50	4-Nitro– phenol, µg/L # 51	4-chloro-3-methyl phenol, µg/L # 52	Pentachloro-phenol, µg/L # 53	Phenol, µg/L # 54
8/14/02	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<0.2	<5.0
5/16/03	<1.0	<2.0							<1.0
MEC, µg/L									
Background, µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
BP Obj, µg/L					Aquatic Toxicity 150		Aquatic Toxicity 30	MCL 1.0	
CMC Freshwater, µg/L At worst pH=6.9	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	7.9 f,w	None Est.
CCC Freshwater, µg/L At worst pH=6.9	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	6.1 f,w	None Est.
Human Health, µg/L Water +Org Only	**93** a,s	**540** a	**13.4** s	**70** a,s	None Est.	None Est.	None Est.	**0.28** a,c	**21,000** a
Human Health, µg/L Org Only	790 a,t	2,300 a	765 t	14,000 a,t	None Est.	None Est.	None Est.	8.2 a,c,j	4,600,000 a,j,t
Reasonable Potential	No	No	No	No	No	No	No	No	No

Notes: Footnotes, abbreviations, and other notations from Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, 40 CFR Part 131, FR/Vol. 65, No. 97, May 18, 2000/Rules and Regulations.

Constituent, Unit CTR # Date	2, 4, 6 Trichloro-phenol, µg/L # 55	Acenaphthene, µg/L # 56	Acenaphthylene, µg/L # 57	Anthracene, µg/L # 58	Benzidine, µg/L # 59	Benzo(a) anthracene, µg/L # 60	Benzo(a) Pyrene, µg/L # 61	Benzo(b) fluoranthene, µg/L # 62	Benzo(ghi) perylene, µg/L # 63
8/14/02	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
5/16/03		<1.0					<2.0		
MEC, µg/L									
Background, µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
BP Obj, µg/L							MCL 0.2		
CMC Freshwater, µg/L	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, µg/L	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, µg/L Water +Org Only	**2.1** a,c	**1,200** a	None established	**9,600** a	**0.00012** a,c,s	**0.0044** a,c	**0.0044** a,c	**0.0044** a,c	None established
Human Health, µg/L Org Only	6.5 a,c	2,700 a	None established	110,000 a	0.00054 a,c,t	0.049 a,c	0.049 a,c	0.049 a,c	None established
Reasonable Potential	No	No	No	No	No	No	No	No	No

Constituent, Unit CTR # Date	Benzo(k) fluoranthene, µg/L # 64	Bis (2-Chloro-ethoxy) Methane, µg/L # 65	Bis (2-Chloroethyl) Ether, µg/L # 66	Bis (2-Chloroiso-propyl) Ether, µg/L # 67	Bis (2-Ethylhexyl) Phthalate, µg/L # 68	4-Bromo-phenyl Phenyl Ether, µg/L # 69	Butyl benzyl Phthalate, µg/L # 70	2-Chloro-naphthalene, µg/L # 71	4-Chloro phenyl Phenyl Ether, µg/L # 72
8/14/02	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
5/16/03	<2.0		<1.0						
MEC, µg/L									
Background, µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
BP Obj, µg/L				Aquatic Toxicity 122	MCL 4	Aquatic Tox 122	Aquatic Tox 3	Aquatic Toxicity 1600	Aquatic Toxicity 122
CMC Freshwater, µg/L	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, µg/L	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, µg/L Water +Org Only	**0.0044** a,c	None established	**0.031** a,c,s	1,400 a	**1.8** a,c,s	None established	3,000 a	1,700 a	None Est.
Human Health, µg/L Org Only	0.049 a,c	None established	1.4 a,c,t	170,000 a,t	5.9 a,c,t	None established	5,200 a	4,300 a	None Est.
Reasonable Potential	No	No	No	No	No	No	No	No	No

Notes: Footnotes, abbreviations, and other notations from Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, 40 CFR Part 131, FR/Vol. 65, No. 97, May 18, 2000/Rules and Regulations.

Constituent, Unit, CTR # Date	Chrysene, µg/L # 73	Dibenzo (ah) anthracene, µg/L, # 74	1,2 Dichloro-benzene, µg/L # 75	1, 3 Dichloro-benzene, µg/L # 76	1, 4 Dichloro-benzene, µg/L # 77	3,3-Dichloro-benzidine, µg/L # 78	Diethyl Phthalate, µg/L # 79	Dimethyl Phthalate, µg/L, # 80	Di-n-Butyl Phthalate, µg/L # 81
8/14/02	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
5/16/03		<0.1							
6/23/03			<1.0	<1.0	<1.0				
MEC, µg/L									
Background, µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
BP Obj, µg/L			MCL **600**		MCL **5**		Aquatic Toxicity 3	Aquatic Tox 3	Aquatic Toxicity 3
CMC Freshwater, µg/L	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, µg/L	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, µg/L Water +Org Only	**0.0044** a,c	**0.0044** a,c	2,700 a	**400**	400	**0.04** a,c,s	23,000 a,s	313,000 s	2,700 a,s
Human Health, µg/L Org Only	0.049 a,c	0.049 a,c	17,000 a	2,600	2,600	0.077 a,c,t	120,000 a,t	2,900,000 t	12,000 a,t
Reasonable Potential	No	No	No	No	No	No	No	No	No

Constituent, Unit CTR # Date	2,4-Dinitro – toluene, µg/L # 82	2,6-Dinito-toluene, µg/L # 83	Di-n-Octyl Phthalate, µg/L # 84	1,2-Diphenyl – hydrazine, µg/L # 85	Fluoranthene, µg/L # 86	Fluorene, µg/L # 87	Hexachloro-benzene, µg/L # 88	Hexachloro – butadiene, µg/L # 89	Hexachloro – cyclopentadiene, µg/L, # 90
8/14/02	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
5/16/03				<1.0				<1.0	
MEC, µg/L									
Background, µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA
BP Obj, µg/L			Aquatic Toxicity 3						MCL **50**
CMC Freshwater, µg/L	None Est.	None Est.	None Est.		None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, µg/L	None Est.	None Est.	None Est.		None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, µg/L Water +Org Only	**0.11** c,s	None Est.	None Est.	**0.040** a,c,s	**300** a	**1,300** a	**0.00075** a,c	**0.44** a,c,s	240 a,s
Human Health, µg/L Org Only	9.1 c,t	None Est.	None Est.	0.54 a,c,t	370 a	14,000 a	0.00077 a,c	50 a,c,t	17,000 a,j,t
Reasonable Potential	No	No	No	No	No	No	No	No	No

Notes: Footnotes, abbreviations, and other notations from Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, 40 CFR Part 131, FR/Vol. 65, No. 97, May 18, 2000/Rules and Regulations.

