State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

ORDER NO. R04-2002-0027
NPDES NO. CA0001848

WASTE DISCHARGE REQUIREMENTS
for
PRAXAIR INCORPORATED
(Wilmington)

The California Regional Water Quality Board, Los Angeles Region, (hereinafter Regional Board), finds:

Background

1. Praxair Incorporated (hereinafter Praxair or Discharger) discharges wastes from its Wilmington facility under waste discharge requirements (WDRs) contained in Order No. 95-156, adopted by this Regional Board on December 4, 1995. Order No. 95-156 serves as the National Pollutant Discharge Elimination System (NPDES) permit (CA0001848).

2. Praxair has filed a report of waste discharge (ROWD) and has applied for renewal of its WDRs and NPDES permit.

Purpose of Order

3. This Order regulates the discharge from the cryogenic air separation plant to the storm local drain system which eventually drains into the Dominguez Channel estuary, a water of the United States. The purpose of this Order is to renew WDRs for the Praxair Wilmington plant.

Facility Description

4. The Praxair Wilmington plant (Facility), a cryogenic air-separation facility, is located at 2300 East Pacific Coast Highway, Wilmington, California. The Facility produces oxygen, nitrogen, argon, and 27-29 megawatts of electric power from its natural gas cogeneration unit. The cogeneration unit provides electric power for its on-site use for the air separation process. Figures 1 and 2 show the location and plan views of the Facility respectively.

Discharge Description

5. Praxair discharges up to 150,000 gallons per day of wastewater to a storm drain in Pacific Coast Highway (Longitude 118◦13'40", Latitude 33◦27'23") that flows to the Dominguez Channel estuary, a water of the United States. There are two cooling tower units (No.1 and No.2) at this Facility. Unit No.1 is for the cryogenic air-separation plant and Unit No.2 is for the cogeneration unit.
   The wastewater discharged from the cryogenic air-separation plant consists of up to 132,000

gallons per day of cooling tower (No.1) bleedoff, water softener (No.1) and boiler (No.1) blowdown, air compressor condensate, and effluent from an oil-water separator for truck washing and oily water from liquefier compressors and the cogeneration unit steam turbine skid.

The cogeneration unit discharges up to 18,000 gallons per day of wastewater consisting of cooling tower (No.2) bleedoff, boiler (No.2) blowdown, and water softener (No.2) blowdown. Figure 3 shows the schematic diagram of the wastewater flow.

6. Praxair has studied the possibility of discharging the wastewater to the sanitary sewer system and has determined that the connection to the sanitary sewer system is not economically feasible. The nearest sanitary sewer line is an 8-inch line located about 400 feet north of the plant. This line is located in the City of Long Beach and drains to the County treatment plant in Carson. Praxair plant is located in the City of Los Angeles, and is outside the official service area of the County. Also, due to the severe hydraulic limitations in the County system, it would be quite difficult to gain approval for such a request and the available capacity in the 8-inch line is another unknown.

7. The effluent characteristics as reported in the Report of Waste Discharge (ROWD) are summarized as follows:

Constituents	Concentration, mg/L or as specified	
	Daily Maximum	Monthly Average
Flow, mgd	0.163	0.07
Biochemical oxygen demand (BOD)	2.0	---
Chemical oxygen demand (COD)	106	45.1
Total suspended solids (TSS)	24	10.8
Ammonia (as N)	3.0	0.53
pH, Std units	7.3-8.5	---
Oil and grease	11	2.5
Antimony, µg/L	<15	---
Arsenic, µg/L	<15	---
Beryllium, µg/L	<1	---
Cadmium, µg/L	<5	---
Chromium, µg/L	7.01	---
Copper, µg/L	198	---
Lead, µg/L	96.4	---
Mercury, µg/L	<0.5	---
Nickel, µg/L	12.5	---
Selenium, µg/L	<15	---
Silver, µg/L	<5	---
Thallium, µg/L	<15	---
Zinc, µg/L	140	---
Cyanide, µg/L	<50	---

Constituents	Concentration, mg/L or as specified	
	Daily Maximum	Monthly Average
Phenols, µg/L	<9.5	---
Benzene, µg/L	<0.5	---
Bromodichloromethane, µg/L	1.8	---
Chloroform, µg/L	2.2	---
Dibromochloromethane, µg/L	1.2	---

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

8. Over the five-year period between January 1996 and December 2000, the Discharger had fourteen exceedances of the daily maximum for COD, detergent (as MBAS), total suspended solids, and total residual chlorine. Violations have been identified and are being evaluated for appropriate enforcement.

