

STATE OF CALIFORNIA

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

**FACT SHEET**  
**WASTE DISCHARGE REQUIREMENTS**  
**for**  
**BANK OF AMERICA**  
**LOS ANGELES DATA CENTER**

NPDES Permit No.: CA0057690  
Public Notice No.: 05-032

FACILITY ADDRESS

Bank of America Los Angeles Data Center  
1000 West Temple Street, #4240  
Los Angeles, CA 90012

FACILITY MAILING ADDRESS

Bank of America Los Angeles Data Center  
1000 West Temple Street, #4240  
Los Angeles, CA 90012  
Contact: Maria Darmiento  
Telephone: (213) 240-6114

**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 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

Written comments regarding this tentative Order must be submitted to the Regional Board staff no later than 5 p.m. on June 3, 2005, in order to be evaluated by Board staff and included in the Board's agenda folder. The Regional Board chair may exclude from the record written materials received after this date. (See Cal. Code Regs., tit. 23, § 648.4.).

## **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: July 7, 2005  
Time: 9:00 A.M.  
Location: City of Simi Valley Council Chambers  
2929 Tapo Canyon Road  
Simi Valley, 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.waterboards.ca.gov/losangeles/](http://www.waterboards.ca.gov/losangeles/) 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 Miller Jennings, Senior Staff Counsel  
1001 I Street, 22<sup>nd</sup> 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 4<sup>th</sup> 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

Bank of America – Los Angeles Data Center (hereinafter BA-LADC or Discharger) discharges treated groundwater and untreated groundwater from a foundation dewatering system under WDRs and a NPDES permit contained in Order No. 97-126 (NPDES No. CA0057690, CI-6203), adopted by the Regional Board on September 29, 1997. Order No. 97-126 expired on August 10, 2002.

BA-LADC filed a Report of Waste Discharge and applied for renewal of its WDRs and a NPDES permit on November 12, 2002. A NPDES permit compliance evaluation inspection (CEI) was conducted on January 6, 2004, to observe operations and collect additional data to develop permit limitations and conditions.

## III. Description of Facility and Waste Discharge

BA-LADC is the owner and operator of a data processing center located at 1000 West Temple Street, Los Angeles, California. BA-LADC discharges up to 25,000 gallons per day (gpd) of treated and untreated groundwater via three outfalls (Discharge Serial Nos. 001, 002, and 003) into the storm drains located at Temple Street and Beaudry Avenue (Latitude 34°03'45" and Longitude 118°15'00"), thence to the Los Angeles River, a water of the United States. Due to the proximity of the outfalls to each other, the latitude and longitude are considered the same.

The wastes discharged through the Outfalls are the following:

a. Discharge Serial No. 001:

Up to 3,000 gpd of untreated groundwater from a sump located in the basement of the data center building. The effluent flows into a storm drain located on Temple Street.

b. Discharge Serial No. 002:

Up to 7,000 gpd of untreated groundwater from a sump located in the basement of the parking structure. The effluent flows into a storm drain located on Beaudry Avenue.

c. Discharge Serial No. 003:

Up to 15,000 gpd of treated groundwater from the cleanup of petroleum hydrocarbon contamination. The effluent flows into a storm drain located on Beaudry Avenue.

Groundwater contaminated with petroleum hydrocarbon is collected from under the parking structure and is treated using two pre-filters, a 460-gallon oil-water separator and two 1,000-lb activated carbon adsorption vessels.

The existing Order describes that the facility discharges a combined maximum flow of 10,000 gpd of untreated foundation dewatering effluent through Discharge Serial Nos. 001 and 002, and

15,000 gpd of treated contaminated groundwater through Discharge Serial No. 003.

Effluent data presented in the permit renewal application are summarized in the Table below.

**Discharge Serial No. 001**

Constituent (units)	Maximum Daily Value		Average Daily Value	
	Detected Effluent Mass	Detected Effluent Concentration	Detected Effluent Mass	Detected Effluent Concentration
Biochemical oxygen demand (BOD) (grams, mg/L)	< 5	< 5	< 5	< 5
Total suspended solids (TSS) (grams, mg/L)	492	13	689	18.2
Oil and grease (g, mg/L)	< 1	< 1	--	--
Ammonia as N (grams, mg/L)	7.6	0.2	--	--
Discharge flow (gpd)	N/A	10,000 <sup>1</sup>	N/A	--
pH (s.u)	N/A	7.5	N/A	6.8 – 7.2
Temperature (winter deg. C)	N/A	19	N/A	18
Temperature (summer deg. C)	N/A	--	N/A	20
Chromium III (µg/L)	--	30 <sup>2</sup>	--	--
Copper (µg/L)	--	10 <sup>2</sup>	--	--
Molybdenum (µg/L)	--	10 <sup>2</sup>	--	--

N/A = Not applicable.

