State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
320 West 4th Street, Suite 200, Los Angeles
AND
U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street, San Francisco

FACT SHEET

WASTE DISCHARGE REQUIREMENTS AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT FOR THE CITY OF LOS ANGELES (Hyperion Treatment Plant)

NPDES No. CA0109991
Public Notice No.: LA-04-W-14
Public Notice Date: September 21, 2004

PLANT ADDRESS	**MAILING ADDRESS**
Hyperion Treatment Plant	City of Los Angeles, Bureau of Sanitation
12000 Vista del Mar Boulevard	433 South Spring Street, Suite 400
Playa Del Rey, California	Los Angeles, CA 90013
Contact Person: Steve S. Fan	Contact Person: Rita L. Robinson
Title: Chief Operations Manager	Title: Director, Bureau of Sanitation
Phone No.: 310-648-5168	Phone No.: 213-473-7999

I. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board) and the U.S. Environmental Protection Agency, Region IX (USEPA) are considering reissuance of waste discharge requirements (WDR) and a National Pollutant Discharge Elimination System (NPDES) permit for the above-referenced plant. As an initial step in this process, Regional Board and USEPA staff have developed a tentative WDR and NPDES permit. The Regional Board and USEPA encourage public participation in this reissuance process.

A. Written Comments

Staff determinations are tentative. Interested persons are invited to submit written comments concerning the tentative WDR and NPDES permit. Comments should be submitted either in person or by mail to:

EXECUTIVE OFFICER
California Regional Water Quality Control Board, Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, CA 90013

Robyn Stuber
U.S. Environmental Protection Agency, Region IX (WTR-5)
75 Hawthorne Street
San Francisco, CA 94105

To facilitate consideration by the Regional Board and USEPA, written comments should be received at Regional Board and USEPA offices by 5:00 p.m. on October 21, 2004. However, the public comment period will remain open through the close of the public hearing on November 4, 2004.

B. Public Hearing

The Regional Board and USEPA will hold a joint public hearing on the tentative WDR and NPDES permit during the regular Board meeting on the following date, time, and location:

Date:	November 4, 2004
Time:	9:00 a.m.
Location:	The Metropolitan Water District of Southern California, Board Room 700 N. Alameda Street Los Angeles, California

Interested parties and persons are invited to attend. At the public hearing, the Regional Board and USEPA will hear testimony, if any, pertinent to the waste discharge, WDR and NPDES 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. The Regional Board's web address is www.swrcb.ca.gov/rwqcb4 where you can access the current agenda for changes in Board meeting dates and locations.

C. 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 and 75 Hawthorne Street, San Francisco, California, at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged by calling the Los Angeles Regional Board at (213) 576-6600 or USEPA at (415) 972-3524.

D. Register of Interested Persons

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

E. **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 WDR. 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
P.O. Box 100, 1001 I Street
Sacramento, CA 95812

F. **Federal NPDES Permit Appeals**

When a final NPDES permit is issued by USEPA, it will become effective 33 days following the date it is mailed to the Discharger, unless a request for review is filed. If a request for review is filed, only those permit conditions which are uncontested will go into effect pending disposition of the request for review. Requests for review must be filed within 33 days following the date the final permit is mailed and must meet the requirements of Section 124.19, Title 40, Code of Federal Regulations (40 CFR). All requests for review should be addressed to the Environmental Appeals Board (EAB) as follows. Requests sent through the U.S. Postal Service (except by Express Mail) must be addressed to the EAB's mailing address, which is:

U.S. Environmental Protection Agency
Clerk of the Board
Environmental Appeals Board (MC 1103B)
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460-0001

All filings delivered by hand or courier, including Federal Express, UPS, and U.S. Postal Express Mail, should be directed to the following address:

Environmental Appeals Board
U.S. Environmental Protection Agency
Colorado Building
1341 G Street, N.W., Suite 600
Washington, D.C. 20460

Those persons filing a request for review must have filed comments on the draft permit, or participated in the public hearing. Otherwise, any such request for review may be filed only to the extent of changes from the draft to the final permit decision.

II. BACKGROUND

The City of Los Angeles (City or Discharger) discharges undisinfected secondary treated municipal wastewater from the Hyperion Treatment Plant (Hyperion Plant) located at 12000 Vista del Mar Boulevard, Playa Del Rey through the five-mile outfall (Discharge Serial No. 002, see Section VI for description) to the Pacific Ocean within Santa Monica Bay, a water of the United States. It also discharges chlorinated secondary treated effluent through the one-mile outfall (Discharge Serial No. 001) during extremely high flows, power failures, and preventive maintenance. On March 8, 1999, the City filed a ROWD and applied for renewal of its WDR and NPDES permit. The Discharger's permit has been administratively extended beyond the March 10, 1999 expiration date.

III. PURPOSE OF ORDER

This NPDES Permit regulates the discharge of treated wastewater from Hyperion Treatment Plant. This discharge was previously permitted by Waste Discharge Requirements in Order No. 94-021, adopted by this Regional Board on February 28, 1994. Order No. 94-021 also serves as the NPDES permit (CA0109991) issued jointly by the Regional Board and USEPA on April 1, 1994. This Order is a reissuance of waste discharge requirements and permit that have been revised to reflect current wastewater treatment processes and to include additional findings, effluent limitations, prohibitions, updated standard provisions, and an expanded monitoring and reporting program. The proposed WDR and NPDES permit will expire on May 14, 2010.

IV. CONSENT DECREE AND LEGAL ISSUES

A. The operations and discharges from the Hyperion Treatment Plant and Hyperion collection system are also regulated under the following enforcement actions:

1. Amended Consent Decree entered on February 19, 1987, in United States and State of California v. City of Los Angeles, No. CV 77-3047-HP (C.D. Cal.);

2. Settlement Agreement, Los Angeles Superior Court Case No. C 665238, dated January 29, 1990, in State of California v. City of Los Angeles; and

3. Regional Board Cease and Desist Order 98-073 adopted on September 14, 1998, amended by Order No. 00-128 adopted on August 31, 2000.

B. In 1987, the City entered into an Amended Consent Decree (No. CV 77-3047-HP) with USEPA and the Regional Board. The Amended Consent Decree required the City under time schedules to undertake the following:

1. Eliminate the discharge of sewage sludge into the Pacific Ocean from Hyperion Treatment Plant by December 31, 1987 (status: completed);

2. Comply with interim effluent limits (status: interim limits are not applicable as of January 1, 1999);

3. Complete construction and begin operation of the Hyperion Energy Recovery System by June 30, 1989 (status: completed, but determined to be a technological failure and abandoned);

4. Achieve and thereafter maintain compliance with full secondary treatment at Hyperion Treatment Plant by December 31, 1998 (status: completed and achieved compliance before the deadline);

5. Prepare a storm water pollution reduction study and implement the recommended measures thereof (status: completed).

C. On June 7, 1991, the United States and the State of California filed a supplemental complaint under the existing Consent Decree CV 77-3047-HP (C.D. Cal.) for alleged pretreatment violations against the City. Settlement of the complaint had been concluded and modification to the Consent Decree was entered into court records on August 7, 2000. The settlement requires the City to implement the Westside Water Recycling Extension Project and the Santa Monica Bay Storm Drain Low-Flow Diversion Project.

D. In October 1987, the California Attorney General, on behalf of the Regional Board, filed a complaint with the Los Angeles Superior Court (Case No. C 665238) for civil penalties regarding unpermitted discharges to Discharge Serial No. 001 and raw sewage overflows to surface waters from the Hyperion collection system. A settlement agreement was entered into on January 29, 1990. In lieu of civil penalties, the City was required to implement 23 projects to improve and enhance its collection system and benefit the waters in the Greater Los Angeles Area. Twenty two of the 23 Settlement Agreement projects were completed. The remaining project deals with the Los Angeles Zoo Wastewater Treatment Facility. Two of the original three elements of the Zoo project (construction of the retention basin and pump station for collection of the Zoo's wastewater and diversion to the North Outfall Sewer force main) were completed in 1995. The City proposes to substitute Best Management Practices (BMPs) for the stormwater peripheral drainage system, the third element of the original design concept. After reviewing the study, the Regional Board rejected the City's proposal because the proposed BMPs can not achieve the objectives of the original Settlement Agreement. Currently, the City is in the process of developing other options for the Regional Board's consideration.

E. Sanitary sewer overflows (SSO) have been a recurring problem in certain areas of the City; in particular, in the South Central area, where sewers do not have adequate capacity to absorb inflow and infiltration that occurs during wet weather. For the entire City, between the wet weather period of February 3, 1998, through May 14, 1998, there were 99 separate sanitary overflows resulting in 44 million gallons of raw sewage released. On September 14, 1998, the Regional Board issued Cease and Desist Order (CDO) No. 98-073 to the City, amended by CDO No. 00-128 adopted on August 31, 2000. The CDO requires the City to provide adequate capacity to its wastewater collection system by constructing additional sewer alignments and/or upgrading the existing sewer system over a seven-year period (1998 to 2005). Additionally, on August 5, 2004, the United States, the State of California, Santa Monica Baykeeper, a coalition of community groups and the City of Los Angeles lodged a settlement

that would resolve the parties' Clean Water Act and Porter-Cologne Act litigation regarding the City of Los Angeles' SSOs and sewage odors. This settlement underwent public review and comment. The Settlement Agreement and Final Order was filed on October 28, 2004 and entered by the District Court on October 29, 2004, and is now being implemented. The Settlement Agreement and Final Order establishes a ten-year program designed to reduce SSOs and sewage odors to the maximum extent feasible.

V. DESCRIPTION OF FACILITY

The City owns and operates the Hyperion Treatment Plant, a publicly owned treatment works (POTW). The Hyperion Treatment Plant is a secondary treatment facility located at 12000 Vista del Mar Boulevard, Playa Del Rey, California. The plant has a dry weather average design treatment capacity of 450 million gallons per day (mgd) and a wet weather peak hydraulic capacity of approximately 850 mgd. In 2003, the Hyperion Treatment Plant received an average of 339 mgd of influent and discharged an average of 315 mgd of secondary treated effluent to the Pacific Ocean. Approximately 24 mgd of secondary effluent was sent to West Basin Water Recycling Facility for advanced treatments.

The Hyperion Treatment Plant is part of a joint outfall system commonly known as the Hyperion Treatment System that consists of the wastewater collection system, the Hyperion Treatment Plant, and three upstream wastewater treatment plants: Donald C. Tillman Water Reclamation Plant (Tillman WRP), Los Angeles-Glendale Water Reclamation Plant (LAGWRP), and Burbank Water Reclamation Plant (Burbank WRP)(owned and operated by a contract city). The Hyperion Treatment System collects, treats, and disposes of sewage from the entire City (except the Wilmington - San Pedro Area, the strip north of San Pedro, and Watts) and from a number of cities and agencies under contractual agreements. Approximately 85% of the sewage and commercial/industrial wastewater comes from the City of Los Angeles. The remaining 15% comes from the Contract Cities and Agencies. There are approximately four million people in the Hyperion Treatment System Service Area.

Currently, the Hyperion Treatment Plant also accepts dry weather urban runoff that is diverted from storm drains into the City's collection system from April 1 to October 31. The City plans to extend this diversion operation from the dry summer months to year-round in order to conform to the six-year compliance schedule for bacteria concentration during winter dry weather, contained in the Santa Monica Bay Beach Dry-weather Bacteria TMDL regulation (Resolution No. 02-004 and Resolution No. 2002-022) adopted by the Regional Board.

The Hyperion Treatment System is an interconnected system and includes approximately 6,500 miles of sewer lines located within the City (including trunk sewers in contract cities and agencies) and additional sewer lines under the control of the contract cities and agencies. Sludge from the City's two upstream plants (Tillman WRP and LAGWRP) is returned to the wastewater collection system and flows to the Hyperion Treatment Plant for treatment. Discharges from Tillman WRP and LAGWRP are regulated by Order No. 98-046 (NPDES Permit No. CA0056227) and Order No. 98-047 (NPDES Permit No. CA0053953), respectively. In addition, sludge generated from the Burbank WRP is also returned to the City of Burbank sewer system for treatment at the Hyperion Treatment Plant. The influent to

the Burbank WRP can be diverted/bypassed to the Hyperion Treatment Plant during periods of emergency. Discharges from the Burbank WRP are regulated under Order No. 98-052 (NPDES CA0055531).

The Hyperion Treatment Plant has provided full secondary treatment since December 1998. Preliminary and primary wastewater treatments consist of screening, grit removal, and primary sedimentation with coagulation and flocculation. In secondary treatment, the primary effluent is biologically treated in a high purity oxygen activated sludge process comprised of a cryogenic oxygen plant, 9 secondary reactor modules and 36 secondary clarifiers. Each secondary reactor module is designed to handle 50 mgd of flow which results in a total treatment capacity of 450 mgd of primary effluent. After clarification, undisinfected secondary effluent is discharged into Santa Monica Bay through a five mile submerged outfall pipe (see below for description). Discharge up to 325 mgd flows by gravity to the outfall, or is pumped at the Effluent Pumping Plant when flows exceed 325 mgd.