Storm Water Management

9. Praxair has implemented a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the general NPDES permit for storm water discharges associated with industrial activity [State Water Resources Control Board (State Board) Order No. 97-03-DWQ , NPDES Permit No. CAS000001].

Applicable Plans, Policies, and Regulations

10. 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 for, and lists the following beneficial uses of the Dominguez Channel estuary:

    Existing: water contact recreation, non-contact water recreation, commercial and sport fishing, estuarine habitat, marine habitat, wildlife habitat, preservation of rare and endangered species, migration of aquatic organisms, and spawning, reproduction, or early development.
    Potential: navigation.

11. There is public contact in the receiving water downstream of the discharge; therefore, the quality of wastewater discharge to the Dominguez Channel estuary must be such that no public health hazard is created.

12. 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 Dominguez Channel.
13. Under 40 CFR 122.44, *Establishing Limitations, Standards, and other Permit Conditions*,

NPDES permits should also include toxic pollutant limitations if the Discharger uses or manufactures a toxic pollutant as an intermediate or final product or byproduct. Where numerical effluent limitations have not been established in the Basin Plan, 40 CFR Part 122.44 specifies the water quality-based effluent limitations (WQBELs) may be set based on USEPA criteria and supplement where necessary by other relevant information to attain and maintain narrative water quality criteria to fully protect designated beneficial uses.

14. 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 part 131.38]. 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 CTR and SIP require dischargers to submit sufficient data 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 Dominguez Channel estuary.

15. Effluent limitations, toxic effluent standards, and monitoring programs established pursuant to sections 301, 304, 306, and 307 of the federal Water Pollution Control Act and amendments thereto are applicable to the discharges herein.

Watershed Management and Total Maximum Daily Loads

16. The Regional Board has implemented a Watershed Management Initiative to address water quality issues in the region. Watershed management may include the study of diverse issues by stakeholders to identify comprehensive solutions to protect, maintain, enhance, and restore water quality and beneficial uses. To achieve this goal, the watershed management approach integrates the Regional Board‘s many diverse programs, particularly Total Maximum Daily Loads (TMDLs) to better assess cumulative impacts of pollutants from all point and nonpoint sources to more efficiently develop watershed-specific solutions that balance the environmental and economic impacts within a watershed. The TMDLs will establish waste load allocations (WLAs) and load allocations (LAs) for point and nonpoint sources, and will result in achieving water quality standards for the waterbody.

17. The Dominguez Channel begins in El Segundo and flows through portions of Hawthorne,

Torrance, Gardena, Carson, and Wilmington to the East Basin of the Los Angeles Harbor. The channel is concrete-lined above the estuary (Vermont Avenue). Dominguez Channel receives discharges from highly developed and industrialized areas.

18. The Dominguez Channel estuary is classified as impaired in the State Board's 1998 California 303(d) list. The pollutants of concern, detected in the channel water, sediment, and in the fish tissue, are listed below:

- In sediment: chromium, lead, zinc, DDT, and polynuclear aromatic hydrocarbons (PAHs).
- In fish tissue: lead, aldrin, benthic community effects, Chem A (refers to the sum of aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, HCH (including lindane), endosulfan, and toxaphene), chlordane, DDT, dieldrin, and polychlorinated biphenyls (PCBs).
- In the water column: copper, lead, ammonia, and coliform.

TMDL development for Dominguez Channel watershed is scheduled for fiscal year 2003, beginning with one for coliform. The TMDLs will include WLAs for the 303(d)-listed pollutants, and the Board will adopt a WQBEL consistent with the corresponding WLA. If authorized, a time schedule might be included in a revised permit to require compliance with the final WQBEL.

19. To prevent further degradation of the water quality of Dominguez Channel estuary and to protect its beneficial uses, mixing zones and dilution credits are not allowed in this Order, except as set forth in Section IV.H. of this Order. This determination is based on:

- The discharge may contain 303(d)-listed pollutants that exceed water column criteria. Since the receiving water is highly impaired and assimilative capacity is not available in the receiving water, a dilution factor is not appropriate and the final WQBEL should be numeric objective/criterion applied end-of-pipe.