Constituent, Unit CTR # Date	Hexachloro – ethane, µg/L # 91	Indeno (1,2,3-cd) pyrene, µg/L # 92	Isophorone, µg/L # 93	Naphthalene, µg/L # 94	Nitrobenzene, µg/L # 95	N-Nitrosodimethyl-amine, µg/L # 96	N-Nitrosodi-n-Propylamine, µg/L # 97	N-Nitrosodiphenyl amine, µg/L # 98
8/14/02	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
5/16/03			<1.0	<10		<5.0		<1.0
MEC, µg/L								
Background, µg/L	NA	NA	NA	NA	NA	NA	NA	NA
BP Obj, µg/L								
CMC Freshwater, µg/L	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
CCC Freshwater, µg/L	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.
Human Health, µg/L Water +Org Only	**1.9** a,c,s	**0.0044** a,c	**8.4** c,s	None Est.	17 a,s	0.00069 a,c,s	0.005 a	5.0 a,c,s
Human Health, µg/L Org Only	8.9 a,c,t	0.049 a,c	600 c,t	None Est.	1,900 a,j,t	8.1 a,c,t	1.4 a	16 a,c,t
Reasonable Potential	No	No	No	No	No	No	No	No

Constituent, Unit CTR # Date	Phenanthrene, µg/L # 99	Pyrene, µg/L # 100	1,2,4-Trichloro-benzene, µg/L # 101	Aldrin, µg/L # 102	α-BHC, µg/L # 103	β-BHC, µg/L # 104	γ-BHC (Lindane), µg/L # 105	δ-BHC, µg/L # 106	Chlordane, µg/L # 107	4,4' DDT, µg/L # 108
8/14/02	<5.0	<5.0	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
5/16/03			<5.0	<0.01	<0.01	<0.05	<0.02	<0.01	<0.1	<0.01
MEC, µg/L										
Background, µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BP Obj, µg/L			MCL **5**	**303d/OCPest <0.005**	**303d/OCPest <0.01**	**303d/OCPest <0.014**	**303d/OCPest <0.019**	**303d/OCPest <0.005**	**303d/OCPest <0.1**	**303d/OCPest <0.01**
CMC Freshwater, µg/L	None Est.	None Est.	None Est.	3 g			0.95 w		2.4 g	1.1 g
CCC Freshwater, µg/L	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	None Est.	0.0043 g	0.001 g
Human Health, µg/L Water +Org Only	None established	960 a	None established	0.00013 a,c	0.0039 a,c	0.014 a,c	0.019 c	None established	0.00057 a,c	0.00059 a,c
Human Health, µg/L Org Only	None established	11,000 a	None established	0.00014 a,c	0.013 a,c	0.046 a,c	0.063 c	None established	0.00059 a,c	0.00059 a,c
Reasonable Potential	No	No	No	No	No	No	No	No	No	Yes

Notes: Footnotes, abbreviations, and other notations from Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, 40 CFR Part 131, FR/Vol. 65, No. 97, May 18, 2000/Rules and Regulations.

Constituent, Unit CTR # Date	**4, 4'-DDE, µg/L # 109**	**4,4'-DDD, µg/L # 110**	**Dieldrin, µg/L # 111**	**alpha-Endo-sulfan, µg/L # 112**	**beta-Endo-sulfan, µg/L # 113**	**Endosulfan Sulfate, µg/L # 114**	**Endrin, µg/L # 115**	**Endrin Aldehyde, µg/L # 116**	**Heptachlor, µg/L # 117**	**Heptachlor Epoxide, µg/L # 118**
8/14/02	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
5/16/03	<0.05	<0.05	<0.01	<0.02	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01
MEC, µg/L										
Background, µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BP Obj, µg/L	**OCPest <0.05**	**OCPest <0.05**	**303d/OCPest <0.01**	**303d/OCPest <0.02**	**303d/OCPest <0.01**	**303d/OCPest <0.05**	**303d/OCPest <0.01**	**303d/OCPest <0.01**	**303d/OCPest <0.01**	**303d/OCPest <0.01**
CMC Freshwater, µg/L	None Est.	None Est.	0.24 w	0.22 g	0.22 g	None Est.	0.086 w	None Est.	0.52 g	0.52 g
CCC Freshwater, µg/L	None Est.	None Est.	0.056 w	0.056 g	0.056 g	None Est.	0.036 w	None Est.	0.0038 g	0.0038 g
Human Health, µg/L Water +Org Only	0.00059 a,c	0.00083 a,c	0.00014 a,c	110 a	110 a	110 a	0.76 a	0.76 a	0.00021 a,c	0.00010 a,c
Human Health, µg/L Org Only	0.00059 a,c	0.00084 a,c	0.00014 a,c	240 a	240 a	240 a	0.81 a,j	0.81 a,j	0.00021 a,c	0.00011 a,c
Reasonable Potential	No	No	No	No	No	No	No	No	No	No

Constituent, Unit CTR # Date	PCBs, µg/L **# 119**	PCBs, µg/L # **120**	PCBs *, µg/L # 121 -125	Toxaphene, µg/L # 126
8/14/02	<0.5	<0.5	<0.5	<0.5
5/16/03				<0.5
MEC, µg/L				
Background, µg/L	NA	NA	NA	NA
Basin Plan Objective, µg/L				**303d/OCPest <0.5**
CMC Freshwater, µg/L				0.73
CCC Freshwater, µg/L	0.014u	0.014u	0.014u	0.0002
Human Health, µg/L Water +Org Only	0.00017c,v	0.00017c,v	0.00017c,v	0.00073a,c
Human Health, µg/L Org Only	0.00017c,v	0.00017c,v	0.00017c,v	0.00075a,c
Reasonable Potential	No	No	No	No

Notes: Footnotes, abbreviations, and other notations from Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, 40 CFR Part 131, FR/Vol. 65, No. 97, May 18, 2000/Rules and Regulations.

EFFLUENT DATA, OTHER POLLUTANTS OF CONCERN

Constituent, Unit Date	Aluminum, µg/L	Ammonia as N, mg/L	Barium, µg/L	Boron, µg/L	Chloride, mg/L	EC µmhos/cm	Fluoride, µg/L	Iron, µg/L	Mn, µg/L	Nitrate as N, mg/L	Nitrite as N, mg/L	Sulfate mg/L	TDS, mg/L
1/9/98						232							
6/14/99						261							
6/19,23/00						305,303							
6/21/01					11	306							219
6/24/02					12	302							234
8/14/02	0.9	<1.0	50.2		11	320	190	<10	3.3	1.6	<0.4	14	240
7/7/03		<0.5				299							
7/12/04						323							
MEC, µg/L	0.9(11.9)		50.2 (662)		12(67.2)	323(1034)	190(2508)		3.3(44)	1.6(21)		14(185)	240(1344)
Background, µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Numeric Basin Plan Objective, µg/L (site specific, MCL)	2ry MCL 200		MCL **1000**	Ag WQ Gold Book **750**	Ag WQ goal **106**	Ag WQ goal **700**	Ag WQ Rome Paper **1,000**	2ry MCL **300**	2ry MCL **50**	MCL **10**	MCL **1.0**	2ry MCL 250/500	Ag WQ Rome Paper **450**
Narrative Basin Plan Objective, µg/L	USEPA **87** CCC 750 CMC	USEPA **0.72** CCC 2.14 CMC **											
Reasonable Potential	No	No	No	No	No	**Yes**	**Yes**	No	No	**Yes**	No	No	**Yes**

Notes: Footnotes, abbreviations, and other notations from Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, 40 CFR Part 131, FR/Vol. 65, No. 97, May 18, 2000/Rules and Regulations. *Values in parenthesis are projected MECs calculated by multiplying appropriate multiplier of 13.2 or 5.6 for chloride and TDS and 3.2 for EC by actual MEC when RP is based on a non-CTR stringent criterion. ** Based on pH of 8.5 and temperature of 21°C.

