ATTACHMENT F

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
320 West 4th Street, Suite 200, Los Angeles

FACT SHEET

WASTE DISCHARGE REQUIREMENTS
FOR
LAS VIRGENES MUNICIPAL WATER DISTRICT
(TAPIA WATER RECLAMATION FACILITY)

NPDES No. CA0056014
Public Notice No. : 05-047

FACILITY ADDRESS	FACILITY MAILING ADDRESS
Tapia Water Reclamation Facility	Las Virgenes Water District
731 Malibu Canyon Road	4232 Las Virgenes Road
Calabasas, CA 91302	Calabasas, CA 91302
	Contact: John R. Mundy
	Telephone: (818) 251- 2100

I. Public Participation

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

A. Public Comment Period

The staff determinations are tentative. Interested persons are invited to submit written comments on the tentative WDRs for the Las Virgenes Municipal Water District (Discharger), Tapia Water Reclamation Facility (Tapia WRP). Comments should be submitted either in person or by mail to:

Executive Officer
California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

To be fully responded to by staff and considered by the Regional Board, written comments regarding the revised tentative Order should be received at the Regional Board offices by 5:00 p.m. on June 10, 2005.

The Regional Board staff will consider comments received, and when appropriate will incorporated them into a revised tentative.

B. Public Hearing

The Regional Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: November 3, 2005
Time: 9:00 a.m.
Location: City of Simi Valley
Council Chambers, 2929 Tapo Canyon Road, Simi Valley, California

Interested persons are invited to attend. At the public hearing, the Regional Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is www.waterboards.ca.gov/losangeles/ where you can access the current agenda for changes in dates and locations.

C. Information and Copying

Copies of the tentative WDRs and NPDES permit, report of waste discharge, Fact Sheet, comments received, and other documents relative to this tentative WDRs and permit are available at the Regional Board office. Inspection and/or copying of these documents are by appointment scheduled between 8:00 a.m. and 4:50 p.m., Monday through Friday, excluding holidays. For appointment, please call the Los Angeles Regional Board at (213) 576-6600.

D. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding this 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 WDRs. The petition must be submitted within 30 days of the Regional Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel

ATTN: Elizabeth Miller Jennings
P.O. Box 100
Sacramento, CA 95812

II. PURPOSE OF ORDER

Las Virgenes Municipal Water District (hereinafter Las Virgenes or Discharger) discharges tertiary-treated wastewater, from the Tapia WRF under two separate Orders. Order No. 97-135 regulates the discharges to Malibu Creek and Order No. 99-066 regulates the discharges to Arroyo Calabasas which is a tributary to Los Angeles River. Order No. 97-135 and Order No. 99-066 were adopted by this Regional Board on November 3, 1997, and July 8, 1999, respectively. Those Orders served as the permit under the National Pollutant Discharge Elimination System (NPDES No. CA0053619). The Discharger's permit was administratively extended beyond the May 10, 2000, expiration date. The Discharger filed a Report of Waste Discharge (ROWD) and applied to the Regional Board for renewal of its WDRs and NPDES permit on March 28, 2002. This WDR and NPDES permit will expire on June 10, 2010.

Amendments to NPDES Permits:

There were amendments to both Orders:

A. Order No. 97-135 (discharges to Malibu Creek): On April 13, 1998, the Regional Board adopted Order No. 98-030 amending Order No. 97-135. Again on December 9, 1999, the Regional Board adopted Order No. 99-142 amending Order No. 98-030.

a. Order No. 98-030: Order No. 97-135 contains a provision prohibiting discharges from Tapia to Malibu Creek from May 1st to November 1st each year, except under certain conditions. Implementation of the prohibition under Order No. 97-135 was subject to further discussions among the Regional Board, National Marine Fisheries Service (NMFS), U.S. Fish and wildlife Service (USFWS), California Department of Fish and Game. After discussions among these departments, it was concluded that Las Virgenes apply for an incidental "take" permit as required by Endangered Species Act § 10(a)(1)(B). It was also recommended that a minimum flow of 2.5 ft^3/sec be maintained throughout the year to sustain endangered species.

Also, extreme weather conditions in the winter of 1998 caused the Lagoon to remain open for an extended period. Heavy rains at that time also resulted in more runoff into the Malibu Creek and Lagoon and created a condition resulting in less demand for reclaimed water during the period the discharge prohibition was in effect.

To address these issues, the following revisions were made to the Order No. 97-135 through Order No. 98-030.

"i The Discharger shall not discharge as otherwise permitted by these requirements to Malibu Creek at any of its discharge points commencing either: (a) May 1st of each calendar year, or (b) the first natural closure of

Malibu Lagoon by sand buildup, whichever is later, through and including October 31st of each calendar year. This prohibition will not be in effect during any of the following events:

Discharge Prohibition:

a. Treatment plant upset or other operational emergencies;
b. Storm events; or
c. The existence of minimal streamflow conditions that require flow augmentation in Malibu Creek to sustain endangered species.

ii. The Discharger shall submit an application for an Incidental Take Permit."

b. Order No. 99-142: On November 19, 1998, after a hearing on the petitions filed by the Discharger, the stake holders and the interested parties, the State Board adopted Order No. WQ 98-11 (remanded the Order No. 97-135) directing the Regional Board to make revisions consistent with the Findings and Conclusions in the remand order. As a result, the following are the revisions to Order No. 97-135, adopted through Order No. 99-142.

i. Two changes were made to Discharge Prohibition. The Discharge Prohibition was extended from April 15 to November 15; except during any of the following events: (No change in above mentioned exception 'a")

b. Storm events as determined by the Executive Officer; or

c. The existence of minimal streamflow conditions that require flow augmentation in Malibu Creek to sustain endangered species as determined by the Executive Officer."

ii. Order No. 98-030 strengthened the permit Finding No. 27 found in the Order No. 97-135 to reflect State Board's conclusion that unseasonable freshwater inputs from Tapia and other sources cause the Lagoon to flood and/or breach when it otherwise would not.

iii. Circumstances were defined under which exemptions to discharge prohibitions were allowed.

iv. Deleted a provision that otherwise would require the Discharger to apply for an Incidental Take Permit.

v. Changed the nitrate limitation as daily maximum from 10 mg/l to 8 mg/L.

vi. WQ 2001-03: The Discharger challenged the 8 mg/L limit in a petition to the State Board dated January 7, 2000. The State Board upheld the petition, and on February 15, 2001, adopted Order No. WQ-2001-03, changing the final nitrate limit back to 10 mg/L. The Order also stated that the Regional Board could, "after making adequate findings and

otherwise complying with law" establish lower limitations in order to implement applicable water quality standards and protect beneficial uses in Malibu Creek and Lagoon.

B. Order No. 99-066 (discharges to Los Angeles River): During the discharge prohibition period for Malibu Creek and when there is no recycled water demand, the Discharger has the option to discharge up to 2 million gallons per day (mgd) of recycled water from Tapia WRF to the Los Angeles River. Order No. 99-066 contains a provision that allows the discharges from Tapia WRF to the Los Angeles River from May 1st to November 1st of each calendar year during the time the discharge prohibition applies to Malibu Creek. However, Order No. 98-030, adopted on April 13, 1998, was amended by Order No. 99-142 on December 9, 1999, to extend the discharge prohibition from May 1st through October 31st to April 15th though November 15th of each calendar year. Subsequently, the Discharger requested an amendment to the Order No. 99-066 to reflect the changed prohibition made on December 9, 1999.

Also, the Discharger submitted a workplan on February 15, 2000, to relocate the discharge outfall from Dry Canyon Creek to a lined portion of the Arroyo Calabasas Creek.

Order No. 00-046: On April 13, 2000, the Regional Board adopted Order No. 00-046 amending Order No. 99-066 and incorporated the requested changes. The discharge period was changed from May 1st through October 31st to April 15th through November 15th of each calendar year.

III. FACILITY AND TREATMENT PROCESS DESCRIPTION

1. The Tapia WRP (Tapia) is jointly owned by the Las Virgenes Municipal Water District (LVMWD) and Triunfo Sanitation Districts (TrSD). Tapia is located at 731 Malibu Canyon Road, in an unincorporated area of Los Angeles County. Figure 1 shows the location of Tapia including the service area. Tapia is a tertiary wastewater treatment plant with a design capacity of 16.1 million gallons per day (mgd) that treats municipal wastewater from domestic, commercial, and industrial sources. In 2003, the annual average flow was 10.4 mgd. Currently, Tapia serves approximately 80,000 residents in western Los Angeles and eastern Ventura Counties (Agoura Hills, Calabasas, Hidden Hills, Thousand Oaks, Westlake Village) with a service area of over 109 square miles.

2. The United States Environmental Protection Agency (USEPA) and the Regional Board have classified the Tapia WRP as a major discharger. It has a Threat to Water Quality and Complexity rating of 1-A pursuant to Section 2200, Title 23, CCR.

3. Pursuant to 40 CFR, Part 403, the Tapia WRP developed, and has been implementing, an industrial wastewater Pretreatment Program, which has been approved by USEPA and the Regional Board.

4. In 1965, LVMWD and TrSD, in a joint venture, built the Tapia WRF which discharged 750,000 gallons per day of secondary treated effluent by spray irrigation

under Resolution No. 64-55. In 1968, the plant's design capacity was expanded to 2 mgd. From 1969 to 1980, year-round discharge to the Creek was prohibited by the Regional Board because of human health and nutrient concerns, and maximum use of reclaimed water for spray irrigation of fields was required. Discharge was allowed to occur only on a limited basis, under the following conditions: During, and immediately following, periods of rain when spray fields or percolation areas could not be used; and, between mid-November and mid-April when reclamation and use of all spray fields had been maximized. In 1982, the plant's design capacity was expanded to 8 mgd and the Rancho Las Virgenes Farm was established for injection of biosolids. In 1984, a year-round discharge to the Creek was permitted after the tertiary filters were installed. In 1989, the plant was expanded to 10 mgd. In 1989, the Regional Board adopted Order No. 89-076 that permitted a phased increase in the discharge rate up to 16.1 mgd. The construction of facilities for Tapia's treatment capacity expansion, from 10 mgd to 16.1 mgd, was completed in 1994.

5. Tapia treats both the liquid and solid fractions of the municipal wastewater. Treatment starts with coarse screening, grit removal, and primary sedimentation. The flow stream then separates into two routes, one for solids and the other for liquid. The liquid treatment route consists of secondary treatment, tertiary treatment, chlorination, and dechlorination. Prior to 1993. the principal solids treatment route was aerobic digestion at Tapia and land application at the Rancho Las Virgenes Farm. After startup of the Rancho Las Virgenes Composting Facility in 1993, the solids were anaerobically digested, dewaterd using centrifuges and then composted. See Figure 2 for the plant flow diagram.

6. The treatment facility consists of primary, secondary, and tertiary treatment for the 16.1 mgd capacity. Currently, Las Virgenes uses five primary tanks to treat approximately 9 mgd total flow to the plant. For secondary treatment, Tapia employs an activated sludge process with fine bubble aeration, followed by single stage nitrification and secondary clarification. Tertiary treatment includes coagulant addition, flocculation, and physical filtration through a mono-media coal filter. Sodium hypochlorite solution is added for effluent disinfection, and sodium bisulfate is added for dechlorination.

7. Primary and secondary sludges from the wastewater treatment at Tapia are pumped to the Rancho Las Virgenes Composting Facility (Rancho), also operated by Las Virgenes, located at 3700 Las Virgenes Road, approximately three miles north of Tapia. At Rancho, the sludge is anaerobically digested, screened, dewatered, and composted to be used as soil amendment in plant nurseries, sod farms, and landscapes. Centrate from the composting facility is stored in a holding tank, and is returned within 24 hours via a sewage pipeline to the headworks at Tapia for treatment. This centrate is a significant source of nutrients for Tapia. Figure 2a shows the process flow diagram at Rancho.

   A. *Primary sedimentation*. The main objective of primary sedimentation is to remove solids from the wastewater by gravity. The heavier solids (settleable solids) precipitate out and are scraped out of the primary sedimentation basin. The lighter solids float to the top and are skimmed off. However, some solids remain in suspension.

B. *NDN Activated sludge*. The activated sludge process is a treatment system in which the incoming wastewater is mixed with existing biological floc (microorganisms or activated sludge) in an aeration basin. Activated sludge converts non-settleable and dissolved organic contaminants into biological floc, which can then be removed from the wastewater with further treatment. The nitrification process converts ammonia nitrogen into nitrate plus nitrite nitrogen (inorganic nitrogen). The denitrification process converts the inorganic nitrogen into gaseous nitrogen, thus removing it from the wastewater.

C. *Secondary sedimentation with coagulation.* The main objective of secondary sedimentation is to remove biological floc from the wastewater. Chemicals, such as aluminum sulfate (alum), may be added as part of the treatment process to enhance solids removal. Alum causes the biological floc to combine into larger clumps (coagulate). This makes it easier to remove the floc.

D. *Inert media filtration*. The filtration process is used to remove or reduce suspended or colloidal matter from a liquid stream, by passing the water through a bed of graded granular material. Filters remove the solids that the secondary sedimentation process did not remove, thus, improving the disinfection efficiency and reliability.

E. *Chlorination*. In the past, gaseous chlorine was used as a disinfectant in the Tapia WRP. However, gaseous chlorine was replaced by liquid sodium hypochlorite. Disinfectant is added to the treated effluent prior to the filters to destroy bacteria, pathogens and viruses, and to minimize algal growth in the filters. Additional disinfectant may be dosed prior to the serpentine chlorine contact chamber.

F. *Dechlorination*. Prior to discharge, sodium bisulfite is added to the treated effluent to remove residual chlorine.

G. *Sludge*. A portion of the waste activated sludge is aerobically digested and screened at Tapia and pumped to the Rancho Las Virgenes Farm, a 91-acre site located at 3240 Las Virgenes Road, for subsurface sludge injection. If no sludge injection is being done at the Rancho Las Virgenes Farm, the waste activated sludge is sent, instead to, the composting facility.

8. The Rancho Las Virgenes Farm fields are planted with a variety of pasture grasses to agronomically remove nutrients from the injection operation.. The subsurface biosolids injection is regulated under separate WDRs contained in Order No. 79-107, adopted by this Regional Board on June 25, 1979. If no biosolids injection is being done at the Rancho Las Virgenes Farm, the waste activated sludge is sent, instead, to . Rancho. The majority of the WAS is treated at Rancho and recycled as compost. The composting and farm facilities eliminate the need for hauling and disposal of biosolids to landfills.

