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**
**LINCOLN AVENUE WATER COMPANY**
**(SOUTH COULTER SURFACE WATER TREATMENT PLANT)**

NPDES Permit No.: CA0064068
Public Notice No.: 03-041

| FACILITY ADDRESS | FACILITY MAILING ADDRESS |
|---|---|
| 3939 Chaney Trail | 564 W. Harriet Street |
| Altadena, CA 91001 | Altadena, CA 91001 |
| | Contact: Anne Asavavimol |
| | Telephone: (626) 798-9101 |

## 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 15, 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
700 North Alameda Street
Los Angeles, CA

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, Office of Chief Counsel
ATTN: Elizabeth Jennings, Senior Staff Counsel
1001 I Street, 22nd Floor
Sacramento, CA 95814

### 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

Lincoln Avenue Water Company (hereinafter LAWC or Discharger) discharges wastewater under waste discharge requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit contained in Order No. 97-002 (NPDES Permit No. CA0064068). Order No. 97-002 expired on December 10, 2001.

LAWC has filed a Report of Waste Discharge and has applied for renewal of its WDRs and NPDES permit on February 23, 2001. A site visit was conducted on January 14, 2003, to observe operations and collect additional data to develop permit limits and conditions.

## III. Description of Facility and Waste Discharge

LAWC operates the South Coulter Surface Water Treatment Plant (Plant) located at 3939 Chaney Trail (Sunset Ridge east of Chaney Trail) in Altadena, California. The Plant is a domestic drinking water treatment plant. The Plant is operated as a back-up, intermittent, water treatment system for the community of Altadena (population approximately 16,000) during the winter months when surface water is flowing from the mountains to the Plant's intake point.

The treatment system of the Plant consists of 2-stage high-pressure garnet filtration system capable of treating 700 gallons per minute (gpm) of non-potable water. The first stage consists of seven garnet filtration vessels and the second stage consists of five garnet filtration vessels.

Surface water is piped from an existing diversion structure in Millard Canyon, through a settling basin for removal of leaves and other debris, then to a 1,000,000-gallon storage tank (Upper Coulter Reservoir). The water then flows via gravity to the 2-stage garnet filtration system. A food-grade, cationic polymer is added to the water prior to reaching the first stage filter system via a chemical pump feeding from a container of neat chemical, for solids coagulation and improved filtration. Cationic polymer is also be added in front of the second stage of the filter system. Then chlorine is added for disinfection of the product water. The treated water is directed to and stored in a second 1,000,000-gallon storage tank (Lower Coulter Reservoir), then flows via gravity to customers in Altadena.

The garnet filters in each stage of the treatment system are backwashed with non-potable water from the system. The process vessels are piped to backwash in series (both first and second stage filter systems), through separated pipelines, and the first and second stage filters are backwashed separately. Only one tank is backwashed at any one time using clean filtered water generated by the adjacent filter tanks. During backwashing, filtered water is not delivered to the clean water storage reservoir. Filtered and chemically treated raw water is used to backwash the filters at a pre-set backwash flow rate of 300 gpm for the first stage filters and 270 gpm for the second stage filters. Backwash is done for 5 minutes per tank on alternate days during the operating season with an automatic valve sequence programmed for the operation. Prior to backwash, the chlorine injection is shut down (since raw water is chlorinated between the raw

water storage tank and the filtration system), and there is a non-operating period of 5 minutes prior to backwash to allow chlorinated water to leave the filter vessel. When backwash is initiated, filtered, non-chlorinated water is used so that the discharge to Discharge Serial No. 001 does not contain residual chlorine.

LAWC discharges up to 18,500 gpd of backwash wastewater from the Plant and drainage water from settling basin through Discharge Serial No. 001 (Latitude 34°12' 49" North, Longitude 118°08'34" West) into an unnamed canyon, tributary to the Arroyo Seco, above the estuary. The discharge of backwash wastewater is intermittent. The facility generally operates during the winter months (December, January, February) if there is adequate stream flow from the mountains for intake water.

As part of normal operating procedures, the settling basin is drained and cleaned of leaves, branches, and other debris at the beginning of each operating season, and are not directed to Discharge Serial No. 001. During cleaning, water resulting from drainage of the settling basin flows to Discharge Serial No. 001.

The Regional Board and the United States Environmental Protection Agency (USEPA) have classified the LAWC South Coulter Surface Water Treatment Plant as a minor discharge.

The effluent monitoring data show that the Discharger has been in compliance with effluent limitations in the existing permit. A site visit was conducted on January 14, 2003.

