

STATE OF CALIFORNIA

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
320 W. 4th Street, Suite 200, Los Angeles

FACT SHEET
WASTE DISCHARGE REQUIREMENTS
for
CRC INDUSTRIES, INCORPORATED
(Formerly Sta-Lube, Incorporated)

NPDES Permit No.: CA0064025
Public Notice No.: 03-045

FACILITY ADDRESS

3039 Ana Street
Rancho Dominguez, CA 90221

FACILITY MAILING ADDRESS

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I. Public Participation

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the above-referenced facility. As an initial step in the WDR process, the Regional Board staff has developed tentative WDRs. The Regional Board encourages public participation in the WDR adoption process.

A. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to:

Executive Officer
California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

To be fully responded to by staff and considered by the Regional Board, written comments should be received at the Regional Board offices by 5:00 p.m. on August 20, 2003.

B. Public Hearing

The Regional Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: September 11, 2003
Time: 9:00 a.m.
Location: Metropolitan Water District of Southern California, , Board Room
700 North Alameda Street, Los Angeles, California.

Interested persons are invited to attend. At the public hearing, the Regional Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is www.swrcb.ca.gov/rqcb4 where you can access the current agenda for changes in dates and locations.

C. Waste Discharge Requirements Appeals

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Board's action to the following address:

State Water Resources Control Board
P.O. Box 100, 1001 I Street
Sacramento, CA 95812

D. Information and Copying

The Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special conditions, comments received, and other information are on file and may be inspected at 320 West 4th Street, Suite 200, Los Angeles, California 90013, at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Los Angeles Regional Board by calling (213) 576-6600.

E. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Board, reference this facility, and provide a name, address, and phone number.

II. Introduction

CRC Industries, Incorporated (hereinafter CRC or Discharger) discharges treated ground water under WDRs contained in Order No. 96-089 (NPDES No. CA0064025). Order No. 96-089 expired on November 10, 2001.

CRC has filed a report of waste discharge on February 11, 2003 and has applied for renewal of its WDRs and NPDES permit for discharge of wastes to surface waters. The tentative Order is the reissuance of the WDRs and NPDES permit for discharges from CRC.

Sta-Lube, Incorporated (Sta-Lube) owned and operated a facility for the custom blending and distribution of hand cleaners, greases, and petroleum-based lubricants, located at 3039 Ana Street, Rancho Dominguez. CRC purchased Sta-Lube in 1993 and continued operations until 1998. The site is currently leased to a trucking and warehousing company, and the only activities on-site related to CRC (formerly Sta-Lube) are ground water treatment operations.

The existing permit states that the facility is covered under the general NPDES permit for storm water discharges associated with industrial activity.

III. Description of Facility and Waste Discharge

Operations at the former Sta-Lube facility included blending and packaging of hand cleaners, greases, and lubricants. Soil and ground water pollution resulted from leaking underground solvent storage tanks while the Sta-Lube facility was in operation. Solvents detected included acetone, benzene, chloroform, 1,1-dichloroethane, 1,1-dichloroethylene, 1,2-dichloroethylene, methylene chloride, methyl ethyl ketone, and toluene. All leaking underground storage tanks and associated piping have been removed.

The facility has operated a remediation treatment system for the removal of solvents from soils and ground water since June 1998. The original treatment system included a soil vapor extraction system and a ground water treatment system. The target lifespan for the remediation project was 5 years.

The facility removed the vapor extraction system, and in November 2002 completed a large diameter auger extraction project to remove the remaining contaminated soils. Prior to that time, the pollutant influent concentrations had reached very low levels and the cumulative mass removals were asymptotic. The soil vapor extraction system consisted of extracting solvent vapors from the contaminated soils through vapor extraction wells and treatment of the extracted solvent vapor by regenerable vapor-phase resin beds.

The ground water is pumped from two monitoring wells (1A and 9A) to a treatment train consisting of a bag filter for particulate removal and two granular activated carbon units that are operated in series. The treated ground water effluent is then directed through

Discharge Serial No. 001. Storm water that collects within the site is directed to a sump, and then is processed through the same ground water filtration system and is also discharged through Discharge Serial No. 001.