EFFLUENT DATA, OTHER POLLUTANTS OF CONCERN

Constituent, Unit Date	1,1,2-Trichloro-1,2,2-Trifluor-ethane, µg/L	1,2-Dibromo-3-chloro-propane (DBCP), µg/L	2,4,5-TP Silvex), µg/L	2,4-D, µg/L	Alachlor, µg/L	Atrazine, µg/L	Bentazon, µg/L	Carbofuran, µg/L	Chlor-pyrifos, µg/L	Cis-1,2-dichloro-ethene, µg/L	Dalapon, µg/L	Di((2-ethylhexyl) adipate, µg/L	Diazinon, µg/L
12/17/02								<10					
5/16/03					<1.0	<1.0							<0.25
8/14/03			<1.0	<10			<2.0				<10		
MEC, µg/L													
Background, µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Basin Plan Objective, µg/L	MCL 1200	MCL 0.2	USEPA 10 HH	MCL 70	MCL 2	MCL 1.0	MCL 18	MCL 18	CCC criterion 0.014	MCL 6	Aquatic Tox 110	MCL 400	CCC criterion 0.05
Reasonable Potential	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Constituent, Unit Date	Dinoseb, µg/L	Diquat µg/L	Endothal, µg/L	Ethylene Dibromide, µg/L	Foaming Agents, µg/L	Glyphosate, µg/L	Methoxychlor, µg/L	Methyl-tert-butyl ether (MTBE), µg/L	Molinate (Ordram), µg/L	Oxamyl µg/L	Picloram µg/L
8/14/02	<2.0										<1.0
8/23/02		<0.4			<50						
12/5/02						<5.0					
5/16/03							<10				
MEC, µg/L											
Background, µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Basin Plan Objective, µg/L	MCL 7	MCL 20	MCL 100	MCL 0.05	MCL 500	MCL 700	MCL 30	MCL 5	MCL 20	MCL 50	MCL 500
Reasonable Potential	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

Notes: Footnotes, abbreviations, and other actions from Final Rule, Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California, 40 CFR Part 131, FR/Vol. 65, No. 97, May 18, 2000/Rules and Regulations.

5 November 2001

REQUIREMENT TO SUBMIT MONITORING DATA

The Regional Water Quality Control Board (Board) is required to protect and enhance the beneficial uses of surface and ground waters in the Region. As part of that effort, National Pollutant Discharge Elimination System (NPDES) Permits are adopted which prescribe effluent limits for the types and concentrations of chemical and physical constituents which can be safely discharged. In order to prepare appropriate NPDES Permits, it is necessary to have adequate characterization of the discharged effluent and the receiving water.

The following is a requirement that you collect effluent and receiving water samples and have them analyzed for a variety of potential waste constituents. In most cases this monitoring will be in addition to monitoring required in your NPDES Permit. To the extent that there is overlap between this request and monitoring already being done under your Permit, the monitoring need not be duplicated. This requirement is brought on by a number of factors:

1. On 2 March 2000, the State Water Resources Control Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, also known as the State Implementation Policy (SIP). The SIP established methods of evaluating receiving water criteria and developing effluent limitation in NPDES Permits for the priority pollutants contained in the US Environmental Protection Agency's (USEPA) *California Toxics Rule* and portions of USEPA's *National Toxics Rule*. Section 1.2 of the SIP directs the Board to issue Water Code Section 13267 letters to all NPDES dischargers requiring submittal of data sufficient to (1) determine if priority pollutants require effluent limitations (Reasonable Potential Analysis) and (2) calculate water quality-based effluent limitations. Further, Section 2.4 of the SIP requires that each discharger submit to the Regional Boards reports necessary to determine compliance with effluent limitations for priority pollutants in permits. Sections 2.4.1 through 2.4.4 of the SIP provide minimum standards for analyses and reporting. (Copies of the SIP may be obtained from the State Water Resources Control Board, or downloaded from http://www.swrcb.ca.gov/iswp/final.pdf.) To implement the SIP, effluent and receiving water data are needed for all priority pollutants. Effluent and receiving water pH and hardness are required to evaluate the toxicity of certain priority pollutants (such a heavy metals) where the toxicity of the constituents varies with pH and/or hardness. Section 3 of the SIP prescribes mandatory monitoring of dioxin congeners.

2. In addition to the specific requirements of the SIP, the Board is requiring the following monitoring needed for permit development:

   a. Organophosphorous pesticides, principally diazinon and chlorpyrifos, are commonly-used insecticides found in many domestic wastewater discharges at concentrations which can cause toxicity both in effluent and in receiving water. These pesticides are not "priority pollutants" and so are not part of the analytical methods routinely performed for NPDES discharges. **This monitoring is required of domestic wastewater dischargers only.**

   b. Drinking water constituents. Constituents for which drinking water Maximum Contaminant Levels (MCLs) have been prescribed in the California Code of Regulation are included in the *Water Quality*

Control Plan, Fourth Edition, for the Sacramento and San Joaquin River Basins (Basin Plan). The Basin Plan defines virtually all surface waters within the Central Valley Region as having existing or potential beneficial uses for municipal and domestic supply. The Basin Plan further requires that, at a minimum, water designated for use as domestic or municipal supply shall not contain concentrations of chemical constituents in excess of the MCLs contained in the California Code of Regulations.

c. Effluent and receiving water temperature. This is both a concern for application of certain temperature sensitive constituents, such as fluoride, and for compliance with the Basin Plan's thermal discharge requirements.

d. Effluent and receiving water hardness and pH. These are necessary because several of the CTR constituents are hardness or pH dependent.

e. Receiving water flow is needed to determine possible dilution available in the receiving water. The receiving water flows, in combination with the receiving water pollutant concentrations, will be used to determine if there is assimilative capacity in the receiving water for each pollutant, and whether dilution credits can be granted. Dilution credits can increase the concentrations of pollutants allowed in your effluent discharge if assimilative capacity is available in the receiving water.

Pursuant to Section 13267 of the California Water Code, you are required to submit monitoring data for your effluent and receiving water as described in Attachments I through IV.

Attachment I – Sampling frequency and number of samples.

Attachment II – Constituents to be monitored. This list identifies the constituents to be monitored. It is organized into groupings (Volatile Organics, Semi-Volatile Organics, Inorganics, Pesticides/Polychlorinated Biphenyls (PCBs), Other Constituents, and Discharge & Receiving Water Flows), which correspond to groupings in Attachment I. Also listed are the Controlling Water Quality Criteria and their concentrations. The criteria concentrations are compiled in the Central Valley Regional Water Board's staff report, *A Compilation of Water Quality Goals.*[1] Minimum quantitation levels for the analysis of the listed constituents will be equal to or less than the Minimum Levels (ML) listed in Appendix 4 of the SIP or the Detection Limits for Reporting Purposes (DLRs) published by the Department of Health Services which are below the controlling water quality criteria concentrations listed in Attachment II of this letter. In cases where the controlling water quality criteria concentrations are below the detection limits of all approved analytical methods, the best available procedure will be utilized that meets the lowest of the MLs and DLR. Also listed are suggested analytical procedures. You are not required to use these specific procedures as long as the procedure you select achieves the desired minimum detection level. All analyses must be performed by a California certified environmental analytical laboratory.