Effluent data reported in the ROWD is summarized in the following table:

| Constituent | Maximum Daily Value | Average Daily Value |
|---|---|---|
| Biochemical oxygen demand (mg/L) | 30 | ND |
| Total suspended solids (mg/L) | 75 | 3.5 |
| Total residual chlorine (mg/L) | 0.1 | ND |
| Oil and grease (mg/L) | 15 | ND |
| Flow (gpd) | 18,500 | 7,905 |
| pH (s.u.) | NR | 8 |
| Temperature – Winter (deg. C) | NR | 11.2 |

## IV. Applicable Plans, Policies, and Regulations

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

1. 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.

2. 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 by LAWC.

3. 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 Basin Plan contains beneficial uses and water quality objectives for the Arroyo Seco.

   Existing: municipal and domestic supply, industrial service supply, industrial process supply, ground water recharge, water contact recreation, non-contact water recreation, warm freshwater habitat, cold freshwater habitat, wildlife habitat, wetland habitat.

4. **Ammonia Basin Plan Amendment.** The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through Tables 3-4. However, those ammonia objectives were revised on April 25, 2002, by the Regional Board with the adoption of Resolution No. 2002-011, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (Including Enclosed Bays, Estuaries and Wetlands) with Beneficial Use Designations for Protection of Aquatic Life*. The ammonia Basin Plan amendment was approved by the State Board, the Office of Administrative Law, and USEPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively. Although the revised ammonia water quality objectives may be less stringent than those contained in the 1994 Basin Plan, they are still protective of aquatic life and are consistent with USEPA's 1999 ammonia criteria update.

5. 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 the Arroyo Seco and it's tributaries.

6. 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.

7. 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 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 Arroyo Seco and it's tributaries.

8. 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 water quality-based effluent limits (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.

9. 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.

10. 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 Arroyo Seco and it's tributaries.

11. Existing waste discharge requirements contained in Board Order No. 97-002, were adopted by the Regional Board on January 27, 1997. 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 discharges 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 water quality-based effluent limitations (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 including 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:

1. **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.

   Surface water from Millard Canyon is the raw source water for the treatment plant. Raw water may contain oil and grease, settleable solids, total suspended solids, total dissolved solids, chloride, and sulfate. During the filtration process, these constituents may settle in the filter vessels, and during the garnet filter backwash process may become loosened from filter surfaces, and therefore, may be present in the discharge of filter backwash water. These constituents are considered pollutants of concern. The raw surface water may also contribute to turbidity and biochemical oxygen demand; therefore, they are also considered pollutants of concern. Since the raw water is chlorinated, there is potential for residual chlorine to be present in the discharge of filter backwash water. Thus, effluent limitations for Discharge Serial No. 001 in the current permit were established for biochemical oxygen demand, turbidity, oil and grease, settleable solids, suspended solids, total dissolved solids, chloride, sulfate, and residual chlorine. Effluent limitations are established in this Order for pH because the raw water source may affect the pH of the discharge wastewater.

   The existing Order states that in addition to establishing permit limits based on the Basin Plan and EPA water quality criteria, the maximum effluent limitations specified in Order No. 97-002 are based upon the State Department of Health Services Action Levels and EPA's primary drinking water standards.

2. **Technology-Based Effluent Limits**

   This permit will require the Discharger to continue to develop and implement 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. Due to the fact that storm water discharges may occur at the LAWC facility, this permit will require that LAWC develop and implement a SWPPP.

   There are currently no national effluent limitation guidelines (ELGs) for the discharge of filter backwash from surface water treatment systems. It should be noted that the previous permit stated that the current treatment system is considered to be the BAT economically achievable.

3. **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 water and organisms, whichever is more stringent, are used to prescribe the effluent limitations in this Order to protect the beneficial uses of the Arroyo Seco.

***(a) Reasonable Potential Analysis (RPA)***

In accordance with Section 1.3 of the SIP, the Regional Board will conduct 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 would analyze 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 a RPA:

1) Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limit is needed.

2) Trigger 2 – If MEC<C and background water quality (B) > C, a limit is needed.

3) 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 will be 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 all of the priority pollutants. The Regional Board issued a letter to LAWC on June 27, 2001 that required LAWC to monitor for priority pollutants regulated in the CTR. LAWC submitted monitoring data as required, for the period from October 15, 2001 through February 11, 2003. These data were used to conduct the RPA.

Based on the RPA, there was reasonable potential to exceed water quality standards for zinc, and dichlorobromomethane. Refer to Attachment C for a summary of the RPA and associated effluent limitation calculations.

### *(b) 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:

1) If applicable and available, use of the wasteload allocation (WLA) established as part of a total maximum daily load (TMDL).

2) Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).