The Discharger found reuse options to be uneconomical and not technically feasible. Options evaluated included re-injection into the aquifer, irrigation, commercial, industrial, and residential uses.

CRC treats the contaminated ground water and discharges up to 144,000 gallons per day (gpd) of treated ground water and storm water. CRC discharges treated ground water and storm water through Discharge Serial No. 001 (Latitude 33°51'45" N, Longitude 118°12'30" W) to a local storm drain that conveys the wastewater to Compton Creek, a water of the United States. The waste discharge flows approximately 3 miles in Compton Creek to the Los Angeles River, and ultimately to the Los Angeles River Estuary.

The Regional Board and the USEPA have classified the CRC facility as a minor discharge.

Effluent limits contained in the existing permit for Discharge Serial No. 001 and representative monitoring data from the previous permit term are presented in the following table:

Constituent (units)	Effluent Limit	Monitoring Data (November 1998 – December 2002)
	Daily Maximum	Range of Reported Values
BOD ₅ 20°C (mg/L)	30	5 (one reported value)
BOD ₅ 20°C (lbs/day) ¹	36	NR
Oil and grease (mg/L)	15	<1.0 – <5.0
Oil and grease (lbs/day) ¹	18	NR
Suspended Solids (mg/L)	75	<1.0 – 6
Suspended Solids (lbs/day) ¹	90	NR
Settleable solids (ml/L)	0.2	<0.1
Turbidity (NTU)	75	0.07 – 0.35
Benzene (µg/L)	5.9	<0.5 – <100
Benzene (lbs/day) ¹	0.007	NR
Methylene chloride (Dichloromethane) (µg/L)	450	<5.0 – 3820 ²
Methylene chloride (Dichloromethane) (lbs/day) ¹	0.054	NR
Acute Toxicity (% survival)	³	90 – 100

NR = Not Reported

¹ Mass-based effluent limitations were based on 144,000 gallons per day maximum discharge flow rate. The Discharger did not report discharge data in units of mass.

² Methylene chloride concentrations exceeded permit limitations twice.

³ Average survival in effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test producing less than 70% survival.

The effluent monitoring data show that the effluent limitation for methylene chloride was exceeded once in November 1998 (3,820 µg/L). Correspondence from EMCON/IT Group

(the then current site operator) dated April 17, 2000 indicated that a concentration of 1,000 µg/L of methylene chloride was detected on March 28, 2000. The Discharger stated the exceedance was caused by a high concentration of the constituent that saturated the resin beds and carbon polisher unit. The Discharger stated that the carbon vessel had been changed out with fresh activated carbon as a corrective measure. The Discharger also stated in the April 17, 2000 correspondence that acute toxicity tests conducted on March 28, 2000 indicated 90% survival. However, the First Quarter 2000 report indicated the sample collected on March 28, 2000 resulted in <5 µg/L for methylene chloride. It appears there is a reporting error in the Second Quarter 2000 report for methylene chloride, as indicated by the discrepancy between the April 17, 2000 correspondence and First Quarter 2000 monitoring report. Otherwise, available data indicate that methylene chloride was detected an additional 3 times (at 40 µg/L, 90 µg/L, and 110 µg/L) out of 18 sampling and analysis events during the time frame shown in the table above. The detection limit for benzene on November 11, 1998 was 100 µg/L, while all other detection limits for data from that time frame were 0.5 µg/L.

In addition to sampling for the parameters with effluent limitations, the existing Monitoring and Reporting Program requires sampling for certain constituents (i.e., total dissolved solids, acetone, chloroform, 1,1-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, methyl ethyl ketone, and toluene). Most of the reported values were below detectable levels. Chloroform levels ranged from 0.37 µg/L to 1.7 µg/L and total dissolved solids ranged from 780 mg/L to 1220 mg/L.