Attachment III – Dioxin and furan sampling. Section 3 of the SIP has specific requirements for the collection of samples for analysis of dioxin and furan congeners, which are detailed in Attachment III. Briefly, dischargers classified as major must collect and analyze two samples per year (one collected in the wet season and one collected in the dry season) for congeners in each of the next three years. For dischargers classified as minor, one wet season and one dry season sample must be collected and analyzed at some time during the next three years.

Attachment IV – Reporting Requirements. This attachment provides laboratory and reporting requirements including a recommended data reporting format.

With the exception of dioxin and furan congener sampling which is due by **1 November 2004** (see Attachment III), all samples shall be collected, analyses completed, and monitoring data shall be submitted to the Regional Board by **1 March 2003**. Any NPDES permit application submitted after **1 March 2002** shall include with the application at least one set of data for the constituents listed in Attachment II.

In the interest of generating and submitting data by the required dates, a schedule for compliance with this data request shall be prepared and submitted to the Executive Officer by **16 November 2001**. This schedule shall include the requirements of Attachment I and Attachment III. The schedule will also include the data submission requirements for applications submitted after **1 March 2002**.

Failure or refusal to submit technical or monitoring data as required by Section 13267, California Water Code, or falsifying any information provided is guilty of a misdemeanor and is subject to an administrative civil liability of up to $1,000 per day of violation, in accordance with Section 13268, California Water Code.1

If you have any questions, please contact your Regional Board staff representative.

GARY M. CARLTON
Executive Officer

Attachments (4)

1 Available on the internet at http://www.swrcb.ca.gov/rwqcb5/wq_goals.

ATTACHMENT E1

Attachment I – Sampling Frequency and Number of Samples (Minor Industrial)

Samples shall be collected from the effluent and upstream receiving water and analyzed for the constituents listed in Attachment II to provide the indicated number of valid sample results by the submittal due date. Sampling frequency shall be adjusted so that the appropriate number of samples is collected by the due date and so that the sampling is representative of the wastewater discharge.

Constituent/Sample Type2	Frequency	Timeframe (years)	Total Number ofSamples
Volatile Organics/grab	Quarterly	1	4
Semi-Volatile Organics/grab or composite	Quarterly	1	4
Inorganics/grab or composite	Quarterly	1	4
Pesticides3 & PCBs/grab or composite	Quarterly	1	4
Other Constituents4/grab or composite	Quarterly	1	4
Discharge & Receiving Water Flow5	Monthly	1	12
Dioxins/grab or composite	Semi-annual	1	2

2 The effluent sampling station and the upstream receiving water station specified in the NPDES Permit Monitoring and Reporting Program should be used.

3 OP pesticides (diazinon, chlorpyrifos) are not required of industrial facilities.

4 See list in Attachment II.

5 Discharge and Receiving Water Flow. Discharge flow should be recorded and reported for each day of sample collection. All NPDES dischargers should have a means of measuring the volume of discharge as part of their monitoring already required by the NPDES Permit Monitoring and Reporting Program. Receiving Water Flow, however, is not generally required by NPDES Permit Monitoring Programs. For facilities that already conduct receiving water flow monitoring, the receiving water flow should be recorded and reported for each day in which sampling occurs. For facilities that do not routinely conduct receiving water flow monitoring, provide the best estimate of flow reasonably obtainable. It may be possible to obtain flow data from an existing nearby gauging station.

Attachment III -Dioxin and Furan Sampling

Section 3 of the State Implementation Plan requires that each NPDES discharger conduct sampling and analysis of dioxin and dibenzofuran congeners. The required number and frequency of sampling are as follows:

- Major NPDES Dischargers – once during dry weather and once during wet weather for each of three years, for a total of six samples.
- **Minor NPDES Dischargers** – once during dry weather and once during wet weather for one year during the three-year period, for a total of two samples.

Each sample shall be analyzed for the seventeen congeners listed in the table below. High Resolution GCMS Method 8290, or another method capable of individually quantifying the congeners to an equivalent detection level, shall be used for the analyses.

Sampling shall start during winter 2001/2002 and all analyses shall be completed and submitted by 1 November 2004. Sample results shall be submitted along with routine monitoring reports as soon as the laboratory results are available.

For each sample the discharger shall report:

- The measured or estimated concentration of each of the seventeen congeners
- The quantifiable limit of the test (as determined by procedures in Section 2.4.3, No. 5 of the SIP)
- The Method Detection Level (MDL) for the test
- The TCDD equivalent concentration for each analysis calculated by multiplying the concentration of each congener by the Toxicity Equivalency Factor (TEF) in the following table, and summing the resultant products to determine the equivalent toxicity of the sample expressed as 2,3,7,8-TCDD.

Congener	TEF
2,3,7,8TetraCDD	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 IV – Reporting Requirements

1. **Laboratory Requirements**. The laboratory analyzing the monitoring samples shall be certified by the Department of Health Services in accordance with the provisions of Water Code Section 13176 and must include quality assurance/quality control data with their reports.

2. **Criterion Quantitation Limit (CQL)**. The criterion quantitation limits will be equal to or lower than the minimum levels (MLs) in Appendix 4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (Copies of the SIP may be obtained from the State Water Resources Control Board, or downloaded from http://www.swrcb.ca.gov/iswp/final.pdf) or the detection limits for purposes of reporting (DLRs) published by the Department of Health Services (http://www.dhs.ca.gov/ps/ddwem/chemicals/DLR/dlrindex.htm) which is below the controlling water quality criterion concentrations summarized in attachment II of this letter.

3. **Method Detection Limit (MDL)**. The method detection limit for the laboratory shall be determined by the procedure found in 40 Code of Federal Regulations (CFR) Part 136, Appendix B (revised as of May 14, 1999).

4. **Reporting Limit (RL).** The reporting limit for the laboratory. This is the lowest quantifiable concentration that the laboratory can determine. Ideally, the RL should be equal to or lower than the CQL to meet the purposes of this monitoring.

5. **Reporting Protocols**. The results of analytical determinations for the presence of chemical constituents in a sample shall use the following reporting protocols:

   a. Sample results greater than or equal to the reported RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
   b. Sample results less than the report RL, 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.
   c. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory, if such information is available, may include numerical estimates of the data quantity for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.
   d. Sample results that are less than the laboratory's MDL shall be reported as "Not Detected" or ND.

6. **Data Format**. The monitoring report shall contain the following information for each pollutant:

   a. The name of the constituent.
   b. Sampling location.
   c. The date the sample was collected.
   d. The time the sample was collected.
   e. The date the sample was analyzed. For organic analyses, the extraction date will also be indicated to assure that hold times are not exceeded for prepared samples.

f. The analytical method utilized.
g. The measured or estimated concentration.
h. The required Criterion Quantitation Limit (CQL).
i. The laboratory's current Method Detection Limit (MDL), as determined by the procedure found in 40 CFR Part 136, Appendix B (revised as of May 14, 1999).
j. The laboratory's lowest reporting limit (RL).
k. Any additional comments.