- The discharge may contain the 303(d)-listed pollutants that are bioaccumulative. These pollutants, when exceeding water criteria within the mixing zone, can potentially result in tissue contamination of organisms directly or indirectly through contamination of bed sediments with subsequent incorporation into the food chain.

Reasonable Potential Analysis

20. 40 CFR 122.44(d)(1)(i) and (ii) require that each toxic pollutant be analyzed with respect to its reasonable potential when determining whether a discharge (1) causes; (2) has the reasonable potential to cause; or (3) contributes to the exceedance of a receiving water quality objective/criterion. This is done by performing a reasonable potential analysis (RPA) for each pollutant. In performing the RPA, the permitting authority uses procedures that account for existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, and the sensitivity of the species to toxicity

testing (when evaluating whole effluent toxicity). Because of effluent variability, there is always some degree of uncertainty in determining an effluent's impact on the receiving water. The SIP, as well as the USEPA's *Technical Support Document for Water Quality-Based Toxics Control* (TSD) *of 1991* (USEPA/505/2-90-001), addresses this issue by suggesting the use of a statistical approach.

21. The CTR and SIP require that a limit be imposed for a toxic pollutant if (1) the maximum effluent concentration (MEC) is greater than the most stringent CTR criteria, or (2) the background concentration is greater than the CTR criteria, or (3) other available information.

22. RPAs were performed for the priority pollutants for which effluent data were available. 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, lead, nickel, and zinc) are expected to have reasonable potential of exceeding the water quality objectives. Effluent limitations are prescribed for these pollutants in this Order.

23. 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, consistent with the SIP, monitoring is required for future evaluation.

24. Until the TMDLs and the corresponding WQBELs are adopted, State and Federal antibacksliding and antidegradation policies require that Regional Board actions ensure that the waterbody will not be further degraded. The antibacksliding provisions are specified in Sections 303(d)(4) and 402(o) of the Clean Water Act (CWA) and in 40 CFR Part 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. Section 402(o)(2) outlines six exceptions where effluent limitations may be relaxed. The antidegradation provisions are contained in the Statement of Policy with Respect to Maintaining High Quality Water in California (State Board Resolution No. 68-16) on October 28, 1968, and in the federal Antidegradation Policy (40 CFR 131.12) developed under the CWA. Therefore, water quality objectives/criteria specified in the Basin Plan, the CTR, or the effluent limits from the existing permit were used to set the limits for toxic pollutants that are believed to be present in the effluent and have reasonable potential of exceeding the water quality criteria. Other toxic pollutants may only be monitored to gather data to be used in RPAs for future permit renewals and updates.

    For 303(d) listed pollutants, the Regional Board plans to develop and adopt TMDLs which will specify WLAs for point sources and 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. In the absence of a TMDL, effluent limits for 303(d) listed pollutants, for which RPA indicates a reasonable potential, were established for (1) concentration based on the most stringent applicable CTR criterion and/or Basin Plan objective, and (2) mass emission based on the maximum allowable

discharge flow rate and concentration limitation.

For 303(d)-listed non-priority pollutants (ammonia), water quality objectives developed and specified in the Basin Plan, and applicable to the receiving water were prescribed.

Interim Limits

25. The Discharger has demonstrated that it is infeasible to achieve immediate compliance with the CTR-derived WQBELs for copper, lead, nickel, and zinc contained in Section I.B.5.b of this permit. Data submitted in self monitoring reports indicates that these four constituents have been detected at a concentration greater than the new limit proposed in this Order.

26. 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. On December 10, and 18, 2001, Praxair submitted a compliance schedule and implementation plan for this Regional Board's evaluation. A 5-year compliance schedule was proposed by Praxair. Interim limits based on current treatment facility performance for copper, lead, nickel, and zinc are contained in this NPDES permit. Since the current performance-based effluent concentrations for copper and lead are high and Praxair is unable to modify the facility to meet the proposed interim limits for copper and lead in the proposed compliance schedule, two tiers of interim limits and compliance schedules for copper and lead are proposed.

27. 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.

Notification

28. The Regional Board has notified the Discharger and interested agencies and persons of its intent to issue waste discharge requirements for this discharge, and has provided them with an opportunity to submit their written views and recommendations.

29. The Regional Board, in a public hearing, heard and considered all comments pertaining to the discharge and to the tentative requirements.