Effluent data for Discharge Serial No. 001 presented in the permit renewal application is summarized in the following table:

Constituent (units)	Reported Maximum Daily Value
Flow (gpd)	8,640
Total suspended solids (mg/L)	< 1
Temperature (winter and summer) (deg. F)	70 / 74
Oil and grease (mg/L)	< 1
Arsenic (mg/L)	0.0054
Zinc (mg/L)	0.048
Aldrin (µg/L)	0.02
gamma-BHC (µg/L)	0.029
delta-BHC (µg/L)	0.02
4,4'-DDT (µg/L)	0.046
Dieldrin (µg/L)	0.022
alpha-Endosulfan (µg/L)	0.01
Endosulfan sulfate (µg/L)	0.011
Endrin (µg/L)	0.011
Endrin Aldehyde (µg/L)	0.053
Heptachlor (µg/L)	0.019
Heptachlor Epoxide (µg/L)	0.012

All other toxic pollutants were reported in the permit application as “non-detect” or “believed absent”.

IV. Applicable Plans, Policies, and Regulations

The requirements contained in the proposed Order are based on the requirements and authorities contained in the following:

- A. The federal Clean Water Act (CWA). The federal Clean Water Act requires that any point source discharges of pollutants to a water of the United States must be done in conformance with an NPDES permit. NPDES permits establish effluent limitations that incorporate various requirements of the CWA designed to protect water quality.
- B. Title 40, Code of Regulations (40 CFR) – Protection of Environment, Chapter I, Environmental Protection Agency, Subchapter D, Water Programs, Parts 122-125 and Subchapter N, Effluent Guidelines. These CWA regulations provide effluent limits for certain dischargers and establish procedures for NPDES permitting, including how to establish effluent limits for certain pollutants discharged.
- C. On June 13, 1994, the Regional Board adopted a revised *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan). The Basin Plan contains water quality objectives and beneficial uses for inland surface waters and for the Pacific Ocean. The immediate receiving body for the permitted discharge covered by this permit is a storm drain that conveys wastewater to Compton Creek. The Basin Plan contains beneficial uses and water quality objectives for Compton Creek. The beneficial uses listed in the Basin Plan for Compton Creek are:

Compton Creek – Hydro Unit No. 405.15

Existing: ground water recharge, contact and non-contact water recreation, warm freshwater habitat wildlife habitat, wetlands habitat.

Potential: municipal and domestic water supply.

- D. The State Water Resources Control Board (State Board) adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.
- E. On May 18, 2000, the U.S. Environmental Protection Agency (USEPA) promulgated numeric criteria for priority pollutants for the State of California [known as the *California Toxics Rule* (CTR) and codified as 40 CFR § 131.38]. In the CTR, USEPA promulgated criteria that protect the general population at an incremental cancer risk level of one in a million (10^{-6}), for all priority toxic pollutants regulated as carcinogens. The CTR also provides a schedule of compliance not to exceed 5 years from the date of permit renewal for an existing discharger if the Discharger demonstrates that

it is infeasible to promptly comply with the CTR criteria.

- F. On March 2, 2000, State Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP was effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through National Toxics Rule (NTR) and to the priority pollutant objectives established by the Regional Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by the USEPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP was effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The SIP requires the dischargers' submittal of data sufficient to conduct the determination of priority pollutants requiring water quality-based effluent limits (WQBELs) and to calculate the effluent limitations. The CTR criteria for freshwater or human health for consumption of organisms, whichever is more stringent, are used to develop the effluent limitations in this Order to protect the beneficial uses of Compton Creek.
- G. 40 CFR section 122.44(d)(vi)(A) requires the establishment of numeric effluent limitations to attain and maintain applicable narrative water quality criteria to protect the designated beneficial uses. Where numeric water quality objectives have not been established in the Basin Plan, 40 CFR section 122.44(d) specifies that WQBELs may be set based on USEPA criteria and supplemented, where necessary, by other relevant information to attain and maintain narrative water quality criteria to fully protect designated beneficial uses.
- H. State and Federal antibacksliding and antidegradation policies require that Regional Board actions to protect the water quality of a water body and to ensure that the waterbody will not be further degraded. The antibacksliding provisions are specified in section 402(o) of the CWA and in the Title 40 of the Code of Federal Regulations (40 CFR), section 122.44(l). Those provisions require a reissued permit to be as stringent as the previous permit with some exceptions where effluent limitations may be relaxed.
- I. Effluent limitations are established in accordance with sections 301, 304, 306, and 307 of the federal CWA, and amendments thereto. These requirements, as they are met, will maintain and protect the beneficial uses of Compton Creek.
- J. Existing waste discharge requirements contained in Board Order No. 96-089, adopted by the Regional Board on December 9, 1996. In some cases, permit conditions (effluent limits and other special conditions) established in the existing waste discharge requirements have been carried over to this permit.