3) Where sufficient effluent and receiving water data exist, use of a dynamic model which has been approved by the Regional Board.

Attachment C includes the results of the Reasonable Potential Assessment, the Compliance Summary Report, and the WQEBLs Calculations Summary for the discharges from the Plant. The analysis was completed using the California Permit Writer and Training Tool, and the data submitted by the Discharger.

### *(c) 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 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 Basin Plan, as well as the 303(d) list, divides the Arroyo Seco into two reaches. The effluent discharge point appears to be within Reach 2. The 303(d) List classifies both reaches of the Arroyo Seco, as impaired by algae and high coliform count. The Arroyo Seco, Reach 2 is also impaired by trash.

### *(d) 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 response on 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 does not contain acute toxicity limitations nor monitoring requirements.

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, this Order includes acute toxicity limitations.

In addition to the Basin Plan requirements, Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters.

The discharges at the LAWC plant are not continuous. Intermittent discharges are likely to have short-term toxic effects. Furthermore, due to the nature of this discharge, it is not anticipated the filter backwash water will contribute to chronic toxicity in receiving waters. Therefore LAWC will not be required to conduct chronic toxicity testing.

## 4. Specific Rationale for Each Numerical Effluent Limitation

Section 402(o) of the Clean Water Act and 40 CFR 122.44(l) require that effluent limitations standards or conditions in reissued permits be at least as stringent as those in the existing permit. 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. The requirements in the proposed Order for oil and grease, biochemical oxygen demand, suspended solids, settleable solids, tubidity, total dissolve solids, chloride, sulfate, and residual chlorine (shown in the table below) are based on limits specified in LAWC's existing permit. The effluent limitations for pH and temperature are based on the Basin Plan.

Average monthly effluent limitations are established in the Order for certain pollutants. These average monthly effluent limitations are based on BPJ and are consistent with current individual permits adopted by the Regional Board to industrial facilities of a similar nature. In addition, Section 402(o) of the Clean Water Act and 40 CFR 122.44(l) require that effluent limitations standards or conditions in reissued permits be at least as stringent as those in the existing permit.

In addition to these limitations, effluent limitations for zinc and dichlorobromomethane have been established based on the revised water quality criteria contained in the CTR and the requirements contained in Section 1.4 of the SIP. These limitations include establishing both MDELs and AMELs. Calculations of the final WQEBLs for these constituents and summary of the RPA analysis are provided in Attachment C.

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. The mass-based effluent limitations contained in this Order are based on a maximum discharge flow rate of 18,500 gpd, as shown in the permit renewal application and consistent with the existing permit. Effluent limitations established in this Order are applicable to wastewater discharges from the NPDES Discharge Serial No. 001.

When calculating the mass for discharges, the appropriate flow, daily maximum for daily maximum mass calculations, and the monthly average flow rate when calculating the monthly average mass discharged should be substituted in the following equation.

Mass (lbs/day) = flow rate (MGD) X 8.34 X 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 following table provides the final effluent limitations for the discharge from Discharge Serial No. 001.

| Constituents | Units | Average Monthly Discharge Limitations | | Maximum Daily Discharge Limitations | | Ratio nale |
|---|---|---|---|---|---|---|
| | | Concentration | Mass[1] (lbs/day) | Concentration | Mass[1] (lbs/day) | |
| Turbidity | NTU | 50 | -- | 75 | -- | E,BPJ |
| Settleable solids | ml/L | 0.1 | -- | 0.3 | -- | E,BPJ |
| Total suspended solids | mg/L | 50 | 7.71 | 75 | 11.56 | E,BPJ |
| Oil and Grease | mg/L | 10 | 1.54 | 15 | 2.31 | E,BPJ |
| $BOD_5$ | mg/L | 20 | 3.09 | 30 | 4.62 | E,BPJ |
| Total dissolved solids | mg/L | --- | --- | 950 | 146 | E |
| Sulfate | mg/L | --- | --- | 300 | 46.23 | E |
| Chloride | mg/L | | | 150 | 23.12 | E |
| Nitrate + Nitrite (as Nitrogen) | mg/L | --- | --- | 8 | 1.54 | BP |
| Residual Chlorine | mg/L | --- | --- | 0.1 | --- | E |
| Zinc [2] | µg/L | 92.65 | --- | 185.94 | --- | CTR |
| Dichlorobromomethane | µg/L | 0.56 | --- | 1.12 | --- | CTR |

1 The mass-based effluent limitations (lbs/day) for pollutants are based on a maximum discharge flow rate of 18,500 gallons per day, using the formula:

$$m = 8.34\ C_i Q$$

where: m = mass discharge for a pollutant, lb/day
$C_i$ = limitation concentration for a pollutant, mg/L
Q = actual discharge flow rate, mgd

2 Discharge limitations for this metal is expressed as total recoverable.

E - Existing permit.