9. On September 26, 2002, the Regional Board adopted WDRs, Order No. R4-2002-158, for Las Virgenes Water District authorizing the discharge of tertiary-treated wastewater from its Tapia WRF to Percolation Ponds (Constructed Wetlands). The percolation ponds are located immediately adjacent to Malibu Creek near the Tapia WRF. Las Virgenes plans to rehabilitate the percolation ponds and convert them to constructed wetlands to treat a portion of Malibu Creek flows for the removal of pathogens and nutrients. The wetlands will also be used approximately six weeks in the spring and six weeks in the fall to remove nutrients from the discharge and to dispose of surplus recycled water. The constructed wetlands are designed and monitored to ensure that any water applied to the constructed wetlands does not reach Malibu Creek or Malibu Lagoon.

   Construction of the wetlands is on hold pending issuance of a permit by the California Coastal Commission.

IV. Modifications to Treatment Plant.

1. Biological Nutrient Reduction (BNR) Facility: Time Schedule Order No. 97-136 provided a compliance schedule to achieve compliance with the water quality objectives for nitrogen compounds. The District prepared a Nutrient Reduction Master Plan in January 2002, to identify facilities and/or improvements needed to consistently meet nitrate limits in Malibu Creek and the Los Angeles River.

2. Centrate Equalization Project: The biosolids generated from wastewater treatment at the Tapia WRF are pumped to Rancho for further treatment. At Rancho, the biosolids are anaerobically digested, dewatered through cetrifuges, and composted. The centrate generated from dewatering the anaerobically digested sludge which has a very high concentration of ammonia is stored in a wet well and returned to Tapia WRF for treatment at a regulated rate. Centrate return to Tapia historically has impacted the activated sludge treatment process. Return of centrate to Las Virgenes WRF creates higher air demand for complete nitrification. To reduce the high ammonia load in the centrate, biological and physical/chemical alternatives for reduction of total inorganic nitrogen in centrate were considered.

3. Las Virgenes is considering retrofitting/rehabilitating the farm tanks to perform centrate flow pacing, so that centrate flow can be spread out over 24 hours a day, seven days a week instead of the current 7 hours a day, five days a week. It is expected that this would level out the spike in nitrogen concentrations at Tapia that are derived from centrate return flows, and result in lower, more consistent nitrogen concentrations, as well as an increase in nitrogen removal efficiency.

   On April 22, 2005, Las Virgenes met with Regional Board staff and submitted a Technical Memorandum on "Nutrient Reduction Measures for Nitrogen and Phosphorus". The objective of the nutrient reduction master plan is to look at the feasibility of converting Tapia WRF into a 12 mgd membrane bioreactor (MBR) process with reverse osmosis (RO) treatment of the MBR effluent, in order to meet the final effluent nutrient limitations.

4. Tapia WRF is experiencing difficulty in meeting the final effluent limit for dichlorobromomethane (DCBM). To achieve compliance with the DCBM limit, in 2001, Las Virgenes made changes to the treatment plant's disinfection system to limit the formation of DCBM in the effluent. DCBM is one of the disinfectant byproducts formed by the chlorination of wastewater. Las Virgenes replaced chlorine gas chlorination with sodium hypochlorite solution chlorination and sulfur dioxide with sodium bisulfite dechlorination, to disinfect and dechlorinate their wastewater, thus limiting free chlorine molecules in the effluent (free chlorine triggers the formation of DCBM). But changes in the chlorination system did not yield significant reduction in DCBM concentrations.

5. Las Virgenes indicates that it will take at least four and a half years to make changes to the Tapia facility to meet the final limits. Assuming a start date of February 6, 2006 (the closest Joint Powers Authority board meeting to December 23, 2005, if the permit is adopted on November 3, 2005) preliminary design and CEQA would be complete by December 2006. Because the facility is in the Coastal Zone, a Coastal Commission permit would be required and may take at least a year, to December 2007. The design would be complete and a Notice to Proceed could be issued by December 2008. An 18-month construction period results in operational facilities by December 2010. Several approvals required for the project are outside Las Virgenes's control, such as a delay in obtaining the Coastal permit, and would increase the time to complete the project. It is also necessary to provide centrate equalization facilities to achieve the final limit of 8 mg/L. Las Virgenes awarded a design contract for these facilities on September 27, 2005, and the design could be complete by June 2006. The facilities should be operational by May or June 2007.

6. Approximately 40 percent of the treated wastewater is used for landscaping irrigation. Recycled water is also used at Tapia WRF, Pepperdine University, Rancho Las Virgenes Composting Facility and Rancho Las Virgenes Farm. The use of reclaimed water is regulated under Water Reclamation Requirements contained in Order No. 87-086. Order No. 87-086 was readopted on May 12, 1997, through General blanket Order No. 97-072.

7. ***Storm Water Management.*** Tapia WRP has developed a Storm Water Pollution Prevention Plan (SWPPP) for storm water that traverses the plant but does not enter the treatment system. Storm water in the Tapia WRP is collected by a series of diversion storm drains that route storm flow around hardscapes, and collect stormwater for diversion to the plant process.

V. DISCHARGE OUTFALL AND RECEIVING WATER DESCRIPTION

1. The Tapia WRF discharges the tertiary-treated wastewater to Malibu Creek and the Los Angeles River, waters of the United States at the following locations. Tapia WRF discharges to Malibu Creek primarily during winter times and occasionally to the Los Angeles River between April 15 to November 15 when there is reduced demand on recycled water.. Tapia's tertiary-treated effluent is reclaimed year-round for irrigation or industrial uses throughout the Malibu Creek Watershed and the excess is discharged directly into Malibu Creek. During summer

months, discharge from Tapia to Malibu Creek is significantly reduced due to increased sales of reclaimed water to irrigation customers.

Malibu Creek, Malibu Lagoon and Surfrider Beach (Malibu Beach):

Malibu Creek flows year round except during extended drought periods when flows in the Creek are minimal. The reach immediately above Malibu Lagoon usually dries each fall for periods ranging from a few weeks (wet years) to several months (dry years). The main stem of Malibu Creek originates as an overflow from Malibu Lake. Approximately one mile upstream from Tapia, Las Virgenes Creek joins Malibu Creek from the north. Malibu Creek passes through Malibu Creek State Park and the Tapia Segment of Malibu Creek State Park which is owned and operated by California Department of Parks and Recreation. Tapia discharges into Malibu Creek in the Monte Nido area at two points, one upstream and one downstream of the confluence with Cold Creek. Below Monte Nido, Malibu Creek courses through Malibu Canyon, spills over Rindge Dam, and emerges into a small alluvial plain, located adjacent to Sierra Retreat and the City of Malibu Civic Center. At its mouth, Malibu Creek forms a lagoon at the ocean shore. This area constitutes Malibu Lagoon State Park. The Surfrider Beach (Malibu Beach) is located adjacent to the Malibu Lagoon is owned by the state and managed by Los Angeles County.

The Malibu Lagoon is closed by a sand bar during low flow months. The sandbar reduces the amount of Creek and Lagoon water directly reaching the surfzone at Surfrider Beach. The input of imported water into the Malibu Creek watershed has resulted in significant freshwater flows into Malibu Lagoon. The high water level in the Lagoon caused flooding of roads and properties in the Malibu Colony area and saturated the ground under the Cross Creek Shopping Center, which resulted in a septic tank overflow. Due to freshwater inputs, in the past, the sand bar was breached periodically by California Department of Parks and Recreation during the dry season by artificial means. Artificial breaching of the sandbar has now been prohibited by the Army Corps of Engineers because it resulted in lower water levels, increased tidal interaction, increased salinity and potential impacts on Lagoon fauna and flora. Rapid changes in salinity after breaching are a likely cause of low species diversity in Lagoon invertebrates. During winter months, the Lagoon is usually open to the ocean due to sustained flow in Malibu Creek.

The following are the discharge points to Malibu Creek:

a. Discharge Serial No. 001 - Primary Discharge Point to Malibu Creek.

Latitude: 34^0 04' 55"
Longitude:118^0 42' 28"

Discharge No. 001 is the primary discharge outfall into Malibu Creek, located adjacent to the treatment plant.

The waste discharged to Malibu Creek shall be limited to winter months from November 16 through April 14 of each calendar year.

b. Discharge Serial No. 002 - Reservoir No. 2 Outfall.

Latitude: 34^0 08' 40"
Longitude: 118^0 41' 50"

Discharge No. 002 is used to release surplus effluent from Las Virgenes' Reservoir #2 which stores water for distribution to the recycled water system. Reservoir #2 has a capacity of 17 million gallons, which is less than a two-day supply during the high demand in summer. Overflow from this reservoir is discharged to Las Virgenes Creek, a tributary to Malibu Creek, near the Las Virgenes Municipal Water District headquarters building located at 4232 Las Virgenes Road in Calabasas. Stormwater runoff enters the reservoir and causes overflow. Such discharges are unintentional and infrequent.

c. Discharge Serial No. 003 - Above County Gauging Station.

Latitude: 34^0 40' 40"
Longitude: 118^0 42' 03"

Discharge No. 003 is located 0.2 miles downstream of Cold Creek and is no longer used routinely. No reclaimed water has been discharged at this location except during the storms of 1998. . This discharge location was established along with the percolation ponds to offer a bypass option in times of extremely high flow conditions to regulate flow and protect the pond structures.

Los Angeles River Discharge:

Las Virgenes moved Discharge Serial No. 005 to a location further downstream, in a fully-lined section of the Arroyo Calabasas Creek to eliminate the potential impacts of the discharge on the soft-bottomed portions of Dry Canyon Creek. Order No. 99-066 was amended on April 13, 2000, through Order No. 00-046, to incorporate this new discharge location.

Discharge Serial No. 005 – Discharge point to Arroyo Calabasas Creek, a tributary to the Upper Los Angeles River.

Latitude: 34^o 9' 21"
Longitude: 118^o 38' 34"

VI. DISCHARGE PROHIBITION FOR MALIBU CREEK

1. Santa Monica Bay Watershed includes Santa Monica Bay and the surrounding land area that drains naturally into the Bay, including the Malibu Creek Watershed. The Creek flows through a steep-sided canyon to Malibu Lagoon and Surfrider Beach. The Santa Monica Bay Restoration Commission, formerly known as Santa Monica Bay Restoration Project (SMBRP), developed the *Santa Monica Bay Restoration Plan* (BRP) that serves as the blueprint for the restoration and enhancement of the Bay. The Regional Board plays a leading role in the implementation of the plan. Two of the proposed priorities of the plan are reduction of pollutants of concern at the source (which includes municipal wastewater treatment plants) and implementation of mass emission caps on some of the pollutants of concern.

2. The Malibu Creek Watershed Advisory Council (Council) became part of the Santa Monica Bay Restoration Project as a BRP implementing committee. As part of overall watershed management, the Council has identified the reduction of freshwater flows to the Lagoon, reduction of nutrients to the Creek and Lagoon, protection of human health in the Creek, Lagoon, and surfzone, and restoration of a fully functioning Lagoon, as high priorities. Previous investigations conducted for the SMBRP showed pathogens were detected in summer runoff at four storm drain or channel locations. Possible sources of pathogen contamination include pet and livestock feces, illicit sewer connections to the storm drains, leaking sewer lines, malfunctioning septic systems, and improper waste disposal by recreational vehicles, campers or transients. Additional potential sources of human pathogens in nearshore waters include sewage overflows into storm drains, small boat waste discharges, and bathers.

3. The *Malibu Creek Watershed Natural Resources Plan* completed in July 1995 by the Natural Resources Conservation Service (NRCS) demonstrated significant increases in flow in Malibu Creek from urban runoff. The U.S. Fish and Wildlife Service listed the Tidewater Goby (*Eucyclogobius newberry*) as an endangered species in February 1994. On August 18, 1997, the National Marine Fisheries Service listed the Southern California Steelhead Trout (*Oncorhynchus mykiss*) as an endangered species. The tidewater goby historically existed in Malibu Lagoon but died out in the 1950's. A tidewater goby population was successfully reintroduced to the Lagoon on April 5, in 1991. Population surveys conducted by the Resource Conservation District of the Santa Monica Mountains and UCLA show that the Goby population has remained stable since their reintroduction. Malibu Creek has the southernmost known sustained run of steelhead trout in North America.

4. Los Angeles County Lifeguards prefer reduced flow to the Lagoon and thus less time with an open sandbar during the dry season because of a standing riptide current that developed around the mouth of the Creek opening, and because they cannot drive emergency vehicles across the Creek mouth area to provide emergency service to the west side of Surfrider Beach.

5. To minimize the contribution of Tapia's discharge to the excess freshwater flow into Malibu Lagoon (which leads to elevated Lagoon level and frequent breaching of the sandbar once, or if, the sandbar has formed), thus impacting both wildlife and human health beneficial uses, this Order continues to enforce the existing discharge prohibition from April 15 to November 15 of each calendar year, the time period of heaviest recreational use and historically-lowest freshwater flows in the watershed.

VII. DISCHARGE PROHIBITION EXEMPTION FOR MALIBU CREEK

1. A provision in this Order prohibits discharges from Tapia WRF to Malibu Creek from April 15 to November 15 of each calendar year from all discharge points, except under certain conditions. These conditions include:

   i. Treatment plant upset or other operational emergencies;
   ii. Storm events as determined by the Executive Officer; or

iii. The existence of minimal streamflow conditions that require flow augmentation in Malibu Creek to sustain endangered species as determined by the Executive Officer.

For purposes of the prohibition, the exemptions are defined in the Order.

2. The Discharger has submitted a "Rain Impact Analysis" (February 1999) and updated analysis (May 2005) to determine the impact of rain events on Tapia inflows and recycled water demand (i.e., how long it takes for recycled water demand to return to normal). The analysis also includes the spray field recovery time under both short-term rain events during the prohibition, and long-term winter rain events during unusually wet winters (average rainfall exceeding the 90th percentile of rainfall since 1993). These parameters are contingent on the magnitude and timing of rain event(s) and the evapotranspiration. The analysis showed that it takes approximately four days (with 0.43 inches of rain) for recycled water demand to return to pre-rain capacity. Following extremely wet winters, recycled water demand and spray field recovery times depend directly on the volume of rainfall received and plant water demand (evapotranspiration) following the cessation of winter storms. When plant water demand is less than the cumulative rainfall, soils are still saturated on April 15, impacting both recycled water demand and spray field absorption capacity. These impacts end when cumulative plant water demand exceeds cumulative rainfall, and varies from one to several weeks after April 15th depending on the severity of winter rain events.