V. Regulatory Basis for Effluent Limitations

The CWA requires point source dischargers to control the amount of conventional, nonconventional, and toxic pollutants that are discharged into the waters of the United States. The control of the discharge of pollutants is established through NPDES permits that contain effluent limitations and standards. The CWA establishes two principal bases for effluent limitations. First, dischargers are required to meet technology-based effluent limitations that reflect the best controls available considering costs and economic impact. Second, they are required to meet WQBELs that are developed to protect applicable designated uses of the receiving water.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

Best practicable treatment control technology (BPT) is based on the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and nonconventional pollutants.

Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and nonconventional pollutants.

Best conventional pollutant control technology (BCT) is a standard for the control from existing industrial point sources of conventional pollutants, which are BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

New source performance standards (NSPS) that represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires EPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BCT, BAT, and NSPS. Section 402(a)(1) of the CWA and 40 CFR 125.3 of the NPDES regulations authorize the use of best professional judgment (BPJ) 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.

If a reasonable potential exists for pollutants in a discharge to exceed water quality standards, WQBELs are also required under 40 CFR 122.44(d)(1)(i). WQBELs are established after determining that technology-based limitations are not stringent enough to ensure that state water quality standards are met for the receiving water. WQBELs are based on the designated use of the receiving water, water quality criteria necessary to support the designated uses, and the state's antidegradation policy. For discharges to

inland surface waters, enclosed bays, and estuaries, the SIP establishes specific implementation procedures for determining reasonable potential and establishing WQBELs for priority pollutant criteria promulgated by USEPA through the CTR and NTR, as well as the Basin Plan.

There are several other specific factors affecting the development of limitations and requirements in the proposed Order. These are discussed as follows:

A. Pollutants of Concern

The CWA requires that any pollutant that may be discharged by a point source in quantities of concern must be regulated through an NPDES permit. Further, the NPDES regulations and SIP require regulation of any pollutant that (1) causes; (2) has the reasonable potential to cause; or (3) contributes to the exceedance of a receiving water quality criteria or objective. The SIP includes provisions for priority pollutant criteria promulgated by USEPA in the CTR and NTR, and for those priority pollutants outlined in the Basin Plan.

Effluent limitations for Discharge Serial No. 001 in the current permit were established for BOD₅, oil and grease, suspended solids, settleable solids, and turbidity, because they are parameters typically used to characterize wastewater. They may be present in the discharge of storm water since storm water contacts the paved surface surrounding the treatment system, and may contact treatment equipment, picking up solids and oil and grease; therefore, there is potential for these constituents to be present in the effluent discharged from the ground water treatment system. Thus, effluent limitations for these parameters have been established in this permit. An effluent limitation for pH is established because treated ground water and storm water may contain materials that affect pH; therefore, pH is considered a pollutant of concern. Benzene and methylene chloride (dichloromethane) were found in the contaminated ground water due to previously leaking underground storage tanks and are expected to be in the treated ground water; thus effluent limitations for these parameters have been established in this permit.

Acetone, chloroform, 1,1-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, methyl ethyl ketone, and toluene are pollutants of concern because they were previously stored in the underground solvent storage tanks. There is the potential these constituents may be present in the treated ground water; therefore, they are considered pollutants of concern.

B. Technology-Based Effluent Limits

There are currently no national ELGs for ground water treatment systems. The previous permit stated that the current treatment system is considered to be the best available technology economically achievable (BAT).

This permit will require the Discharger to continue to develop and implement, consistent with the existing permit requirements, a *Storm Water Pollution Prevention Plan* (SWPPP). The SWPPP will outline site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff from being discharged directly into surface waters.