<sup>1</sup> Reported as the total flow for Discharge Serial Nos. 001 and 002.

<sup>2</sup> Reported with a “J” data qualifier; this value is outside of the calibration curve and represents an estimated concentration.

**Discharge Serial No. 002**

Constituent (units)	Maximum Daily Value		Average Daily Value	
	Detected Effluent Mass	Detected Effluent Concentration	Detected Effluent Mass	Detected Effluent Concentration
BOD (grams, mg/L)	< 5	< 5	< 5	< 5
TSS (grams, mg/L)	< 10	< 10	< 10	< 10
Oil and grease (g, mg/L)	< 1	< 1	--	--
Ammonia as N (grams, mg/L)	7.6	0.2	--	--
Discharge flow (gpd)	N/A	10,000 <sup>1</sup>	N/A	--
PH (s.u)	N/A	7.6	N/A	6.9 – 7.1
Temperature (winter deg. C)	N/A	20	N/A	--
Temperature (summer deg. C)	N/A	18	N/A	--
Chromium III (µg/L)	--	40 <sup>2</sup>	--	--
Copper (µg/L)	--	20 <sup>2</sup>	--	--
Molybdenum (µg/L)	--	10 <sup>2</sup>	--	--
Nickel (µg/L)	--	10 <sup>2</sup>	--	--

N/A = Not applicable.

<sup>1</sup> Reported as the total flow for Discharge Serial Nos. 001 and 002.

<sup>2</sup> Reported with a “J” data qualifier; this value is outside of the calibration curve and represents an estimated concentration.

**Discharge Serial No. 003**

Constituent (units)	Maximum Daily Value		Average Daily Value	
	Detected Effluent Mass	Detected Effluent Concentration	Detected Effluent Mass	Detected Effluent Concentration
BOD (grams, mg/L)	< 5	< 5	< 5	< 5
TSS (grams, mg/L)	< 10	< 10	< 10	< 10
Oil and grease (g, mg/L)	< 1	< 1	--	--
Ammonia as N (grams, mg/L)	68	1.2	--	--
Discharge flow (gpd)	N/A	10,000 <sup>1</sup>	N/A	--
PH (s.u)	N/A	8.0	N/A	6.9 – 7.2
Temperature (winter deg. C)	N/A	14	N/A	--
Temperature (summer deg. C)	N/A	23	N/A	--
Zinc (µg/L)	--	20 <sup>2</sup>	--	--

N/A = Not applicable.

<sup>1</sup> Reported as the total flow for Discharge Serial Nos. 001 and 002.

<sup>2</sup> Reported with a "J" data qualifier; this value is outside of the calibration curve and represents an estimated concentration.

All other priority pollutants were reported as below detection limits.

In addition, data collected from sampling the three discharge locations (February 12, 2002) for 2,3,7,8-TCDD and the 16 congeners were submitted with the permit renewal application, and as self-monitoring reports (sample collected December 2, 2002). Data for the individual congeners in the February 12, 2002 sample were reported as non-detect, detected, or as an estimated maximum possible concentration. Further, the February 12, 2002 data for Discharge Serial No. 001 are all reported as non-detect; for Discharge Serial Nos. 002 and 003, congeners are reported as non-detect, detected, and estimated. However, for those data reported as detected or estimated, the concentrations are equal to the reported detection limits (which vary between samples for each discharge location). In addition, for the congeners where all values were reported as having been detected or as estimated maximum possible concentrations, the congeners were also detected in the method blank sample. Further, for samples collected in December 2002, reported concentrations for individual congeners were also noted as estimated concentrations and also detected in the method blank sample. It appears as though there may have been interference or possible laboratory contamination, indicated by inconsistencies in detection levels among the samples. The Discharger is required to monitor for dioxin and report results in accordance with Section II of the Monitoring and Reporting Program (MRP) No. CI-6203.

The Discharger submitted quarterly discharge monitoring reports for 1998, 1999, 2000, 2001, and 2002. In addition, the three quarters of monitoring data for 2003 were submitted. The NPDES permit renewal application utilized monitoring data previously submitted. These data are included in the summary Tables below.