30. This Order shall serve as a NPDES permit pursuant to Section 402 of the Federal Clean Water Act or amendments thereto, and shall take effect at the end of ten days from the date of its adoption provided the Regional Administrator, USEPA, has no objections.

31. Pursuant to California Water Code Section 13320, any aggrieved party may seek review of this Order by filing a petition with the State Board. A petition must be sent to the State Water Resources Control Board, P. O. Box 100, Sacramento, California, 95812, within 30 days of adoption of this Order.

32. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) in accordance with the California Water Code, Section 13389.

IT IS HEREBY ORDERED that Praxair Incorporated, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Federal Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

I. Discharge Requirements

A. Discharge Prohibition

1. Wastes discharged shall be limited to cooling tower bleed-off, side-stream filter backwash, water softener, boiler blowdown, air compression condensate, and effluent from an oil-water separator for truck washing and oily water from liquefier compressors and the cogeneration steam turbine skid only, as proposed. The discharge of water from accidental spills or other sources is prohibited.

2. Discharges of materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, tributaries to Dominguez Channel estuary, or waters of the State are prohibited.

B. Effluent Limitations

The discharge of an effluent in excess of the following limits is prohibited:

1. A pH value less than 6.5 or greater than 8.5.

2. A temperature value greater than 100°F.

3. The fecal coliform concentration shall not exceed a log mean of 200 MPN/100 ml (based on a minimum of not less than four samples for any 30-day period), nor shall more than 10 percent of the total samples collected during any 30-day period exceed 400 MPN/100ml.

4. Toxicity limitations:

a. The acute toxicity of the effluent shall be such that: (i) the average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and (ii) no single test producing less than 70% survival.

b. If any acute toxicity bioassay test result is less than 90% survival, the Discharger shall conduct six additional tests over a six-week period. The Discharger shall ensure that they receive results of a failing acute toxicity test within 24 hours of the close of the test and the additional tests shall begin within 3 business days of the receipt of the result. If the additional tests indicate compliance with acute toxicity limitation, the Discharger may resume regular testing. However, if the results of any two of the six accelerated tests are less than 90% survival, then the Discharger shall begin a toxicity identification evaluation (TIE). The TIE shall include all reasonable steps to identify the source(s) of toxicity. Once the source(s) of toxicity is identified, the Discharger shall take all reasonable steps to reduce the toxicity to meet the objective.

c. If any two of the additional six acute toxicity bioassay test result in less than 70% survival, including the initial test, the Discharger shall immediately begin TIE.

d. The chronic toxicity of 100% effluent shall not exceed a monthly median of 1.0 TU_c or a daily maximum of 2.0 TU_c in a critical life stage test.

e. If the chronic toxicity of the effluent exceeds the monthly median of 1.0 TU_c, the Discharger shall immediately implement accelerated chronic toxicity testing according to Monitoring and Reporting Program 5428, item IV.D.1. If any of three out of the initial test and the six accelerated tests results exceed 1.0 TU_c, the Discharger shall initiate a TIE.

f. The chronic toxicity of the effluent shall be expressed and reported in toxic units, where:

$$TU_c = \frac{100}{NOEC}$$

The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

g. The Discharger shall conduct acute and chronic toxicity monitoring as specified in Monitoring and Reporting Program No. 5428.

5. The discharge of an effluent in excess of the following limits is prohibited:

a. Conventional and non-conventional pollutants:

Constituents	Discharge Limitations[1/]			
	Monthly Average		Daily Maximum	
	C (mg/L)	mass[2/] (lbs/day)	C (mg/L)	Mass[2/] (lbs/day)
Chemical oxygen demand	---	---	---	55
Oil and grease	10	12.5	15	18.8
Total suspended solids (TSS)	50	62.6	150	187.7
Settleable solids, ml/L	0.1	---	0.3	---
Sulfides	---	---	1.0	1.3
Total residual chlorine	---	---	0.2	0.25
Detergents (MBAS)	---	---	0.5	0.63

[1/] Discharge limitations include concentration (C) and mass limits for each specified pollutants.