C. Water Quality-Based Effluent Limits

As specified in 40 CFR § 122.44(d)(1)(i), permits are required to include WQBELs for toxic pollutants (including toxicity) that are or may be discharged at levels which cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard. The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses for the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria (that are contained in other state plans and policies, or USEPA water quality criteria contained in the CTR and NTR). The specific procedures for determining reasonable potential, and if necessary for calculating WQBELs, are contained in the SIP.

The CTR contains both saltwater and freshwater criteria. According to 40 CFR § 131.38(c)(3), freshwater criteria apply at salinities of 1 part per thousand (ppt) and below at locations where this occurs 95 percent or more of the time; saltwater criteria apply at salinities of 10 ppt and above at locations where this occurs 95 percent or more of the time; and at salinities between 1 and 10 ppt the more stringent of the two apply. The CTR criteria for freshwater or human health for consumption of organisms, whichever is more stringent, are used to develop the effluent limitations in this Order to protect the beneficial uses of Compton Creek.

1. Reasonable Potential Analysis (RPA)

In accordance with Section 1.3 of the SIP, the Regional Board conducts a reasonable potential analysis for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Board analyzes effluent data to determine if a pollutant in a discharge has a reasonable potential to cause or contribute to an excursion above a state water quality standard. For all parameters that have a reasonable potential, numeric WQBELs are required. The RPA considers water quality objectives outlined in the CTR, NTR, as well as the Basin Plan. To conduct the RPA, the Regional Board must identify the maximum observed effluent concentration (MEC) for each constituent, based on data provided by the Discharger.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete an RPA:

- a. Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limit is needed.
- b. Trigger 2 – If $MEC < C$ and background water quality (B) $> C$, a limit is needed.
- c. Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates that a WQBEL is required.

Sufficient effluent and ambient data are needed to conduct a complete RPA. If data are not sufficient, the Discharger is required to gather the appropriate data for the Regional Board to conduct the RPA. Upon review of the data, and if the Regional Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

The RPA was performed for the priority pollutants for which effluent data were available. The Regional Board issued a letter on July 27, 2001 that required CRC to monitor for priority pollutants regulated in the CTR. Monitoring data collected in accordance with these requirements are available for the period from October 2001 through February 2003.

Based on the RPA, there was reasonable potential to exceed water quality criteria for copper, lead, zinc, methylene chloride, aldrin, alpha-BHC, 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, dieldrin, heptachlor, and heptachlor epoxide.

2. Calculating WQBELs

If a reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one of three procedures contained in Section 1.4 of the SIP. These procedures include:

- a. If applicable and available, use of the wasteload allocation (WLA) established as part of a total maximum daily load (TMDL).
- b. Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).
- c. Where sufficient effluent and receiving water data exist, use of a dynamic model which has been approved by the Regional Board.

3. Impaired Water Bodies in 303 (d) List

Section 303(d) of the CWA requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d)-listed water bodies and pollutants, the Regional Board plans to develop and adopt TMDLs that will specify WLAs for point sources and load allocations (LAs) for non-point sources, as appropriate.

The USEPA has approved the State's 1998 303(d) list of impaired water bodies. Certain receiving waters in the Los Angeles and Ventura County watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 1998 303(d) list and have been scheduled for TMDL development.

The 1998 303(d) List classifies Compton Creek as impaired. The pollutants of concern, detected in the water column, in the sediment, and in fish tissue, include copper, lead, high coliform count, and pH.

4. Whole Effluent Toxicity

Whole Effluent Toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative "no toxics in toxic amounts" criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and measures mortality, reproduction, and growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses by aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. The existing permit contains acute toxicity limitations and monitoring requirements. Effluent monitoring data indicate toxicity test results ranged between 90 and 100 percent survival.

In accordance with the Basin Plan, acute toxicity limitations dictate that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival. Consistent with Basin Plan requirements and existing permit limitations, this Order includes acute toxicity limitations.