   If Las Virgenes cannot reuse all of the effluent during rain events, Discharger has the option and is encouraged to discharge to the Los Angeles River.

   Based on the foregoing, this Order allows storm events during the prohibition as an exemption to the discharge prohibition when the storm intensity is over 0.4 inch at the Plant rain gauge. Subject to conditions in the Order and those in Attachment SW-1, the Executive Officer may grant approval to discharge when the storm intensity is <0.4 inches at the Plant rain gauge.

3. In the past, The National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service, and California Department of Fish and Game have expressed concern over the summer discharge prohibition because it may cause adverse modification of habitat for the Southern California Steelhead Trout and other potential impacts to aquatic life.

   Las Virgenes contracted Entrix, Inc., to undertake a study on the minimum streamflow in Malibu Creek with respect to the steelhead trout habitat. The study entitled "*Minimum Flow Recommendations for Malibu Creek*" (Entrix, Inc., 1999), recommends that a minimum streamflow be maintained in Malibu Creek and discussed three levels of streamflow – 2.5, 3.5 and 4.5 cfs and the quantity of aquatic habitat associated with each. NMFS evaluated the three alternative flow levels and in a letter to the Regional Board dated April 12, 2000, and discussed the advantages and disadvantages of the three levels of streamflow.

   While NMFS contended that the lower streamflow alternatives, 2.5 and 3.5 cfs, would likely result in less stream habitat for steelhead trout than the 4.5 cfs

alternative, they also pointed out that these lower flow alternatives might be beneficial by producing lower water velocities which would favor the formation of cool water refuge in pools. However, most importantly, each alternative is likely to eliminate late-summer, low-flow days.

Most years flows are sufficient to preclude the need to augment stream flows. However, in 2004 flows fell below the recommended thresholds in late summer, and Tapia released surplus recycled water for 22 days to augment streamflows, terminating the release upon the onset of rain on October 9th. This release, which followed the 2.5 cfs minimum flow criteria, failed to achieve flows of 2.5 cfs at the County gaging station, but field observations and measurements verified that the augmentation was sufficient to sustain creek flows in the reach below Rindge Dam and to re-wet a 100 m dry section of the creek immediately above Cross Creek Road without causing either a breach of Malibu Lagoon or a rise in the Lagoon's elevation.

This Order therefore allows discharge from Tapia during the prohibition period to maintain a streamflow of 2.5 cfs at the Los Angeles County gaging station F-130-R. This flow is likely to eliminate late-summer, low flow days in the reach from Rindge Dam to Cross Creek Road in Malibu Creek the section of Malibu Creek occupied by steelhead trout, while minimizing flows into Malibu Lagoon. It also requires Las Virgenes to monitor the Creek flow so that the 2.5 cfs flow can be maintained in this reach through augmentation from Tapia.

VIII. DISCHARGE QUALITY DESCRIPTION

1. The Discharger's Annual Monitoring Report from 1999 to 2003 showed the following:

   A. Treated wastewater average annual effluent flow rate of 9.5 mgd.

   B. Average annual removal rate of 98.8% and >99%, for BOD and total suspended solids, respectively.

   C. 7-day median and daily maximum coliform values as 2.2 and 6.9-coliform forming units (CFU)/ 100 ml in the treated wastewater.

2. The characteristics of the treated wastewater discharged, based on data submitted in the 2003 Annual summary discharge monitoring report, are as follows in Table 1. The "<" symbol indicates that the pollutant was not detected (ND) at that concentration level. It is not known if the pollutant was present at a lower concentration.

Table 1 - 2003 Annual Summary Effluent Monitoring Summary

CTR#	Constituent	Unit	Average	Maximum	Minimum
	Flow	mgd	9.3	16.5	6.9
	pH	pH units	7.1	7.7	6.2
	Temperature	°F	22.7	28	4
	$BOD_{5@20℃}$	mg/L	2.4	5.8	<2

Table 1 - 2003 Annual Summary Effluent Monitoring Summary					
CTR#	Constituent	Unit	Average	Maximum	Minimum
	Suspended solids	mg/L	1.2	6.2	<0.5
	Settleable solids	ml/L	<0.1	<0.1	<0.1
	Total dissolved solids	mg/L	827	1300	700
	Chloride	mg/L	153	170	133
	Sulfate	mg/L	205	307	171
	Boron	mg/L	0.42	0.5	0.4
	Phosphate	mg/L	2.53	3.1	1.3
	Turbidity (24-HR composite)	NTU	0.55	1.5	0.2
	Oil and grease	mg/L	<2	<2	<2
	Fluoride	mg/L	0.28	0.4	0.2
	MBAS	mg/L	<0.08	0.1	<0.1
	Residual Chlorine (Dechlorinated)	mg/L	<0.1	<0.1	<0.1
	Total Coliform	CFU/ 100mL	--	12	1.1
	Ammonia-N	mg/L	<0.2	<0.2	<0.2
	Organic-N	mg/L	0.74	0.9	0.6
	Nitrate-N	mg/L	13.7	21	7
	Nitrite-N	mg/L	<0.004	0.02	<0.01
The following Priority Pollutants detected in effluent above their respective water quality criteria requiring limits (From 1999-2004)					
7	Cyanide	µg/L	10	10	10
8	Selenium	µg/L	3.58	12	2
14	Bis(2-ethylhexyl)phthalate	µg/L	4.75	40	5
16	Dichlorobromomethane	µg/L	36	62	19
The following Priority Pollutants detected in receiving water above their respective water quality criteria requiring limits (From 1999-2004)					
60	Mercury (Malibu Creek)	µg/L	0.0144	0.1	0.01
97	Mercury (Los Angeles River)	µg/L	0.0599	0.22	0.01
4	Cadmium (Malibu Creek)	µg/L	1.183	13	0.2
6	Copper (Malibu Creek)	µg/L	13.93	73	3
111	Lead (Malibu Creek)	µg/L	3.6	31.7	0.3

The remainder of the priority pollutants were either non-detect (ND) or detected below their respective water quality criteria.

3. The Discharger's effluent demonstrated chronic toxicity during the last permit cycle. Based on this information, the Regional Board has determined that there is a reasonable potential that the discharge will cause toxicity in the receiving water. However, the circumstances warranting a numeric chronic toxicity effluent limitation when there is reasonable potential were under review by the State Water Resources Control Board (State Board) in SWRCB/OCC Files A-1496 & A-1496(a) [Los Coyotes/Long Beach Petitions]. On September 16, 2003, at a public hearing, the State Board adopted Order No. WQO 2003-0012, deferring the issue of numeric chronic toxicity effluent limitations until Phase II of the SIP is adopted. In the mean time, the State Board replaced the numeric chronic toxicity limit with a narrative effluent limitation and a 1 TUc trigger, in the Long Beach and Los Coyotes WRP NPDES permits. This permit contains a similar chronic toxicity

effluent limitation. This Order also contains a reopener to allow the Regional Board to modify the permit, if necessary, consistent with any new policy, law, or regulation.

IX. APPLICABLE LAWS, PLANS, POLICIES, AND REGULATIONS

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

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

2. ***Basin Plan –*** The Regional Board adopted a revised *Water Quality Control Plan for the Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) on June 13, 1994, and amended by various Regional Board resolutions. This updated and consolidated plan represents the Board's master quality control planning document and regulations. The State Board and the State of California Office of Administrative Law (OAL) approved the revised Basin Plan on November 17, 1994, and February 23, 1995, respectively. On May 26, 2000, the USEPA approved the revised Basin Plan except for the implementation plan for potential municipal and domestic supply (MUN) designated water bodies, which is not applicable to this discharge.

   Ammonia Water Quality Objective (WQO). The 1994 Basin Plan contained water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through Tables 3-4. However, those ammonia objectives were revised on April 25, 2002, by the Regional Board, with the adoption of Resolution No. 2002-011, Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (including enclosed bays, estuaries and wetlands) with Beneficial Use designations for protection of Aquatic Life. Resolution No. 2002-011 was approved by the State Board, OAL, and USEPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively, and is now in effect. The final effluent limitations for ammonia prescribed in this Order are based on the revised ammonia criteria (see Attachment H) and apply at the end of pipe.

   Chloride WQO.

   Chloride WQO for Malibu Creek discharge. The chloride effluent limitations for discharge to Malibu Creek remains unchanged at 500 mg/L, and is based upon the Basin Plan.

   Chloride WQO for Los Angeles River discharge (005 discharge). The 1994 Basin Plan contained water quality objectives for chloride in Table 3-8. However, the chloride objectives for some waterbodies were revised on January 27, 1997, by

the Regional Board, with the adoption of Resolution No. 97-02, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Incorporate a Policy for Addressing Levels of Chloride in Discharges of Wastewaters*. Resolution No. 97-02 was approved by the State Board, the Office of Administrative Law, and USEPA on October 23, 1997, January 9, 1998, and February 5, 1998, respectively, and are now in effect. The chloride WQO was revised from 150 mg/L to 190 mg/L, for the following segments of the Los Angeles River:

a. Between Sepulveda Flood Control Basin and Figueroa Street (including Burbank Western Channel only), and
b. Between Figueroa Street and the Estuary (including Rio Hondo below Santa Ana Freeway only).

The final effluent limitation for chloride prescribed in this Order for Discharge Serial No. 005 is based on the revised chloride WQOs for the Los Angeles River and apply at the end of pipe.

The Basin Plan (i) designates beneficial uses for surface and groundwater, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated (existing and potential) beneficial uses and conform to the State's antidegradation policy, and (iii) includes implementation provisions, programs, and policies to protect all waters in the Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. The 1994 Basin Plan was prepared to be consistent with all State and Regional Board plans and policies adopted in 1994 and earlier. This Order implements the plans, policies, and provisions of the Board's Basin Plan.

3. ***Sources of Drinking Water Policy***. On May 19, 1988, the State Board adopted Resolution No. 88-63, *Sources of Drinking Water (SODW) Policy*, which established a policy that all surface and ground waters, with limited exemptions, are suitable or potentially suitable for municipal and domestic supply. To be consistent with State Board's SODW policy, on March 27, 1989, the Regional Board adopted Resolution No. 89-03, Incorporation of Sources of Drinking Water Policy into *the Water Quality Control Plans (Basin Plans) – Santa Clara River Basin (4A)/ Los Angeles River Basin (4B)*.

4. ***Potential Municipal and Domestic Supply (P* MUN) –*** Consistent with Regional Board Resolution No. 89-03 and State Board Resolution No. 88-63, in 1994 the Regional Board conditionally designated all inland surface waters in Table 2-1 of the 1994 Basin Plan as existing, intermittent, or potential for Municipal and Domestic Supply (P* MUN). However, the conditional designation in the 1994 Basin Plan included the following implementation provision: "no new effluent limitations will be placed in Waste Discharge Requirements as a result of these [potential MUN designations made pursuant to the SODW policy and the Regional Board's enabling resolution] until the Regional Board adopts [a special Basin Plan Amendment that incorporates a detailed review of the waters in the Region that should be exempted from the potential MUN designations arising from SODW policy and partial approval (May 26, 2000) of the 1994 Basin Plan amendments and acknowledged that the conditional designations do not currently have a legal

effect, do not reflect new water quality standards subject to USEPA review, and do not support new effluent limitations based on the conditional designations stemming from the SODW Policy until a subsequent review by the Regional Board finalizes the designations for these waters. This permit is designed to be consistent with the existing Basin Plan.

5. ***State Implementation Plan (SIP) and California Toxics Rule (CTR)***. The State Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (also known as the State Implementation Plan or SIP) on March 2, 2000. The SIP was amended by Resolution No. 2000-30, on April 26, 2000, and the Office of Administrative Law approved the SIP on April 28, 2000. The SIP applies to discharges of toxic pollutants in the inland surface waters, enclosed bays and estuaries of California which are subject to regulation under the State's Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) and the Federal Clean Water Act (CWA). This policy also establishes the following:

   A. Implementation provisions for priority pollutant criteria promulgated by USEPA through the CTR and for priority pollutant objectives established by Regional Boards in their Basin Plans;

   B. Monitoring requirements for priority pollutants with insufficient data to determine reasonable potential;

   C. Monitoring requirements for 2, 3, 7, 8 – TCDD equivalents; and,

   D. Chronic toxicity control provisions.

   The CTR became effective on May 18, 2000 (codified as 40 CFR Part 131.38). The SIP (which implements CTR criteria) was revised by the State Board on February 24, 2005, and became effective on May 31, 2005.Toxic pollutant limits are prescribed in this Order to implement the CTR and Basin Plan.

   In the CTR, USEPA promulgated criteria that protects the general population at an incremental cancer risk level of one in a million (10^{-6}), for all priority toxic pollutants regulated as carcinogens. USEPA recognizes that adoption of a different risk factor is outside of the scope of the CTR. However, states have the discretion to adopt water quality criteria that result in a higher risk level, if it can demonstrate that the chosen risk level is adequately protective of the most highly exposed subpopulation, and has completed all necessary public participation. This demonstration has not happened in California. Further, the information that is available on highly exposed subpopulations in California supports the need to protect the general population at the 10^{-6} level. The Discharger may undertake a study, in accordance with the procedures set forth in Chapter 3 of USEPA's Water Quality Standards Handbook: Second Edition (EPA-823-B-005a, August 1994) to demonstrate that a different risk factor is more appropriate. Upon completion of the study, the State Board will review the results and determine if the risk factor needs to be changed. In the mean time, the State will continue using a 10^{-6} risk level, as it has done historically, to protect the population against carcinogenic pollutants.

6. ***Alaska Rule***. On March 30, 2000, USEPA revised its regulation that specifies when new and revised State and Tribal water quality standards (WQS) become effective for CWA purposes (40 CFR 131.21, 65 FR 24641, April 27, 2000). Under USEPA's new regulation (also known as the *Alaska rule*), new and revised standards submitted to USEPA after May 30, 2000, must be approved before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by EPA.