6. **Example of Data Format**.

Discharger: _____ Name of
Laboratory: _____
Contact Name: _____ Laboratory
Contact: _____
Phone Number: _____ Phone
Number: _____

Name of Constituent and CTR #	Sampling Location*	Date Sample Collected	Time Sample Collected	Date Sample Analyzed	USEPA Method Used	Analytical Results (ug/L)	CQL (ug/L)	MDL (ug/L)	RL (ug/L)
(See Attachment II)									

* The effluent sampling station and the upstream receiving water station specified in the NPDES Permit Monitoring and Reporting Program should be used. Other sampling locations must be approved by Regional Board staff. Include longitude and latitude coordinates for the receiving water sampling stations.

INFORMATION SHEET

ORDER NO. R5-2005-XXXX
PACIFIC COAST SPROUT FARMS, INC.
SACRAMENTO FACILITY
SACRAMENTO COUNTY
NPDES NO. CA0082961

SCOPE OF PERMIT

This renewed Order regulates the discharge of up to 0.124 million gallons per day (mgd) of effluent from the Pacific Coast Sprout Farms, Inc., Sacramento Facility. This Order includes effluent, groundwater, and receiving water limitations, monitoring and reporting requirements, additional study requirements, and reopener provisions for effluent constituents.

BACKGROUND INFORMATION

The Pacific Coast Sprout Farms, Inc. (hereafter Discharger) owns and operates a sprout farm located at 5649 Warehouse Way, Sacramento, California. The facility produces 3.5 million pounds per year of organic mung bean sprouts. Supply water is provided by an on-site water supply well. The water is used to irrigate and cool the bean sprouts during the growing stage, and to wash the bean sprouts upon completion of the growing cycle. Some additional washwater is produced during washing of equipment used for sprout growing. The facility may generate up to 104,000 gallons per day (gpd) of wastewater from irrigation and bean sprouts cooling, and 20,000 gpd of washwater from beans and equipment washing. The Discharger requested a modification of its previous Order, Order No. 98-120, on 24 July 2001 to address the need to add chlorine to the water used for growing and washing the sprouts. On 25 January 2002, the Regional Board adopted Order No. R5-1998-0120-R01, modified to include effluent limitations and weekly effluent monitoring for chlorine residual. Since requesting the modification, the Discharger has determined that its water supply does not need to be chlorinated. Thus, no chemicals are used in the growing process and only a small amount of chlorine is used during equipment cleaning. The wastewater is discharged from Outfall 001 to the storm drain system that is owned and operated by the City of Sacramento. Waters in the storm drain system collect in a sump that is pumped to an open storm drain channel that carries the discharge and other runoff within the drainage area approximately one to two miles prior to discharging to Morrison Creek, a water of the United States and a tributary to the Sacramento-San Joaquin River Delta (Delta) as defined by Section 12220 of the California Water Code. Morrison Creek crosses the Delta boundaries at about 10 miles from the discharge point.

PREVIOUS VIOLATIONS AND PERMIT EXCEEDANCES

Based on Self-Monitoring Reports submitted by the Discharger between 1998 and 2003, the Discharger did not report any exceedances to effluent limitations established in previous Order R5-1998-0120-R01.

RECEIVING WATER BENEFICIAL USES AND ASSIMILATIVE CAPACITY

The Basin Plan on page II-1.00 states: "Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning…" and with respect to disposal of wastewaters states that "…disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses." In addition, State Board Resolution No 88-63, incorporated

into the Basin Plan pursuant to Regional Board Resolution 89-056, requires the Regional Board to assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in Table II-1.

The federal Clean Water Act, Section 101(a)(2), states: "it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983." Federal Regulations, developed to implement the requirements of the Clean Water Act, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 CFR Sections 131.2 and 131.10, require that all waters of the State regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. Section 131.3(e), 40 CFR, defines existing beneficial uses as those uses actually attained after November 28, 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 CFR Section 131.10 requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

The Basin Plan at page II-2.00 states: "Existing and potential beneficial uses which currently apply to surface waters of the basins are presented in Figure II-1 and Table II-1. The beneficial uses of any specifically identified water body generally apply to its tributary streams." The receiving stream is Morrison Creek. The Basin Plan does not specifically identify beneficial uses for Morrison Creek outside the boundaries of the Sacramento-San Joaquin River Delta (Delta), but does identify beneficial uses for Morrison Creek once it enters the Delta, which occurs within 10 miles from the discharge point, and thus is considered a tributary to the Delta. Morrison Creek once it enters the Delta flows into the Bufferlands area, which includes Upper and Lower Beach Lakes. There is no direct access of Morrison Creek to the Sacramento River. In order for Morrison Creek to reach the Sacramento River, it must do so via a lift station and pump (Sump 90 operated by the City of Sacramento) since there is a continuous levee separating the Sacramento River from Morrison Creek. The Basin Plan identifies the following beneficial uses for the Sacramento-San Joaquin River Delta: municipal and domestic supply, agricultural irrigation and stock watering, industrial process and service water supply, water contact recreation, non-contact water recreation, warm and cold freshwater habitat, warm and cold water fish migration habitat, warm water spawning habitat, wildlife habitat, and navigation.

Upon review of the flow conditions, habitat values, and beneficial uses of Morrison Creek, and considering site specific facts, the Regional Board finds that the beneficial uses identified in the Basin Plan for the Sacramento-San Joaquin River Delta are applicable to Morrison Creek. In addition, based on the available information, the worst-case dilution is assumed to be zero to provide protection for the receiving water beneficial uses. The impact of assuming zero assimilative capacity within the receiving water is that discharge limitations are end-of-pipe limits with no allowance for dilution within the receiving water.

EFFLUENT LIMITATIONS AND REASONABLE POTENTIAL

On 5 November 2001, the Executive Officer issued a letter, pursuant to California Water Code, Section 13267, requiring the Discharger to prepare a technical report assessing effluent and receiving water quality. The letter required sampling for volatile organics, semi-volatile organics, inorganics, pesticides and PCBs,

and other constituents in the effluent and receiving water. The data are used to determine reasonable potential for the pollutants listed in the letter. In response to the letter dated 5 November 2001 and subsequent letters (dated 27 December 2001, and 25 February 2003) the Discharger provided monitoring data of some but not all of the pollutants listed in the letter dated 5 November 2001. Also, the reported detection limits of several CTR and non-CTR pollutants were above the minimum detection limits recommended in the 5 November 2001 letter. As a result, reasonable potential analyses could not be completed for these pollutants. Therefore, the Regional Board is requiring the facility to conduct a monitoring study to sample the effluent for CTR and certain non-CTR constituents. The Discharger is to begin its sampling program within 90-days after the effective date of this Order and complete its study within one-year after the start of the study. A final report is due no later than 60-days after completion of the study. Board staff will review the data for reasonable potential. If it is determined that a pollutant has a reasonable potential to cause or contribute to an excursion of applicable water quality standards, this Order may be reopened to allow the Regional Board to incorporate additional effluent limitations into this Order.