The discharges at the CRC facility occur continuously and, due to the types of pollutants present in the ground water treated at the site, could contribute to long-term toxic effects. However, no chronic toxicity data is available for the discharge. Therefore, the Discharger will be required to conduct chronic toxicity testing in order to determine reasonable potential and establish WQBELs as necessary. In addition, the Order includes a chronic testing trigger hereby defined as an exceedance of 1.0 toxic units chronic (TU_c) in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed 1.0 TU_c in a critical life stage test.) If the chronic toxicity of the effluent exceeds 1.0 TU_c, the Discharger will be required to immediately implement accelerated chronic toxicity testing according to Monitoring and Reporting Program, Item IV.D.1. If the results of two of the six accelerated tests exceed 1.0 TU_c, the Discharger shall initiate a toxicity identification evaluation (TIE).

D. Specific Rationale for Each Numerical Effluent Limitation

The Regional Board has determined that reasonable potential exists for all pollutants that are regulated under the current permit; therefore effluent limitations have been established for these pollutants. Furthermore, the requirements in the proposed Order for BOD₅, oil and grease, suspended solids, settleable solids, and turbidity, benzene, and methylene chloride (dichloromethane) (shown in the table below) are based on limits specified in CRC 's existing permit. The effluent limitation for pH is based on the Basin Plan.

Section 402(o) of the Clean Water Act and 40 CFR 122.44(l) require that effluent limitations standards or conditions in re-issued permits are at least as stringent as in the existing permit. Therefore, existing effluent limitations for most of the regulated pollutants are carried over to this permit. In addition to these limitations, the Regional Board is implementing the CTR and SIP, and additional effluent limitations are required for those regulated pollutants that show reasonable potential to exceed water quality standards. For those that do show reasonable potential and for which existing effluent limitations exist, a comparison between existing permit limitations and CTR-based WQBELs was made and the most stringent limitation included in the Order. For methylene chloride, the CTR-based WQBELs are more stringent; therefore, they are established in this permit. In addition, the proposed reissued permit establishes effluent limitations for copper, lead, zinc, aldrin, alpha-BHC, 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, dieldrin, heptachlor, and heptachlor epoxide.

In compliance with 122.45(d), permit limitations shall be expressed, unless impracticable, as both average monthly limitations and maximum daily limitations. Therefore, average monthly limitations are established in the Order. Due to the absence of AMELs in the existing permit, AMELs will be calculated based on the ratios of MDEL:AMEL for those effluent limitations calculated according to the requirements in the CTR (i.e., copper, lead, zinc, methylene chloride, aldrin, alpha-BHC, 4,4'-DDT,

4,4'-DDE, 4,4'-DDD, dieldrin, heptachlor, and heptachlor epoxide). The average of the MDEL:AMEL ratios used to calculate AMELs for these constituents is 2.01. To calculate the AMELs for pollutants without existing AMELs, based on this average ratio, the existing MDEL is divided by 2.01.

In compliance with 40 CFR § 122.45(f), mass-based limitations have also been established in the proposed Order for conventional, nonconventional, and toxic pollutants. Generally, mass-based limits ensure that proper treatment, and not dilution is employed to comply with the final effluent concentration limits. When calculating the mass-based limitations for discharges, the appropriate flow, daily maximum limitations for daily maximum mass calculations, and the monthly average limitations when calculating the monthly average mass, should be used in the following equation:

$$\text{Mass (lbs/day)} = \text{flow rate (MGD)} \times 8.34 \times \text{effluent limitation (mg/L)}$$

where:

- mass = mass limit for a pollutant in lbs/day
- effluent limitation = concentration limit for a pollutant, mg/L
- flow rate = discharge flow rate in MGD

The mass-based effluent limitations contained in this Order are based on a maximum permitted discharge flow rate of 144,000 gpd. Effluent limitations established in this Order are applicable to wastewater discharges from the NPDES Discharge Serial No. 001 (Latitude 33°51'45", Longitude 118°12'30").