Solid fractions recovered from wastewater treatment processes include grit, primary screenings, primary sludge and skimmings, thickened waste activated sludge, digested sludge screenings and digester cleaning solids. The fine solids (grit, primary screenings, digested sludge screenings, digester cleaning solids) that consist of primarily inorganic materials are hauled away to landfills. The remaining solid fractions (primary sludge and skimmings, thickened waste activated sludge) are anaerobically digested onsite. The digested solids are screened and dewatered using centrifuges. Starting on January 1, 2003, the Hyperion Treatment Plant implemented full thermophilic digestion to generate Class A "EQ" biosolids. The biosolids (treated sewage sludge) are beneficially reused offsite for land application and composting projects. The digester gas is cleaned and a major part of the gas is currently exported to the Los Angeles Department of Water and Power's Scattergood Steam Generating Plant, located immediately adjacent to the Hyperion Treatment Plant. The exported digester gas is used as fuel in the generation of electricity. In return, the generating plant provides steam for digester heating for the Hyperion Treatment Plant. During interruptions in the export of steam from the DWP Scattergood Steam Generation Plant, digester gas can be used as fuel for in-plant boilers that provide steam to heat the anaerobic digesters. Any remaining non-exported digester gas may be flared, if necessary, and is regulated under a flare operation permit from the South Coast Air Quality Management District (AQMD).

The Hyperion Treatment Plant has developed an industrial wastewater Pretreatment Program which was approved by USEPA and the Regional Board. The City continues to implement the Pretreatment Program throughout the Hyperion Treatment Plant's service area. However, since Contract Cities and Agencies operate their respective collection systems that are tributary to the City's main trunk lines, some contract cities and agencies also operate their own nondomestic source control programs.

The Hyperion Treatment Plant collects and treats in-plant storm water runoff except that, during intense storms, undisinfected storm water overflows may be discharged through Outfall 001. This storm water discharge is regulated under the State Board's *NPDES General Permit No. CAS00001 and Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities* contained in Order No. 97-03-DWQ, adopted on April 17, 1997. This general permit was originally issued in November 1991 and amended in

September 1992. Since 1992, the City has developed and implemented a *Storm Water Pollution Prevention Plan* as required by the general permit.

USEPA and the Regional Board have classified the Hyperion Treatment Plant as a major discharger. It has a Threat to Water Quality and Complexity rating of 1-A pursuant to California Code of Regulations (CCR), Title 23, Section 2200.

Water Reclamation - The West Basin Municipal Water District (West Basin) operates the West Basin Water Recycling Facility (West Basin Facility) in El Segundo. West Basin is contractually entitled to receive up to 70 mgd of secondary effluent from Hyperion Treatment Plant for advanced treatment. West Basin Facility provides tertiary treatment and/or advanced treatments such as microfiltration and reverse osmosis (RO) to the Hyperion secondary effluent to produce Title 22 and high purity recycled water. Title 22 recycled water is used for beneficial irrigation, industrial applications including cooling water and boiler feed water, and other purposes. The RO treated recycled water is primarily injected into the West Coast Basin Barrier Project to control seawater intrusion. In 2003, West Basin Facility received approximately an average of 24 mgd of secondary effluent from the Hyperion Treatment Plant.

The waste brine from West Basin Facility is discharged to the ocean through Hyperion's five-mile outfall (Discharge Serial No. 002) via a waste brine line from West Basin Facility. Although the waste brine is discharged through Hyperion's outfall, it is regulated under separate waste discharge requirements and NPDES permit.

The Hyperion Treatment Plant ceased the irrigation use of in-plant chlorinated secondary treated wastewater in July 1999. Instead, the plant started using tertiary recycled water from West Basin in August 1999.

VI. DISCHARGE OUTFALL DESCRIPTION

The Hyperion Treatment Plant has three ocean outfalls. However, only two outfall discharge points (i.e., 001 and 002) are utilized to discharge treated wastes to the Pacific Ocean. The three ocean outfalls are described as follows:

Discharge Serial No. 001 - this is commonly referred to as the "one-mile outfall". It is a 12-foot diameter outfall terminating approximately 5,364 feet (1.6 kilometers [km]) west-southwest of the treatment plant at a depth of approximately 50 feet (15 meters [m]) below the ocean surface (Latitude: 33° 55.095; Longitude 118° 26.844). This outfall is permitted for emergency discharge of chlorinated secondary treated effluent during extremely high flows, power failures, and preventive maintenance, such as routine opening and closing the outfall gate valve(s) for exercising and lubrication. However, during intense storms or storms associated with plant power outages, direct discharge of undisinfected storm water overflow is also permitted at this outfall. This Order and permit require the City to notify the Regional Board and USEPA in advance of any planned preventive maintenance that results in discharges through Discharge Serial No. 001.

Discharge Serial No. 002 - this is commonly referred to as the "five-mile outfall". It is a 12-foot diameter outfall terminating approximately 26,525 feet (8.1 km) west-southwest of the treatment plant at a depth of approximately 187 feet (57 m) below the ocean surface. This

outfall is located north of Discharge Serial No. 001 and ends in a "Y" shaped diffuser consisting of two 3,840-foot legs (Latitude: 33° 54.718; Longitude: 118° 31.287) (North terminus of wye structure – Latitude 33° 55.160 and Longitude 118° 31.709; South terminus of wye structure – Latitude 33° 54.039 and Longitude 118° 31.636). This is the only outfall permitted for the routine discharge of undisinfected secondary treated effluent.

Discharge Serial No. 003 – this is a 20-inch diameter outfall terminating approximately 35,572 feet (10.8 km) west of the treatment plant, at the head of a submarine canyon at a depth of approximately 300 feet (91 m) below the ocean surface (Latitude: 33° 55.622, Longitude: 118° 33.183). This outfall had been used to discharge sludge. Under the 1987 amended Consent Decree No. CV77-3047-HP, this outfall was deactivated in November 1987 when sludge discharge to the ocean was terminated. Near the head of this outfall, a spool piece was removed and the discharge pipe was blind-flanged to prevent any possible discharge of sewage or sludge into the Pacific Ocean. The outfall has not been maintained since it was taken out of service. Any discharge from this outfall is prohibited.

VII. DESCRIPTION OF DISCHARGE AND DISCHARGE QUALITY

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The effluent characteristics, shown in the following Table 1, are based on data in the Discharger's 2003 annual report submitted to the Regional Board and USEPA.

Table 1 – Effluent Characteristics for Year 2003

Constituent	Unit	Average or Median *	Maximum	Minimum
Flow	mgd	315	466	268
PH	pH units	6.8	7.3	6.4
Temperature	°F	79	85	--
BOD_5 20°C	mg/L	18	24**	--
Suspended solids	mg/L	19	27**	--
Settleable solids	ml/L	< 0.1	< 0.1	< 0.1
Total organic carbon	mg/L	46	20	--
Total phosphorus	mg/L	2.5	3.2	--
Turbidity	NTU	8	12	--
Oil and grease	mg/L	< 3	4	--
Dissolved oxygen	mg/L	5.6	7.3	--
Organic nitrogen	mg/L	3.7	5.6	--
Nitrate as N	mg/L	0.020	0.076	--
Marine Aquatic Life Toxicants				
Arsenic	ug/L	2.6	5.0	1.1
Cadmium	ug/L	< 0.08	0.16	< 0.08
Chromium VI	ug/L	< 2	4	< 2
Copper	ug/L	14	19	10
Lead	ug/L	< 3	4.5	< 2
Mercury	ug/L	< 0.002	0.18	< 0.002
Nickel	ug/L	9.4	12	6.1
Selenium	ug/L	1.1	2	0.24

Constituent	Unit	Average or Median *	Maximum	Minimum
Silver	ug/L	0.8	1.8	0.6
Zinc	ug/L	18	24	12
Cyanide	ug/L	< 4	6	< 2
Total chlorine residual	mg/L	< 0.1	< 0.1	< 0.1
Ammonia as N	mg/L	35	37	32
Acute toxicity	TUa	0.6	1.1	0
Chronic toxicity	TUc	25	48	10
Phenolic compounds – non-chlorinated (sum of the following)	ug/L	< DL	1.9	< DL
Phenol	ug/L	< 0.4	< 0.4	< 0.4
2-Nitrophenol	ug/L	< 0.09	< 0.09	< 0.09
2,4-Dimethylphenol	ug/L	< 0.17	< 0.17	< 0.17
2,4-Dinitrophenol	ug/L	< 0.21	< 0.21	< 0.21
4-Nitrophenol	ug/L	< 0.06	< 0.06	< 0.06
2-Methyl-4,6-dinitrophenol	ug/L	< 0.4	< 0.4	< 0.4
Phenolic compound – chlorinated (sum of the following)	ug/L	< DL	0.46	< DL
2-Chlorophenol	ug/L	< 0.09	< 0.09	< 0.09
2,4-Dichlorophenol	ug/L	< 0.09	< 0.09	< 0.09
3-Methyl-4-chlorophenol	ug/L	< 0.18	0.46	< 0.18
2,4,6-Trichlorophenol	ug/L	< 0.09	< 0.09	< 0.09
Pentachlorophenol	ug/L	< 0.4	< 0.4	< 0.4
Endosulfan (sum of the following)		< DL	0.002	< DL
alpha-Endosulfan	ug/L	< 0.0014	< 0.0014	< 0.0014
beta-Endosulfan	ug/L	< 0.0011	0.002	< 0.0011
Endosulfan sulfate	ug/L	< 0.004	< 0.004	< 0.004
Endrin	ug/L	< 0.007	0.009	< 0.007
HCH (sum of the following)	ug/L	< DL	0.006	< DL
alpha-BHC	ug/L	< 0.0023	< 0.0023	< 0.0023
beta-BHC	ug/L	< 0.0019	< 0.0019	< 0.0019
gamma-BHC (Lindane)	ug/L	< 0.0020	0.006	< 0.0020
delta-BHC	ug/L	< 0.0007	< 0.0007	< 0.007
Human Health Toxicants – Noncarcinogens				
Acrolein	ug/L	< 2.0	< 2.0	< 0.76
Antimony	ug/L	< 1.3	2	< 1.3
Bis(2-chloroethoxy) methane	ug/L	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl) ether	ug/L	< 0.05	< 0.05	< 0.05
Chlorobenzene	ug/L	< 0.12	< 0.12	< 0.10
Di-n-butyl phthalate	ug/L	< 0.07	0.77	< 0.07
Dichlorobenzenes (sum of the following))		< 0.06	0.17	< 0.06
1,2-Dichlorobenzene	ug/L	< 0.06	0.17	< 0.06
1,3-Dichlorobenzene	ug/L	< 0.05	< 0.05	< 0.05
Diethyl phthalate	ug/L	< 0.06	< 0.06	< 0.06

Constituent	Unit	Average or Median *	Maximum	Minimum
Dimethyl phthalate	ug/L	< 0.27	< 0.27	< 0.27
2-Methyl-4,6-dinitrophenol	ug/L	< 0.4	< 0.4	< 0.4
2,4-Dinitrophenol	ug/L	< 0.21	< 0.21	< 0.21
Ethylbenzene	ug/L	< 0.08	< 0.12	< 0.08
Fluoranthene	ug/L	< 0.06	0.18	< 0.06
Hexachlorocyclopentadiene	ug/L	< 2.9	< 2.9	< 2.9
Nitrobenzene	ug/L	< 0.05	< 0.05	< 0.05
Thallium	ug/L	< 0.3	0.68	< 0.3
Toluene	ug/L	0.23	0.78	< 0.08
Tributyltin	ng/L	< 3.2	10	< 2
1,1,1-Trichloroethane	ug/L	< 0.18	< 0.18	< 0.09
Human Health Toxicants – Carcinogens				
Acrylonitrile	ug/L	< 0.31	< 0.31	< 0.23
Aldrin	ug/L	< 0.0016	< 0.0016	< 0.0016
Benzene	ug/L	< 0.22	< 0.22	< 0.14
Benzidine	ug/L	< 5	< 5	< 5
Beryllium	ug/L	< 0.01	0.17	< 0.006
Bis(2-chloroethyl) ether	ug/L	< 0.09	< 0.09	< 0.09
Bis(2-ethylhexyl) phthalate	ug/L	2.9	6.4	0.88
Carbon tetrachloride	ug/L	< 0.15	< 0.15	< 0.14
Chlordane (sum of the following)	ug/L	< DL	< DL	< DL
alpha-Chlordene	ug/L	--	--	--
gamma-Chlordene	ug/L	--	--	--
alpha-Chlordane	ug/L	< 0.07	< 0.07	< 0.07
beta-Chlordane	ug/L	< 0.07	< 0.07	< 0.07
alpha-Noncahlor	ug/L	< 0.09	< 0.09	< 0.09
gamma-Nonachlor	ug/L	< 0.09	< 0.09	< 0.09
Oxychlordane	ug/L	< 0.08	< 0.08	< 0.08
Chlorodibromomethane	ug/L	1.4	2.4	0.81
Chloroform	ug/L	5.8	7.1	3.7
DDT, total (sum of the following)	ug/L	< DL	< DL	< DL
2,4'-DDT	ug/L	< 5	< 5	< 5
2,4'-DDE	ug/L	< 2.7	< 2.7	< 2.7
2,4- DDD	ug/L	< 3.0	< 3.0	< 3.0
4,4'-DDT	ug/L	< 6	< 6	< 6
4,4'-DDE	ug/L	< 1.8	< 1.8	< 1.8
4,4- DDD	ug/L	< 1.7	< 1.7	< 1.7
1,4-Dichlorobenzene	ug/L	2.2	5.3	< 0.07
3,3'-Dichlorobenzidine	ug/L	< 0.11	< 0.11	< 0.11
1,2-Dichloroethane	ug/L	< 0.05	< 0.08	< 0.05
1,1-DIchloroethylene	ug/L	< 0.13	< 0.13	< 0.13
Dichlorobromomethane	ug/L	1.2	1.6	0.93
Methylene chloride	ug/L	3.3	5.4	1.7
1,3-Dichloropropylene	ug/L	< DL	< DL	< DL

