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
BP WILMINGTON CALCINER
(Wilmington)

NPDES Permit No.: CA0059153
Public Notice No.: 01-024

FACILITY ADDRESS
BP Wilmington Calciner
1175 Carrack Avenue
Wilmington, CA 90748

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I. Public Participation

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

A. Public Comment Period

The staff determinations are tentative. Interested persons are invited to submit written comments upon 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 December 21, 2001.

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 at the following location:

Date: January 24, 2002
Time: 9:00 a.m.
Location: Richard H. Chambers U.S. Court of Appeals Bldg., Courtroom 3
125 S. Grand Avenue
Pasadena, California

C. Waste Discharge Requirement Appeals

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

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

D. Information and Copying

The Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special conditions, comments received, and other information are on file and may be inspected at 320 West 4th Street, Suite 200, Los Angeles, California 90013, at any time between 8:00 am and 5:00 pm, 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

BP Wilmington Calciner (hereinafter BP or Discharger), formerly known as ARCO CQC Kiln, discharges wastes from its Wilmington facility under WDRs contained in Order No. 96-004 adopted by this Board on January 22, 1996. Order No. 96-004 serves as NPDES permit (CA0059153) for the facility.

BP has filed a ROWD and has applied for renewal of its WDRs and NPDES permit.

III. Description of Facility and Waste Discharge

BP operates a petroleum coke calcining facility (Facility) located at 1175 Carrack Avenue, Wilmington, California. The green coke (petroleum coke from a refinery's coke unit) is calcined by running it through a large rotary kiln to remove water and other impurities to produce calcined coke. The green coke comes from BP's Carson Refinery. This facility consists of a reverse osmosis (RO) unit and a 30-megawatt power generation unit with a cooling tower for coke calciner. The RO unit generates a salt-free water for spray cooling heated calcined coke. The RO unit concentrates the removed salts into a softener flush water stream. The softener flush water is pumped into a retention basin, and then the wastewater contained in the retention basin is discharged to Cerritos Channel.

The Discharger discharges intermittently up to 1.1 million gallons per day (mgd) of treated wastewater. The wastewater consists of storm water runoff which may contain petroleum coke dust, drainage from the green coke receiving and storage area, coke storage washwater, and drainage from the green coke receiving pit. The drainage wastewater and storm water pass through two 2-compartment settling basins (110,000 gallons each) for removal of settleable solids, then flow into a retention basin having a capacity of 777,600 gallons. The entire facility is paved and sloped to direct storm water runoff to the retention basin. The wastewater from the retention basin is pumped to nearby Cerritos Channel (Longitude 118º14'19" west, Latitude 33º46'33" north), then to the Los Angeles/Long Beach Harbors, a water of the United States.

The Regional Board and the U.S. Environmental Protection Agency (USEPA) have classified the BP Wilmington Calciner facility as a minor discharge.

The effluent characteristics as reported in the ROWD are summarized as follows:

Constituent	Concentration, mg/L or as specified	
	Daily Maximum	30-Day Average
Flow, mgd	0.939	0.483
Biochemical oxygen demand (BOD)	18.0	9.1
Chemical oxygen demand (COD)	88	88
Total suspended solids (TSS)	25	12.7
Ammonia (as N)	---	---
pH, Std units	6.1 – 8.7	---
Oil and grease	11.3	8.2
Sulfate (as SO_4)	490	---
Antimony, µg/L	<10	---
Arsenic, µg/L	6.3	---
Beryllium, µg/L	<4	---
Cadmium, µg/L	<5	---
Chromium, µg/L	<5	---
Copper, µg/L	10	---
Lead, µg/L	<5	---
Mercury, µg/L	<0.2	---
Nickel, µg/L	130	---

Constituent	Concentration, mg/L or as specified	
	Daily Maximum	30-Day Average
Selenium, µg/L	<5	---
Silver, µg/L	<10	---
Thallium, µg/L	9.1	---
Zinc, µg/L	220	---
Cyanide, µg/L	<25	---
Phenols, µg/L	<100	---
Benzene, µg/L	<2	---
1,2 Trans-Dichloroethylene, µg/L	2	---

Other priority pollutants were not reported, or were reported as non-detected.

A neutralizing agent is added to the wastewater stream for adjustment of pH prior to pumping into Cerritos Channel. Sediments from the settling basin are hauled to a legal disposal site. All other industrial and sanitary waste waters from the facility are discharged to the community sewer system. A bag-house type filter system is used for air pollution control.

BP studied the feasibility of discharging to the sanitary sewer and concluded that the connection to the sewer is not economically feasible.

Over the five-year period between January 1996 and December 2000, the Discharger had five exceedances of the daily maximum limitations for oil and grease, and BOD_5. Exceedances were recorded in February of 1996, December of 1997, September and December of 1998, and August of 2000. Violations have been identified and evaluated for appropriate enforcement.

IV. Applicable Plans, Policies, and Regulations

The following documents are bases for the proposed requirements:

1. The federal Clean Water Act (CWA).

2. Code of Federal Regulations, Title 40 (40 CFR) – Protection of Environment, Chapter 1, Environmental protection Agency, Subchapter D, Water programs, Parts 122-125 and Subchapter N, Effluent Guidelines. These regulations provide effluent limits for conventional pollutants discharged.

3. *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) adopted June 13, 1994; The Basin Plan provides water quality objectives and lists the following beneficial uses for Los Angeles/Long Beach Harbors.

   Existing: industrial service supply; non-contact water recreation; ocean commercial and sport fishing; preservation of rare and endangered species; navigation; marine habitat; and saline water habitat.