Effluent data submitted to the Regional Board for the period from January 1998 to September 2003 as Discharge Monitoring Reports are summarized in the following Tables:

**Discharge Serial No. 001**

Constituent (units)	Monthly Average Effluent Limitations	Daily Maximum Effluent Limitations	Range of Reported Values	Average Reported Effluent Concentration <sup>1</sup>
Discharge flow (gpd)	--	--	254 – 1,539	535.1
pH (s.u.)	--	6.0 – 9.0	6.8 – 7.47	--
Temperature (°F)	--	100	64 – 70	67
TSS (mg/L)	50	150	<5 – 63	27
Turbidity (NTU)	50	150	<1.0 – 40.1	10.1
BOD (mg/L)	20	30	<5 – 9	7.1
Settleable solids (mL/L/hr)	0.1	0.3	<0.05 - <0.1	--
Sulfides (mg/L)	--	1.0	<0.01 – 1.2	0.7
Total petroleum hydrocarbons (TPH) (µg/L)	--	100	<5 – 17	17 <sup>2</sup>
Benzene (µg/L)	--	1.0	<0.25 – <0.5	--
Toluene (µg/L)	--	150	<0.25 – <0.5	--
Ethylbenzene (µg/L)	--	700	<0.25 – <0.5	--
Xylene (µg/L)	--	1,750	<0.4 – <1.0	--
Ethylene dibromide (µg/L)	--	0.05	<0.02 – <0.05	--
Lead (µg/L)	--	50	<0.05 – <50	--
Methyl tertiary butyl ether (µg/L)	--	35	<0.5 – <1.0	--
Total dissolved solids (mg/L)	--	--	2,530 – 4,560	3,011
Sulfate (mg/L)	--	--	1,690 – 1,320	1,495
Chloride (mg/L)	--	--	198 – 384	231
Acute toxicity (% survival)	--	<sup>3</sup>	85 – 100	--

<sup>1</sup> Represents the average of detected values only.

<sup>2</sup> Only one sampling event had a detected value.

<sup>3</sup> Average survival of any three consecutive 96-hour static or continuous flow bioassay tests must be at least 90%, with no single test producing less than 70% survival.

**Discharge Serial No. 002**

Constituent (units)	Monthly Average Effluent Limitations	Daily Maximum Effluent Limitations	Range of Reported Values	Average Reported Effluent Concentration <sup>1</sup>
Discharge flow (gpd)	--	--	911 – 6,561	2,754
PH (s.u.)	--	6.0 – 9.0	6.71 – 7.5	--
Temperature (°F)	--	100	64 – 70	67
TSS (mg/L)	50	150	<5 – 10	10 <sup>2</sup>
Turbidity (NTU)	50	150	<0.5 – 3.9	1.5
BOD (mg/L)	20	30	<5 – 5	5 <sup>2</sup>
Settleable solids (mL/L/hr)	0.1	0.3	<0.05 – <0.1	--
Sulfides (mg/L)	--	1.0	<0.01 – <0.05	--
TPH (mg/L)	--	100	<5 – <10	--
Benzene (µg/L)	--	1.0	<0.25 – <0.5	--
Toluene (µg/L)	--	150	<0.25 – <0.5	--

Constituent (units)	Monthly Average Effluent Limitations	Daily Maximum Effluent Limitations	Range of Reported Values	Average Reported Effluent Concentration <sup>1</sup>
Ethylbenzene (µg/L)	--	700	<0.25 – <0.5	--
Xylene (µg/L)	--	1750	<0.4 – <1.0	--
Ethylene dibromide (µg/L)	--	0.05	<0.25 – <0.5	--
Lead (µg/L)	--	50	<0.05 – <50	--
Methyl tertiary butyl ether (µg/L)	--	35	<0.5 – <1.0	--
Total dissolved solids (mg/L)	--	--	2,570 – 3,460	2,962
Sulfate (mg/L)	--	--	1,160 – 1,780	1,404
Chloride (mg/L)	--	--	170 – 235	196
Acute toxicity (% survival)	--	<sup>3</sup>	80 – 100	--

<sup>1</sup> Represents the average of detected values only.

<sup>2</sup> Only one sampling event had a detected value.

<sup>3</sup> Average survival of any three consecutive 96-hour static or continuous flow bioassay tests must be at least 90%, with no single test producing less than 70% survival.