Constituent	Unit	Average or Median *	Maximum	Minimum
cis-1,3-Dichloropropylene	ug/L	< 0.11	< 0.13	< 0.11
trans-1,3-Dichloropropylene	ug/L	< 0.07	< 0.18	< 0.07
Dieldrin	ug/L	< 0.0009	< 0.0009	< 0.0009
2,4-Dinitrotoluene	ug/L	< 0.08	< 0.08	< 0.08
1,2-Diphenylhydrazine	ug/L	< 0.06	< 0.06	< 0.06
Halomethanes (sum of the following)	ug/L	< DL	1.1	< DL
Methyl chloride (Chloromethane)	ug/L	< 0.14	< 0.18	< 0.14
Methyl bromide (Bromomethane)	ug/L	< 0.28	< 0.28	< 0.16
Bromoform	ug/L	< 0.19	1.1	< 0.08
Heptachlor	ug/L	< 0.002	< 0.002	< 0.002
Heptachlor epoxide	ug/L	< 0.0018	< 0.0018	< 0.0018
Hexachlorobenzene	ug/L	< 0.07	< 0.07	< 0.07
Hexachlorobutadiene	ug/L	< 0.07	< 0.07	< 0.07
Hexachloroethane	ug/L	< 0.07	< 0.07	< 0.07
Isophorone	ug/L	0.15	0.21	< 0.07
N-Nitrosodimethylamine (NDMA)	ug/L	< 0.17	< 0.17	< 0.17
N-Nitrosodi-n-propylamine	ug/L	< 0.13	< 0.13	< 0.13
N-Nitrosodiphenylamine	ug/L	< 0.09	< 0.09	< 0.09
PAHs (sum of the following)		< DL	1.6	< DL
Acenaphthylene	ug/L	< 0.06	< 0.06	< 0.06
Anthracene	ug/L	< 0.06	0.16	< 0.06
Benzo(a)anthracene	ug/L	< 0.09	0.28	< 0.09
Benzo(b)fluoranthene	ug/L	< 0.07	0.13	< 0.07
Benzo(k)fluoranthene	ug/L	< 0.19	0.21	< 0.19
Benzo(g,h,i)perylene	ug/L	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	ug/L	< 0.06	< 0.06	< 0.06
Chrysene	ug/L	< 0.05	0.19	< 0.05
Dibenzo(a,h)anthracene	ug/L	< 0.05	< 0.05	< 0.05
Fluorene	ug/L	< 0.05	0.18	< 0.05
Indeno(1,2,3-cd)pyrene	ug/L	< 0.07	< 0.07	< 0.07
Phenanthrene	ug/L	< 0.08	0.23	< 0.08
Pyrene	ug/L	< 0.07	0.2	< 0.07
PCBs (sum of the following)	ug/L	< DL	< DL	< DL
Aroclor 1016	ug/L	< 0.08	< 0.08	< 0.08
Aroclor 1221	ug/L	< 0.3	< 0.3	< 0.3
Aroclor 1232	ug/L	< 0.04	< 0.04	< 0.04
Aroclor 1242	ug/L	< 0.05	< 0.05	< 0.05
Aroclor 1248	ug/L	< 0.12	< 0.12	< 0.12
Aroclor 1254	ug/L	< 0.05	< 0.05	< 0.05
Aroclor 1260	ug/L	< 0.1	< 0.1	< 0.1
TCDD equivalents	ng/L	< 0.1	< 1.4	< 0.07
1,1,2,2-tetrachloroethane	ug/L	< 0.11	< 0.12	< 0.11
Tetrachloroethylene	ug/L	1.7	2.4	0.96

Constituent	Unit	Average or Median *	Maximum	Minimum
Toxaphene	ug/L	< 0.13	< 0.13	< 0.13
Trichloroethylene	ug/L	< 0.17	< 0.17	< 0.07
1,1,2-Trichloroethane	ug/L	< 0.14	< 0.17	< 0.14
2,4,6-Trichlorophenol	ug/L	< 0.09	< 0.09	< 0.09
Vinyl chloride	ug/L	< 0.08	< 0.17	< 0.08

The "<" symbol indicates that the pollutant was not detected at that concentration level.
DL represents detection limit for a group of compounds.

* When a data set contain nondetected data, the median value of the data set is reported.

** Data are weekly average.

Discharge Plume – The City has collected and assessed extensive chemical and physical data from Santa Monica Bay, including (since 1987) over 6 years of weekly water quality assessments, approximately 4 years of monthly assessments, and approximately 4 years of quarterly assessments. Data collection has taken place at 36 sites (12 nearshore stations and 24 offshore stations) throughout Santa Monica Bay during all weather conditions, including El Niño, La Niña and winter storm conditions. The parameters collected in these assessments are used to locate and define the geometry of the wastewater plume and include transmissivity, dissolved oxygen, temperature and salinity.

The movement of the plume is dictated by the depth of the thermocline or stratification and the direction and strength of highly variable Santa Monica Bay currents. Under typical conditions, the plume is detected within 2 km (6562 feet) of the outfall terminus, although it has been detected as far as 8 km (26247 feet) away from the outfall. Also, the plume has almost always been detected below the thermocline at a depth ranging from 10 m (33 feet) to 55 m (180 feet). Infrequently, during winter storm conditions, the plume has been detected at the surface in the vicinity of the outfall. On rare occasions, it has been impossible to detect the plume.

As the waters of Santa Monica Bay approach the shore, the thermocline intersects the rising sea bottom. This point is typically 1000 m (3281 feet) or more offshore and is the theoretical limit of the approach of the plume to the shoreline. The plume has never been detected less than 2.5 km (8202 feet) from shore, at the 45 m (148 feet) depth contour.

The City has conducted shoreline and nearshore/inshore water quality monitoring in Santa Monica Bay since the late 1940s. The monitoring results indicated that effluent from Hyperion's five-mile outfall does not reach the shoreline and that elevated bacterial counts are associated with runoff from storm drains and discharges from piers. The direct impacts of the discharge from Hyperion's one-mile outfall on shoreline water quality have not been studied due to the lack of routine discharge. However, it is expected to be very minimal in that effluent discharged from the one-mile outfall is disinfected, and the volume of the discharge is usually much less than five million gallons occurring at most quarterly. This discharge is intended for conducting a functional test of equipment.

Shoreline monitoring requirements have been transferred to the monitoring program of the municipal storm water for the City (Order No. 01-182, NPDES No. CAS004001) adopted by this Regional Board on December 13, 2001.

VIII. RECEIVING WATER DESCRIPTION

The receiving water into which the Hyperion Treatment Plant discharges is part of the Santa Monica Bay watershed. The watershed is home to unique wetland, sand dune, and open ocean ecosystems that support a rich diversity of wildlife and serve as migration stopovers for marine mammals and birds. The Bay and its beaches are invaluable recreational resources and important sources of revenue for the region. The Bay is heavily used for fishing, swimming, surfing, diving, and other activities classified as water contact and noncontact recreation.

Over the years, the beneficial uses of the Bay have been impaired to various degrees due to pollution, resource over-exploitation, and habitat destruction. The primary problems of concern include acute health risk associated with swimming in runoff-contaminated surfzone waters, chronic (cancer) risk associated with consumption of certain sport fish species in areas impacted by DDT and PCB contamination, pollutant loading from point sources, urban runoff, and other nonpoint sources in light of projected population increases and their impacts on marine ecosystem, health of fishery resources, and degradation of natural habitats, and population decline of key species. [Santa Monica Bay Restoration Commission. 2004. “State of the Bay: 2004 Progress and Challenges”, 45 pages; Santa Monica Bay Restoration Project. 1998. “Taking the Pulse of the Bay - State of the Bay 1998”].

Section 403 of the Clean Water Act (CWA) requires dischargers to comply with specific Ocean Discharge Criteria established to address impacts on marine resources, including fisheries and endangered species. The City of Los Angeles submitted a report on May 29, 2003, to demonstrate compliance with the Section 403 Ocean Discharge Criteria. Based upon an evaluation of previous receiving water monitoring data and reports from other agencies, the City concluded that no unreasonable degradation of the marine environment is occuring with the current discharge receiving full secondary treatment.

IX. ATMOSPHERIC DEPOSITION ON SANTA MONICA BAY

The Santa Monica Bay air deposition study was conducted with the overall support of the Santa Monica Bay Restoration Project (SMBRP) and the Los Angeles County Department of Public Works. Due to limited resources, the primary emphasis was deposition of trace metals.

Data collection and analysis were undertaken collaboratively by scientists from University of California at Los Angeles (UCLA) and the Southern California Coastal Water Research Project (SCCWRP). This study ran concurrently with a study of air toxics conducted by AQMD. During the study, scientists used air concentration data gathered from a site located on the UCLA campus, as well as data collected by AQMD from 24 locations throughout the airshed. This information was then entered into a computer model which calculated and plotted the distribution of deposition rates at different locations under varying weather conditions. Researchers also collected sea surface microlayer (the very thin upper surface

layer) information from eight locations in the Bay and analyzed these samples for contaminant concentrations to study the spatial pattern of deposition. The observed distribution pattern for the sea surface samples indicates that farther away from the shore there is less zinc fallout and agrees well the modeling results.

The major conclusions of the final report (September 2001) are:

- Aerial deposition is a significant contributor to the overall pollutant loading to Santa Monica Bay for trace metals, such as lead, chromium, and zinc.
- On an annual basis, daily dry atmospheric deposition of metals on Santa Monica Bay and its watershed far exceeds the amount deposited during rain events. Chronic daily dry atmospheric deposition is also far greater than deposition during Santa Ana conditions when large volumes of polluted air are blown from inland areas to the ocean.
- Most of the mass of metals deposited by dry atmospheric deposition on Santa Monica Bay and its watershed originates as relatively large (larger than 10 microns) aerosols from area sources (e.g., off-road vehicles and small business) in the Santa Monica Bay watershed.

X. APPLICABLE LAWS, PLANS, POLICIES, AND REGULATIONS

A. ***Federal Clean Water Act -*** Section 301(a) of the CWA requires that point source discharges of pollutants to a water of the United States must be in conformance with a National Pollutant Discharge Elimination System (NPDES) permit. NPDES permits establish effluent limitations that incorporate various CWA requirements designed to protect and enhance water quality. The CWA Section 402 authorizes USEPA or States with an approved NPDES program to issue NPDES permits. The State of California has an approved NPDES program.

B. ***Basin Plan –*** The Board adopted and USEPA has approved under CWA Section 303(c) a revised and amended *Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) subsequently amended by Resolution Nos. 97-02, 01-018, 2002-011, 2002-022, 2003-001, and 2003-10, also approved by USEPA under Section 303(c). This updated and consolidated plan represents the Board's master water quality control planning document and regulations. The Basin Plan: (i) designates beneficial uses for surface and groundwaters, (ii) sets narrative and numeric objectives that must be attained or maintained to protect the designated (existing and potential) beneficial uses and conform to State and federal antidegradation policies, and (iii) includes implementation provisions, programs, and policies to protect all waters in the Region. In addition, the Basin Plan incorporates (by reference) applicable State and Regional Board plans and policies and other State-pertinent water quality policies and regulations. This Order and permit implement the plans, policies and provisions of the Basin Plan.

C. ***Ocean Plan -*** On November 16, 2000, the State Water Resources Control Board (State Board) adopted a revised *Water Quality Control Plan for the Ocean Waters of California* (Ocean Plan*)*. The revised plan was approved by USEPA, on December 3, 2001, for the CWA purposes. This Order and permit include effluent and

receiving water limitations, prohibitions, and provisions that implement the Ocean Plan.