The Regional Board determined reasonable potential analysis (RPA) for remaining CTR and non-CTR pollutants for which the data were available. The analytical results of two major and three minor sampling events were submitted to the Regional Board (summary of available results shown in Attachment D). The results of these sampling events were used in developing this Order. Table 1 (below) summarizes the results of the RPA. Effluent limitations are included in the Order to protect the beneficial uses of the receiving stream and to ensure that the discharge complies with the Basin Plan objective that toxic substances not be discharged in toxic amounts.

Reasonable potential (RP) was determined by calculating the projected maximum effluent concentration (MEC) for each constituent and comparing it to applicable water quality criteria; if a criterion was exceeded, the discharge was determined to have reasonable potential to exceed a water quality objective for that constituent. The projected MEC is determined by multiplying the observed MEC (the maximum detected concentration) by a factor that accounts for statistical variation. The multiplying factor is determined (for 99% confidence level and 99% probability basis) using the number of results available and the coefficient of variation (CV) (standard deviation divided by the mean) of the sample results. However, when there are less than 10 results available, the default CV of 0.6 is used. In accordance with the SIP, when calculating the CV, non-detect results are counted as one-half the detection level when calculating the mean. For all priority pollutants where the source of the applicable water quality standard is the CTR, NTR or site-specific Basin Plan numeric objectives referenced in the CTR, the multiplying factor is 1. Reasonable potential evaluation was based on the methods used in the SIP and the USEPA Technical Support Document for Water Quality-Based Toxics Control [EPA/505/2-90-001]. Table 1 summarizes the results of the reasonable potential analysis and the method for effluent limitation development.

Effluent Limitations for water quality-based limitations were calculated in accordance with Section 1.4 of the SIP and the TSD. The following paragraphs describe the general methodology used for calculating Effluent Limitations.

Calculations for Effluent Limitations

In calculating maximum effluent limitations, the effluent concentration allowances were set equal to the criteria/standards/objectives.

$$ECA_{acute} = CMC \qquad ECA_{chronic} = CCC \qquad ECA_{HH} = HH$$

where: ECA_{acute} = effluent concentration allowance for acute (one-hour average) toxicity criterion
$ECA_{chronic}$ = effluent concentration allowance for chronic (four-day average) toxicity criterion
ECA_{HH} = effluent concentration allowance for human health, agricultural goal, or other long-term criterion/objective such an MCL
CMC = criteria maximum concentration (one-hour average)
CCC = criteria continuous concentration (four-day average, unless otherwise noted)
HH = human health, agriculture, or other long-term criterion/objective

Acute and chronic toxicity ECAs were then converted to equivalent long-term averages (LTAs) using statistical multipliers (obtained from SIP Table 1, using a CV of 0.6, when less than 10 results available) and then the lowest LTA was used. Additional statistical multipliers (obtained from SIP Table 2 using a CV of 0.6 and n=4, since available results were less than 10) were then used to calculate the maximum daily effluent limitation (MDEL) and the average monthly effluent limitation (AMEL). .

$$AMEL = mult_{AMEL}\left[\min\left(\overbrace{M_A ECA_{acute}}^{LTA_{acute}}, M_C ECA_{chronic}\right)\right]$$
$$MDEL = mult_{MDEL}\left[\min\left(M_A ECA_{acute}, \underbrace{M_C ECA_{chronic}}_{LTA_{chronic}}\right)\right]$$

Human health ECAs were set equal to the AMEL and when applicable (if limit is based on a CTR criterion) a statistical multiplier was used to calculate the MDEL

$$AMEL_{HH} = ECA_{HH}$$
$$MDEL_{HH} = \left(\frac{mult_{MDEL}}{mult_{AMEL}}\right) AMEL_{HH}$$

where: $mult_{AMEL}$ = statistical multiplier converting minimum LTA to AMEL
$mult_{MDEL}$ = statistical multiplier converting minimum LTA to MDEL
M_A = statistical multiplier converting CMC to LTA
M_C = statistical multiplier converting CCC to LTA

In compliance with 40 Code of Federal Regulations (CFR) section 122.45(f), mass-based limitations have also been established in this Order. Generally, mass-based limits ensure that dilution is not employed to comply with the final effluent concentration limits. This Order had developed mass-based effluent limitations based on a maximum flow of 0.124 mgd.

The Basin Plan includes a list of Water Quality Limited Segments (WQLSs), which are defined as "*…those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.)*." The Basin Plan also states, "*Additional treatment beyond minimum federal standards will be imposed on dischargers to WQLSs. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment*." This 303(d)

list includes Morrison Creek, which listed as impaired by diazinon. On 10 September 2004, the Regional Board adopted Resolution No. R5-2004-0109, Establishment of Total Maximum Daily Loads of Diazinon and Chlorpyrifos in Sacramento Area Urban Creeks, which includes Morrison Creek. The Resolution concluded that existing Regional Board and federal regulatory requirements (Federal Insecticide, Fungicide, and Rodenticide Act and Waste Discharge Requirements Order No. R5-2002-0206 and monitoring requirements for the County of Sacramento storm water discharges from municipal separate storm sewer systems) are sufficient to attain water quality objectives in Urban Creeks including Morrison Creek with respect to diazinon and chlorpyrifos. Based on monitoring studies conducted by the Discharger, diazinon was not found in detectable concentrations in the facility's effluent. This Order, therefore does not include a requirement for the Discharger to monitor its effluent or Morrison Creek for diazinon.

Dilution

While it is possible that there is hydraulic assimilative capacity for the discharge, the discharger failed to provide information regarding available dilution in the receiving water (Morrison Creek). Therefore, it must be assumed that no dilution exists and applicable water quality standards must be applied as end-of-pipe effluent limitations.

Hardness Dependent Criteria

Section 1.2 of the SIP requires the Regional Board to ensure criteria/objectives are properly adjusted for hardness using the hardness for the receiving water. The discharger failed to submit hardness data for Morrison Creek. In evaluating compliance with the CTR and SIP for this Order, Regional Board staff utilized available ambient monitoring data reported by Procter and Gamble, a discharger regulated by NPDES Order No. 5-01-064 that discharges to Morrison Creek immediately downstream of the facility's discharge. Regional Board staff believes this data is representative of the background water quality for Morrison Creek at the point of discharge for this Order.

WATER QUALITY BASED EFFLUENT LIMITATIONS

Table 1 summarizes the final effluent limitations and how they were developed for each of the following CTR and non-CTR constituents found to have Reasonable Potential to cause or contribute to an exceedance of applicable water quality standards:

Arsenic— The maximum observed effluent arsenic concentration was 3.7 µg/L. Using the TSD reasonable potential analysis procedure, the maximum projected concentration of arsenic in the effluent is calculated to be 27.4 µg/L. The projected MEC for arsenic exceeds the primary MCL of 10 µg/L; therefore, the discharge has a reasonable potential to cause or contribute to an excursion of the Basin Plan chemical constituents objective. Therefore, to protect the municipal and domestic beneficial uses, drinking water standards or human health criteria this Order incorporates water quality-based effluent limitations for arsenic and establishes 10 µg/L as a monthly average concentration limit and 0.01 lbs/day as a mass-based effluent limit. Based on the limited data submitted (only two samples), it appears that the statistically projected MEC would not comply with these effluent limitations, and a time schedule is needed. Therefore, since the chemical constituents Basin Plan objective, the basis for this limitation, is not a new objective, a schedule of

compliance for arsenic is not included in this Order. Instead, a separate Time Schedule Order shall be proposed for compliance with the arsenic effluent limitations.