### Discharge Serial No. 003

Constituent (units)	Monthly Average Effluent Limitations	Daily Maximum Effluent Limitations	Range of Reported Values	Average Reported Effluent Concentration <sup>1</sup>
Discharge flow (gpd)	--	--	33 – 215	138.26
PH (s.u.)	--	6.0 – 9.0	6.8 – 8.04	--
Temperature (°F)	--	100	48 – 77	63
TSS (mg/L)	50	150	<5 – 34	4
Turbidity (NTU)	50	150	<0.5 – 9.0	2.5
BOD (mg/L)	20	30	<5	--
Settleable solids (mL/L/hr)	0.1	0.3	<0.05 – <0.1	--
Sulfides (mg/L)	--	1.0	<0.01 – <0.05	--
TPH (mg/L)	--	100	<5 – <10	--
Benzene (µg/L)	--	1.0	<0.25 – <0.5	--
Toluene (µg/L)	--	150	<0.25 – <0.5	--
Ethylbenzene (µg/L)	--	700	<0.5 – <1.0	--
Xylene (µg/L)	--	1750	<0.5 – <1.0	--
Ethylene dibromide (µg/L)	--	0.05	<0.02 – <0.2	--
Lead (µg/L)	--	50	<0.05 – <50	--
Methyl tertiary butyl ether (µg/L)	--	35	<0.5 – <1.0	--
Total dissolved solids (mg/L)	--	--	1,040 – 4,910	2,936
Sulfate (mg/L)	--	--	525 – 2,100	1,445
Chloride (mg/L)	--	--	109 – 1,217	247
Acute toxicity (% survival)	--	<sup>2</sup>	90 – 100	--

<sup>1</sup> Represents the average of detected values only.

<sup>2</sup> Average survival of any three consecutive 96-hour static or continuous flow bioassay tests must be at least 90%, with no single test producing less than 70% survival.

Data submitted indicate a violation of the daily maximum sulfide limitation (1.0 mg/L) at Discharge Serial No. 001 in August 2002 (1.2 mg/L). This violation is being evaluated for appropriate enforcement action.

The Regional Board and the U.S. Environmental Protection Agency (U.S. EPA) have classified the Bank of America facility as a minor discharge.

#### 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 in conformance with an NPDES permit. NPDES permits establish effluent limitations that incorporate various requirements of the CWA designed to protect water quality.
2. Code of Regulations, Title 40 (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 limitations for certain dischargers and establish procedures for NPDES permitting, including how to establish effluent limitations for certain pollutants discharged to Los Angeles River.
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 immediate receiving body for the permitted discharge covered by this permit is the Los Angeles River between Figueroa Street and the Los Angeles River Estuary. The beneficial uses listed in the Basin Plan for Los Angeles River and Los Angeles River to Estuary, are:

Existing uses: groundwater recharge, water contact recreation, non-contact water recreation, warm freshwater habitat, marine habitat, wildlife habitat, and rare, threatened, or endangered species.

Potential uses: municipal and domestic supply\*, industrial process supply, industrial service supply, migration of aquatic organisms, spawning, reproduction and/or early development, and shellfish harvesting.

\* Municipal and domestic supply designations under SB 88-63 and RB 89-03.

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 U.S. EPA 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 U.S. EPA'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 inland surface waters.
6. On May 18, 2000, the U.S. EPA 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, U.S. EPA 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 allows for a schedule of compliance not to exceed five years from the date of permit renewal for an existing discharger if the Discharger demonstrates that it is infeasible to promptly comply with effluent limitations derived from the CTR criteria. CTR's Compliance Schedule provisions sunset on May 18, 2005. After this date, the provisions of the SIP allow for Compliance Schedules not to exceed five years from issuance or past May 1, 2011, whichever is sooner.
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 U.S. EPA 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 U.S. EPA 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 U.S. EPA through the CTR. The SIP requires the dischargers' submittal of data sufficient to conduct the determination of priority pollutants requiring water quality-based effluent limitations (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 the Los Angeles River.
8. 40 CFR section 122.44(d)(1)(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 limitations (WQBELs) may be set based on U.S. EPA 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 sections 402(o) and 303(d)(4) 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 the Los Angeles River.
11. On March 30, 2000, U.S. EPA revised its regulation that specifies when new and revised State and Tribal water quality standards (WQS) become effective for Clean Water Act (CWA) purposes (40 CFR 131.21, 65 FR 24641, April 27, 2000). Under U.S. EPA's new regulation (also known as the Alaska rule), new and revised standards submitted to U.S. EPA after May 30, 2000, must be approved before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to U.S. EPA by May 30, 2000, may be used for CWA purposes, whether or not approved by EPA.
12. Existing waste discharge requirements contained in Board Order No. 97-126, adopted by the Regional Board on September 29, 1997. In some cases, permit conditions (effluent limitations 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 requirements for 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 control:

1. 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.
2. 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.