7. ***Beneficial Uses*** The designated beneficial uses in the Basin Plan for Malibu Creek, the Los Angeles River, and their contiguous waters are:

   A. The beneficial uses of Malibu Creek:

Malibu Creek - Hydrologic Unit 404.21	
Existing:	Water contact recreation[1]; noncontact water recreation; warm freshwater habitat; cold freshwater habitat; wild life habitat; rare, threatened, or endangered species habitat; migration of aquatic organisms[2]; spawning, reproduction, and/or early development habitat; and wetland habitat[3].
Potential:	municipal and domestic supply[4] ; and industrial service supply.
Malibu Lagoon - Hydrologic Unit 404.21	
Existing:	Navigation; water contact recreation[1]; noncontact water recreation; estuarine and marine habitats; wildlife habitat; rare, threatened, or endangered species habitats; migration of aquatic organisms[2]; spawning, reproduction, and/or early development habitat; and wetland habitat[3].
Malibu Beach (Surfrider Beach) - Hydrologic Unit 404.21	
Existing:	Navigation; water contact recreation[1]; noncontact water recreation; commercial and sport fishing; marine habitats; wildlife habitat; rare, threatened, or endangered species; migration of aquatic organisms[2]; spawning, reproduction, and/or early development habitat; and shellfish harvesting.

The beneficial uses of the Los Angeles River:

Los Angeles River upstream of Figueroa Street- Hydrologic Unit 405.21	
Existing:	groundwater recharge; water contact[1] and non-contact water recreation; warm freshwater habitat, wildlife, and wetland[3] habitat.
Potential:	municipal and domestic supply[4] ; and industrial service supply.
Los Angeles River downstream of Figueroa Street - Hydrologic Unit 405.15	
Existing:	groundwater recharge; water contact[1] and non-contact water recreation; warm freshwater habitat.
Potential:	municipal and domestic supply[4] ; industrial services supply; and wildlife habitat.
Los Angeles River downstream of Figueroa Street - Hydrologic Unit 405.12	

Existing:	groundwater recharge; water contact[1] and non-contact water recreation; rare, threatened, or endangered species; warm freshwater, wildlife, and marine habitat.
Potential:	municipal and domestic supply[4] ; and industrial services supply; industrial process supply; migration of aquatic organisms; spawning, reproduction, and/or early development; and shellfish harvesting.
Los Angeles River Estuary - Hydrologic Unit 405.12	
Existing:	industrial service supply; navigation; water contact[1] and non-contact water recreation; commercial and sport fishing; estuarine habitat[5]; marine habitat; wildlife habitat; rare, threatened, or endangered species; migration of aquatic organisms[2]; spawning, reproduction, and/or early development[2]; and wetland[3] habitat.
Potential:	Shellfish harvesting.

Footnote:

[1]. The Los Angeles County Department of Public Works posted signs prohibiting access to the Los Angeles River. However, there is public contact in the downstream areas; hence, the quality of treated wastewater discharged to both Malibu Creek and the Los Angeles River must be such that no health hazard is created.

[2]. Aquatic organisms utilize estuary and coastal wetland, to a certain extent, for spawning and early development. This may include migration into areas, which are heavily influenced by freshwater inputs

[3]. This wetland habitat may be associated with only a portion of the waterbody. Any regulatory action would require a detailed analysis of the area.

[4]. Municipal and domestic supply uses were designated for the State Water Resources Control Board Order No. 88-63 and Regional Board Resolution No. 89-003. However, the Regional Board has only conditionally designated the MUN beneficial uses and at this time cannot establish effluent limitations designated to protect the conditional designation.

[5]. One or more rare species utilize estuary and coastal wetlands for foraging and/or nesting.

B. The beneficial uses of the receiving groundwater:

1. The beneficial uses of the receiving groundwater for Malibu Creek:

Santa Monica Mountains-Southern Slopes – DWR Basin No.[1] 4-22	
Malibu Valley	
Existing:	agriculture supply
Potential:	municipal and domestic supply and industrial service supply

2. The beneficial uses of the receiving groundwater for Los Angeles River:

The Los Angeles River traverses through the San Fernando Ground Water Basin before it enters into the Los Angeles Coastal Groundwater Basin.

San Fernando Valley Basin – DWR Basin No.[1] 4-12

West of Highway 405	
Existing:	municipal and domestic supply, industrial service supply, industrial process supply, and agriculture supply
Potential:	None
East of Highway 405 (overall)	
Existing:	municipal and domestic supply, industrial service supply, industrial process supply, and agriculture supply
Potential:	None
Narrows area (below confluence of Verdugo Wash with the Los Angeles River)	
Existing:	municipal and domestic supply, industrial service supply, industrial process supply, and agriculture supply
Potential	None

Los Angeles Coastal Plain – DWR Basin No.[1] 4-11	
Central Basin	
Existing:	municipal and domestic supply, industrial service supply, industrial process supply, and agriculture supply
Potential:	None
West Coast Basin	
Existing:	municipal and domestic supply, industrial service supply, industrial process supply, and agriculture supply
Potential:	None

Footnote:

[1]. Basins are numbered according to DWR Bulletin No. 118-80 (DWR, 1980).

C. The requirements in this Order are intended to protect designated beneficial uses and enhance the water quality of the watershed. Effluent limits must protect both existing and potential beneficial uses.

D. Consistent with Regional Board Resolution No. 89-03 and State Board Resolution No. 88-63, all inland surface waters in Table 2-1 of the 1994 Basin Plan are designated existing, intermittent, or potential for Municipal and Domestic Supply (MUN).

8. ***Title 22 of the California Code of Regulations -*** The California Department of Health Services established primary and secondary maximum contaminant levels (MCLs) for inorganic, organic, and radioactive contaminants in drinking water. These MCLs are codified in Title 22, California Code of Regulations (Title 22). The Basin Plan (Chapter 3) incorporates Title 22 primary MCLs by reference. This incorporation by reference is prospective including future changes to the incorporated provisions as the changes take effect. Title 22 primary MCLs have been used as bases for effluent limitations in WDRs and NPDES permits to protect the groundwater recharge beneficial use when that receiving groundwater

is designated as MUN. Also, the Basin Plan specifies that "Ground waters shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses." Therefore the secondary MCL's, which are limits based on aesthetic, organoleptic standards, are also incorporated into this permit to protect groundwater quality.

Groundwater Recharge (GWR)- Sections of Los Angeles River, located downstream of the Tapia WRP discharge point, are designated as GWR. Tapia WRF discharges to Arroyo Calabasas Creek which is a tributary to the Upper Los Angeles River. Since groundwater from the San Fernando Groundwater Basin is used to provide drinking water to over one million people, Title 22-based limits are needed to protect that drinking water supply where there is reasonable potential for the contaminant to be present in the discharge. By limiting the contaminants in the Tapia WRF discharges, the amount of pollutants entering the surface waters and groundwater basins are correspondingly reduced. Once groundwater basins are contaminated, it may take years to clean up, depending on the pollutant. Compared to surface water pollution, investigations and remediation of groundwater are often more difficult, costly, and extremely slow.

9. ***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. The State Board has, in State Board Order No. 86-17 and an October 7, 1987 guidance memorandum, interpreted Resolution No. 68-16 to be fully consistent with the federal antidegradation policy. Similarly, the CWA (section 304(d)(4)(B)) and USEPA regulations (40 CFR, Section 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 resulting from the permitted discharge. The provisions of this Order are consistent with the antidegradation policies.

10. ***Watershed Approach*** **-** This Regional Board has been implementing a Watershed Management Approach (WMA), to address water quality protection in the Los Angeles Region, as detailed in the Watershed Management Initiative (WMI). The WMI is designed to integrate various surface and ground water regulatory programs while promoting cooperative, collaborative efforts within a watershed. It is also designed to focus limited resources on key issues and use sound science. Information about the Los Angeles River Watershed and Malibu Creek Watershed and other watersheds in the region can be obtained from the Regional Board's web site at *http://www.swrcb.ca.gov/rwqcb4/* and clicking on the word "Watersheds".

Malibu Creek Watershed:

Pursuant to this Regional Board's watershed initiative framework, the Malibu Creek Watershed Management Area was the targeted watershed for fiscal year 2001-2002 and is being considered for this fiscal year.

Los Angeles River Watershed:

Pursuant to this Regional Board's watershed initiative framework, the Los Angeles River Watershed Management Area is targeted for this fiscal year.

X. REGULATORY BASIS FOR EFFLUENT AND RECEIVING WATER LIMITS AND OTHER DISCHARGE REQUIREMENTS

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

   A. Applicable State Regulations/Policies/Guidances

      a. The plans, policies and water quality standards (beneficial uses + objectives + antidegradation policy) contained in the 1994 *Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*, as amended, including chemical constituent limitations established by incorporating the California Code of Regulations, Title 22, Maximum Contaminant Levels designed to protect the existing drinking water use of the receiving groundwaters;

      b. California Toxics Rule (40 CFR 131.38);

      c. The State Board's "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California" (the State Implementation Plan or SIP);

      d. Administrative Procedures Manual and Administrative Procedure Updates; and,

      e. Porter-Cologne Water Quality Act (Water Code § 13000 et seq.);

   B. Applicable Federal Regulations/Policies/Guidances

      a. Federal Clean Water Act;

      b. 40 CFR, Parts 122, 131, among others;

      c. Best Professional Judgment (pursuant to 40 CFR 122.44);

      d. USEPA Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity Programs Final May 31, 1996;

      e. USEPA Whole Effluent Toxicity (WET) Control Policy July 1994;

      f. Inspectors Guide for Evaluation of Municipal Wastewater Treatment Plants, April 1979 (EPA/430/9-79-010);

      g. Fate of Priority Pollutants in Publicly Owned Treatment Works Pilot Study October 1979 (EPA-440/1-79-300);

h. *Technical Support Document for Water Quality Based Toxics Control,* March 1991 (EPA-505/ 2-90-001);

i. *U.S. EPA NPDES Permit Writers' Manual,* December 1996 (EPA-833-B-96-003); and,

j. USEPA's *National Recommended Water Quality Criteria: 2002*, November 2002 (EPA-822-R-02-047).

A full list of the Docket reference materials is in Attachment I.

Where numeric water quality objectives have not been established in the Basin Plan, 40 CFR Part 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.

2. ***Mass and Concentration Limits –*** 40 CFR section 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 section 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.

3. ***Maximum Daily Effluent Limitations –*** Pursuant to 40 CFR section 122.45(d)(2), for POTWs 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 only include average weekly and average monthly effluent limitations in the permits, because a single daily discharge of certain pollutants, in excess amounts, can cause violations of water quality objectives. The effects of certain 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 section 122.45(d)(1), are included in the permit for certain constituents as discussed in the Fact Sheet accompanying this Order.

4. ***Pretreatment –*** Pursuant to 40 CFR, Section 403, the Tapia WRF developed and

has been implementing an approved industrial wastewater Pretreatment Program. This Order requires Tapia WRF to continue the implementation of the approved Pretreatment Program and modifications thereof.

5. ***Sludge Disposal -*** To implement CWA Section 405(d), on February 19, 1993, the USEPA promulgated 40 CFR, Part 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 Discharger to comply with said regulations that are enforceable by USEPA, because California has not been delegated the authority to implement this program.

6. ***Storm Water 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 section 122.26 that established requirements for storm water discharges under an NPDES program. 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 in State Board Order No. 97-03-DWQ to regulate storm water discharges associated with industrial activity. The Tapia WRF is covered by general NPDES permit No. CAS000001.

7. ***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 herein.

8. ***Antibacksliding Policies -*** Antibacksliding provisions are contained in Sections 303(d)(4) and 402(o) of the CWA, and in 40 CFR section 122.44(l). Those provisions require a reissued permit to be as stringent as the previous permit with some exceptions. Section 402(o) of the CWA establishes express statutory language prohibiting the backsliding of effluent limitations. It consists of the following three parts:

   A. Section 402(o)(1) prohibits (subject to exceptions in section 303(d)(4) and/or 402(o)(2)) the relaxation of effluent limitations for two situations:

      a. When a permittee seeks to revise a technology-based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent, and

      b. When a permittee seeks relaxation of an effluent limitation which is based upon a changed State treatment standard or water quality standard.

B. Section 402(o)(2) outlines specific exceptions to the general prohibition against establishment of less stringent effluent limitations. Codified in the NPDES regulations at 40 CFR 122.44(l), Section 402(o)(2) provided that the establishment of less stringent limits may be allowed where:

a. There have been material and substantial alterations or additions to the permitted facility which justify this relaxation;

b. New information (other than revised regulations, guidance, or test methods) is available that was not available at the time of permit issuance which would have justified a less stringent effluent limitation;

c. Technical mistakes or mistaken interpretations of the law were made in issuing the permit under Section 402(a)(1)(b);

d. Good cause exists due to events beyond the permittee's control (e.g., acts of God) and for which there is no reasonably available remedy;

e. The permit has been modified under certain specified sections of the CWA; or,

f. The permittee has installed and properly operated and maintained required treatment facilities, but still has been unable to meet the permit limitations (relaxation may only be allowed to the treatment levels actually achieved).

Although the statute identified six exceptions where effluent limitations may be relaxed, the language specifically stated that exception "c" (as listed above) does not apply to water quality-based effluent limitations. Further, exception "e" as listed above only concerns sections of the CWA governing technology-based limits. Thus, exceptions c & e would only apply to technology-based effluent limitations.

C. Section 402(o)(3) prohibits the relaxation of effluent limitations in all cases if a revised effluent limitation would result in a violation of applicable effluent limitation guidelines or water quality standards, including antidegradation requirements. Thus, even if any of the antibacksliding exceptions outlined in either the statute or regulations are applicable, Section 402(o)(3) acts as a floor and restricts the extent to which effluent limitations may be relaxed. This requirement affirms existing provisions of the CWA that require limits, standards, and conditions to ensure compliance with applicable technology-based limits and water quality standards.

9. ***Applicable Water Quality Objectives -*** 40 CFR, Section 122.44(d)(vi)(A) requires the establishment of numeric effluent limitations to attain and maintain applicable narrative water quality criteria to protect the designated beneficial use.