Constituent (units)	Maximum Daily Discharge Limitations		Average Monthly Discharge Limitations		Rationale ¹
	Concentration	Mass ² (lbs/day)	Concentration	Mass ² (lbs/day)	
pH (standard units)	Between 6.5 – 8.5	--	Between 6.5 – 8.5	--	BP
BOD ₅ @ 20°C (mg/L)	30	36	20	24	E, BPJ
Oil and grease (mg/L)	15	18	10	12	E, BPJ
Total suspended solids (mg/L)	75	90	50	60	E, BPJ
Settleable solids (ml/L)	0.2	--	0.1	--	E, BPJ
Turbidity (NTU)	75	--	50	--	E, BPJ
Benzene (µg/L)	5.9	0.007	2.94	0.004	E, BPJ
Methylene chloride (Dichloromethane) (µg/L)	450	0.54	224	0.27	E, BPJ
Copper ³ (µg/L)	12.5	0.02	6.23	0.008	CTR

Constituent (units)	Maximum Daily Discharge Limitations		Average Monthly Discharge Limitations		Rationale ¹
	Concentration	Mass ² (lbs/day)	Concentration	Mass ² (lbs/day)	
Lead ³ (µg/L)	4.50	0.005	2.24	0.003	CTR
Zinc ³ (µg/L)	109	0.13	54	0.06	CTR
Aldrin (µg/L)	0.0003	0.000000 3	0.0001	0.000000 1	CTR
alpha-BHC (µg/L)	0.026	0.00003	0.013	0.00002	CTR
4,4'-DDT (µg/L)	0.001	0.000001	0.0006	0.000000 7	CTR
4,4'-DDE (µg/L)	0.001	0.000001	0.0006	0.000000 7	CTR
4,4'-DDD (µg/L)	0.002	0.000002	0.0008	0.000001	CTR
Dieldrin (µg/L)	0.0003	0.000000 3	0.0001	0.000000 2	CTR
Heptachlor (µg/L)	0.0004	0.000000 5	0.0002	0.000000 2	CTR
Heptachlor epoxide (µg/L)	0.0002	0.000000 2	0.0001	0.000000 1	CTR
Toxicity – Acute (% survival)	4	--	--	--	E

¹ BP = Basin Plan, BPJ = Best Professional Judgment, E = Existing Permit (Order No. 96-089), CTR = California Toxics Rule.

² The mass-based effluent limitations for pollutants are based on a maximum discharge flow rate of 144,000 gpd.

³ Discharge limitations for these metals are expressed as total recoverable.

⁴ Average survival in effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test producing less than 70% survival.

E. Compliance Schedule

Based on effluent monitoring data submitted by the Discharger, a comparison between the MEC and calculated AMEL value shows that the Discharger will be unable to consistently comply with effluent limitations established in the proposed Order for aldrin, 4,4'-DDT, dieldrin, heptachlor, and heptachlor epoxide. A review of the monitoring data indicates that two detected values of methylene chloride exceed the CTR-based final effluent limitation. Regional Board staff have determined that interim effluent limitations are not required for methylene chloride, since this elevated concentration occurred only twice in the past (1998 and 2000), and recent data indicate concentrations have decreased over time. It is expected that the Discharger will be able to comply with final WQBELs for methylene chloride. Interim limits have been prescribed for aldrin, 4,4'-DDT, dieldrin, heptachlor, and heptachlor epoxide. As a result, the proposed Order contains a compliance schedule that allows the

Discharger up to 2 years to comply with the revised effluent limitations. Within 1 year after the effective date of the Order, the Discharger must prepare and submit a compliance plan that describes the steps that will be taken to ensure compliance with applicable limitations.

40 CFR section 131.38(e) provides conditions under which interim effluent limits and compliance schedules may be issued. The SIP allows inclusion of an interim limit with a specific compliance schedule included in a NPDES permit for priority pollutants if the limit for the priority pollutant is CTR-based. Since the CTR-based effluent limits for aldrin, 4,4'-DDT, dieldrin, heptachlor, and heptachlor epoxide appear infeasible for the Discharger at this time, interim limits for aldrin, 4,4'-DDT, dieldrin, heptachlor, and heptachlor epoxide are contained in this Order.