D. ***Beneficial Uses –*** The receiving water, Dockweiler Beaches (Hydrologic Unit No. 405.12), is part of El Segundo/LAX Sub-Watershed of the Santa Monica Bay Watershed. The Basin Plan contains water quality objectives for and lists the following beneficial uses of waterbodies in the El Segundo/LAX Sub-Watershed area:

Dockweiler Beaches (Hydrologic Unit 405.12)
Existing: industrial service supply, navigation, water contact recreation, non-contact water recreation, commercial and sport fishing, marine habitat, and wildlife habitat.

Potential: spawning, reproduction, and/or early development.

Nearshore Zone (defined as the zone bounded by the shoreline and a line 1000 feet from the shoreline or the 30-foot depth contours, whichever is further from the shoreline)
Existing: industrial service supply, navigation, water contact recreation, non-contact water recreation, commercial and sport fishing, marine habitat, wildlife habitat, preservation of biological habitats, rare, threatened, or endangered species, migration of aquatic organisms, and spawning, reproduction, and/or early development.

Offshore Zone
Existing: industrial service supply, navigation, water contact recreation, non-contact water recreation, commercial and sport fishing, marine habitat, wildlife habitat, migration of aquatic organisms, and spawning, reproduction, and/or early development.

Chapter 1, Section A, of the Ocean Plan contains the beneficial uses of the ocean waters of the State that shall be protected. These beneficial uses include: industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Area of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish migration; fish spawning and shellfish harvesting.

E. ***Antidegradation Policy -*** On October 28, 1968, the State Board adopted Resolution No. 68-16*, Maintaining High Quality Water*, which established an antidegradation policy for State and Regional Boards. Similarly, CWA (Section 304(d)(4)(B)) and USEPA regulations (40 CFR 131.12) require that all permitting actions be consistent with the federal antidegradation policy. Together, the State and federal policies are designed to ensure that a water body will not be degraded by a permitted discharge, except under the conditions established in the State Antidegradation Policy and the federal regulation. The provisions of this Order and permit are consistent with these antidegradation policies.

F. ***Watershed Management -*** This Regional Board has been implementing a Watershed Management Approach (WMA) to address water quality protection in

Los Angeles and Ventura Counties. The approach is in accordance with USEPA guidance on *Watershed Protection: A Project Focus* (EPA841-R-95-003, August 1995). The objective is to provide a comprehensive and integrated strategy resulting in water resource protection, enhancement and restoration, while balancing economic and environmental impacts within a hydrologically defined drainage basin or watershed. The Management Approach emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with the resources available. This Order and the accompanying *Monitoring and Reporting Program* fosters implementation of this approach. The *Monitoring and Reporting Program* requires the Discharger to participate in regional water quality and kelp bed monitoring programs in the Southern California Bight.

G. ***CWA 303(d) Listed Pollutants –*** On July 25, 2003, USEPA approved the State's 2002 list of impaired waterbodies prepared pursuant to CWA 303(d). The list (hereinafter referred to as the 303(d) list) identifies waterbodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations by point sources (water quality-limited waterbodies).

Santa Monica Bay (Offshore and Nearshore) is on the 303(d) list for the following pollutants/stressors, from point and non-point sources: chlordane (sediment), DDT (tissue & sediment), polycyclic aromatic hydrocarbons (sediment), PCBs (tissue & sediment), debris, sediment toxicity, and fish consumption advisory. This Order and permit prescribe Water Quality Based Effluent Limits (WQBELs) for chlordane DDT, PAHs, and PCBs.

H. ***Santa Monica Bay Beaches Bacteria Total Maximum Daily Loads (TMDLs)*** – The Board has adopted two TMDLs to reduce bacteria at Santa Monica Bay beaches during dry and wet weather. The Board adopted the Dry Weather and Wet Weather TMDLs on January 24, 2002 and December 12, 2002, respectively (Resolution Nos. 2002-004 and 2002-022). These TMDLs were approved by the State Board, State OAL and USEPA Region IX and became effective on July 15, 2003. In these TMDLs, waste load allocations (WLAs) are expressed as the number of sample days at a shoreline monitoring site that may exceed the single sample targets for total coliform, fecal coliform and enterococcus identified under "Numeric Target" in the TMDLs. Waste load allocations are expressed as allowable exceedance days because the bacterial density and frequency of single sample exceedances are the most relevant to public health protection at beaches. The final shoreline compliance point for the WLAs in the TMDLs is the wave wash where there is a freshwater outlet (i.e., publicly owned storm drain or natural creek) to the beach, or at ankle depth at beaches without a freshwater outlet. The City of Los Angeles, as the owner of Hyperion Treatment Plant, is identified as a responsible jurisdiction in these TMDLs. In these TMDLs, Hyperion Treatment Plant is assigned a WLA of zero days of exceedance of the single sample bacterial objectives during all three identified periods – summer dry weather, winter dry weather and wet weather. Hyperion's WLA of zero exceedance days requires that no discharge from Hyperion's outfall may cause or contribute to any exceedances of the single sample bacteria objectives at the shoreline compliance points identified in the TMDL and,

subsequently, in the approved Coordinated Shoreline Monitoring Plan (dated April 7, 2004) submitted by responsible agencies and jurisdictions under the TMDLs. Because it has been demonstrated that the plume from the outfall does not come into contact with the shoreline and has never been detected less than 2.5 km from shore (see Section VII, Discharge Plume), this Order and permit do not require shoreline monitoring. However, the shoreline monitoring data collected in LA County Stormwater Monitoring (MS4) Permit will be used to demonstrate compliance with the WLAs in these TMDLs.

XI. BASIS FOR EFFLUENT AND RECEIVING WATER LIMITS AND OTHER DISCHARGE REQUIREMENTS

A. ***Water Quality Objectives and Effluent Limits*** - Water Quality Objectives (WQOs) and effluent limitations in this permit are based on:

- The plans, policies and water quality standards (beneficial uses + objectives + antidegradation policy) contained in the *Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*, as amended and approved by USEPA through the public notice date of this Order and permit (Basin Plan);
- *Water Quality Control Plan, Ocean Waters of California, California Ocean Plan,* State Water Resources Control Board, 2001 (Ocean Plan);
- *Region 9 & 10 Guidance for Implementing Whole Effluent Toxicity Programs, Final* , USEPA Regions IX & X, May 31, 1996;
- *Whole Effluent Toxicity (WET) Control Policy*, USEPA, July 1994;
- Applicable federal laws and regulations
  - Federal Clean Water Act, and
  - 40 CFR Parts 122, 125, and 131, among others; and,
- Best professional judgment (pursuant to 40 CFR 122.44).

B. USEPA regulations, policy, and guidance documents upon which Best Professional Judgment (BPJ) was developed include, in part:

- *Technical Support Document for Water Quality Based Toxics Control,* March 1991 (EPA-505/2-90-001);
- *U.S. EPA NPDES Permit Writers' Manual,* December 1996 (EPA-833-B-96-003);
- *Inspectors Guide for Evaluation of Municipal Wastewater Treatment Plants*, April 1979 (EPA/430/9-79-010); and,
- *Fate of Priority Pollutants in Publicly Owned Treatment Works Pilot Study,* October 1979 (EPA-440/1-79-300).

C. Where numeric water quality objectives have not been established in the Basin Plan or Ocean Plan, 40 CFR 122.44(d) specifies that water quality based effluent limits may be set based on USEPA criteria and supplemented where necessary by other relevant information to attain and maintain narrative water quality criteria to fully protect designated beneficial uses.

D. ***Mass and Concentration Limits -*** 40 CFR 122.45(f)(1) requires that except under certain conditions, all permit limits, standards, or prohibitions be expressed in terms of mass units. 40 CFR 122.45(f)(2) allows the permit writer, at their discretion, to express limits in additional units (e.g., concentration units). The regulations mandate that, where limits are expressed in more than one unit, the permittee must comply with both.

Generally, mass-based limits ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limits. Concentration-based effluent limits, on the other hand, discourage the reduction in treatment efficiency during low-flow periods and require proper operation of the treatment units at all times. In the absence of concentration-based effluent limits, a permittee would be able to increase its effluent concentration (i.e., reduce its level of treatment) during low-flow periods and still meet its mass-based limits. To account for this, this permit includes mass and concentration limits for some constituents, except during wet weather storm events that cause flows to the treatment plant to exceed the plant's design capacity. Therefore, during storm events when flows exceed design capacity, only concentration-based limits are applicable.

E. ***Maximum Daily Effluent Limitations -*** Pursuant to 40 CFR 122.45(d)(2), for POTW continuous discharges, all permit effluent limitations, standards, and prohibitions, including those necessary to achieve water quality standards, shall, unless impracticable, be stated as average weekly and average monthly discharge limitations. It is impracticable to include only average weekly and average monthly effluent limitations in the permit, because a single daily discharge of certain pollutants, in excess amounts, can cause violations of water quality objectives. The effects of pollutants on aquatic organisms are often rapid. For many pollutants, an average weekly or average monthly effluent limitation alone is not sufficiently protective of beneficial uses. As a result, maximum daily effluent limitations, as referenced in 40 CFR 122.45(d)(1), are included in the permit for certain constituents.

F. ***Pretreatment -*** In compliance with 40 CFR 403, the City developed a Pretreatment Program for POTWs owned and operated by the City. The City's Pretreatment Program was approved by USEPA on June 30, 1983. In 1989, USEPA delegated the authority to administer pretreatment programs in California to the State and Regional Boards. Thus, this Regional Board became the approval authority for pretreatment programs in Los Angeles and Ventura Counties.

This Order and permit include the City's approved Pretreatment Program and require the City to continue implementation and control of the Program throughout the Hyperion Treatment Plant's service area, including contributing jurisdictions. The POTW, as Control Authority, may exercise its authority over the entire service area directly, as provided by state law, or may elect to enter into contracts or other multi-jurisdictional agreements with the contributing jurisdictions. In case the POTW elects to enter into inter-jurisdictional agreements, the POTW must ensure that discharges received from entities outside of its political boundaries are regulated to the same extent, as are the discharges from within its political boundaries.

The City applies one set of local limits to all discharges from the Hyperion Treatment Plant, Tillman WRP, and LAGWRP to the Hyperion Treatment System. Burbank WRP is also part of the Hyperion Treatment System. To meet the effluent limitations of this Order and permit and General Pretreatment Regulations, this Order and permit require the City to reevaluate local limits for discharges to the Hyperion Treatment System.

G. ***Sludge Disposal*** **-** To implement CWA Section 405(d), on February 19, 1993, USEPA promulgated 40 CFR 503 to regulate the use and disposal of municipal sewage sludge. This regulation was amended on September 3, 1999. The regulation requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. It is the responsibility of the City to comply with said regulations that are enforceable by USEPA, because California has not been delegated the authority to implement this program. The City is also responsible for compliance with WDR and NPDES permits for the generation, transport and application of biosolids issued by the State Board, other regional boards, or USEPA, to whose jurisdiction the Hyperion biosolids will be transported and applied.

H. ***Stormwater Management*** **-** CWA Section 402(p), as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges. Pursuant to this requirement, in 1990, USEPA promulgated 40 CFR 122.26 that established requirements for storm water discharges under an NPDES permit. To facilitate compliance with federal regulations, on November 1991, the State Board issued a statewide general permit, *General NPDES Permit No. CAS000001 and Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities.* This permit was amended in September 1992 and reissued on April 17, 1997 as State Board Order No. 97-03-DWQ. The Hyperion Treatment Plant is covered under this general permit.

I. ***Clean Water Act Effluent Limitations*** **-** Numeric and narrative effluent limitations are established pursuant to Section 301 (Effluent Limitations), Section 302 (Water Quality-Related Effluent Limitations), Section 303 (Water Quality Standards and Implementation Plans), Section 304 (Information and Guidelines [Effluent]), Section 305 (Water Quality Inventory), Section 307 (Toxic and Pretreatment Effluent Standards), and Section 402 (NPDES) of the CWA. The CWA and amendments thereto are applicable to the discharges regulated by this Order and permit.

J. ***Antibacksliding Policies*** **-** Antibacksliding provisions are contained in Sections 303(d)(4) and 402(o) of the CWA and in 40 CFR 122.44(l). These provisions require a reissued permit to be as stringent as the previous permit with some exceptions. Section 402(o)(2) outlines six exceptions where effluent limitations may be relaxed.

The relaxation of effluent limitations for certain discharges covered by this Order and permit are excepted from antibacksliding pursuant to CWA Sections 402(o)(2)(B)(I) and 303(d)(4) because new information is available about the likelihood of constituents to be present in concentrations with the reasonable potential to cause or contribute to excursions above water quality standards. This

new information would have justified the application of less stringent effluent limitations at the time the NPDES permit was previously issued. Pursuant to the reasonable potential analysis, certain constituents that previously had water quality-based effluent limitations have been shown not to have reasonable potential and, as a result, no longer require effluent limitations to protect water quality standards. Consistent with antibacksliding statutes and regulations and antidegradation policies, the effluent limitations contained in this Order and permit are at least as stringent as existing effluent limitation and are fully protective of existing, intermittent, and potential designated beneficial uses. Reasonable Potential Analysis results are described in Section XII.