BPJ-Best Professional Judgement (BPJ) is the method used by permit writers to develop technology-based NPDES permit conditions on a case-by-case basis using all reasonably available and relevant data. BPJ limits are established in cases where effluent limitation guidelines are not available for a particular pollutant of concern. Authorization for BPJ limits is found under section 401(a)(1) of the Clean Water Act and under 40 CFR 125.3.

BP - Basin Plan Objectives are instantaneous maximum concentrations of pollutants that when not exceeded are protective of the beneficial uses of the particular water body. They are generally set at the level required to protect the most sensitive beneficial use or at an even lower level based on antidegradation principles.

CTR - California Toxic Rule. CTR-based number for the protection of aquatic organisms. The average monthly limit is derived as a continuous criteria concentration (CCC) and equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects. The maximum daily limit is derived as a criteria maximum concentration (CMC) and equals the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time without deleterious effects.

4. **Interim Limits and Compliance Schedule**

The Discharger may not be able to achieve immediate compliance with the WQBELs for dichlorobromomethane. Data submitted in self-monitoring reports indicate that these constituents have been detected at concentrations greater than the new limit proposed in this Order. The Discharger may not be able to achieve immediate compliance with an effluent limitation based on CTR criterion for this constituent.

40 CFR 131.38(e) provides conditions under which interim effluent limits and compliance schedules may be issued. The CTR and SIP allow 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. Numeric interim limitations for the pollutants shall be based on current treatment facility performance. Interim limit for dichlorobromomethane has been included in this Order. During the compliance period, the current treatment facility performance is imposed as the interim effluent limitation.

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. This interim limitation shall be effective until September 11, 2005, after which, the Discharger shall demonstrate compliance with the final effluent limitations.

Within six months from 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 the final effluent limitations. Once final limitations become effective, the interim limitation will no longer apply. The Discharger is also required to submit to the Regional Board quarterly progress reports describing the progress of studies and or actions undertaken to reduce these compounds in the effluent, and to achieve compliance with the final limitations in this Order by the deadline specified in provision I.B.5. of the Order. The first progress report shall be received by the Regional Board by February 15, 2004.

The following table provides the interim effluent limitation for dichlorobromomethane in the discharge from Discharge Serial No. 001.

| Constituents | Units | Discharge Limitations [1] | | Rationale |
|---|---|---|---|---|
| | | Monthly Average | Daily Maximum | |
| Dichlorobromomethane | µg/L | --- | 1.3 | MEC |

MEC= Maximum Effluent Concentration

1 The effluent limit in this table is effective from the date of adoption of this order through September 11, 2005.

5. **Monitoring Requirements**

***(a) Effluent Monitoring***

For regulated parameters, the previous permit for LAWC required quarterly monitoring for flow, temperature, pH, biological oxygen demand, settleable solids, suspended solids, turbidity, total dissolved solids, sulfate, chloride, residual chlorine, and oil and grease. The previous permit also required the Discharger to conduct monitoring for EPA priority pollutants once during the lifetime of the permit.

The proposed permit requires once per discharge event monitoring for flow, pH, temperature, zinc, dichlorobromomethane, residual chlorine, BOD, oil and grease, suspended solids, settleable solids, turbidity, total dissolved solids chloride, sulfate, nitrate + nitrite (as nitrogen), copper, lead, and selenium. However, certain parameters that have Footnote No. 2 are monitored once per discharge event but not more than once per month and those parameters that have Footnote No. 3 are monitored once per discharge event but not more than once every two months. The remaining priority pollutants and acute toxicity are monitored annually. As prescribed in the Monitoring and Reporting Program, the Regional Board shall require periodic monitoring for pollutants for which criteria or objectives apply and for which no effluent limitations have been established.

### *(b)* Receiving Water Monitoring

LAWC is required to perform general observations of the receiving water when discharges occur and report the observations in the quarterly monitoring report. The Regional Board in assessing potential impacts of future discharges will use data from these observations. If no discharge occurred during the observation period, this shall be reported. Observations shall be descriptive where applicable, such that colors, approximate amounts, or types of materials are apparent. The following observations are required:

- Tidal stage, time, and date of monitoring;
- Weather conditions;
- Color of water;
- Appearance of oil films or grease, or floatable materials;
- Extent of visible turbidity or color patches;
- Direction of tidal flow;
- Description of odor, if any, of the receiving water; and
- Presence and activity of California Least Tern and California Brown Pelican.