Chlorine, Total Residual— The Discharger utilizes chlorine during equipment cleaning operations. The Basin Plan prohibits the discharge of toxic materials in toxic concentrations. Aquatic habitat is a beneficial use of the receiving water. The use of chlorine presents a reasonable potential that it could be discharged in toxic concentrations. Previous Order R5-1998-0120-R01 contained effluent limitations for chlorine based on the ambient water quality criteria for chlorine and continues to be protective of water quality. This Order carries forward the effluent limitations for chlorine.

Electrical Conductivity (EC)— EC is a method of measuring salinity in water. High salinity can impact the beneficial uses of receiving waters. Analytical data provided (9 sample results) by the discharger indicate that the maximum EC was detected at 323 µmhos/cm. Using the TSD reasonable potential analysis procedure, the projected MEC for EC in the effluent is calculated to be 1034 µmhos/cm. Based on this projected MEC, the discharge has a reasonable potential to exceed the Agricultural Water Quality Goal for EC of 700 µmhos/cm. Therefore, to protect the agricultural beneficial use, an average monthly effluent limitation (AMEL) of 700 µmhos/cm for EC is included in this Order. Based on the data submitted (nine samples ranging between 261 µmhos/cm and 323 µmhos/cm), it appears that consistently the effluent would be able to comply with this effluent limitation, and therefore a time schedule is not needed, even if it appears that the statistically projected MEC would not comply with this effluent limitation.

Total Dissolved Solids (TDS)— Analytical data provided by the discharger indicate that the maximum observed TDS concentration was 240 mg/l. TDS are typically correlated with EC. Therefore, because an effluent limitation has been placed on EC, an effluent limit on TDS would be redundant. An effluent limit on TDS therefore has not been placed on this discharge.

Fluoride — Analytical data provided by the discharger indicate that the maximum observed fluoride concentration was detected at 190µg/L. Using the TSD reasonable potential analysis procedure, the projected MEC for fluoride in the effluent is calculated to be 2508 µg/L. Based on this projected MEC, the discharge has a reasonable potential to exceed the Agricultural Water Quality Goal for fluoride of 1,000 µg/L. Therefore, to protect the agricultural beneficial use, an average monthly effluent limitation (AMEL) of 1,000 µg/L and mass-based limit of 1.0 lbs/day for fluoride are included in this Order. Based on the limited data submitted (only one sample), it appears that the statistically projected MEC would not comply with these effluent limitations, and a time schedule is needed. Therefore, since the chemical constituents Basin Plan objective, the basis for these limitations, is not a new objective, a schedule of compliance for fluoride is not included in this Order. Instead, a separate Time Schedule Order shall be proposed for compliance with the fluoride effluent limitations.

Nitrate— Analytical data provided by the discharger indicate that the maximum observed nitrate concentration was 1.6 mg/L (measured as Nitrogen). Using the TSD reasonable potential analysis procedure, the projected MEC for nitrate in the effluent is calculated to be 21 mg/L (as N). Based on this projected MEC, the discharge has a reasonable potential to exceed the Primary MCL for nitrate of 10 mg/L (as N). Therefore, to protect drinking water sources and human health, an average monthly effluent limitation (AMEL) for nitrate of 10 mg/L (as N) and a mass-based limit of 10 lbs/day are included in this Order. Based

on the limited data submitted (only one sample), it appears that the statistically projected MEC would not comply with these effluent limitations, and a time schedule is needed. Therefore, since the chemical constituents Basin Plan objective, the basis for this limitation, is not a new objective, a schedule of compliance for nitrate is not included in this Order. Instead, a separate Time Schedule Order shall be proposed for compliance with the nitrate effluent limitations.

pH— Previous Order R5-1998-0120-R01 contained effluent limitations pH based on Basin and these limits continue to be protective of water quality. This Order carries forward the effluent limitations for pH.

Chloride— Analytical data provided by the Discharger (3 sample results) indicate that the maximum observed chloride concentration was 12 mg/L. Using the TSD reasonable potential analysis procedure, the projected MEC for chloride in the effluent is calculated to be 67 mg/L. The projected MEC does not exceed the Agricultural Water Quality Goal for chloride of 106 mg/L. Therefore, the discharge does not have a reasonable potential to exceed a water quality standard for chloride and an effluent limitation for chloride is not necessary.

TECHNOLOGY-BASED EFFLUENT LIMITS

USEPA develops Effluent Limitations, Guidelines and Standards (ELGs) for discharges from different industries. These ELGs, also known as the technology-based standards, are based on best practicable treatment control technology (BPT), best available technology economically achievable (BAT), best conventional pollutant control technology (BCT), and new source performance standards (NSPS). The CWA requires that the dischargers must meet these technology-based standards. Section 402(a)(1) of the CWA and 40 CFR 125.3 of the NPDES regulations authorize the use of best professional judgment to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. No ELGs exists for this type of discharge, and therefore, the technology-based limits in this Order are based on best professional judgment.

5-day Biochemical Oxygen Demand (BOD_5) and Total Suspended Solids (TSS)- Based on best professional judgement, the Regional Board has historically established AMEL and MDEL for BOD and TSS at 30 mg/L and 45 mg/L, respectively, for similar or almost similar operating facilities. Previous Order R5-1998-0120-R01 contained effluent limitations for BOD_5 and TSS at 30 mg/L and 45 mg/L, respectively. These limitations are protective of the beneficial uses of the receiving water; particularly in maintaining dissolved oxygen levels. An excess of oxygen demanding substances can cause depletion of the in-stream dissolved oxygen levels thereby causing harm to aquatic life. Therefore, this Order carries over the average monthly effluent limitations (AMEL) and maximum daily effluent limitations (MDEL) for BOD and TSS.

Flow—Previous Order R5-1998-0120-R01 contained a maximum flow limitation of 0.105 mgd. In its Report of Waste Discharge, the Discharger requested an increase of its maximum flow limitation to 0.124 mgd to account for an increase in water usage at the facility. Discharges from the facility can be characterized as low threat due to their character and nature; therefore, the final mass-based effluent limitations in this Order are based on the maximum flow limit requested by the Discharger of 0.124 mgd. .

TIME SCHEDULE ORDER (TSO)

In accordance with CWC Section 13300, a separate TSO has been prepared to address completion of action necessary to achieve full compliance and bring the waste discharge into compliance for the new effluent limitations for arsenic, fluoride, and nitrate (as N).

RECEIVING WATER LIMITATIONS

***Dissolved Oxygen*—** The designated beneficial use of the Sacramento-San Joaquin Delta, downstream from Morrison Creek, includes cold freshwater aquatic habitat (COLD). Pursuant to the Basin Plan Tributary Rule, COLD beneficial use is applied to Morrison Creek. For water bodies designated as having COLD as a beneficial use, the Basin Plan includes a water quality objective of maintaining a minimum of 7.0 mg/L of dissolved oxygen. The current permit includes a limitation of 5.0 mg/L for dissolved oxygen. In order to assure attainment of the Basin Plan requirement for the protection of the cold freshwater aquatic habitat beneficial use, this Order contains a new receiving water limitation of 7.0 mg/L for dissolved oxygen applied at R-2.