K. ***Types of Pollutants -*** For CWA regulatory purposes, pollutants are grouped into three general categories under the NPDES program: conventional, toxic, and non-conventional. By definition, there are five conventional pollutants (listed in 40 CFR 401.16) - 5-day biochemical oxygen demand, total suspended solids, fecal coliform, pH, and oil and grease. Toxic or "priority" pollutants are those defined in Section 307(a)(1) of the CWA (and listed in 40 CFR 401.12 and 40 CFR 423, Appendix A) and include heavy metals and organic compounds. Non-conventional pollutants are those which do not fall under either of the two previously described categories and include such parameters as ammonia, phosphorous, chemical oxygen demand, whole effluent toxicity, etc.

L. ***Technology-Based Limits for Municipal Facilities (POTWs) -*** Technology-based effluent limits require a minimum level of treatment for industrial/municipal point sources based on currently available treatment technologies while allowing dischargers to use any available control techniques to meet the effluent limits. The 1972 CWA required POTWs to meet performance requirements based on available wastewater treatment technology. Section 301 of the CWA established a required performance level—referred to as “secondary treatment”—that all POTWs were required to meet by July 1, 1977. More specifically, Section 301(b)(1)(B) of the CWA required that USEPA develop secondary treatment standards for POTWs as defined in Section 304(d)(1). Based on this statutory requirement, USEPA developed national secondary treatment regulations which are specified in 40 CFR 133. These technology-based regulations apply to all POTWs and identify the minimum level of effluent quality to be attained by secondary treatment in terms of five-day biochemical oxygen demand, total suspended solids, and pH.

M. ***Water Quality Based Effluent Limits (WQBELs) -*** WQBELs are designed to protect the quality of the receiving water by ensuring that water quality standards are met by discharges from an industrial/municipal point source. If, after technology-based effluent limits are applied, a point source discharge will cause, have the reasonable potential to cause, or contribute to an exceedance of an applicable water quality standard, then 40 CFR 122.44(d)(1) requires that the permit contain a WQBEL. Although the CWA establishes explicit technology-based requirements for POTWs, Congress did not exempt POTWs from additional regulation to protect water quality standards. As a result, POTWs are also subject to WQBELs. Applicable water quality standards for ocean waters of Santa Monica Bay are contained in the Ocean Plan and Basin Plan. Any pollutant for which reasonable potential exists, pursuant to 40 CFR 122.44(d)(1), to exceed an Ocean

Plan or Basin Plan water quality standard has WQBELs. Under 40 CFR 122.44(d)(1)(vii)(B), WQBELs shall ensure that effluent limits are consistent with the assumptions and requirements of any available waste load allocation for the discharge prepared by the State and approved by USEPA pursuant to 40 CFR 130.7. The Santa Monica Bay Beaches TMDLs for bacteria include wasteload allocations of zero (0) exceedance days for the Hyperion Treatment Plant.

N. ***Ocean Plan Limits and Objectives –*** Numerical effluent limitations for conventional, nonconventional, and toxic pollutants were calculated based on effluent limitations in *Table A*, and water quality objectives in *Table B* of the Ocean Plan. The minimum dilution ratio used to calculate effluent limitations for nonconventional and toxic pollutants based on water quality objectives in *Table B* of the Ocean Plan is 84:1 (i.e., 84 parts seawater to one part effluent) and 13:1 for Discharge Serial No. 002 and Discharge Serial No. 001, respectively. The ratios were calculated by the State Board.

O. ***401 Certification -*** The Regional Board has determined that its joint issuance of this NPDES permit with USEPA serves as its certification under CWA Section 401 that any discharge pursuant to this permit will comply with the CWA provisions at 33 U.S.C. 1311, 1312, 1313, 1316, and 1317.

P. ***Magnuson-Stevens Fishery Conservation and Management Act (MSA) and Endangered Species Act (ESA) -*** USEPA's reissuance of NPDES permit No. CA0109991 to the City of Los Angeles for Hyperion Treatment Plant is subject to requirements of MSA and Section 7 of ESA. On February 9, 2004, USEPA requested updated information related to: (1) essential fish habitat and managed and associated species, and (2) threatened and endangered species and their designated critical habitats, in the vicinity of the Hyperion outfalls from the National Marine Fisheries Service and the U.S. Fish and Wildlife Service (collectively, the Services). Based on this and other relevant information, USEPA is currently evaluating whether there are effects on essential fish habitat and managed and associated species protected under the MSA, or on threatened and endangered species and their designated critical habitats protected under the ESA. Based on the outcome of this analysis, USEPA may engage in consultation with the Services during, and subsequent to, this permit reissuance. USEPA may decide that changes to this permit are warranted based on the results of the completed consultation, and a reopener provision to this effect has been included in the permit.

Q. ***Santa Monica Bay Restoration Plan -*** The Hyperion Treatment Plant discharges to Santa Monica Bay, which is one of the most heavily used recreational areas in California. Recognizing the importance of the Bay as a national resource, the State of California and USEPA nominated, and Congress included, Santa Monica Bay in the National Estuary Program. This led to the formation of the Santa Monica Bay Restoration Project that developed the Bay Restoration Plan (BRP) which serves as a blueprint for restoring and enhancing the Bay. The Regional Board plays a lead role in the implementation of the plan. Three of the proposed priorities of the plan are reduction of pollutants of concern at the source (including municipal wastewater treatment plants), attainment of full secondary treatment at the City of Los Angeles' Hyperion Treatment Plant and the County Sanitation Districts of Los Angeles

County's Joint Water Pollution Control Plant, and implementation of the mass emission approach for discharges of pollutants to the Bay.

The Hyperion Treatment Plant has operated with full secondary treatment since December 1998. The Mass Emission Approach's objective is to reduce mass emissions of pollutants that have detectable inputs to the Bay and can accumulate in the marine environment. It complements the existing concentration-based regulatory system while sediment quality objectives are being formulated. The BRP identified copper, lead, silver, and zinc to have interim mass emission performance caps. Similar to the concentration-based performance goals, the mass emission performance caps are not enforceable limitations. The interim mass emission caps for the four metals contained in this Order and permit are based on the average mass emission in 1995 when the mass emission approach was initiated.

XII. REASONABLE POTENTIAL ANALYSIS

A. 40 CFR 122.44(d)(1)(i and iii) provide that effluent limitations shall be prescribed in permits for all pollutants or pollutant parameters determined to (or that may) be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard. 40 CFR 122.44(d)(1)(ii) provides the factors, including variability of the pollutants in the effluent, to be considered in determining reasonable potential. The procedure for statistical determination of the reasonable potential for a discharged pollutant to exceed an objective is outlined in USEPA guidance, *Technical Support Document for Water Quality-based Toxics Control* (TSD; EPA/505/2-90-001, March 1991). This approach combines knowledge of effluent variability (in terms of a calculated coefficient of variation, CV) with uncertainty (as a function of the number of effluent data) to statistically estimate a maximum effluent value at a high level of confidence. The estimated maximum effluent value is calculated as the value associated with the upper 99 percent confidence level of the 99th percentile, based on a lognormal distribution of daily effluent values. The projected receiving water value (based on the statistically estimated maximum effluent value and dilution ratio) is then compared to the appropriate objective to determine the potential for exceedance of that objective and the need for an effluent limitation.

B. Regional Board and USEPA staff conducted RPAs for all toxic pollutants listed in *Table B* of the Ocean Plan. Effluent data provided in the Discharger's monitoring reports from January 1999 to June 2004 were used in the analyses. Dilution ratios of 84:1 and 13:1 for Discharge Serial Nos. 002 and 001, respectively, were considered in this evaluation.

The procedures for conducting a RPA are as follows:

Step 1: A maximum detected effluent concentration (MDEC) is identified for each pollutant that has at least one detected sample. The MDEC is then compared with the reported maximum method detection limit (MDL) during the reporting period and the larger of these two values is selected as the maximum reported effluent concentration for that pollutant. If the pollutant is not detected in any of the effluent samples, the reported maximum MDL

is selected as the maximum reported effluent concentration for that pollutant.

Step 2: Effluent data (one half of MDL used for nondetected data) are used to calculate a pollutant-specific CV that is then used to generate a pollutant-specific reasonable potential multiplier. When more than 80 percent of the effluent data are reported as not detected, a default CV of 0.6 is used.

Step 3: The statistically estimated maximum effluent concentration is then determined by multiplying the maximum reported effluent concentration (obtained in step 1) with its multiplier.

Step 4: With the consideration of the dilution ratio, the projected receiving water concentrations for these pollutants are calculated based on the equation described in Section XIII.B.2.

Step 5: Projected receiving water concentrations are then compared to the Ocean Plan water quality objectives in the determination of reasonable potential.

C. Based on the above RPA procedures, Regional Board and USEPA staff have determined that the following pollutants, when discharged through each outfall, have reasonable potential to exceed Ocean Plan objectives, and, therefore, require effluent limitations.

Discharge Serial No. 001

Copper, cyanide, chlorine residual, ammonia, chronic toxicity, chlorinated phenolic compounds, hexachlorocyclohexane (HCH), 2,4-dinitrophenol, tributyltin, acrylonitrile, aldrin, benzidine, beryllium, bis (2-chloroethyl) ether, bis (2-ethylhexyl) phthalate, chlordane, DDT, 3,3'-dichlorobenzidine, dieldrin, heptachlor, heptachlor epoxide, hexachlorobenzene, n-nitrosodi-n-propylamine, PAHs, PCBs, TCDD equivalents, tetrachloroethene, toxaphene, and 2,4,6-trichlorophenol.

Discharge Serial No. 002

Chlorine residual, chronic toxicity, tributyltin, aldrin, benzidine, chlordane, DDT, 3,3'-dichlorobenzidine, dieldrin, heptachlor, heptachlor epoxide, hexachlorobenzene, PAHs, PCBs, TCDD equivalents, and toxaphene.

WQBELs for these pollutants discharged through each outfall were calculated using the procedure outlined in the Ocean Plan as described in Section XIII. B.

The results of reasonable potential analyses and permit limit calculation are presented in Tables R1-1, R1-2, R2-1, and R2-2.

Additional analysis for chlorine residual

The above RPA determination showing RP for chlorine residual is based on 0.4 mg/L Maximum Detected Effluent Concentration for chlorine residual during the reporting period from January 1999 to June 2004. There are nine detected results out of a total of 2007 samples during that period. In order to prevent algal growth, the sampling line for Outfall 002 has to be chlorinated periodically. The detected chlorine residual may be caused by contamination when test samples for chlorine residual were taken without adequate flushing. Furthermore, effluent is not chlorinated when it is routinely discharged through Outfall 002. Based on this information and using best professional judgement, USEPA and Regional Board staff have determined that there is no RP for chlorine residual when the effluent is discharged through Outfall 002. However, the effluent limit for chlorine residual is retained for Outfall 001 since the effluent is required to be chlorinated when it is discharged through Outfall 001.

Additional analyses for nine constituents (aldrin, benzidine, chlordane, 3,3'-dichlorobenzidine, dieldrin, heptachlor, heptachlor epoxide, hexachloro-benzene, and toxaphene)

During the comment period, the City provided additional information on sediment and fish tissue for nine constituents that were 100% non-detected in the 1999-2004 effluent data set. USEPA and Regional Board staff have evaluated the additional information and determined that eight constituents (aldrin, benzidine, 3,3'-dichlorobenzidine, dieldrin, heptachlor, heptachlor epoxide, hexachlorobenzene, and toxaphene) have no reasonable potential to exceed Ocean Plan objectives. Therefore, effluent limits for these eight constituents are not required. Reasonable potential evaluations for these nine constituents are presented as follows:

Benzidine

Benzidine is a manufactured chemical used to produce dyes for cloth, paper and leather. In the U.S., it is no longer produced or used commercially, but may still be produced for in-house use under stringent controls. Benzidine-based dyes may still be imported into the U.S. and can be purchased commercially. Benzidine is moderately persistent in the environment and readily attaches to soil particles. Limited data have shown that benzidine can bioconcentrate in aquatic organisms. It has been shown that benzidine may degrade in sewage treatment systems.

Benzidine	Effluent Concentration (ug/l)	Calculated Effluent Limit (ug/l)
Outfall 002	<5 - <47	0.005865
Outfall 001	<5 - <47	0.000966

As shown in the Table above, the effluent detection limit for benzidine ranged from <47 ug/l in January 1999 to <5 ug/l in June 2004. For Outfall Serial No. 002, the

calculated effluent limit is 0.005865 ug/l. For Outfall Serial No. 001, the calculated effluent limit is 0.000966 ug/l. Although effluent detection limits have improved over the previous permit term, all reported effluent detection limits for benzidine are too high to establish that the Hyperion Treatment Plant discharge will not exceed applicable Ocean Plan objectives following initial dilution of the effluent. As noted previously, benzidine is moderately persistent in the environment. Because the permittee reports that benzidine has not been detected in sediments or fish tissue in the vicinity of the discharge since 1999, EPA and the Regional Board now conclude that there is currently **no reasonable potential for benzidine** in Hyperion Treatment Plant discharges from Outfall Serial Nos. 002 and 001 to exceed water quality standards. Consequently, water quality based effluent limits for benzidine are **not** included in the final permit.