The SIP requires that the Regional Board establish other interim requirements such as requiring the Discharger to develop a pollutant minimization plan and/or source control measures and participate in the activities necessary to develop final effluent limitations. When interim requirements have been completed, the Regional Board shall calculate final WQBELs for that pollutant based on the collected data, reopen the permit, and include the final effluent limitations in the permit provisions. Once final limitations become effective, the interim limitations will no longer apply. These interim limitations shall be effective until December 31, 2005, after which, the Discharger shall demonstrate compliance with the final effluent limitations.

The Discharger will specifically be required to develop and implement a plan to reduce the concentrations of aldrin, 4,4'-DDT, dieldrin, heptachlor, and heptachlor epoxide in their discharge. This plan therefore should evaluate options to achieve compliance with the revised permit limitations. These options can include, for example, evaluating and updating available treatment unit processes, upgrading the system if necessary, and maintaining proper operation and maintenance of the treatment system.

Pursuant to the SIP (Section 2.2.1, Interim Requirements under a Compliance Schedule), when compliance schedules are established in an Order, interim limitations must be included based on current treatment facility performance or existing permit limitations, whichever is more stringent to maintain existing water quality. The existing Order does not contain effluent limitations for aldrin, 4,4'-DDT, dieldrin, heptachlor, and heptachlor epoxide; therefore, the MEC will serve as the basis for the interim effluent limitations. It should be noted that the Board may take appropriate enforcement actions if interim limitations and requirements are not met.

From the effective date of this Order until December 31, 2005 the discharge of effluent from Discharge Serial No. 001 in excess of the following limitations is prohibited:

Constituent (units)	Discharge Limitations – Daily Maximum (µg/L) ¹	Rationale ²
Aldrin	0.02	MEC
4,4'-DDT	0.046	MEC
Dieldrin	0.022	MEC
Heptachlor	0.019	MEC
Heptachlor Epoxide	0.012	MEC

¹ The effluent limits in this table are effective from the date of adoption of this Order through August 31, 2005.

² MEC = Maximum Observed Effluent Concentration.

F. Monitoring Requirements

The previous permit for CRC required daily monitoring for flow. Order No. 96-089 also required monthly monitoring for temperature and pH and annual monitoring for biochemical oxygen demand. Semi-annual monitoring was required for oil and grease, settleable solids, suspended solids, and total dissolved solids. Quarterly monitoring was required for turbidity, acetone, benzene, chloroform, 1,1-dichloroethane, 1,1-dichloroethylene, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, methylene chloride, methyl ethyl ketone, and toluene. The previous permit also required monitoring for the priority pollutants once per the life of the permit (within the first week of discharge). Further, the previous permit required annual monitoring for toxicity. The existing Monitoring and Reporting Program required the Discharger to sample and analyze for compliance with discharge limitations prior to commencing discharge.

As discussed previously, the Regional Board also issued a letter on July 27, 2001 that required CRC to monitor for priority pollutants regulated in the CTR, and submit the data by May 22, 2003.

Monitoring requirements are discussed in greater detail in Section III of the Monitoring and Reporting Program CI-7742.

1. Effluent Monitoring

To demonstrate compliance with effluent limitations established in the permit, this Order carries over the existing monitoring requirements for most parameters. Monthly monitoring for aldrin, 4,4'-DDT, dieldrin, heptachlor, and heptachlor epoxide is required to demonstrate compliance with interim effluent limitations.

Quarterly monitoring is required for benzene, copper, lead, zinc, methylene chloride, alpha-BHC, 4,4'-DDE, 4,4'-DDD to demonstrate compliance with established final WQBELs. Annual monitoring requirements have been established for rest of the priority pollutants. pH is required to be monitored on a monthly basis and the rest of the conventional pollutants are to be monitored on a quarterly basis.

2. Receiving Water Monitoring Requirements

To conduct RPA receiving water monitoring data is required. The receiving water monitoring of priority pollutants shall be conducted for the first two years on an annual basis. The two time annual monitoring of the receiving water shall be conducted at the same time as annual effluent monitoring of priority pollutants. .Receiving monitoring station shall be within 50 feet upstream from or near the discharge point (of storm drain) into Receiving Water.