3. 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.
4. 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 or do not consider certain pollutants.

If a reasonable potential to exceed water quality standards exists for pollutants in a discharge, 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 from this facility 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 U.S. EPA through the CTR and NTR, as well as priority pollutant objectives in 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 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 criterion or objective.

The existing permit established identical effluent limitations for all three outfalls for a number of pollutants believed to be present in the discharge of foundation dewatering effluent and treated groundwater. The existing regulated pollutants are still considered pollutants of concern in this permit due to the nature of current dewatering and groundwater remediation activities. Effluent limitations for Discharge Serial Nos. 001, 002, and 003 in the previous

permit were established for total suspended solids (TSS), turbidity, biochemical oxygen demand (BOD), settleable solids, sulfides, total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, xylene, ethylene dibromide, lead, and methyl tertiary butyl ether (MTBE). Groundwater may contain solids and constituents that contribute to BOD; therefore, TSS, turbidity, BOD, and settleable solids are considered pollutants of concern in this discharge. The existing Order states that the groundwater has been contaminated by historical petroleum releases. Sulfides, benzene, toluene, ethylbenzene, xylene, ethylene dibromide, lead, TPH, and MTBE are typical constituents of petroleum-based products and fuels, therefore, these are pollutants of concern.

The discharge of foundation dewatering effluent and treated groundwater has the potential to affect the pH of the receiving water body, therefore, effluent limitations for pH are established in this permit. In addition, discharges of certain wastewaters may cause changes in the temperature of the receiving water. Although temperature is not a pollutant of concern in this discharge, consistent with Basin Plan requirements, the proposed Order establishes an effluent limitation for temperature.

## 2. **Technology-Based Effluent Limitations**

There are currently no national ELGs for foundation dewatering effluent or groundwater treatment systems. It should be noted that the previous permit stated that the current treatment system (i.e., oil-water separator and activated carbon adsorption) has been used extensively to treat contaminated groundwater, especially for the removal of TPH and volatile organic compounds, and is considered to be the BAT economically achievable for treating the petroleum-contaminated groundwater.

## 3. **Water Quality-Based Effluent Limitations**

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 U.S. EPA 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 condition 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 the protection of aquatic freshwater organisms or human health for consumption of organisms or the California Department of Health Services recommended maximum

contaminant levels specified in Title 22 of the California Code of Regulations, whichever is most stringent, are used to prescribe the effluent limitations in this Order to protect the beneficial uses of the Los Angeles River, which include groundwater recharge.

Some water quality criteria are hardness dependent. The Discharger provided hardness data for the receiving water (Los Angeles River) as part of their required CTR monitoring. Hardness data ranged from 228 mg/L to 276 mg/L. The lowest hardness value, representing the most conservative approach for establishing criteria, was used for evaluation of reasonable potential.

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

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 has 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 and determine that a WQBEL is needed:

- 1) Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limitation is needed.
- 2) Trigger 2 – If  $MEC < C$  and backgroundwater quality (B)  $> C$ , a limitation 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 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 is reopened for appropriate modification.

The RPA was performed for the priority pollutants for which effluent data were available. Effluent and receiving water data were provided pursuant to a letter dated August 3, 2001, from the Regional Board addressed to BA-LADC requiring quarterly monitoring for priority pollutants regulated in the CTR. Data collected on February 12, 2002, April 29,

2002, August 15, 2002, November 27, 2002, and February 5, 2003 were used in the RPA.

Based on the RPA, there is reasonable potential to exceed water quality criteria at all three discharge locations (i.e., Discharge Serial Nos. 001, 002, and 003) for copper. In addition, the discharge from Discharge Serial No. 001 showed reasonable potential for hexavalent chromium (“chromium (VI)”). Thus, effluent limitations and effluent monitoring requirements for these pollutants have been established.

As stated previously, data collected from sampling the three discharge locations for 2,3,7,8-TCDD (dioxin) and the 16 congeners appears that analyses may have been compromised by interference or possible laboratory contamination, as indicated by inconsistencies in detection levels among the samples, and detection in the method blank samples. The reasonable potential analysis does not represent these data and therefore, no effluent limitation has been developed for dioxin. However, it is important to note that the Discharger is required to monitor and report results for dioxin in accordance with Section II of the MRP (No. CI-6203).