3,3'-Dichlorobenzidine

3,3'-dichlorobenzidine is a manufactured chemical used for pigments for printing inks, textiles, plastics and enamels, paint, leather and rubber. It is no longer manufactured in the U.S., but is imported for on-site processing or to synthesize pigments. Dissolved 3,3'-dichlorobenzidine in solution has a strong tendency to adsorb to sediment. It does not appear to biodegrade easily and is bioconcentrated by aquatic organisms under experimental conditions. Limited data suggests that 3,3'-dichlorobenzidine may photolyze in water to yield benzidine. Due to the secondary treatment process, only a small percentage of any 3,3'-dichlorobenzidine that might enter a POTW is subsequently released to surface water.

3,3'-Dichlorobenzidine	Effluent Concentration (ug/l)	Calculated Effluent Limit (ug/l)
Outfall 002	<0.11 - <2	0.6885
Outfall 001	<0.11 - <2	0.1134

The effluent detection limit for 3,3'-dichlorobenzidine ranged from <2 ug/l in January 1999 to <0.11 ug/l in June 2004. For Outfall Serial No. 002, the calculated effluent limit is 0.6885 ug/l. For Outfall Serial No. 001, the calculated effluent limit is 0.1134 ug/l.

Because effluent detection limits have improved over the previous permit term, more recent reported effluent detection limits for 3,3'-dichlorobenzidine are low enough to enable us to conclude that recent data indicate that the Hyperion Treatment Plant discharge should not exceed applicable Ocean Plan objectives following initial dilution of the effluent. As noted previously, 3,3'-dichlorobenzidine does not biodegrade easily in the environment and can also degrade to benzidine. Because the permittee reports that both 3,3'-dichlorobenzidine and benzidine have not been detected in sediments or fish tissue in the vicinity of the discharge since 1999, EPA and Regional Board staff now conclude that there is currently **no reasonable potential for 3,3'-dichlorobenzidine** in Hyperion Treatment Plant discharges from Outfall Serial Nos. 002 and 001 to exceed water quality standards. Consequently,

water quality based effluent limits for 3,3'-dichlorobenzidine are **not** included in the final permit.

Hexachlorobenzene

Hexachlorobenzene (HCB) was once widely used in agricultural settings as a pesticide and fungicide and for a variety of industrial processes. Although HCB is no longer directly used as a commercial end product in the U.S., limited amounts are produced for laboratory use. HCB may still be formed as a byproduct in several industrial chemical manufacturing processes, in aluminum casting, and in the chlorination treatment of process water and wastewater. HCB can be released to the environment during the application of pesticide formulations which contain HCB as a residual contaminant, and during waste incineration of chlorine-containing materials. Sources of HCB to POTWs may include domestic residential releases, industrial/commercial discharges, and stormwater runoff; and from HCB-contaminated ferric chloride used in the wastewater treatment process.

HCB is a highly persistent environmental toxin. It has low water solubility and can be found in sediments, food crops, fish and animal tissue. It undergoes long-range transport in the atmosphere and bioaccumulates in fish, marine animals, birds and animals that feed on fish.

Hexachlorobenzene (HCB)	Effluent Concentration (ug/l)	Calculated Effluent Limit (ug/l)
Outfall 002	<0.07 - <1	0.01785
Outfall 001	<0.07 - <1	0.00294

The effluent detection limit for HCB ranged from <1 ug/l in January 1999 to <0.07 ug/l in June 2004. For Outfall Serial No. 002, the calculated effluent limit is 0.01785 ug/l. For Outfall Serial No. 001, the calculated effluent limit is 0.00294 ug/l.

Although effluent detection limits have improved over the previous permit term, all reported effluent detection limits for HCB are too high to establish that the Hyperion Treatment Plant discharge will not exceed applicable Ocean Plan objectives following initial dilution of the effluent. As noted previously, HCB is highly persistent in the environment. Because the permittee reports that HCB has not been detected in sediments or fish tissue in the vicinity of the discharge since 1999, USEPA and Regional Board staff now conclude that there is currently **no reasonable potential for HCB** in Hyperion Treatment Plant discharges from Outfall Serial Nos. 002 and 001 to exceed water quality standards. Consequently, water quality based effluent limits for HCB are **not** included in the final permit.

Toxaphene

Toxaphene is an insecticide that was principally used to control insect pests on cotton. It was also used to control insect pests on other field crops, livestock and poultry, and kill unwanted fish in lakes. Toxaphene solutions were often mixed with

other pesticides to help solubilize insecticides with low water solubility. It was frequently applied with methyl or ethyl parathion, DDT, lindane, and rotenone. In the U.S., toxaphene has been banned for all uses since 1990. It does not dissolve well in water so it is more likely to be found in sediments. It breaks down slowly in the environment and accumulates in fish and mammals.

Toxaphene	Effluent Concentration (ug/l)	Calculated Effluent Limit (ug/l)
Outfall 002	<0.1 - <0.113	0.01785
Outfall 001	<0.1 - <0.113	0.00294

As shown in the Table above, the effluent detection limit for toxaphene ranged from <0.113 ug/l in January 1999 to <0.1 ug/l in June 2004. For Outfall Serial No. 002, the calculated effluent limit is 0.01785 ug/l. For Outfall Serial No. 001, the calculated effluent limit is 0.00294 ug/l. Although reported effluent detection limits for toxaphene have somewhat improved over the previous permit term, they are often too high to establish that the Hyperion Treatment Plant discharge will not exceed applicable Ocean Plan objectives following initial dilution of the effluent. As noted previously, toxaphene is persistent in the environment; in water, toxaphene is strongly adsorbed to suspended particulates and sediments and is bioconcentrated by aquatic organisms to fairly high levels. Because the permittee reports that toxaphene has not been detected in sediments or fish tissue in the vicinity of the discharge since 1999, EPA and Regional Board staff now conclude that there is currently **no reasonable potential for toxaphene** in Hyperion Treatment Plant discharges from Outfall Serial Nos. 002 and 001 to exceed water quality standards. Consequently, water quality based effluent limits for toxaphene are **not** included in the final permit.

Aldrin and Dieldrin

In the U.S., aldrin and dieldrin were widely used as soil insecticides in agricultural settings, to control termite infestations, and in public health settings for vector control, until they were banned for all uses in 1987. In the environment, aldrin is readily converted to dieldrin. Known sources of these pesticides include: atmospheric transport, contaminated soils from historical applications, contaminated building materials from termiticide applications, and hazardous waste sites. Dieldrin has been detected in all environmental media. Aldrin detections are much lower and less frequent, since it is rapidly converted to dieldrin through chemical and biological processes. Concentrations of dieldrin in surface waters are generally higher than those of many other highly persistent organochlorine pesticides, primarily due to its greater preference for the water phase. However, both aldrin and dieldrin tend to accumulate in biological tissues and are primarily detected as dieldrin.

Aldrin	Effluent Concentration (ug/l)	Calculated Effluent Limit (ug/l)
Outfall 002	<0.0016 - <0.008	0.00187
Outfall 001	<0.0016 - <0.008	0.000308
Dieldrin	Effluent Concentration (ug/l)	Calculated Effluent Limit (ug/l)
Outfall 002	<0.0009 - <0.006	0.0034
Outfall 001	<0.0009 - <0.006	0.00056

As shown in the Table above, the effluent detection limit for aldrin ranged from <0.008 ug/l in January 1999 to <0.0016 ug/l in June 2004. For Outfall Serial No. 002, the calculated effluent limit is 0.00187 ug/l, and for Outfall Serial No. 001, the calculated effluent limit is 0.00308 ug/l. The effluent detection limit for dieldrin ranged from <0.006 ug/l in January 1999 to <0.0009 ug/l in June 2004. For Outfall Serial No. 002, the calculated effluent limit is 0.0034 ug/l, and for Outfall Serial No. 001, the calculated effluent limit is 0.00056 ug/l.

Effluent detection limits have improved over the previous permit term, such that recent reported effluent detection limits for both aldrin and dieldrin are low enough to enable us to conclude that recent data indicate that the Hyperion Treatment Plant discharge from Outfall Serial No. 002 should not exceed applicable Ocean Plan objectives following initial dilution of the effluent. Although effluent detection limits for aldrin and dieldrin are elevated in comparison to the calculated effluent limit for Outfall Serial No. 001, discharge from this Outfall is infrequent and limited in volume. The permittee reports that aldrin has not been detected in sediments or fish tissue, and that dieldrin (the breakdown product of aldrin) has been infrequently detected (<3 percent of the time) in sediments and fish tissue samples in the vicinity of the discharge. Although dieldrin detections have been above levels at which adverse biological effects and significant human health problems are expected, dieldrin has not been detected in sediments or fish tissue samples in the vicinity of the discharge since 2001. As noted previously, aldrin and dieldrin tend to bioaccumulate in biological tissues and are detected primarily as dieldrin. Based on recent effluent, sediment and fish tissue data for aldrin and dieldrin provided by the permittee, EPA and Regional Board staff now conclude that there is currently **no reasonable potential for dieldrin and aldrin** in Hyperion Treatment Plant discharges from Outfall Serial Nos. 002 and 001 to exceed water quality standards. Consequently, effluent limits for these two pollutants are **not** included in the final permit.

Heptachlor and Heptachlor epoxide

Heptachlor was extensively used in agricultural and urban settings as an insecticide until use stopped in 1988. Heptachlor is also a constituent of technical grade chlordane (approximately 10% by weight). Heptachlor epoxide is an oxidation product of heptachlor and of chlordane. Heptachlor epoxide degrades more slowly

and is more persistent than heptachlor. Both compounds adsorb strongly to sediments and are bioconcentrated in aquatic food chains and terrestrial organisms, primarily has heptachlor epoxide.

Heptachlor	Effluent Concentration (ug/l)	Calculated Effluent Limit (ug/l)
Outfall 002	<0.002 - <0.005	0.00425
Outfall 001	<0.002 - <0.005	0.0007
Heptachlor Epoxide	Effluent Concentration (ug/l)	Calculated Effluent Limit (ug/l)
Outfall 002	<0.0018 - <0.001	0.0017
Outfall 001	<0.0018 - <0.001	0.00028

As shown in the Table above, the effluent detection limit for heptachlor ranged from <0.005 ug/l in January 1999 to <0.002 ug/l in June 2004. For Outfall Serial No. 002, the calculated effluent limit is 0.00425 ug/l, and for Outfall Serial No. 001, the calculated effluent limit is 0.0007 ug/l. The effluent detection limit for heptachlor epoxide ranged from <0.001 ug/l in January 1999 to <0.0018 ug/l in June 2004. For Outfall Serial No. 002, the calculated effluent limit is 0.0017 ug/l, and for Outfall Serial No. 001, the calculated effluent limit is 0.00028 ug/l.

Generally, reported effluent detection limits for heptachlor and heptachlor epoxide are too high to establish that the Hyperion Treatment Plant discharge will not exceed applicable Ocean Plan objectives following initial dilution of the effluent. The permittee reports that heptachlor is only infrequently detected (<3 percent of the time) in fish tissue samples and that heptachlor epoxide (a breakdown product of heptachlor) is infrequently detected (<3 percent of the time) in sediments and fish tissue samples in the vicinity of the discharge. Sediment and/or tissue concentrations are measured at levels below which adverse or significant biological effects or human health problems are expected. Heptachlor and heptachlor epoxide have not been detected in sediments or fish tissue samples in the vicinity of the discharge since 2001. There are no 303(d) listings for these pollutants in the vicinity of the discharge. Based on this new information, USEPA and Regional Board staff now conclude that there is currently **no reasonable potential for heptachlor or heptachlor epoxide** in Hyperion Treatment Plant discharges from Outfall Serial Nos. 002 and 001 to exceed water quality standards. Consequently, water quality based effluent limits for these pollutants are **not** included in the final permit.

Chlordane

Chlordane, an organochlorine insecticide, was widely used in agricultural on field crops such as corn and citrus fruits, and in urban settings to control termites in houses and for home and garden use, until it was banned in 1988. Technical chlordane is not a single chemical but a mixture of pure chlordane with more than 140 other related compounds. Chlordane is extremely persistent in the environment. Sources include contaminated building materials from termiticide

application, soils to which chlordane was historically applied, and hazardous waste sites. It may be found in urban runoff and sewage sludge. Adsorption to sediments and volatilization are important removal mechanisms in water. Chlordane has low water solubility and can be found in sediments, food crops, and fish and animal tissue. The ultimate fate of chlordane in oceans is in the bottom sediment. It is known to bioaccumulate in marine organisms.