[2/] The mass limits for a pollutants is calculated using the following equation:

$m = 8.34\ C_i Q$

where: m = mass limit for a pollutant, lbs/day
C_i = concentration limit for a pollutant, mg/L
Q = maximum discharge flow rate =0.15 mgd

b. Toxic pollutants:

Constituents	Discharge Limitations[1/]			
	Monthly Average		Daily Maximum	
	C (µg/L)	mass[2/] (lbs/day)	C (µg/L)	mass[2/] (lbs/day)
Copper [3/]	2.88	0.0036	5.78	0.0072
Lead [3/]	6.97	0.0087	13.99	0.0175
Nickel [3/]	6.78	0.0085	13.61	0.0170
Zinc [3/]	47.42	0.0593	95.14	0.1190

[1/] Discharge limitations include concentration (C) and mass limits for each specified pollutants.

[2/] The mass limits for a pollutants is calculated using the following equation:

$m = 8.34\ C_i Q$

where: m = mass limit for a pollutant, lbs/day
C_i = concentration limit for a pollutant, mg/L
Q = maximum discharge flow rate =0.15 mgd

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

6. Interim Limits:

a. Commencing with the date of this Order to January 24, 2003, Praxair shall comply with the performance-based interim limits listed below for copper, lead, nickel, and zinc for the wastes effluent discharge:

	Discharge Limitations			
	Monthly Average		Daily Maximum	
Constituents	C (µg/L)	Mass[2/] (lbs/day)	C (µg/L)	mass[2/] (lbs/day)
Copper [1/]	633	0.7919	927	1.1597
Lead [1/]	335	0.4191	580	0.7256
Nickel [1/]	17.6	0.0220	20.7	0.0259
Zinc [1/]	232	0.2902	306	0.3828

[1/] Discharge limitations for these metals are based on 67 sampling data and expressed as total recoverable.

[2/] The mass limits for a pollutants is calculated using the following equation:

$m = 8.34\ C_i Q$

where: m = mass limit for a pollutant, lbs/day
C_i = concentration limit for a pollutant, mg/L
Q = maximum discharge flow rate =0.15 mgd

b. From January 25, 2003 to July 24, 2005, Praxair shall comply with the performance-based interim limits listed below for copper, lead, nickel, and zinc for the wastes effluent discharge:

	Discharge Limitations			
	Monthly Average		Daily Maximum	
Constituents	C (µg/L)	Mass[2/] (lbs/day)	C (µg/L)	mass[2/] (lbs/day)
Copper [1/]	431	0.5392	556	0.6956
Lead [1/]	186	0.2327	350	0.4379
Nickel [1/]	17.6	0.0220	20.7	0.0259
Zinc [1/]	232	0.2902	306	0.3828

[1/] Discharge limitations for these metals are based on 64 sampling data and expressed as total recoverable.

[2/] The mass limits for a pollutants is calculated using the following equation:

$m = 8.34\ C_i Q$

where: m = mass limit for a pollutant, lbs/day
C_i = concentration limit for a pollutant, mg/L
Q = maximum discharge flow rate =0.15 mgd

c. The Discharger shall submit quarterly progress reports to describe the

progress of studies and/or actions undertaken to reduce these compounds in the effluent, and to achieve compliance with the limits in this Order by the deadline specified in provision I.B.6.d, below. The first progress report shall be received at the Regional Board by April 15, 2002.

d. Praxair shall submit, by July 31, 2002, a detailed engineering work plan detailing how the final limitations contained in this Order will be met. The plan shall include, at minimum, the following elements:

i. An engineering analysis of all water quality data collected since the adoption of the Order, along with an identification of the type of source reductions planned;

ii. An evaluation of treatment methods or other corrective actions to be taken to meet the requirements of this Order;

iii. A layout of the implementation plan, along with cost estimates for same;

iv. An explanation regarding any additional monitoring that will be required in order to finalize the implementation plan; and,

v. A schedule setting forth compliance implementation dates. There shall be no more than one year between events in the compliance implementation schedule.

e. The interim limits stipulated shall be in effect for a period not to extend beyond July 24, 2005. Thereafter, the Discharger shall comply with the limitations specified in Section I.B.5.b of this Order.

f. The Discharger must notify the Regional Board's Executive Officer, in writing, no later than 14 days following each interim date, compliance implementation event, or quarterly report, of the Discharger's compliance or noncompliance with the interim requirements.