**(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.

**(c) Impaired Water Bodies on 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 U.S. EPA approved the State's 2002 303(d) list of impaired water bodies on July 25, 2003. 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 2002 303(d) list and have been scheduled for TMDL development.

The Los Angeles River receives discharges from highly industrial areas. The 2002 State Board's California 303(d) List classifies the Los Angeles River, Reach 1 (Estuary to Carson Street) as impaired. The pollutants of concern, detected in the water column, in the sediment, and in the fish tissue, include total aluminum, ammonia, cadmium, copper, high coliform count, lead, nutrients (algae), pH, scum/foam (unnatural), and zinc. Of these pollutants, the RPA indicates that copper (Discharge Serial Nos. 001, 002, and 003) and chromium (VI) (Discharge Serial No. 001) show reasonable potential to exceed CTR water quality criteria. Therefore, until a TMDL is developed for these pollutants, and as discussed previously, effluent limitations and monitoring requirements have been established.

**(d) Whole Effluent Toxicity**

Whole Effluent Toxicity (WET) requirements protect 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 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 contains acute toxicity limitations and monitoring requirements. Annual acute toxicity test results for the period from 1998 to 2003 were submitted by the facility to the Regional Board. Annual toxicity testing was done at each of the three outfalls during the permit term. Testing done at Discharge Serial No. 001 indicated 100 percent survival except during July 2000 (85 percent) and August 2003 (95 percent). Testing at Discharge Serial No. 002 indicated 100 percent survival except during July 2000 (90 percent) and February 2002 (80 percent). Testing at Discharge Serial No. 003 indicated 100 percent survival except in July 2000 (90 percent).

In accordance with the Basin Plan, acute toxicity limitations in the current Order 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. No exceedances of the acute toxicity limitations established in the current permit were noted. It should be noted that while the average of the three previous results was not below 90 percent (the toxicity limitation), the facility performed accelerated monitoring in May 2000 and documented 100 percent survival in each of three sampling events. 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 BA-LADC facility occur intermittently, but due to the types of pollutants present in the groundwater treated at the site, could contribute to long-term toxic effects. However, no chronic toxicity data are 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 defined as the monthly median exceeding 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 *MRP*, 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).

#### 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 re-issued permits are at least as stringent as in the existing permit. Therefore, existing effluent limitations for many of the regulated pollutants are carried over to this permit. BOD and settleable solids may be present in the groundwater and are considered pollutants of concern; therefore, effluent limitations for these parameters are based on the effluent limitations specified in the existing Order (No. 97-126). Turbidity and TSS are also pollutants of concern in this discharge, and their effluent limitations have been revised to be consistent with effluent limitations for TSS and turbidity in orders recently adopted by the Regional Board for similar discharge types (i.e., groundwater treatment facilities in the Los Angeles Region). Effluent limitations for oil and grease, and phenols were established in the proposed Order based on effluent limitations contained in permits recently adopted by the Regional Board for similar facilities (specifically, the General Permit No. CAG994004, Waste Discharge Requirements for Discharges of Groundwater from Construction and Project Dewatering to Surface Waters). Further, sulfides, TPH, benzene, toluene, ethylbenzene, xylene, ethylene dibromide, lead, methyl tertiary butyl ether (MTBE), and tertiary butyl alcohol (TBA) may be present in the discharge and effluent limitations are established in the proposed Order based on the effluent limitations specified in the existing Order. The effluent limitations for pH and temperature are based on the Regional Board's interpretation of the Basin Plan.

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 limitations were included in the Order. Further, although certain pollutants did not show reasonable potential in the RPA the existing effluent limitations were carried over because of the nature of discharge from the



Facility. A comparison between existing permit limitations and CTR-based WQBELs was made and the most stringent limitations were included in the Order to ensure protection of the beneficial uses of the receiving water. For lead and toluene, the existing permit limitations were less stringent; therefore, the CTR-based WQBELs were included in this Order. For benzene and ethylbenzene, the existing permit limitations were more stringent; therefore, they are carried over in this permit. In addition, CTR-based WQBELs are established for copper and chromium (VI) because these constituents show reasonable potential to exceed state water quality standards.

In compliance with 40 CFR §122.45(d), permit limitations shall be expressed, unless impracticable, as both average monthly effluent limitations (AMELs) and maximum daily effluent limitations (MDELs). AMELs for TSS, BOD, turbidity and settleable solids are based on the monthly average effluent limitations in Order No. 97-126, and are consistent with other Orders recently adopted by the Regional Board for similar facilities (i.e., groundwater dewatering and treatment facilities in the Los Angeles Region).