Chlordane	Effluent Concentration (ug/l)	Calculated Effluent Limit (ug/l)
Outfall 002	<0.005 - <0.09	0.001955
Outfall 001	<0.005 - <0.09	0.000322

The effluent detection limit for chlordane ranged from <0.005 ug/l in January 1999 to <0.09 ug/l in June 2004. For Outfall Serial No. 002, the calculated effluent limit for chlordane is 0.001955 ug/l. For Outfall Serial No. 001, the calculated effluent limit for chlordane is 0.000322 ug/l.

Recent reported effluent detection limits for chlordane are too high to establish that the Hyperion Treatment Plant discharge will not exceed applicable Ocean Plan objectives following initial dilution of the effluent. The permittee reports that chlordane and its breakdown products are detected <13 percent of the time in sediments and/or fish tissue samples within the vicinity of the discharge. The permittee provides minimal discussion related to these sediment and tissue concentrations and how these data relate to threshold levels used by NOAA, FDA, EPA and California to establish adverse or significant biological effects or human health problems based on sediment and fish tissue levels. Although the permittee asserts that "potential problems associated with chlordane are diminishing, if not gone", there is a current 303(d) listings for chlordane in sediments in the vicinity of the discharge with potential sources given as both nonpoint and point sources. During this permit term, total chlordane measurements in fish from the vicinity of the discharge have periodically exceeded California's Maximum Tissue Residual Level for fish tissue. As described in draft permit Finding 54 and the Fact Sheet, the draft permit does not propose new WQBELs for chlordane, but recommends carrying forward mass emission and concentration WQBELs contained in the 1994 permit until the TMDL for chlordane (sediments) scheduled for 2006 is completed. Based on the information described above and because chlordane is known to occur in municipal effluents, sewage sludge and urban runoff, a conservative reasonable potential decision is warranted. Consequently, to ensure water quality protection as a result of Hyperion Treatment Plant discharges, the final permit **continues forward mass emission and concentration WQBELs for chlordane** contained in the 1994 permit.

D. In general, for constituents that have been determined to have no reasonable potential to cause, or contribute to, excursions of water quality objectives, no numerical limits are prescribed; instead a narrative statement to comply with all Ocean Plan requirements is provided and the Discharger is required to monitor for

these constituents to gather data for use in RPAs for future permit renewals and/or updates.

E. This Order and permit are consistent with State and federal antidegradation policies in that it does not authorize a change in pollutant mass emission rates, nor does it authorize a relaxation in the manner of treatment of the discharge. Pollutant limit mass emission rates continue to be based on the design flow rate of the treatment plant under the 1994 permit of 420 mgd. Although the design flow rate of the treatment plant has increased to 450 mgd, this increase has been accompanied by a significant improvement in the level of effluent treatment necessary to achieve full secondary treatment. As a result, both the quantity of discharged pollutants and quality of the discharge are expected to remain relatively constant or improve during this permit term, consistent with antidegradation policies. In conformance with reasonable potential analysis procedures identified in State Board and USEPA documents, effluent limitations for some constituents are not carried forth in this Order and permit because there is not presently reasonable potential for the constituents to cause or contribute to an exceedance of water quality standards. Without reasonable potential, there is no longer a need to maintain prior WQBELs under WQBEL regulations, antibacksliding provisions, or antidegradation policies. The accompanying monitoring and reporting program requires continued data collection and if monitoring data show reasonable potential for a constituent to cause or contribute to an exceedance of water quality standards, the permit will be reopened to incorporate appropriate WQBELs. Such an approach ensures that the discharge will adequately protect water quality standards for designated beneficial uses and conforms with antidegradation policies and antibacksliding provisions.

XIII. PROPOSED EFFLUENT LIMITATIONS

On the basis of the preliminary staff review and application of State and federal authorities, the Regional Board and USEPA propose to renew the permit.

Pursuant to 40 CFR 122.45(d)(1) and (2), daily maximum limitations are included in the permit. It is impracticable to include only average weekly and average monthly effluent limitations in the permit, because a single daily discharge of a pollutant, in excess amounts, can cause violations of water quality objectives. The effects of pollutants on aquatic organisms are often rapid. For many pollutants, an average weekly or average monthly effluent limitation alone is not sufficiently protective of beneficial uses.

Tables R1-1, R1-2, R2-1, and R2-2 summarize the results of RPA and the prescribed effluent limits.

Pursuant to 40 CFR 122.45(f), mass-based limits are included in the Order and permit, in addition to concentration-based limits.

The numeric limitations contained in this Order and permit are intended to protect and maintain existing and potential beneficial uses of the receiving waters.

The mass emission rates for Discharge Serial No. 002 are based on the average design flow rate (420 mgd) of the Hyperion Treatment Plant in the 1994 permit.

A. Major Wastewater Constituents

Table A of the 2001 Ocean Plan lists wastewater constituents that are technology-based. Limits for these constituents are not dependent upon the dilution ratio for that outfall. The limits in the permit are based either on secondary treatment standards or limits specified in Table A of the Ocean Plan, as shown in the following table.

Constituent	Units	Discharge Limitations			Basis
		Monthly Average	Weekly Average	Daily Maximum	
$BOD_5 20^0C$	mg/L	30	45	---	40 CFR 133.102
	Lbs/day	113,000	169,000	---	
Suspended solids	mg/L	30	45	---	40 CFR 133.102
	Lbs/day	113,000	169,000	---	
Oil and grease	mg/L	25	40	75	Ocean Plan
	Lbs/day	93,800	150,000	---	
Settleable solids	mL/L	1.0	1.5	3.0	Ocean Plan
Turbidity	NTU	75	100	225	Ocean Plan
pH	Units	Within limit of 6.0 to 9.0			Ocean Plan, 40 CFR 133.102
Temperature	^oF	< 100 ^oF at all times			Existing permit

B. Toxic and Nonconventional Constituents

1. Based on results of the reasonable potential analyses (Tables R1-1, R1-2, R2-1, and R2-2) and best professional judgement (BPJ) effluent limits are prescribed in the Order and permit for constituents that were determined to have reasonable potential to cause or contribute to an exceedance of their respective water quality objective(s). In determining the effluent limits, water quality objectives contained in the Basin Plan and Ocean Plan and limits in the existing permit (Order No. 94-021) were considered. In general, the most stringent limit is prescribed for the pollutant unless otherwise indicated.

2. The Ocean Plan provides the procedure (equation) used to calculate effluent limits, as follows:

$$Ce = Co + Dm (Co - Cs)$$

where

Ce = the effluent concentration limit.
Co = the concentration (water quality objective) to be met at the completion of initial dilution.
Cs = background seawater concentration. (As= 3 ug/L; Cu= 2 ug/L; Hg= 0.0005 ug/L; Ag= 0.16 ug/L; and Zn= 8 ug/L).

Dm = minimum probable initial dilution expressed as parts seawater per part wastewater (84:1 and 13:1 for Discharge Serial Nos. 002 and 001, respectively).

3. In the existing permit (Order No. 94-021), the calculated effluent limits (Ce) based on 6-month median objectives for aquatic life protection in the 1990 Ocean Plan were prescribed as monthly average limits. Applying the antibacksliding policy, the same approach is used in this Order (i.e., Ce based on the 6-month median objective for a marine aquatic life toxicant (Table B) in the 2001 Ocean Plan is set as a monthly average limit.

4. The Ocean Plan classifies the most stringent objectives for toxic pollutants into:

   - Marine Aquatic Life Toxicants,
   - Human Health Toxicants – Noncarcinogens, and
   - Human Health Toxicants – Carcinogens.

   a. **Marine Aquatic Life Toxicants**

      i. Discharge Serial No. 002

      There are two constituents (chronic toxicity and acute toxicity) that exhibited reasonable potential to exceed an Ocean Plan objective. Therefore, effluent limits are prescribed for these constituents.

Constituent	Units	DISCHARGE LIMITATIONS			Rationale/Basis
		Monthly Average	Daily Maximum	Instantaneous Maximum	
Acute toxicity	TUa	---	2.8	---	Ocean Plan
Chronic toxicity	TUc	---	84	---	Existing permit
Radioactivity					
Gross alpha	pCi/L		15		BPJ/MCL*
Gross beta	pCi/L		50		BPJ/MCL*
Combined radium-226 & radium-228	pCi/L		5.0		BPJ/MCL*
Tritium	pCi/L		20,000		BPJ/MCL*
Strontium-90	pCi/L		8.0		BPJ/MCL*
Uranium	pCi/L		20		BPJ/MCL*

* Effluent limits for radioactivity are based on Maximum Contaminant Levels (MCLs) specified in Title 22, Chapter 15, Article 5, Section 64443, California Code of Regulations.

      ii. Discharge Serial No. 001

      There are seven constituents (copper, cyanide, total chlorine residual, ammonia, hexachlorocyclohexane [HCH], and chronic toxicity) that

exhibited reasonable potential to exceed an Ocean Plan objective. Therefore, effluent limits are prescribed for these constituents.

Constituent	Units	DISCHARGE LIMITATIONS			Rationale/Basis
		Monthly Average	Daily Maximum	Instantaneous Maximum	
Copper	µg/L	16	140	160	Ocean Plan
Cyanide	µg/L	14	56	140	Ocean Plan
Total chlorine residual	mg/L	0.028	0.092	0.84	Ocean Plan
Ammonia as N	mg/L	8.40	34	84	Ocean Plan
Phenolic compounds (chlorinated)	µg/L	14	56	140	Ocean Plan
HCH	µg/L	0.056	0.11	0.17	Ocean Plan
Chronic toxicity	TUc	---	13	---	Existing permit
Radioactivity					
Gross alpha	pCi/L		15		BPJ/MCL*
Gross beta	pCi/L		50		BPJ/MCL*
Combined radium-226 & radium-228	pCi/L		5.0		BPJ/MCL*
Tritium	pCi/L		20,000		BPJ/MCL*
Strontium-90	pCi/L		8.0		BPJ/MCL*
Uranium	pCi/L		20		BPJ/MCL*

* Effluent limits for radioactivity are based on Maximum Contaminant Levels (MCLs) specified in Title 22, Chapter 15, Article 5, Section 64443, California Code of Regulations.

Acute Toxicity Limit - The 1994 Order and permit include technology based effluent limits for acute toxicity and freshwater acute toxicity testing requirements specified in the 1990 Ocean Plan. In 2001, the Ocean Plan was revised to include a new daily maximum acute toxicity water quality objective of 0.3 TUa, implementation procedures for developing water quality based effluent limits for acute toxicity, and acute toxicity testing protocols using marine species, rather than freshwater species. While the 2001 Ocean Plan specifies that discharges with dilution ratios below 100:1 must conduct chronic toxicity testing, it does not preclude permitting authorities implementing 40 CFR 122.44(d)(1) from establishing acute toxicity testing requirements, including effluent limits, to ensure protection of the new acute toxicity objective. Because ammonia and marine acute toxicity effluent quality data for POTW ocean discharges having dilution ratios greater than 84:1 periodically show acute toxicity related to effluent ammonia concentrations and the current operation of the Hyperion Treatment Plant does not effectively remove ammonia, the Regional Board and USEPA have determined that the Hyperion discharge has reasonable potential to exceed the current Ocean Plan objective for acute toxicity. Consequently, the Order and permit

propose daily maximum acute toxicity effluent limits and testing protocols consistent with the 2001 Ocean Plan. Using the new objective of 0.3 TUa for the daily maximum and 10% of the dilution ratio (as the acute toxicity mixing zone), the daily maximum acute toxicity limits are calculated as follows:

$$Ce = Ca + (0.1)\ Dm\ (Ca)$$

where

Ce = the effluent daily maximum limit for acute toxicity.
Ca = the concentration (water quality objective) to be met at the edge of the acute mixing zone.
Dm = minimum probable initial dilution expressed as parts seawater per part wastewater (84:1 and 13:1 for Outfall Nos. 002 and 001, respectively). (This equation applies only when Dm > 24)

For Discharge Serial No. 002, the Acute Toxicity Units (TUa) is expressed as follows:

Acute Toxicity Units (TUa) = 100/LC50

where:

Lethal Concentration, 50 Percent (LC50) is expressed as the estimate of the percent effluent concentration that causes death in 50% of the test population, in the time period prescribed by the toxicity test, as required by this permit

Radioactivity Limit – Regional Board and USEPA staff used Best Professional Judgements to establish radioactivity limits for the effluent using Maximum Contaminant Levels (MCLs) for the drinking water specified in Title 22, California Code of Regulations.

b. **Human Health Toxicants – Noncarcinogens**

i. Discharge Serial No. 002

There is one constituent (tributyltin) that exhibited reasonable potential to exceed an Ocean Plan objective. Therefore, an effluent limit is prescribed for this constituent.