The Basin Plan includes narrative and numeric WQOs. The CTR promulgates numeric aquatic life criteria for 24 toxic pollutants and numeric human health criteria for 92 toxic pollutants. A compliance schedule provision in the CTR and the SIP authorizes the State to issue schedules of compliance for new or revised NPDES permit limits based on the federal CTR criteria when certain conditions met. CTR's Compliance Schedule provisions sunseted on May 18, 2005. After this date, the provisions of the SIP allow for Compliance Schedules not to exceed five years from issuance or past May 17, 2010, which ever is sooner. Where numeric water quality objectives have not been established in the Basin Plan, 40 CFR, Section 122.44(d) specifies that WQBELs may be set based on USEPA criteria and supplemented, where necessary, by other relevant information to attain and maintain narrative water quality criteria to fully protect designated beneficial uses.

10. ***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 401.15 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.

11. ***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 the Discharger 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.

12. ***Water Quality Based Effluent Limits (WQBELs) -*** Water quality-based effluent limits are designed to protect the quality of the receiving water by ensuring that State 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 criterion, 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. This was upheld by the Appellate Court in *the City of Burbank, City of Los Angeles v. State Water Resources Control Board* case. Applicable water quality standards for Malibu Creek and Los Angeles River are contained in the Basin Plan and CTR, as described in previous findings.

13. ***Water Quality Based Effluent Limitations for Toxic Pollutants.*** Toxic substances are regulated in this permit by water quality based effluent limitations derived from the 1994 Basin Plan, the CTR, and/or best professional judgment (BPJ) pursuant to Part 122.44. If a discharge causes, has a reasonable potential to cause, or contribute to a receiving water excursion above a narrative or numeric objective within a State water quality standard, federal law and regulations, as specified in 40 CFR 122.44(d)(1)(i), and in part, the SIP, require the establishment of WQBELs that will protect water quality. As documented in the fact sheet, pollutants exhibiting reasonable potential in the discharge, authorized in this Order, are identified in the Reasonable Potential Analysis (RPA) section and have final effluent limits. Reasonable potential was not triggered for some of the 126 priority pollutants and final limits cannot be determined at this time. The Discharger is required to gather the appropriate data and the Regional Board will determine if final effluent limits are needed. If final limits are needed, the permit will be reopened and limits will be included in the permit.

14. ***Basis for Effluent Limits for 303(d) Listed Pollutants -*** For 303(d) listed pollutants, the Regional Board plans to develop and adopt Total Maximum Daily Loads (TMDLs) which will specify wasteload allocations (WLAs) for point sources and load allocations (LA) for non-point sources, as appropriate. Following the adoption of TMDLs by the Regional Board, NPDES permits will be issued, and where appropriate, reopened to include effluent limits consistent with the assumptions of the TMDL, based on applicable WLAs. In the absence of a TMDL, the permits will include water quality-based effluent limitations derived as provided in the Basin Plan, CTR, and SIP (if applicable). These effluent limits are based on criteria applied end-of-pipe due to no mixing zone or dilution credits allowed.

15. ***303(d) Listed Pollutants -*** On July 25, 2003, USEPA approved the State's most recent list of impaired waterbodies. The list (hereinafter referred to as the 303(d) list) was prepared in accordance with Section 303(d) of the Federal Clean Water Act to identify specific impaired waterbodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources.

<u>Malibu Creek:</u>
Malibu Beach, Malibu Creek, Malibu Lagoon, Malibu Lagoon Beach (Surfrider Beach) are on the 303 (d) List. The following pollutants/stressors, from point and non-point sources, were identified as impacting the receiving waters:

A. Malibu Beach - Hydrologic Unit 404.21:
Beach closures and DDT (Fish consumption advisory for DDT);

B. Malibu Creek - Hydrologic Unit 404.21:

Fish Barriers, high coliform count, nutrients (algae), scum/foam-unnatural, sedimentation/siltation and trash;

C. Malibu Lagoon - Hydrologic Unit 404.21:
Benthic community effects, enteric viruses, eutrophic, high coliform count, pH (possible sources might be septic systems, stormdrains, and birds), shellfish harvesting advisory, and swimming restrictions; and,

D. Malibu Lagoon Beach (Surfrider Beach) - Hydrologic Unit 404.21:
Beach closures, DDT (Fish consumption advisory for DDT), high coliform count, and PCBs (Fish consumption advisory for PCBs).

Los Angeles River:
Los Angeles River, Los Angeles River Estuary, and their tributaries are on the 303(d) List.

A. Los Angeles River Reach 4 (Sepulveda Drive to Sepulveda Dam) – Hydrologic Unit 405.21: Ammonia, high coliform count, lead, nutrients, odors, and scum/foam-unnatural;

B. Los Angeles River Reach 3 (Figueroa Street to Riverside Drive) – Hydrologic Unit 405.21: Ammonia, nutrients, odors, and scum/foam-unnatural;

C. Los Angeles River Reach 2 (Carson to Figueroa Street) – Hydrologic Unit 405.15: Ammonia, high coliform count, lead, nutrients (algae), odors, oil, and scum/foam-unnatural;

D. Los Angeles River Reach 1 (Estuary to Carson Street) – Hydrologic Unit 405.12: Total aluminum, ammonia, dissolved cadmium, dissolved copper, and high coliform count; and,

E. Los Angeles River Estuary – Hydrologic Unit 405.12: Chlordane, DDT, Lead, PCBs, and Zinc.

16. ***Relevant Total Maximum Daily Loads (TMDLs).*** A TMDL is a determination of the amount of a pollutant, from point, nonpoint, and natural background sources, including a margin of safety, which may be discharged to a water quality-limited water body. Section 303(d) of the CWA established the TMDL process. The statutory requirements are codified at 40 CFR, Part 130.7. TMDLs must be developed for the pollutants of concern, which impact the water quality of water bodies on the 303(d) list.

a. Malibu Creek TMDL

1. Bacteria TMDL for Malibu Creek discharge. According to the TMDL schedule, under the amended consent decree, Heal the Bay, Santa Monica Bay Keeper, et al. v. Browner, et al. (March 23, 1999), a bacteria TMDL needed to be established by March 22, 2003. On December 13, 2004, the Regional Board adopted Resolution No. 2004-019R, Amendment to the Water Quality Control Plan for the Los Angeles Region to

incorporate a Total Maximum Daily Load for Bacteria in the Malibu Creek Watershed, which serves as the bacteria TMDL for Malibu Creek.

2. Nutrient TMDL for Malibu Creek discharge established by EPA. A nutrient TMDL for Malibu Creek for total nitrogen and total phosphorous was developed and established by EPA in March 2003. The EPA TMDL included a numeric target of 1 mg/L for total nitrogen during the summer (April 15 to November 15) to control algal biomass, and a winter numeric target of 8 mg/L, based on the Basin Plan numeric objective of 10 mg/L (with an implicit 20% margin of safety). EPA also established a 0.1 mg/L numeric target for total phosphorous during the summer and no target during winter months. The USEPA's TMDL finds that because there is a discharge prohibition during the summer months, discharge will have an insignificant effect on average summer loads and that it is therefore unnecessary to account for them in the cumulative loading allowed under the TMDL. The USEPA has made it clear that the Regional Board can determine the most appropriate water quality objectives for nutrients during the prohibition period. Therefore, the summer water quality objective for nutrient will be set at 8 mg/L, the same as the winter objective**.**

3. Nutrient TMDL for Malibu Creek discharge proposed by Regional Board. Based on recent scientific studies, the Regional Board is proposing a new TMDL numeric target of 1 mg/L for total nitrogen during both summer and winter seasons. The Malibu Creek Nutrient TMDL is scheduled for Regional Board adoption in the coming months.

b. Los Angeles River TMDL

According to the Los Angeles River TMDL schedule, under the amended consent decree, Heal the Bay, Santa Monica Bay Keeper, et al. v. Browner, et al. (March 23, 1999), the trash, nitrogen, and metals TMDLs for the Los Angeles River must be completed by March 2001, March 2003, and March 2004, respectively. The coliform TMDL for Los Angeles Harbor is scheduled for completion by March 2006.

1. Nitrogen Compounds TMDL**.** On July 10, 2003, the Regional Board adopted Resolution No. 2003-009, *Amendment to the Basin Plan for the Los Angeles Region to Include a TMDL for Nitrogen Compounds and Related Effects in the Los Angeles River (Nitrogen Compounds TMDL)*. On November 19, 2003, the State Board approved *the Nitrogen Compounds TMDL*. However, on December 4, 2003, the Regional Board revised the Nitrogen Compound TMDL by adopting Resolution No. 2003-016, *Revision of Interim Effluent Limits for Ammonia in the Amendment to the Water Quality Control Plan for the Los Angeles Region to Include a TMDL for Nitrogen Compounds and Related Effects in the Los Angeles River.* Resolution No. 2003-016 only revised the portion of the Nitrogen Compounds TMDL containing interim limits for total ammonia as nitrogen, for the Glendale and Tillman WRPs. All other portions of the TMDL

remained unchanged. The Nitrogen Compounds TMDL is awaiting OAL and USEPA approval.

2. Trash TMDL. On January 25, 2001, the Regional Board adopted Resolution No. 01-006. However, on September 19, 2001, the Regional Board reconsidered Resolution No. 01-006 and adopted Resolution No. 2001-013, *Amendment to the Basin Plan for the Los Angeles Region to Incorporate a TMDL for Trash in the Los Angeles River (Trash TMDL)*, which supercedes Resolution No. 01-006. On February 19, 2002, the State Board adopted Resolution No. 02-038, approving the Regional Board's Trash TMDL. OAL and USEPA subsequently approved the Trash TMDL later that year.

3. Metal TMDL. A Metal TMDL for the Los Angeles River for copper, Lead, cadmium and zinc was adopted by the Regional Board in June 2005. A Reasonable Potential Analysis (RPA) showed exeedances of water quality objectives in receiving water for these metals and they were detected in the effluent. Therefore, numerical limitations have been prescribed for these metals in this permit. However, when the Metal TMDL approved by State Board, OAL and USEPA, TMDL Water Quality Objectives (WQO) for these metals will become effective.

17. ***Mixing Zones, Water Effects Ratios (WERs) and Dilution Credits -*** Mixing zones, dilution credits, water effect ratios (WERs) and attenuation factors are not allowed in this Order. Allowance of a mixing zone is in the Regional Board's discretion under Section 1.4.2 of the SIP and under the Basin Plan (Basin Plan Chapter 4, Page 30). If the Discharger subsequently conducts appropriate mixing zone and dilution credit studies, the Regional Board can evaluate the propriety of granting a mixing zone or establishing dilution credits. The Regional Board has concluded mixing zones and dilution credits would be inappropriate to grant, at this time, in light of the following factors:

A. Tapia WRP discharge contributes one of the largest flow (effluent dominated) into the Malibu Creek and Los Angeles River watershed when discharged, in the vicinity of the discharge point where it overwhelms the receiving water providing very limited mixing and dilution;

B. Even in the absence of the Tapia WRF discharge, the receiving water primarily consists of nuisance flows and other effluents, limiting its assimilative capacity;

C. Malibu Creek, Malibu Lagoon and Surfrider Beach and, several reaches of the Los Angeles River [including those subject to this Order] are 303(d) listed (i.e., impaired) for certain constituents;

D. Impaired waters do not have the capacity to assimilate pollutants of concern at concentrations greater than the applicable objective;

E. For the protection of the beneficial uses is listed on Finding 33 (Beneficial Uses);

F. Consistent with Antidegradation Policies;

G. Because a mixing zone study has not been conducted;

H. Because hydrologic models of the discharge and the receiving waters have not been conducted; and,

I. A WER study has not been conducted.

18. Specific effluent limitations for each constituent contained in this order were developed in accordance with the foregoing laws, regulations, plans, policies, and guidance. The specific methodology and example calculations are documented in this Fact Sheet.

XI. REASONABLE POTENTIAL ANALYSIS

1. As specified in 40 CFR, Part 122.44(d)(1)(i), permits are required to include limits for all pollutants "which the Director (defined as the Regional Administrator, State Director, or authorized representative in 40 CFR, Part 122.2) determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard."

   A. Using the method described in the TSD, the Regional Board has conducted Reasonable Potential Analysis (RPA) for:

      1. Chronic Toxicity - RPA was conducted for Chronic Toxicity (see Table R1) using the discharger's effluent data from their ROWD and annual self monitoring reports. The RPA compares the effluent data with USEPA's 1 TUc water quality criteria. The Discharger's effluent demonstrated Chronic Toxicity during the last permit cycle. Based on this information, the Regional Board has determined that there is a reasonable potential that the discharge will cause toxicity in the receiving water and, consistent with SIP section 4, the Order contains a narrative effluent limitation for Chronic Toxicity. The circumstances warranting a numeric Chronic Toxicity effluent limitation were reviewed by the State Board in SWRCB/OCC Files A-1496 & A-1496(a) [Los Coyotes/Long Beach Petitions]. On September 16, 2003, the State Board adopted Order No. WQO 2003-0012, deferring the numeric chronic toxicity effluent limitation issue until the adoption of Phase II of the SIP, and replaced the numeric chronic toxicity effluent limitation with a narrative effluent limitation for the time being.

      2. Ammonia-N, other Nitrogen Species, and MBAS – RPA was conducted for Ammonia, Nitrate plus Nitrite as Nitrogen, Nitrite Nitrogen, and MBAS (see Table R1) using the Discharger's effluent data from their self monitoring reports. Ammonia, Nitrate

plus Nitrite as Nitrogen, and Nitrite Nitrogen effluent data are summarized in Table R1. Temperature and pH effluent data is summarized in Table A1. The RPA compares the effluent data with the Basin Plan WQOs. The Discharger's effluent exceeded the Basin Plan WQOs for Ammonia, Nitrate plus Nitrite as Nitrogen, and Nitrite Nitrogen, during the last permit cycle. Based on this information, the Regional Board has determined that there is a reasonable potential that the discharge will cause or contribute to an exceedance of the Basin Plan WQOs and, consistent with 40 CFR 122.44(d), the Order contains numeric effluent limitations for Ammonia, Nitrate plus Nitrite as Nitrogen, and Nitrite Nitrogen.

B. Using the method described in the SIP, the Regional Board has conducted RPA for priority pollutants using the discharger's effluent data contained in Table D1. The RPA compares the effluent data with water quality objectives in the Basin Plan and CTR.