Because the conventional pollutant BOD<sub>5</sub>20C is an indicator of the potential for a receiving water body to become depleted in oxygen, limits are included in NPDES permits. Water with high BOD and no means for rapidly replenishing the oxygen becomes depleted in oxygen and may become anaerobic and will not support aquatic life. Generally, a BOD<sub>5</sub>20C of 5 mg/L in a slow-moving stream may be enough to produce anaerobic conditions, while a rapid mountain stream might be able to assimilate a BOD<sub>5</sub>20C of 50 mg/L without appreciable oxygen depletion. Therefore a middle range of 20 mg/L as a monthly average limit, and 30 as a daily maximum limit, are considered to be protective of receiving waters based upon BPJ.

The following Table presents the effluent limitations that will apply to discharges through Discharge Serial Nos. 001, 002, and 003:

Pollutant (units)	Average Monthly Effluent Limitations <sup>1</sup>	Maximum Daily Effluent Limitations	Rationale <sup>2</sup>
PH (s.u.)	Between 6.5 – 8.5 <sup>3</sup>		BP
Temperature (°F)	86 <sup>3</sup>		TP
Biochemical Oxygen Demand (BOD) (mg/L)	20	30	E, BPJ
Total Suspended Solids (mg/L)	50	75	E, BPJ
Settleable Solids (ml/L)	0.1	0.3	E
Turbidity (NTU)	50	75	E, BPJ
Oil and Grease (mg/L)	10	15	BPJ
Phenols (mg/L)	---	1.0	BPJ
Sulfides (mg/L)	---	1.0	BPJ
Sulfate (mg/L)	--	350	BP
Total Dissolved Solids (mg/L)	--	1500	BP
Chloride (mg/L)	--	190	BP

Pollutant (units)	Average Monthly Effluent Limitations <sup>1</sup>	Maximum Daily Effluent Limitations	Rationale <sup>2</sup>
Nitrate-nitrogen + Nitrite-nitrogen (as Nitrogen) (mg/L)	--	8	BP
Total petroleum hydrocarbons (TPH) (µg/L)	--	100	E
Methyl tertiary butyl ether (MTBE) (µg/L)	---	5	MCL
Tertiary butyl alcohol (TBA) (µg/L)	---	12	MCL
Benzene (µg/L)	---	1.0	E
Toluene (µg/L)	15	30	CTR, SIP
Ethylbenzene (µg/L)	---	700	E
Xylene (µg/L)	---	1750	E
Ethylene Dibromide (µg/L)	---	0.05	E
Chromium VI <sup>4</sup> (µg/L)	8	16	CTR, SIP
Copper <sup>4</sup> (µg/L)	15	30	CTR, SIP
Lead <sup>4</sup> (µg/L)	7	15	CTR, SIP
Acute Toxicity (% Survival)		<sup>5</sup>	E, BP
Chronic Toxicity (TU <sub>c</sub> )		<sup>6</sup>	BP

<sup>1</sup> The monthly average concentration shall be the arithmetic average of all the values of daily concentrations calculated using the results of analyses of all samples collected during the month. If only one sample is taken within that month, compliance shall be based on this sample result.

<sup>2</sup> BP = Basin Plan; E = Existing Permit (Order No. 97-126); MCL = Maximum Contaminant Level; BPJ = Best Professional Judgment 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 limitations are established in cases in which effluent limitation guidelines are not available for a particular pollutant of concern. Authorization for using BPJ limitations is found under section 401(a)(1) of the Clean Water Act and under 40 CFR section 125.3; CTR = California Toxic Rule; SIP = State Implementation Policy .

<sup>3</sup> The pH shall remain in this range at all times.

For Temperature:

TP = Thermal Plan - The new temperature effluent limit is reflective of new information available which indicates that the 100°F temperature is not protective of aquatic organisms. A survey was completed for several kinds of fish and the 86°F temperature was found to be protective. The Basin Plan lists temperature requirements for the receiving waters. Temperature: This value represents an instantaneous maximum value, not to be exceeded at any time.

<sup>4</sup> Discharge for these metals are expressed as total recoverable.

<sup>5</sup> 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.

<sup>6</sup> This Order includes a chronic testing trigger defined as the monthly median for chronic toxicity of 100% effluent shall not exceed 1 TU<sub>c</sub> in a critical life stage test (more information can be found in Section I.B.3.b. of the proposed Order).