C. Receiving Water Limitations

1. The discharge shall not cause the following conditions to exist in the receiving waters:

a. Floating, suspended or deposited macroscopic particulate matter or foam;

b. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

c. Visible, floating, suspended or deposited oil or other products of petroleum

origin;

d. Bottom deposits or aquatic growths; or,

e. Toxic or other deleterious substances to be present in concentrations or quantities which cause deleterious effects on aquatic biota, wildlife, or waterfowl or render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

2. The discharge shall not cause nuisance, or adversely effect beneficial uses of the receiving water.

3. No discharge shall cause a surface water temperature rise greater than 5°F above the natural temperature of the receiving waters at any time or place.

4. The discharge shall not cause the following limits to be exceeded in the receiving waters at any place within the waterbody of the receiving waters:

a. The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units;

b. Dissolved oxygen shall not be less than 5.0 mg/L anytime, and the median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation;

c. Dissolved sulfide shall not be greater than 0.1 mg/L;

d. Total ammonia (as N) shall not exceed concentrations specified in the Basin Plan (June 13,1994, Attachment H), subject to the following conditions:

The Discharger will have until June 13, 2002, to (1) make the necessary adjustments and/or improvements to meet these objectives, or (2) conduct studies leading to an approved, less-restrictive, site-specific objective for ammonia. If it is determined that there is an immediate threat or impairment of beneficial uses due to ammonia, the objectives in Attachment A shall apply and the timing of compliance will be determined on a case-by-case basis by the Executive Officer;

e. Chronic toxicity requirements:

i. There shall be no chronic toxicity in ambient waters as a result of wastes discharged.

ii. Receiving water and effluent toxicity testing shall be performed on the

same day as close to concurrently as possible.

iii. If the chronic toxicity in the receiving water downstream at a monitoring station, exceeds 1.0 TUc in a critical life stage test and the toxicity cannot be attributed to upstream toxicity assessed by the discharge, then the Discharger shall immediately implement accelerated chronic toxicity testing according to Monitoring and Reporting Program 5428, Item IV.D.1. If any three out of the initial test and the six accelerated tests results, exceed 1.0 TU_c, the Discharger shall initiate a TIE.

iv. If the results of chronic toxicity testing upstream is greater than the results of the testing downstream, and the TU_c of the effluent chronic toxicity test is less than 1 TU_c, then accelerated monitoring does not need to be implemented.

5. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Board or State Board. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clear Water Act, or amendments thereto, the Regional Board will revise or modify this Order in accordance with such standards.

II. Requirements

A. Pollution Minimization Program (PMP):

The goal of the PMP is to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the WQBEL(s). The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Board:

1. An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;

2. Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;

3. Submittal of a control strategy designed to maintain concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;

4. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and,
5. An annual status report that shall be sent to the Regional Board including:

- All PMP monitoring results for the previous year;
- A list of potential sources of the reportable priority pollutant(s);
- A summary of all actions undertaken pursuant to the control strategy; and
- A description of corrective and preventive actions to be taken in the following year to maintain/achieve compliance.

The Discharger shall develop the PMP as soon as a priority pollutant was detected above its effluent limitation. However, the PMP is not required if Discharger takes additional samples or has conducted an accelerated monitoring program during the period of discharge and the analytical results disputed the initial excursion and showed full compliance with the effluent limitation.

B. Storm Water Pollution Prevention Plan (SWPPP) and Best Management Practices Plan (BMPP):

1. An updated SWPPP that describes site-specific management practices for minimizing storm water runoff from being contaminated, and for preventing contaminated storm water runoff from being discharged directly to waters of the State.

2. A BMPP that entails site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the State. The updated BMPP shall be consistent with the requirements of 40 CFR 125, Subpart K, and the general guidance contained in the *NPDES Best Management Guidance Document*, USEPA Report No. 600/9-79-045, December 1979 (revised June 1981). In particular, a risk assessment of each area identified by the Discharger shall be performed to determine the potential of hazardous waste/material discharge to surface waters.

Both plans shall cover all areas of the Facility and shall include an updated drainage map for the Facility. The Discharger shall identify on a map of appropriate scale the areas that contribute runoff to the permitted discharge points; describe the activities in each area and the potential for contamination of storm water runoff and the discharge of hazardous waste/material; and, address the feasibility for containment and/or treatment of the storm water. The plans shall be reviewed annually and at the same time. These two plans are required to be updated within 90 days of the effective date of this Order and are required to be retained on site and submitted to the Regional Board upon request.