Potential: water contact recreation, shellfish harvesting.

4. *Water Quality Control Plan for Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan), adopted by the State Water Resources Control Board (State Board) on September 18, 1975. This Plan provides temperature objectives for Los Angeles/Long Beach Harbors.

5. The California Toxics Rule (CTR) promulgated by the USEPA on May 18, 2000 and the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) adopted by the State Board on March 2, 2000. The CTR establishes numerical criteria for priority pollutants for inland surface water as well as water in the enclosed bays and estuaries.

6. Existing waste discharge requirements contained in Board Order No. 96-004, adopted by the Regional Board on January 22, 1996.

V. Specific Rationale

Section 402(o) of the Clean Water Act and 40 CFR 122.44(l) require that water quality-based effluent limitations (WQBELs) in re-issued permits are at least as stringent as in the existing permit. Therefore, some of the requirements in the proposed Order are based on limits specified in the Discharger's existing permit for the Facility.

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

1. Water Quality-Based Effluent Limitations

   The WQBELs are based on the Basin Plan, other State plans and policies, or USEPA water quality criteria. These requirements, as they are met, will protect and maintain existing beneficial uses of the receiving water.

   The CTR and SIP require dischargers' submittal of data sufficient to conduct the determination of priority pollutants requiring WQBELs and to calculate the effluent limitations. The CTR criteria for saltwater or human health for consumption of organisms, whichever is more stringent, are used to prescribe the effluent limitations in this Order to protect the beneficial uses of the Los Angeles/Long Beach Harbors.

2. Reasonable Potential Analysis (RPA)

   As specified in 40 CFR 122.44(d)(1)(i), permits are required to include limits for toxic pollutants that are or may be discharged at a level which cause, have reasonable potential to cause, or contribute to an excursion above any State water quality standard.

The SIP specified three triggers to complete a RPA:

a. Trigger 1 – If the maximum effluent concentration (MEC) is greater than or equal the CTR water quality criteria (C), a limit is needed.

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

c. Trigger 3 – Use other information to perform RPA .

Sufficient effluent and ambient data are needed to conduct a complete RPA. If data are not sufficient, the Discharger shall 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 effluent limits are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

3. Impaired Water Bodies in 303 (d) List

The 1998 California 303(d) list, approved by the USEPA on May 12, 1999, identified the following pollutants of concern for Los Angeles/Long Beach Harbors: dichloro-diphenyl trichloroethane (DDT), polychlorinated biphenyls (PCBs), benthic community, sediment toxicity and polycyclic aromatic hydrocarbons (PAHs).

The list was prepared in accordance with Section 303 (d) of the federal CWA to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. USEPA requires final effluent limits for all 303(d)-listed pollutants to be based on total maximum daily loads (TMDL) and waste loads allocation (WLA) results.

For 303(d) listed pollutants, the Regional Board plans to develop and adopt TMDLs which will specify WLAs for point sources and load allocations (LAs) for non-point sources, as appropriate. Following the adoption of TMDLs by the Regional Board, NPDES permits will be issued with effluent limits for water quality based on applicable WLAs.

4. Interim Limits

BP may not be able to achieve immediate compliance at the Facility with the WQBELs for copper, nickel and zinc contained in Section I.B.5.b of this permit. Data submitted in self monitoring reports indicate that these three constituents have been detected at a concentration greater than the new limit proposed in this Order.

40 CFR Part 131.38(e) provides conditions under which interim effluent limits and compliance schedules may be issued. The SIP does allow inclusion of an interim limit with specific compliance schedule in an NPDES permit for priority pollutants if the limit for the priority pollutant is CTR-based. Interim limits for copper, nickel and zinc are contained in the tentative order.

The SIP requires that the Regional Board establish other interim requirements such

as requiring the discharger to develop pollutant minimization 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.

VI. Bases for Effluent Limitations

1. Reasonable Potential Analysis (RPA)

RPA was performed for conventional, non-conventional, and toxic pollutants for which effluent data were available. The input data are based on the effluent data provided in the ROWD and the effluent information in the permit renewal application form. The final input data used in the RPA are summarized in the attachment of RPA results. Best professional judgment was used in this proposed Order to determine the presence and reasonable potential of each toxic pollutant. Based on the nature of the business, and as indicated in the ROWD, four inorganic pollutants (copper, nickel, thallium, and zinc) are expected to have reasonable potential of exceeding the water quality objectives. Effluent limitations are prescribed for these pollutants in the tentative Order.

For some pollutants, including aldrin, alpha-BHC, beta-BHC, chlordane, DDT, dieldrin, endrin, heptachlor, heptachlor epoxide, PAHs, total PCBs, toxaphene, and TCDD equivalents, effluent limitations are not prescribed for these pollutants; however, monitoring is required for future evaluation.

Interim monitoring is required for the remaining of toxic pollutants that lack sufficient data for a RPA.

2. Conventional/Non-conventional Pollutants

Conventional and non-conventional pollutants such as pH, temperature, oil and grease, BOD_5, suspended solids, settleable solids, ammonia, sulfide, turbidity, fecal coliform and dissolved oxygen are based on Basin Plan, 40 CFR, or the existing permit whichever more stringent.

3. Bases for Whole Effluent Toxicity

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters shall 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. These acute and chronic toxicity limits in the Basin Plan and the existing permit are necessary to ensure that this objective is protected.

VII. Sample Calculations of WQBELs

The water quality-based effluent limitations are calculated by using the procedures described in Section 1.4 of the SIP. The sample calculations of these effluent limitations are presented in the following tables.