5. **Interim Effluent Limitations and Compliance Schedule for Discharge Serial Nos. 001, 002, and 003**

Based on effluent monitoring data submitted by the Discharger, a comparison between the MEC and calculated WQBELs indicates that the Discharger will be unable to consistently comply with effluent limitations established in the proposed Order for chromium (VI) and copper.

40 CFR section 131.38(e) provides conditions under which interim effluent limitations and compliance schedules may be issued. The CTR allows for a schedule of compliance not to exceed five years from the date of permit issuance for a point source discharge if the Discharger demonstrates that it is infeasible to promptly comply with effluent limitations derived from the CTR criteria. However, CTR's Compliance Schedule provisions sunset on May 18, 2005. After this date, the provisions of the SIP allow for Compliance Schedules not to exceed five years from issuance or past May 1, 2011, whichever is sooner. Interim effluent limitations have been included in the proposed Order for chromium VI and copper for Discharge Serial Nos. 001, 002, and 003. The interim limits are based on the Facility's current treatment performance. During the compliance period, the Discharger shall comply with the interim effluent limits for chromium VI and copper at Discharge Serial Nos. 001, 002, and 003. The interim limits are applicable from the date of adoption of the Order through July 7, 2007, after which, the Discharger shall demonstrate compliance with the final effluent limitations.

The Order requires the Discharger to develop a pollutant minimization plan and/or source control measures, and participate in the activities necessary to achieve the final effluent limitations.

The Discharger is required to submit annual progress reports to describe the progress of studies and or actions undertaken to reduce chromium VI, and copper in the effluent, and to achieve compliance with the limitations in this Order by the deadline specified in provision I.B.5. The first annual progress report shall be received by the Regional Board at the same time the annual summary report is due, as required in section I.B of *MRP*.

From the effective date of this Order until July 7, 2007, the discharge from Discharge Serial Nos. 001, 002, and 003 in excess of the following interim effluent limitations is prohibited:

Constituent	Average Monthly Discharge Limitations (µg/L)	Maximum Daily Effluent Limitation	Rationale <sup>1</sup>
Chromium VI <sup>2</sup>	16	---	MEC
Copper <sup>2</sup>	20	---	MEC

<sup>1</sup> MEC – Based on the maximum effluent concentration reported by the facility

<sup>2</sup> Discharge limitations for these metals are expressed as total recoverable.

## 6. **Monitoring Requirements**

The previous permit for BA-LADC required quarterly monitoring for the following parameters: total waste flow, pH, temperature, TSS, turbidity, BOD<sub>5</sub>20°C, settleable solids, sulfides, TDS, sulfate, chloride, TPH, benzene, toluene, ethylbenzene, xylene, and MTBE. Annual monitoring was required for, ethylene dibromide, lead, and acute toxicity.

On August 3, 2001 the Regional Board sent a letter to BA-LADC requiring the monitoring of priority pollutants regulated in the CTR. Quarterly monitoring was requested for the period from August 2001 through March 2003 (7 quarters). Quarterly monitoring of the effluent and receiving water was received for the period from February 2002 through February 2003.

Monitoring requirements are discussed in greater detail in Section III of the *MRP* No. CI-6203. As described in the *MRP*, monitoring reports must be submitted quarterly.

### ***(a) Effluent Monitoring***

To demonstrate compliance with effluent limitations established in the permit, and to assess the impact of the discharge on the beneficial uses of the receiving waters, this Order requires monthly monitoring for pH, temperature, chromium VI, copper, lead, total petroleum hydrocarbons, total dissolved solids, chloride, and sulfate. Quarterly monitoring is required for total suspended solids, turbidity, BOD, settleable solids, oil and grese, phenols, boron, nitrate plus nitrite as (nitrogen), sulfides, benzene, toluene, ethylbenzene, xylene, ethylene dibromide, methyl tertiary butyl ether, and tertiary butyl alcohol. Further, annual monitoring is required for the remaining priority pollutants, hardness, acute toxicity, and chronic toxicity.

### ***(b)2,3,7,8-TCDD Monitoring for Reasonable Potential Determination***

The Regional Board is requiring, as part of the *MRP*, that the Discharger conduct effluent monitoring for 2,3,7,8-TCDD (or Dioxin) and the 16 congeners. The Discharger is required to calculate Toxic Equivalence (TEQ) for each congener by multiplying its analytical concentration by the appropriate Toxicity Equivalent Factors (TEF). The Discharger is required to monitor for dioxin and report results in accordance with Section II of the *MRP*.