C. The Discharger shall submit within 180 days of the effective date of this Order an updated Contingency Plan. The Contingency Plan shall be site-specific and shall cover all areas of the Facility including the storage tank . The Contingency Plan shall be reviewed at the same time as the SWPPP and BMPP. Updated information shall be submitted within 30 days of revision.

D. Pursuant to the requirements of 40 CFR 122.42(a), the Discharger must notify the

Board as soon as it knows, or has reason to believe (1) that it has begun or expected to begin, to use or manufacture a toxic pollutant not reported in the permit application, or (2) a discharge of toxic pollutant not limited by this Order has occurred, or will occur, in concentrations that exceed the specified limits in 40 CFR 122.42(a).

III. Provisions

A. This Order includes the attached *Standard Provisions and General Monitoring and Reporting Requirements* (Standard Provisions, Attachment N). If there is any conflict between provisions stated hereinbefore and the attached Standard Provisions, those provisions stated hereinbefore prevail.

B. This Order includes the attached Monitoring and Reporting Program. If there is any conflict between provisions stated in the Monitoring and Reporting Program and the Standard Provisions, those provisions stated in the former prevail.

C. This Order includes the attached *Storm Water Pollution Prevention Plan Requirements* (Attachment M).

D. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to their storm drain systems.

IV. Reopeners

A. This Order may be reopened and modified, in accordance with SIP Section 2.2.2.A, to incorporate new limits based on future reasonable potential analysis to be conducted, upon completion of the collection of additional data by the Discharger.

B. This Order may be reopened and modified, to incorporate in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include requirements for the implementation of the watershed management approach.

C. This Order may be reopened and modified, in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include new MLs.

D. This Order may be reopened and modified, in accordance with the provisions set forth in 40 CFR Parts 122.44(d)(1)(vi)(C)(4), if the limits on the indicator parameter (total nitrogen) no longer attain and maintain applicable water quality standards.

E. This Order may be reopened and modified, to revise effluent limitations as a result of future Basin Plan Amendments, such as an update of the Ammonia objective, or the adoption of a TMDL for Dominguez Channel Watershed.

F. This Order may be reopened and modified, to revise the toxicity language once that

language becomes standardized.

G. This Order may be reopened and modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR Parts 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this order and permit, endangerment to human health or the environment resulting from the permitted activity.

H. This Order may be reopened upon the submission by the Discharger, of adequate information, as determined by the Regional Board, to provide for dilution credits or a mixing zone, as may be appropriate.

I. This Order may be reopened to modify the compliance schedule set forth herein. To qualify for this reopener, pursuant to the SIP and State Board Order WQ 2001-06 ("Tosco decision"). The Discharger must provide, within six months after adoption of this Order, information as follows:

- With respect to copper, lead, and zinc, information adequately demonstrating to the satisfaction of the Regional Board that Praxair cannot feasibly comply with the CTR criterion or an effluent limitation based on the criterion within the time provided in this Order and that Praxair has made an adequate commitment to support and expedite TMDL development in the Dominguez Channel.

J. This Order may be reopened and modified to revise the effluent limitations, if consistent with or permissible under Clean Water Act's anti-backsliding provisions, if the Facility's effluent characteristics change as a result of commencing operation of the second air separation unit and/or cogeneration Facility, both of which are currently shut down.

K. This Order may be reopened to modify the compliance schedule set forth herein with respect to copper, lead, and zinc. In order to qualify for this reopener, the Discharger must satisfy the following two conditions no later than six months prior to expiration of this Order:

- The Discharger must provide information adequately demonstrating to the satisfaction of the Regional Board that Praxair can not feasibly comply with the CTR criteria for copper, lead, and zinc.
- The Discharger must demonstrate to the satisfaction of the Regional Board that Praxair has remained good faith efforts to comply with the CTR criteria for copper, lead, and zinc within three and one half years time limit set forth herein this Order.

In any event, the extension of the compliance schedule should not exceed one year.

V. Expiration Date

This Order expires on December 10, 2006.

The Discharger must file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of such date as application for issuance of new waste discharge requirements.

VI. Rescission

Order No. 95-156, adopted by this Regional Board on December 4, 1995, is hereby rescinded except for enforcement purposes.

I, Dennis A. Dickerson, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region on January 24, 2002.

Dennis A. Dickerson
Executive Officer