For surface water bodies outside of the Delta, the Basin Plan includes the water quality objective that "…*the monthly median of the mean daily dissolved oxygen (DO) concentration shall not fall below 85 percent of saturation in the main water mass, and the 95 percentile concentration shall not fall below 75 percent of saturation.*" This objective is also included as a receiving water limitation in the Order.

***pH*—** For all surface water bodies in the Sacramento River and San Joaquin River basins, the Basin Plan includes water quality objectives stating that "[t]*he pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses*." The beneficial uses of Sacramento-San Joaquin Delta, which is downstream from Morrison Creek, include COLD and WARM. This Order includes receiving water limitations for both pH range and pH change.

***Temperature*—** The designated beneficial uses of the Sacramento-San Joaquin Delta, downstream from Morrison Creek, are COLD and WARM. The Basin Plan includes the following objective: "[a]*t no time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5ºF above natural receiving water temperature*." The Order includes a receiving water limitation based on this objective.

***Turbidity*—** The Basin Plan includes the following objective: "*Increases in turbidity attributable to controllable water quality factors shall not exceed the following limits*:

- Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.
- Where natural turbidity is between 5 and 10 NTUs, increases shall not exceed 20 percent.
- Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTU.
- Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent."

***Narrative Limitations*—**Receiving Water Limitations for biostimulatory substances, color, floating material, oil and grease, radioactivity, settleable material, tastes and odors, and toxicity are based on narrative Basin Plan objectives. The objectives are located in Chapter III: Water Quality Objectives, under the Water Quality Objectives for Inland Surface Waters heading.

GROUNDWATER LIMITATIONS

The beneficial uses of the underlying ground water, as identified in the Basin Plan, are municipal and domestic, industrial service, industrial process, and agricultural supply. Basin Plan water quality objectives to protect the beneficial uses of groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity of groundwater, and taste and odor. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, or animals. The chemical constituent objective states that groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use or that exceed the maximum contaminant levels (MCLs) in Title 22, Code of California Regulations (CCR). The Basin Plan requires the application of the most stringent objective necessary to ensure that groundwaters do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect domestic drinking water supply, agricultural supply, or any other beneficial use. This Order contains groundwater limitations that prohibit groundwater degradation.

GENERAL EFFLUENT LIMITATION INFORMATION

Selected 40 CFR §122.2 definitions:

Average monthly discharge limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month.

Average weekly discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week.

Continuous discharge means a "discharge" which occurs without interruption throughout the operating hours of the facility, except for infrequent shutdowns for maintenance, process changes, or other similar activities.

Daily discharge means the "discharge of a pollutant" measured during a calendar day or any 24-hour period that reasonable represents a calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum daily discharge limitation means the highest allowable "daily discharge".

The SIP contains similar definitions. These definitions were used in the development of this Order. Alternate limitation period terms were used in the permit for the sake of clarity. Alternates are shown in the following table:

Term Used in Permit	SIP/40 CFR 122.2 Term
Average monthly	Average monthly discharge limitation (AMEL). 30-day averages may have been converted to monthly averages to conform with 40 CFR §122.45 (see below)

40 CFR §122.45 states that:

(1) "All pollutants limited in permits shall have limitations…expressed in terms of mass except…[f]or pH, temperature, radiation, or other pollutants which cannot appropriately be expressed by mass…Pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations."

USEPA recommends a maximum daily limitation rather than an average weekly limitation for water quality based permitting.

RDJ: 1/3/05

Table 1— Pacific Coast Sprout Farms, Inc. Facility Order No. R5-2005-____:
Summary of Effluent Data, Reasonable Potential Analysis, and Effluent Limitations

Constituent	Max. Conc. (µg/L)	No. of Results	CV[1]	Multiplier[2]	Projected MEC (µg/L)	Criterion Conc. (µg/L)	Controlling Criterion or Goal	Limit Req'd?	ECA= AMEL[3] (µg/L)	N[8]	MDEL/ AMEL	MDEL[4] (µg/L)
Aluminum	0.9	1	0.6	13.2	12	87	USEPA Recommended Ambient Water Quality Criteria for Aquatic Life Protection	No	--	--	--	--
Arsenic	3.7	2	0.6	7.4	27	10	USEPA Primary MCL	**Yes**	10	4	[4]	--
Barium	50.2	1	0.6	1	50	490	USEPA IRIS Reference Dose[2]	No	--	--	--	--
Chloride	12[5]	3	0.6	5.6	67[5]	106[5]	Agricultural Water Quality Goal	No				--
Chromium	3	1	0.6	13.2	39.6	50	CA DHS Primary MCL	No	--	--	--	--
Copper	1.8	1	0.6	1	1.8	5.25[7]	CA Toxics Rule (CTR)	No	--	--	--	--
Electrical Conductivity (EC)	323[6]	9	0.6	3.2	1034[6]	700[6]	Wescott and Ayers Ag Goal	**Yes**	700[6]	4	[4]	--
Fluoride	190	1	0.6	13.2	2,508	1,000	Agricultural Water Quality Goal	**Yes**	1,000	4	[4]	--
Manganese	3.3	1	0.6	13.2	44	50	CA DHS Secondary MCL	No	--	--	--	--
Mercury	0.0018	2	0.6	1	0.0018	0.05	CA Toxics Rule (CTR)	No	--	--	--	--
Nickel	1	1	0.6	1	1	29.5[7]	CA Toxics Rule (CTR)	No	--	--	--	--
Nitrate	1.6[5]	1	0.6	13.2	21.12[5]	10[5]	USEPA Primary MCL	**Yes**	10[5]	4	[4]	--
Sulfate	14[5]	1	0.6	13.2	184.8[5]	250[5]	CA DHS Secondary MCL	No	--	--	--	--
Total Dissolved Solids (TDS)	240[5]	3	0.6	5.6	1344	450	Agricultural Water Quality Goal	No[9]		4	--	--
Zinc	5.8	1	0.6	1	5.8	67.7[7]	CA Toxics Rule (CTR)	No	--	--	--	--

[1] For less than 10 effluent data points, the coefficient of variation (CV) is estimated to equal 0.6.
[2] The multiplying factor (for 99% confidence level and 99% probability basis) is dependent on the CV and number of reported effluent results. For all constituents for which the source of the applicable water quality standard is the CTR, NTR, site-specific Basin Plan numeric objectives referenced in the CTR, or based on USEPA IRIS Reference Dose, the multiplying factor is 1.
[3]For human health criterion/objective, water quality criteria = ECA (effluent concentration allowance) = AMEL (average monthly effluent limitation)
[4]No maximum daily effluent limitation (MDEL) is established for a pollutant whose applicable water quality standard is a drinking water Maximum Contaminant Level (MCL) or a recommended threshold based on Agricultural Water Quality.
[5] mg/L
[6] µmhos/cm
[7] Based on a receiving water hardness of 51 mg/L as $CaCO_3$
[8] For constituents with a monitoring frequency less than four times per month assume N=4
[9] Since including a limitation for EC, it would be redundant to include a TDS effluent limitation.