Constituent	Unit	Discharge Limitations Monthly Average	Rationale/ Basis
Tributyltin	µg/L	120	Ocean Plan
	lbs/day	0.42	

ii. Discharge Serial No. 001

There is two constituents (2,4-Dinitrophenol and tributyltin) that exhibited reasonable potential to exceed an Ocean Plan objective. Therefore, effluent limits are prescribed for these constituents.

Constituent	Unit	Discharge Limitations Monthly Average	Rationale/ Basis
2,4-Dinitrophenol	µg/L	56	Ocean Plan
Tributyltin	µg/L	20	Ocean Plan

c. **Human Health Toxicants – Carcinogens**

i. Discharge Serial No. 002

The following constituents exhibited reasonable potential to exceed an Ocean Plan objective. Therefore, effluent limits are prescribed for these constituents.

Constituent	Unit	Discharge Limitations Monthly Average	Rationale/ Basis
Chlordane	µg/L	0.0019	Ocean Plan
	Lbs/day	0.0067	
DDT	µg/L	0.014	Ocean Plan
	Lbs/day	0.049	
PAHs	µg/L	0.748	Ocean Plan
	Lbs/day	2.62	
PCBs	µg/L	0.002	Ocean Plan
	Lbs/day	0.007	
TCDD equivalents	pg/L	0.33	Ocean Plan
	Lbs/day	$1.2x10^{-6}$	

ii. Discharge Serial No. 001

The following constituents exhibited reasonable potential to exceed an Ocean Plan objective. Therefore, effluent limits are prescribed for these constituents.

Constituent	Unit	Discharge Limitations Monthly Average	Rationale/ Basis
Acrylonitrile	µg/L	1.4	Ocean Plan
Beryllium	µg/L	0.46	Ocean Plan
Bis(2-chloroethyl) ether	µg/L	0.63	Ocean Plan
Bis(2-ethylhexyl) phthalate	µg/L	49	Ocean Plan

Constituent	Unit	Discharge Limitations Monthly Average	Rationale/ Basis
Chlordane	ng/L	0.3	Ocean Plan
DDT, total	ng/L	2.4	Ocean Plan
N-Nitrosodi-n-propylamine	µg/L	5.3	Ocean Plan
PAHs	ng/L	123	Ocean Plan
PCBs	ng/L	0.3	Ocean Plan
TCDD equivalents	pg/L	0.055	Ocean Plan
Tetrachloroethylene	µg/L	28	Ocean Plan
2,4,6-Trichloroethane	µg/L	4.1	Ocean Plan

d. 303(d) Listed Constituents and Discharge Limitations

At various locations in Santa Monica Bay, DDT and chlordane, PCBs and PAHs are found in sediments at levels that can be harmful to marine organisms. In addition, DDT and PCBs are found in certain Bay-captured seafood species at levels posing potential health risks to humans. A brief description of these pollutants and their occurrence in Santa Monica Bay is given below.

In the U.S., DDT and chlordane, both organochlorine insecticides, were widely used in agricultural and urban settings until they were banned in 1973 and 1988, respectively. PCBs, a large group of industrial and commercial chemicals, were widely used as coolants and lubricants in transformers, capacitors and other electronic equipment until the late 1970s when their manufacture was banned. Because of their stable properties, DDT, chlordane and PCBs persist in the environment, the result of historical uses which no longer occur. They have low water solubility and are generally found in sediments and fish tissue. PAHs are trace organic contaminants that occur naturally in crude oil, coal and other hydrocarbons. Anthropogenic sources include the combustion of hydrocarbons and their presence in fossil fuel products, such as coal-tar pitch and asphalt. PAHs are slightly soluble in water. Binding to particulate matter, they tend to accumulate in sediments and concentrate in biota. When present in sufficient quantity, PAHs are toxic to aquatic life and carcinogenic to humans.

Bight '98 surveys included efforts to assess the spatial extent of anthropogenic contaminant accumulation in benthic sediments and their effects on marine biota in the Southern California Bight. These surveys showed that while elevated levels of DDT, chlordane and PCBs continue to be measured in sediments near Hyperion Treatment Plant's 5-mile outfall, much of this is reflective of historical deposition and not the levels of contaminants associated with recent discharges. These surveys also concluded that DDT and PCBs in sediments are a dominant source of contaminant exposure levels in bottom living fish. DDT continues to be found in fish tissue at levels of concern throughout the Bight, although these levels are declining over time. Elevated levels

of PAHs continue to be measured in offshore sediments near Hyperion's 7-mile outfall, decommissioned in November 1987, and are primarily reflective of historical deposition associated with the discharge of sewage sludge. PAHs are also found in shallow water offshore sediments associated with urban stormwater runoff from Ballona Creek. (Bay et al., 2003.) Monitoring data show that effluent levels of DDT, chlordane, PCBs and PAHs discharged from the 5-mile outfall remain at non-detect concentrations.

As described in Section X.G., nearshore and offshore waters of Santa Monica Bay are on California's 2002 CWA 303(d) list of water quality limited segments for DDT (sediment and tissue, centered on Palos Verdes Shelf); chlordane (sediment); PCBs (sediment and tissue); and PAHs (sediment). TMDLs for DDT, PCBs and PAHs have not been scheduled. A TMDL for chlordane is scheduled for 2006. As TMDLs for these four constituents have not been completed, the draft permit proposes to continue forward mass emission and concentration WQBELs contained in the 1994 permit. These limits are based on Ocean Plan water quality objectives and permit limit calculation procedures, and, for Discharge Serial No. 002, the average design flow rate (420 mgd) of the Hyperion Treatment Plant in 1994. Current performance for DDT, chlordane, PCBs and PAHs in the Hyperion Treatment Plant effluent are at non-detect concentrations.

i. Discharge Serial No. 002

Constituent	Units	Discharge Limitations Monthly Average
Chlordane	ug/L lbs/day	0.0019 0.007
DDT	ug/L lbs/day	0.014 0.05
PAHs	ug/L lbs/day	0.748 2.62
PCBs	ug/L lbs/day	0.002 0.007

ii. Discharge Serial No. 001

Constituent	Units	Discharge Limitations Monthly Average
Chlordane	ng/L	0.3
DDT	ng/L	2.4
PAHs	ng/L	123
PCBs	ng/L	0.3

XIV. MASS EMISSION CAPS

Mass emission caps are applied to four pollutants of concern identified in the SMBRP (copper, lead, silver, and zinc) that are causing or could cause deterioration of designated beneficial uses in the Santa Monica Bay. Caps are set at 1995 allowable emission rates. The City should make best efforts to discharge these pollutants of concern below cap values. The Executive Officer and USEPA may modify any of the mass emission cap values, if the City requests and demonstrates that the change is warranted.

The mass emission caps are based on an average flow rate of 347 mgd and the average concentration of the pollutant of concern in 1995. If performance data showed nondetectable levels, one half of the detection limit was used to calculate an average concentration. Mass emission caps calculations are shown below.

Parameter	Mass Emission CAP, lbs/year
Copper	41,100
Lead	2,700
Silver	5,500
Zinc	59,100

Mass Emission Cap Calculation:

1995 average flow: 347 mgd

Monthly Monitoring Results in 1995

		Constituent			
Month	**Unit**	**Copper**	**Lead***	**Silver**	**Zinc**
Jan	ug/L	35	<3	4.2	45
Feb	ug/L	46	<6	6	62
Mar	ug/L	33	<3	6	40
Apr	ug/L	30	<3	1.2	34
May	ug/L	36	<3	7	51
Jun	ug/L	45	3	6.7	77
Jul	ug/L	39	<3	8.9	45
Aug	ug/L	38	10	5.5	53
Sep	ug/L	46	3	3.4	57
Oct	ug/L	42	<3	2.6	60
Nov	ug/L	43	<3	7.2	54
Dec	ug/L	34	<3	3.9	94
Average	ug/L	39	2.6	5.2	56
Mass Emission Cap **	Lbs/yr	41181	2745	5491	59132

* One half of the detection limit is used in the calculation
** Mass Emission Cap is based on the 1995 flow rate of 347 mgd.

Example of calculation for copper:
39 ug/L x 1g/1,000000 ug x 347,000,000 gals/day x3.785L/gal x Lb/454 g x 365 days/year = 41,181 lbs/year

XV. PERFORMANCE GOALS

A. Chapter III, Section F.2, of the Ocean Plan allows the Regional Board and USEPA to establish more restrictive water quality objectives and effluent limitations than those set forth in the Ocean Plan as necessary for the protection of the beneficial uses of ocean waters.

Pursuant to this provision and to implement the recommendation of the Water Quality Advisory Task Force (*Working Together for an Affordable Clean Water Environment, A final report presented to the California Water Quality Control Board, Los Angeles Region by Water Quality Advisory Task force, September 30, 1993)* that was adopted by the Regional Board on November 1, 1993, performance goals that are more stringent than those based on Ocean Plan objectives are prescribed in this Order and permit. This approach is consistent with the antidegradation policy in that it requires the City to maintain its treatment level and effluent quality, recognizing normal variations in treatment efficiency and sampling and analytical techniques. However, this approach does not address substantial changes in treatment plant operations that could significantly affect the quality of the treated effluent.

B. While performance goals were previously placed in many POTW permits in the Region, they have not been continued for discharges that are to inland surface waters. For inland surface waters, the California Toxics Rule (40 CFR 131.38) has resulted in effluent limits as stringent as many performance goals. However, the Ocean Plan allows for significant dilution, and the continued use of performance goals serves to maintain existing treatment levels and effluent quality and supports State and federal antidegradation policies.

C. The performance goals are based upon the actual performance of the Hyperion Treatment Plant and are specified only as an indication of the treatment efficiency of the facility. Performance goals are intended to minimize pollutant loading (primarily for toxics) and while maintaining the incentive for future voluntary improvement of water quality whenever feasible, without the imposition of more stringent limits based on improved performance. They are not considered as limitations or standards for the regulation of the discharge from the treatment facility. The Executive Officer and USEPA may modify any of the performance goals if the City requests and has demonstrated that the change is warranted. The methodology for calculating the performance goals is described below.

D. The performance goals were calculated as follows:

1. For constituents that have been routinely detected in the effluent (less than 80 percent nondetectable data), performance goals are statistically set at the 95th percentile of January 1999 through June 2004 performance data using the protocol described in Appendix E of *Technical Support Document for*

Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991. Effluent pollutant data are assumed lognormally distributed. One half of the detection limit is assigned to respective nondetect samples for conducting statistical analyses. However, if the maximum detected effluent concentration (from January 1999 to June 2004) is less than the calculated 95th percentile value, the maximum detected effluent concentration is used as the performance goal.

2. For constituents where monitoring data has consistently shown nondetectable levels (at least 80 percent nondetectable data), performance goals are set at five times (for carcinogens and marine aquatic life toxicants) or ten times (for noncarcinogens) the maximum method detection limit (MDL) reported from January 2003 to June 2004. (In order to meet Minimum Level reporting requirement outlined in State Implementation Plan the City has completed new studies on method detection limits during this period.) However, if the maximum detected effluent concentration is less than the calculated value based on MDL, the maximum detected effluent concentration is used as the performance goal.

3. For constituent with no RP, if the performance goal derived from above steps exceeds the respective calculated Ocean Plan effluent limit, the calculated WQBEL is then prescribed as performance goal for that constituent.

Mass Emission Benchmarks - To address the uncertainty due to potential increases in toxic pollutant loadings from the Hyperion Treatment Plant discharge to the marine environment during the five-year permit term, and to establish a framework for evaluating the need for an antidegradation analysis to determine compliance with State and federal antidegradation requirements at the time of permit reissuance, 12-month average mass emission benchmarks have been established for effluent discharged through the 5-mile outfall (Discharge Serial No. 002) (see MRP VI.D.). These mass emission benchmarks are not enforceable water quality based effluent limitations. They may be re-evaluated and revised during the five-year permit term. The mass emission benchmarks (in metric tons per year; MT/yr) for the Hyperion Treatment Plant discharge were determined using January 1999 through June 2004 effluent concentrations and the Discharger's projected end-of-permit flow of 400 mgd. If only one effluent data point was detected or if all effluent data points were nondetect, the pollutant concentration associated with the maximum method detection limit from January 2003 to June 2004 was used to calculate the mass emission benchmark. If two or more effluent data points were detected, the pollutant concentration associated with the 95th percentile (calculated in accordance with Regional Board procedures) was used to calculate the mass emission benchmark. Exceptions to this are mass emission benchmarks for copper, lead, silver and zinc which are based directly on Mass Emission Caps for these pollutants of concern in Santa Monica Bay, established by the Regional Board (see Section XIV).

XVI. PROPOSED MONITORING AND REPORTING PROGRAM

Monitoring and Reporting Program No. CI-1492, Attachment T, to the Order and permit, requires the Discharger to conduct monitoring of influent, effluent and receiving waters at certain schedules to demonstrate compliance with permit requirements. The Regional

Board and USEPA staff have considered recommendations in Southern California Coastal Water Research Project's Model Monitoring Program for POTWs discharging to the ocean when developing the proposed Monitoring and Reporting Program.