1. ***Reasonable Potential Determination -*** The RPA (per the SIP) involves identifying the observed maximum pollutant concentration in the effluent (MEC) for each constituent based on the effluent concentration data. There are three tiers to determining reasonable potential. If any of the following three tiers is triggered, then reasonable potential exists:

   a. For the first tier, the MEC is compared with the lowest applicable Water Quality Objective (WQO), which has been adjusted for pH, hardness and translator data, if appropriate. If the MEC is greater than the (adjusted) WQO, then there is reasonable potential for the constituent to cause or contribute to an excursion above the WQO and a WQBEL is required. However, if the pollutant was not detected in any of the effluent samples and all of the reported detection limits are greater than or equal to the WQO, proceed with Tier 2. The Regional Board exercised its discretion in identifying all available, valid, relevant, representative data and information in accordance with SIP Section 1.2 (Page 5).

   b. For the second tier, the observed maximum ambient background concentration (B) for the pollutant is compared with the adjusted WQO. If B is greater than the adjusted WQO, and the pollutant was present in the effluent, then a WQBEL is required because the effluent has reasonable potential to contribute to an exceedance of the WQO. The Regional Board exercised its discretion in identifying all available, applicable ambient background data in accordance with SIP Section 1.4.3 (Page 18).

   c. For the third tier, other information is used to determine RPA, such as the current CWA 303(d) List. Section 1.3 of

the SIP describes the type of information that can be considered in Tier 3.

For all parameters that have reasonable potential to cause or contribute to an exceedance of a WQO/criteria, numeric WQBELs are required. Section 1.4, Step 5 of the SIP (Page 10) states that MDELs shall be used for POTWs in place of average weekly limitations. WQBELs are based on CTR, USEPA water quality criteria, applicable TMDLs, and Basin Plan objectives.

If the data are unavailable or insufficient to conduct the RPA for the pollutant, or if all reported detection limits of the pollutant in the effluent are greater than or equal to the WQO, the Regional Board shall require additional monitoring , in accordance with Section 1.3. of the SIP.. The effluent monitoring data from January 1998 to December 2004 indicate that the following constituents were not detected and their lowest detection limits were greater than their WQO: benzidine, benzo(a)anthracene, benzo(a)pyrene, bemzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, 3,3'-dichlorobenzidine, hexachlorobenzene, indeno(1,2,3-cd)pyrene, aldrin, chlordane, 4,4'-DDT, 4,4'-DDE, 4,4'-DDD, dieldrin, heptachlor, heptachlor epoxide, PCBs, and toxaphene.

Therefore these constituents require interim monitoring requirements. Section 2.4.5 of the SIP discusses how compliance will be determined in those cases. The Discharger should work with the laboratory to lower detection levels to meet applicable and reliable detection limits; follow procedures set forth in 40 CFR Part 136; and, report the status of their findings in the annual report. During the term of the permit, if and when monitoring with lowered detection limits shows any of the priority pollutants at levels exceeding the applicable WQOs, the Discharger will be required to initiate source identification and control for the particular pollutant. Appendix 4 of the SIP lists the minimum levels and laboratory techniques for each constituent.

Upon completion of the required monitoring, the Regional Board shall use the gathered data to conduct RPA and determine if a WQBEL is required. However, if Tier 1 or Tier 3 triggered reasonable potential for a pollutant, then the lack of receiving water data for Tier 2 evaluation would not prohibit the establishing of WQBELs in the permit.

A numerical limit has not been prescribed for a toxic constituent if it has been determined that it has no reasonable potential to cause or contribute to excursions of water quality standards. However, if the constituent had a limit in the previous permit, and if none of the Antibacksliding exceptions apply, then the limit will be retained. A narrative limit to comply with all water quality objectives is provided

in *Standard Provisions* for the priority pollutants, which have no available numeric criteria.

2. ***RPA Data -*** The RPA was based on effluent monitoring data for January 1998 through November 2004, including interim monitoring results from July 2001 to December 2002. Table R2 summarizes the RPA, lists the constituents, and where available, the lowest, adjusted WQO, the MEC, the "Reasonable Potential" result, and the limits from the previous permit.

   a. **Metals Water Quality Objective -** For metals, the lowest applicable Water Quality Objective (WQO) was expressed as total recoverable, and where applicable, adjusted for hardness. A spreadsheet (Table R3) was used to calculate the total recoverable CTR criteria. Hardness values from samples collected in the receiving water upstream of the discharge point were averaged and used to determine the appropriate CTR WQO for those hardness-dependent metals. Individual hardness values greater than 400 mg/L were capped at 400 prior to calculating the average hardness. All the hardness values for both Malibu Creek and Los Angeles River showed greater than 400 mg/L. Therefore, a hardness value of 400 mg/L, was used to calculate CTR WQO. This is consistent with the preamble to the CTR, contained in federal register Section E.f. *Hardness* (p.31692), 40 CFR Part 131.

   b. **Interim Monitoring Requirements -** In accordance with the SIP, the Regional Board may impose interim monitoring requirements upon the Discharger, so that the Discharger obtains adequate ambient, background water data for priority pollutants upstream of the discharge point as well as suitable effluent data. The Executive Officer directed the Discharger to begin an interim monitoring program for the duration of 18 months, beginning July 2001. The Discharger collected the eighteen required samples and reported the results quarterly to the Regional Board. After additional information is gathered, Regional Board staff will conduct RPA once again, to determine if additional numeric limitations are necessary. Section 1.3, Step 8, of the SIP authorizes the Regional Board to use the gathered data to conduct RPA, as outlined in Steps 1 through 7, and determine if a water quality-based effluent limitation is required.

      A reopener provision is included in this Order that allows the permit to be reopened to allow the inclusion of new numeric limitations for any constituent that exhibits reasonable potential to cause or contribute to exceedance of applicable water quality objectives.

c. The numeric limitations contained in this Order are intended to protect and maintain existing and potential beneficial uses of the receiving waters. Environmental benefits provided by these limitations are reasonable and necessary.

d. Regional Board staff have determined that cyanide, selenium, mercury, bis2(ethylhexyl)phthalate, and dichlorobromomethane in effluent the potential to exceed respective CTR objectives, and, therefore, require CTR-based effluent limitations. Because copper, lead, and cadmium were detected in the effluent, and because receiving water concentrations exceed the respective CTR criteria limitations have been prescribed for these constituents.

2. This Order is consistent with State and Federal antidegradation policies in that it does not authorize a change in the quantity of wastewater discharged by the facility, nor does it authorize a change or relaxation in the manner or level of treatment. As a result, both the quantity and quality of the discharge are expected to remain the same consistent with antidegradation policies. The accompanying monitoring and reporting program requires continued data collection and if monitoring data show a 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 potential and existing uses and conforms with antidegradation policies and antibacksliding provisions.

XII. PROPOSED EFFLUENT LIMITATIONS

1. Numeric toxic constituent limitations are based on the Basin Plan the narrative water quality objective for toxic constituents, “All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in, human, plant, animal, or aquatic life”; on the CTR; and, the interpretation of the Basin Plan narrative criteria using USEPA’s 304(a) nationally recommended water quality criteria. For toxic constituents that have no reasonable potential to cause or contribute to excursions of water quality objectives, no numerical limitations are prescribed.

2. Pursuant to 40 CFR 122.45(d)(2), for a POTWs 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 for POTWs. It is impracticable to only include 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. As

a result, maximum daily effluent limitations, as referenced in 40 CFR 122.45(d)(1), are included in the permit.

3. Furthermore, Section 1.4 of the SIP requires the step-by-step procedure to "adjust" or convert CTR numeric criteria into Average Monthly Effluent Limitations (AMELs) and Maximum Daily Effluent Limitations (MDELs), for toxics.

   A. Step 3 of Section 1.4 of the SIP (Page 6) lists the statistical equations that adjust CTR criteria for effluent variability.

   B. Step 5 of Section 1.4 of the SIP (Page 8) lists the statistical equations that adjust CTR criteria for averaging periods and exceedance frequencies of the criteria/ objectives. This section also reads, "For this method only, maximum daily effluent limitations shall be used for publicly-owned treatment works (POTWs) in place of average weekly limitations.

4. Table R1 is the spreadsheet that staff used to calculate the AMELs and MDELs for priority pollutants.

5. 40 CFR section 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 section 122.45(f)(2) allows the permit writer, at its 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.

6. 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.

   A. Effluent Limitations:

      1. Limits for Conventional and non-conventional pollutants for Discharge Serial Nos. 001, 002 and 003 into Malibu Creek, and Discharge Serial No. 005 into the Los Angeles River :

Constituent	Units	Discharge Limitations		
		Daily Maximum [1]	Weekly Average[2]	Monthly Average[2]
BOD_5 20°C [4]	mg/L	20		10
	lbs/day[3]	2,686		1,343
Suspended solids[4]	mg/L	10		5
	lbs/day[3]	1,343		671
Settleable solids [5]	ml/L	0.2	--	0.1
Oil and grease [6]	mg/L	10	--	5

Constituent	Units	Discharge Limitations		
		Daily Maximum [1]	Weekly Average[2]	Monthly Average[2]
	lbs/day[3]	1,343	--	671
Total residual chlorine [7]	mg/L	0.1[8]	--	--

Effluent discharge limitations when discharging to Malibu Creek through Discharge Serial Nos. 001, 002 and 003:

Constituent	Units	Discharge Limitations		
		Monthly Average[1]	Weekly Average[1]	Daily Maximum[2]
			--	--
			--	--
Total dissolved solids [10]	mg/L	2000	--	--
	lbs/day[3]	268,600	--	--
Chloride [10]	mg/L	500	--	--
	lbs/day[3]	67,137	--	--
Sulfate [10]	mg/L	500	--	--
	lbs/day[3]	67,137	--	--
Boron [10]	mg/L	2	--	--
	lbs/day[3]	269	--	--
MBAS [11]	mg/L	0.5	--	--
	lbs/day[3]	67	--	--
Total ammonia (as N) [12]	mg/L	[13]	--	[14]
	lbs/day	[3]	--	[3]

TMDL WLA Nutrient Limits For Malibu Creek Discharge through Discharge Serial Nos. 001, 002 and 003:

For Summer Months (April 15 - November 15)

Constituent	Units	Discharge Limitations		
		Monthly Average[1]	Weekly Average[1]	Daily Maximum[2]
Nitrate + Nitrite (as N)	mg/L	8	--	--
	lbs/day[3]	1,074	--	--
Total Phosphorus	mg/L	3#	--	--
	lbs/day[3]	402	--	--

EPA Established Nutrient Limits for Malibu Creek

For Winter Months (November 16 - April 14)

Constituent	Units	Discharge Limitations		
		Monthly Average[1]	Weekly Average[1]	Daily Maximum[2]
Nitrate + Nitrite (as N)	mg/L	8	--	--

Constituent	Units	Discharge Limitations		
		Monthly Average[1]	Weekly Average[1]	Daily Maximum[2]
	lbs/day[3]	1,074	--	--
Total Phosphorus	mg/L	3#		4#
	lbs/day[3]	402		805

Effluent Discharge Limitations When Discharging to Los Angeles River through Discharge Serial No. 005:

Constituent	Units	Discharge Limitations		
		Monthly Average[1]	Weekly Average[1]	Daily Maximum[2]
Fluoride [9]	mg/L	1.6	--	--
	lbs/day[3]	215	--	--
Total dissolved solids [10]	mg/L	950	--	--
	lbs/day[3]	127,560	--	--
Chloride [10]	mg/L	190 [5]	--	--
	lbs/day[3]	25,512	--	--
Sulfate [10]	mg/L	300	--	--
	lbs/day[3]	40,282	--	--
Boron [10]	mg/L	1.5	--	--
	lbs/day[3]	201	--	--
MBAS [11]	mg/L	0.5	--	--
	lbs/day[3]	67	--	--
Nitrate + Nitrite (as N)	mg/L	8 [16]	--	--
	lbs/day[3]	1074	--	--
Nitrite [15] (as N)	mg/L	1 [16]	--	--
	lbs/day[3]	134	--	--
Nitrate (as N)	mg/L	8 [16]	--	--
	lbs/day[3]	1343	--	--
Total ammonia (as N) [12]	mg/L	[13]	--	[14]
	lbs/day[3]	[3]	--	[3]
	mg/L	2.3 [17]	--	10.1 [17]
Total Phosphorus	mg/L	3#		4#
	lbs/day[3]	402		805

EPA did not establish phosphorus limit for winter months for discharge to Malibu Creek. Antidegradation policy dictates that the existing permit limit be retained which applies to both Malibu Creek and the Los Angeles River discharge because eutrophication and algal growth occurs downstream of the Tapia discharge in Malibu Creek due to nutrient loading. This limit still reflects performance data of the plant, and as such no additional treatment is needed to comply with the limit. Thus, there is no "economic consideration" is needed.

Limits based on statistical analysis on performance data from January 2000 through October 2004, using P-limit software or maximum detected effluent concentration.

[1] Average Monthly Discharge Limitation means the highest allowable average of daily discharge over a calendar month, calculated as the sum of all daily discharges measures during that month divided by the number of days on which monitoring was performed.

Average Weekly Discharge Limitation means the highest allowable average of daily discharge over a calendar week, calculated as the sum of all daily discharges measures during that week divided by the number of days on which monitoring was performed.

[2] The daily maximum effluent concentration limit shall apply to both flow weighted 24-hour composite samples and grab samples, as specified in the Monitoring and Reporting Program (Attachment T). It may apply to grab samples if the collection of composite samples for those constituents is not appropriate because of instability in the constituents.

[3] The mass emission rates are based on the plant design flow rate of 16.1 mgd, and are calculated as follows: Flow (MDG) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

[4] See detailed information on the following Section XII.6.B.a.

[5] See detailed information on the following Section XII.6.B.b.

[6] See detailed information on the following Section XII.6.B.c.

[7] See detailed information on the following Section XII.6.B.d.

[8] For the determination of compliance with total residual chlorine limit, one of the following applies:

a. Total residual chlorine concentration excursions of up to 0.3 mg/L, at the point in treatment train immediately following dechlorination, shall not be considered violations of this requirement provided the total duration of such excursions do not exceed 15 minutes during any calendar day. Peaks in excess of 0.3 mg/L lasting less than one minute shall not be considered a violation of this requirement; or

b. For continuous total residual chlorine recording devices that require greater than one minute to level off after the detection of a spike: if it can be demonstrated that a stoichiometrically appropriate amount of dechlorination chemical has been added to effectively dechlorinate the effluent to 0.1 mg/L or less, then the exceedance over one minute, but not for more than five minutes, will not be considered to be a violation.

[9] See detailed information on the following Section XII.6.B.e.

[10] See detailed information on the following Section XII.6.B.f.

[11] See detailed information on the following Section XII.6.B.h.

[12] See detailed information on the following Section XII.6.B.j.

[13] The Discharger must comply with the updated ammonia water quality objectives in the Basin Plan, Table 3-3 (Attachment H) which resulted from Resolution No. 2002-011 adopted by the Regional Board on April 25, 2002.

For compliance with Criteria Continuous Concentration (CCC) in the Attachment H, the pH and temperature samples collected in the receiving water downstream of the discharge and the ammonia nitrogen sample collected in the effluent, shall be taken and reported at the same time. Shall there be no receiving water present, the pH and temperature of the effluent at the end of pipe shall be determined and reported. However, the Discharger has the option of using average effluent pH and temperature, as approved by the Executive Officer.

[14] The Discharger must comply with the updated ammonia water quality objectives in the Basin Plan, Table 3-1 (Attachment H) which resulted from Resolution No. 2002-011 adopted by the Regional Board on April 25, 2002.

For compliance with Criteria Maximum Concentration (CMC) in the Attachment H, the pH sample collected in the receiving water downstream of the discharge and the ammonia nitrogen sample collected in the effluent, shall be taken and reported at the same time. Should there be no receiving water present, the pH of the

effluent at the end of pipe shall be determined and reported. However, the Discharger has the option of using average effluent pH and temperature, as approved by the Executive Officer.

[15] See detailed information on the following Section XII.6.B.i.

[16] This is the water quality objective for nitrate plus nitrite as nitrogen and nitrite nitrogen in the current Basin Plan. This effluent limitation applies immediately and will stay in effect until the Nutrient TMDL for the Los Angeles River, Resolution No. 2003-009, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Include a TMDL for Nitrogen Compounds in the Los Angeles River* (*Nitrogen Compounds TMDL)*, is approved by USEPA (i.e., the effective date of the TMDL). If U.S. EPA does not approve the *Nitrogen Compounds TMDL*, this effluent limitation and its corresponding mass-based effluent limitation will remain in effect until revised by the Regional Board.

[17] This is the waste load allocation (WLA), according to the Nitrogen TMDL Resolution No. 2003-009, adopted by the Regional Board on July 10, 2003. The waste load allocation will ultimately serve as the effluent limitation for the discharge. This limit becomes effective after the USEPA approves the Nitrogen TMDL. If U.S. EPA does not approve the *Nitrogen TMDL*, this effluent limitation will not apply.

B. Basis for Conventional and nonconventional pollutants:

a. *Biochemical Oxygen Demand (BOD) and Suspended solids*

Biochemical oxygen demand (BOD) is a measure of the quality of the organic matter in the water and, therefore, the water's potential for becoming depleted in dissolved oxygen. As organic degradation takes place, bacteria and other decomposers use the oxygen in the water for respiration. Unless there is a steady re-supply of oxygen to the system, the water will quickly become depleted of oxygen. Adequate dissolved oxygen levels are required to support aquatic life. Depressions of dissolved oxygen can lead to anaerobic conditions resulting in odors, or, in extreme cases, in fish kills.

40 CFR Part 133 describes the minimum level of effluent quality attainable by secondary treatment, for BOD and suspended solids, as:
- the monthly average shall not exceed 30 mg/L and
- the 7-day average shall not exceed 45 mg/L.

Tapia WRF provides tertiary treatment, as such, the limits in the permit are more stringent than secondary treatment requirements. The Plant achieves solids removal that are better than secondary-treated wastewater by adding a polymer (Alum) to enhance the precipitation of solids, and by filtering the effluent.

The monthly average, the 7-day average, and the daily maximum limits cannot be removed because none of the antibacksliding exceptions under apply. Those limits were all included in the previous permit and the Tapia WRF has been able to meet all three limits (monthly average, the 7-day average, and the daily maximum), for both BOD and suspended solids.

In addition to having mass-based and concentration-based effluent limitations for BOD and suspended solids, the Tapia WRF also has a percent removal requirement for these two constituents. In accordance with 40 CFR section 133.102(a)(3) and 133.102(b)(3), the 30-day average percent removal shall not be less than 85 percent. Percent

removal is defined as a percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the 30-day average values of the raw wastewater influent pollutant concentrations to the facility and the 30-day average values of the effluent pollutant concentrations for a given time period.

b. *Settleable solids*

Excessive deposition of sediments can destroy spawning habitat, blanket benthic (bottom dwelling) organisms, and abrade the gills of larval fish. The limits for settleable solids are based on the Basin Plan (page 3-16) narrative, "Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses." The numeric limits are empirically based on results obtained from the settleable solids 1-hour test, using an Imhoff cone.

It is impracticable to use a 7-day average limitation, because short-term spikes of settleable solid levels that would be permissible under a 7-day average scheme would not be adequately protective of all beneficial uses. The monthly average and the daily maximum limits cannot be removed because none of the antibacksliding exceptions apply. The monthly average and daily maximum limits were both included in the previous permit (Order 95-078) and the Tapia WRF has been able to meet both limits.

c. *Oil and grease*

Oil and grease are not readily soluble in water and form a film on the water surface. Oily films can coat birds and aquatic organisms, impacting respiration and thermal regulation, and causing death. Oil and grease can also cause nuisance conditions (odors and taste), are aesthetically unpleasant, and can restrict a wide variety of beneficial uses. The limits for oil and grease are based on the Basin Plan (page 3-11) narrative, "Waters shall not contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses."

The numeric limits are empirically based on concentrations at which an oily sheen becomes visible in water. It is impracticable to use a 7-day average limitation, because spikes that occur under a 7-day average scheme could cause a visible oil sheen. A 7-day average scheme would not be sufficiently protective of beneficial uses. The monthly average and the daily maximum limits cannot be removed because none of the antibacksliding exceptions apply. Both limits were included in the previous permit and the Tapia WRF has been able to meet both limits.

d. *Residual chlorine*

Disinfection of wastewaters with chlorine produces a chlorine residual. Chlorine and its reaction products are toxic to aquatic life. The limit for

residual chlorine is based on the Basin Plan (page 3-9) narrative, "Chlorine residual shall not be present in surface water discharges at concentrations that exceed 0.1 mg/L and shall not persist in receiving waters at any concentration that causes impairment of beneficial uses."

It is impracticable to use a 7-day average or a 30-day average limitation, because it is not as protective as of beneficial uses as a daily maximum limitation is. Chlorine is very toxic to aquatic life and short term exposures of chlorine may cause fish kills.

e. *Fluoride*

The existing permit effluent limitation of 1.6 mg/l for fluoride was developed for the Los Angeles River discharge based on the Basin Plan incorporation of Title 22, *Drinking Water Standards,* by reference, for the protection of GWR. It is practicable to express the limit as a monthly average, since fluoride is not expected to cause acute effects on beneficial uses.

f. *Total Dissolved Solids, Sulfate, Chloride, and Boron*

The limits for total dissolved solids, sulfate, and boron are based on Basin Plan Table 3-8 (page 3-13), for Malibu Creek Watershed and Los Angeles River Watershed.

h. *Methylene Blue Activated Substances (MBAS)*

The MBAS procedure tests for the presence of anionic surfactants (detergents) in surface and ground waters. Surfactants disturb the water surface tension, which affects insects and can affect gills in aquatic life. The MBAS can also impart an unpleasant soapy taste to water, as well as cause scum and foaming in waters, which impact the aesthetic quality of both surface and ground waters.

Given the nature of the facility (a POTW) which accepts domestic wastewater into the sewer system and treatment plant, and the characteristics of the wastes discharged, the discharge has reasonable potential to exceed both the numeric MBAS water quality objective (WQO) and the narrative WQO for prohibition of floating material such as foams and scums. Therefore an effluent limitation is required.

In self-monitoring reports submitted to the Regional Board under MRP requirements, the Discharger has reported MBAS concentrations in the effluent in excess of 0.5 mg/L. The 0.5 mg/L concentration (which has been determined to be protective of beneficial uses and the aesthetic quality of waters), is based on the Department of Health Services' secondary drinking water standard, and on the Basin Plan WQO (p.3-11) which reads, "Waters shall not have MBAS concentrations greater than 0.5 mg/L in waters designated MUN." While the wastewater from this POTW is not directly discharged into a MUN designated surface water body, eventually it will percolate into unlined reaches of the Los Angeles River [via ground water recharge designated beneficial use (GWR)] to ground water designated for MUN beneficial use. In addition, the Basin

Plan states that "Ground water shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses." Therefore, the secondary MCL should be the MBAS limit for this discharge to protect ground water recharge and the MUN use of the underlying ground water, while also protecting surface waters from exhibiting scum or foaming.

Since the Basin Plan objective is based on a secondary drinking water standard, it is practicable to have a monthly average limitation in the permit.

i. *Total inorganic nitrogen*

Total inorganic nitrogen is the sum of Nitrate-nitrogen and Nitrite-nitrogen. Nitrogen is considered a nutrient. High nitrate levels in drinking water can cause health problems in humans. Infants are particularly sensitive and can develop methemoglobinemia (blue-baby syndrome). The nitrite-N limit of 1 mg/L is based on the Basin Plan WQO located on Page 3-11.

1. **Algae**. Reaches of the Malibu Creek are 303(d) listed for algae. Excessive growth of algae and/or other aquatic plants can degrade water quality. Algal blooms sometimes occur naturally, but they are often the result of excess nutrients (i.e., nitrogen, phosphorus) from waste discharges or nonpoint sources. These algal blooms can lead to problems with tastes, odors, color, and increased turbidity and can depress the dissolved oxygen content of the water, leading to fish kills. Floating algal scum and algal mats are also an aesthetically unpleasant nuisance.

   The 303(d) listing for algae is being addressed by applying the narrative WQO for biostimulatory substances, "Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses," and other relevant information to arrive at a mass based-limit intended to be protective of the beneficial uses, pursuant to 40 CFR 122.44(d). Total nitrogen will be the indicator parameter intended to control algae, pursuant to 40 CFR 122.44(d)(1)(vi)(C).

2. **Concentration-based limit**. The effluent limit for total inorganic nitrogen (NO2-N + NO3-N) of 8 mg/L is based on Basin Plan Table 3-8 (page 3-13), for Los Angeles River Watershed. The permit limit for nitrate in the Malibu Creek Watershed is also 8 mg/L based upon the USEPA's TMDL.

3. **Mass-based limits.** The mass emission rates are based on the plant design flow rate of 16.1 mgd.

j. *Ammonia-nitrogen*

1. Ammonia is a pollutant routinely found in the wastewater effluent of POTWs, in landfill-leachate, as well as in run-off from agricultural fields where commercial fertilizers and animal manure are applied. Ammonia exists in two forms – un-ionized ammonia (NH_3) and the ammonium ion (NH_4^+). They are both toxic, but the neutral, un-ionized ammonia species (NH_3) is much more toxic, because it is able to diffuse across the epithelial membranes of aquatic organisms much more readily than the charged ammonium ion. The form of ammonia is primarily a function of pH, but it is also affected by temperature and other factors. Additional impacts can also occur as the oxidation of ammonia lowers the dissolved oxygen content of the water, further stressing aquatic organisms. Oxidation of ammonia to nitrate may lead to groundwater impacts in areas of recharge. [There is groundwater recharge in these reaches]. Ammonia also combines with chlorine (often both are present in POTW treated effluent discharges) to form chloramines – persistent toxic compounds that extend the effects of ammonia and chlorine downstream.

2. Ammonia is 303(d) listed in the Los Angeles River. Since ammonia has reasonable potential to cause or contribute to an excursion of a water quality objective, a water quality-based effluent limitation for total ammonia is required in order to be protective of the water quality objective.

3. The 1994 Basin Plan contained water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through Tables 3-4. However, those ammonia objectives were revised on April 25, 2002, by the Regional Board, with the adoption of Resolution No. 2002-011, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (including enclosed bays, estuaries and wetlands) with Beneficial Use designations for protection of Aquatic Life*. Resolution No. 2002-011 was approved by the State Board, the Office of Administrative Law, and USEPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively, and is now in effect. The final effluent limitations for ammonia prescribed in this Order are based on the revised ammonia criteria (see Attachment H) and apply at the end of pipe.

k. Phosphorous

Excess phosphorous is a cause for algal bloom and eutrophication, as well as decrease in dissolved oxygen. The nexus to water quality is that both receiving water bodies are impaired for nutrients. Therefore, the permit includes a limit for phosphorus based upon the existing permit limit, based upon antidegradation, and as translation of the Basin Plan narrative "Biostimulatory substances include excess nutrients (nitrogen, phosphorus) and other compounds that stimulate aquatic growth. In addition to being aesthetically unpleasant (causing taste, odor, or color problems), this excessive growth can also cause

other water quality problems. Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses". This limit reflects performance data of the plant, and as such no additional treatment is needed to comply with the limit. Thus, there is no "economic consideration" needed. Further, the *City of Burbank* decision would not require a "comprehensive economic impact analysis, only that the Regional Board consider economics.

l. *Coliform/Bacteria*

Total and fecal coliform bacteria are used to indicate the likelihood of pathogenic bacteria in surface waters. Given the nature of the facility, a wastewater treatment plant, pathogens are likely to be present in the effluent in cases where the disinfection process is not operating adequately. As such, the permit contains the following:

1. Effluent Limitations:

   a. The 7 day median number of coliform organisms at some point in the treatment process must not exceed 2.2 Most Probable Number (MPN) per 100 milliliters, and

   b. The number of coliform organisms must not exceed 23 MPN per 100 milliliters in more than one sample within any 30-day period.

   These disinfection-based effluent limitations for coliform are for human health protection and are consistent with requirements established by the Department of Health Services. These limits for coliform must be met at the point of the treatment train immediately following disinfection, as a measure of the effectiveness of the disinfection process.

2. Receiving Water Limitation

   a. Geometric Mean Limits

      * E.coli density shall not exceed 126/100 mL.
      * Fecal coliform density shall not exceed 200/100 mL.

   b. Single Sample Limits

      * E.coli density shall not exceed 235/100 mL.
      * Fecal coliform density shall not exceed 400/100 mL.

   These receiving water limitations are based on Resolution No. 01-018, Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Bacteria Objectives for Water

Bodies Designated for Water Contact Recreation, adopted by the Regional Board on October 25, 2001. The Resolution was approved by State Board, OAL, and USEPA, on July 18, 2002, September 19, 2002, and September 25, 2002, respectively.

m. pH

The hydrogen ion activity of water (pH) is measured on a logarithmic scale, ranging from 0 to 14. While the pH of "pure" water at 25°C is 7.0, the pH of natural waters is usually slightly basic due to the solubility of carbon dioxide from the atmosphere. Minor changes from natural conditions can harm aquatic life. The effluent limitation for pH which reads, "the wastes discharged shall at all times be within the range of 6.5 to 8.5," is taken from the Basin Plan (Page 3-15) which reads" the pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharge.

n. Turbidity

Turbidity is an expression of the optical property that causes light to be scattered in water due to particulate matter such as clay, silt, organic matter, and microscopic organisms. Turbidity can result in a variety of water quality impairments. The effluent limitation for turbidity which reads, "For the protection of the water contact recreation beneficial use, the wastes discharged to water courses shall have received adequate treatment, so that the turbidity of the wastewater does not exceed: (a) a daily average of 2 Nephelometric turbidity units (NTUs); and (b) 5 NTUs more than 5 percent of the time (72 minutes) during any 24 hour period," is based on the Basin Plan (Page 3-17).

o. Radioactivity

Radioactive substances are generally present in natural waters in extremely low concentrations. Mining or industrial activities increase the amount of radioactive substances in waters to levels that are harmful to aquatic life, wildlife, or humans. The existing effluent limitation for radioactivity which reads, "Radioactivity of the wastes discharged shall not exceed the limits specified in Title 22, Chapter 15, Article 5, Section 64443, of the California Code of Regulations, or subsequent revisions," is based on the Basin Plan incorporation of Title 22, *Drinking Water Standards,* by reference, to protect the surface water MUN beneficial use. However, the Regional Board has new information about the appropriate designated uses for the water body, and based on the current designated uses, a limit for Radioactivity is unnecessary and inappropriate unless discharge is to a reach used for groundwater recharge, where Title 22-based limits apply. Which is the case for discharge to the Los Angeles River. Therefore, the accompanying Order will contain a limit for radioactivity to protect the GWR beneficial use.

C. *Toxicity.*

Final effluent water quality data, contained in the Discharger's monitoring reports, also shows that chronic toxicity in the effluent has exceeded 1TUc (EPA WQO) several times. Therefore, pursuant to the TSD, reasonable potential exists for toxicity. As such, the permit should contain a numeric effluent limitation for toxicity.

The following support the inclusion of toxicity numeric effluent limitations for chronic toxicity:

a. 40 CFR 122.2 (Definition of Effluent Limitation);

b. 40 CFR 122.44(d)(v) – limits on whole effluent toxicity are necessary when chemical-specific limits are not sufficient to attain and maintain applicable numeric or narrative water quality standards;

c. 40 CFR 122.44(d)(vi)(A) – where a State has not developed a water quality criterion for a specific pollutant that is present in the effluent and has reasonable potential, the permitting authority can establish effluent limits using numeric water quality criterion;

d. Basin Plan objectives and implementation provisions for toxicity;

e. Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity Programs Final May 31, 1996;

f. Whole Effluent Toxicity (WET) Control Policy July 1994; and,

g. Technical Support Document (several chapters and Appendix B).

However, the circumstances warranting a numeric chronic toxicity effluent limitation when there is reasonable potential were reviewed by the State Water Resources Control Board (State Board) in SWRCB/OCC Files A-1496 & A-1496(a) [Los Coyotes/Long Beach Petitions]. On September 17, 2003, at a public hearing, the State Board decided to defer the issue of numeric chronic toxicity effluent limitations until Phase II of the SIP is adopted. In the mean time, the State Board replaced the numeric chronic toxicity limit with a narrative effluent limitation and a 1 TUc trigger, in the Long Beach and Los Coyotes WRP NPDES permits. This permit contains a similar chronic toxicity effluent limitation. This Order also contains a reopener to allow the Regional Board to modify the permit, if necessary, consistent with any new policy, law, or regulation.

Acute Toxicity Limitation:

The Dischargers may test for Acute toxicity by using USEPA's *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, October 2002 (EPA-821-R-02-012). Acute toxicity provisions in the accompanying Order are derived from the Basin Plan's toxicity standards (Basin Plan 3-16 and 3-17). The provisions require the

Discharger to accelerate acute toxicity monitoring and take further actions to identify the source of toxicity and to reduce acute toxicity.

Chronic Toxicity Limitation and Requirements:

Chronic toxicity provisions in the accompanying Order are derived from the Basin Plan's toxicity standards (Basin Plan 3-16 and 3-17). The provisions require the Discharger to accelerate chronic toxicity monitoring and take further actions to identify the source of toxicity and to reduce chronic toxicity. The monthly median trigger of 1.0 TU_c for chronic toxicity is based on *USEPA Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity (WET) Programs* Final May 31, 1996 (Chapter 2 – Developing WET Permitting Conditions, page 2-8). In cases where effluent receives no dilution or where mixing zones are not allowed, the 1.0 TU_c chronic criterion should be expressed as a monthly median. The "median" is defined as the middle value in a distribution, above which and below which lie an equal number of values. For example, if the results of the WET testing for a month were 1.5, 1.0, and 1.0 TU_c, the median would be 1.0 TU_c.

The *USEPA Regions 9 & 10 Guidance for Implementing Whole Effluent Toxicity (WET) Programs* Final May 31, 1996 (Chapter 2 – Developing WET Permitting Conditions, page 2-8) recommends two alternatives: using 2.0 TUc as the maximum daily limit; or using a statistical approach to develop a maximum daily effluent limitation.

D. Limits for priority pollutants for Discharge to Malibu Creek and Los Angeles River:

i. Effluent Limitations that apply to both Discharge Serial No. 001 into Malibu Creek and Discharge Serial No. 005 into the Los Angeles River:

CTR #[1]	Constituent	Units	Discharge Limitations	
			Monthly Average[2]	Daily Maximum
14	Cyanide [b]	µg/L	4.6[5] [6]	9.9[5] [6]
		lbs/day[4]	0.617	1.329
68	Selenium	µg/L	3.4[5] [6]	9.5[5] [6]
		lbs/day[4]	0.456	1.275
38	Dichlorobromomethane	µg/L	46	64
		lbs/day[4]	6.2	8.6

ii. Additional Effluent Limitation for Discharge Serial No. 001 into Malibu Creek:

CTR #[1]	Constituent	Units	Discharge Limitations	
			Monthly Average[2]	Daily Maximum
16	Bis(2ethylhexyl)phthalate[4][6]	µg/L	5.9	17
		lbs/day[4]	0.8	2.28
8	Mercury	µg/L	0.051[5]	0.151[5]

CTR #[1]	Constituent	Units	Discharge Limitations	
			Monthly Average[2]	Daily Maximum
		lbs/day[4]	0.0068	0.020

iii. Additional Effluent Limitations for Discharge Serial No. 005 into the Los Angeles River:

CTR #[1]	Constituent	Units	Discharge Limitations	
			Monthly Average[2]	Daily Maximum
16	Bis(2ethylhexyl)phthalate[4][6][C]	µg/L	4[7]	--
		lbs/day[4]	0.537	---
6	Copper[3], *	µg/L	19[5]	52[5]
		lbs/day[4]	2.55	6.98
6	Copper[3], #	µg/L	30	---
		lbs/day[4]	4.0	---
6	Copper[3], ##	µg/L	17	---
		lbs/day[4]	2.3	---
7	Lead[3], *	µg/L	10[5]	32[5]
		lbs/day[4]	1.34	4.29[5]
7	Lead[3], #	µg/L	22	---
		lbs/day[4]	2.9	---
7	Lead[3], ##	µg/L	62	---
		lbs/day[4]	8.3	---
4	Cadmium[3], *	µg/L	4[5]	12[5]
		lbs/day[4]	0.537	1.611
4	Cadmium[3], ##	µg/L	3.1	---
		lbs/day[4]	0.4	---
13	Zinc [3], ##	µg/L	159	---
		lbs/day[4]	21.3	---
8	Mercury	µg/L	0.051[5]	0.163[5]
		lbs/day[4]	0.0068	0.0218

* RPA triggered limits. These limits will be replaced by Waste Load allocations (WLAs) once TMDLs for these pollutants are adopted and become effective.

\# This is the WLA, according to the Los Angeles River Metals TMDL that was adopted by the Regional Board in June 2005. The WLA will ultimately serve as the effluent limitation for the discharge. This limit becomes

effective after USEPA approves the Los Angeles River Metals TMDL. If USEPA does not approve the TMDL this effluent limitation and its corresponding mass-based limitation will not apply.

This is the WLA, according to the Los Angeles River Metals TMDL that was adopted by the Regional Board in June 2005. The WLA will ultimately serve as the effluent limitation for the discharge. This limit becomes effective after USEPA approves the Los Angeles River Metals TMDL. If USEPA does not approve the TMDL this effluent limitation and its corresponding mass-based limitation will not apply.

[1] This number corresponds to the compound number found in Table 1 of CTR. It is simply the order in which the 126 priority pollutants were listed 40 CFR part 131.38 (b)(1).

[2] Average Monthly Discharge Limitation means the highest allowable average of daily discharge over a calendar month, calculated as the sum of all daily discharges measured during that month divided by the number of days on which monitoring was performed.

[3] The mass emission rates are based on the plant design flow rate of 16.1 mgd, and calculated as follows: Flow (MDG) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

[4] For priority pollutants, Section 2.4.5 of CTR *Compliance Determination*, reads, "Dischargers shall be deemed out of compliance with an effluent limitation if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported ML."

[5] There was RPA (tier 3) for the Tapia WRF effluent to exceed the CTR human health organisms only criteria, therefore, a CTR-based effluent limitation was included in the accompanying Order.

[6] This effluent limitation will not be in effect until May 17, 2010, and until that time the Discharger shall comply with the interim limits established in Section I.A.(10) of the accompanying NPDES Order No. R4-2005-0074.

[7] This effluent limitation will not be in effect until May 17, 2010, and until that time the Discharger shall comply with the interim limits established in the Time Schedule Order No. R4-2005-0075.

Additional Footnotes - Priority Pollutants:

a. Based on most stringent CTR criteria [Criterion Continuous Concentration (CCC)] for the protection of freshwater aquatic life. To arrive at this calculated limitation, the CTR CCC was adjusted, according to SIP Section 1.4.

   Federal Register Vol. 65, No. 97, page 31689, discusses the basis for the aquatic life criteria in the CTR. The Criterion Maximum Concentration (CMC), a short term concentration limit, and the Criterion Continuous Concentration (CCC), a four day concentration limit, are designed to provide protection of aquatic life and its uses from acute and chronic toxicity to animals and plants. The criteria are intended to identify average pollutant concentrations which will produce water quality generally suited to maintenance of aquatic life and designated uses while restricting the duration of excursions over the average so that total exposures will not cause unacceptable adverse effects.

   Federal Register Vol. 65, No. 97, page 31691, discusses how CCC is intended to be the highest concentration that could be maintained indefinitely in a water body without causing an unacceptable effect on aquatic community or its uses.

b. Based on most stringent CTR criteria for the protection of human health from consumption of organisms only. CTR criteria was adjusted according to SIP Section 1.4, to arrive at this calculated limitation.

c. Based on the Basin Plan chemical constituent incorporation of Title 22, *Drinking Water Standards,* by reference, for the protection of GWR beneficial use.

E. Basis for priority pollutants:

Mixing zones, dilution credits, WERs, and attenuation factors are not used in the accompanying order and would be inappropriate to grant, at this time, in light of the factors discussed in Section VII.17.A. through I of this Fact Sheet.

Allowance of a mixing zone is in the Regional Board's discretion under Section 1.4.2 of the SIP and under the Basin Plan (Basin Plan Chapter 4, page 30). If the Discharger subsequently conducts appropriate mixing zone and dilution credit studies, the Regional Board can evaluate the propriety of granting a mixing zone or establishing dilution credits.

F. Example calculation: Cyanide

Is a limit required? What is RPA?
From Table R, *Reasonable Potential & Limit Derivation*, we determined that Reasonable potential analysis (RPA) = Yes, therefore a limit is required.

Step 1 – Identify applicable water quality criteria.
From California Toxics Rule (CTR), we can obtain the Criterion Maximum Concentration (CMC) and the Criterion Continuous Concentration (CCC).

Freshwater Aquatic Life Criteria:
CMC = 22 µg/L (CTR page 31712, column B1) and
CCC = 5.2 µg/L (CTR page 31712, column B2); and

Human Health Criteria for Water & Organisms = 700 µg/L.

Step 2 – Calculate effluent concentration allowance (ECA)
ECA = Criteria in CTR, since no dilution is allowed.

Step 3 – Determine long-term average (LTA) discharge condition

a. Calculate CV:
CV = Standard Deviation / Mean
= 0.6 (By default because data was > 80% nondetect, SIP page 6)

b. Find the ECA Multipliers from SIP Table 1 (page 7), or by calculating them using equations on SIP page 6. When CV = 0.6, then:
ECA Multiplier acute = 0.321 and
ECA Multiplier acute = 0.527.

c. LTA acute = ECA acute x ECA Multiplier acute
= 22 µg/L x 0.321 = 7.062 µg/L

d. LTA chronic = ECA chronic x ECA Multiplier chronic
= 5.2 µg/L x 0.527 = 2.7404 µg/L

Step 4 – Select the lowest LTA.
In this case, LTA chronic < LTA acute, therefore lowest LTA = 2.74 µg/L

Step 5 – Calculate the Average Monthly Effluent Limitation (AMEL) & Maximum Daily Effluent Limitation (MDEL) for AQUATIC LIFE.

a. Find the multipliers. You need to know CV and n (frequency of sample collection per month). If effluent samples are collected 4 times a month or less, then n = 4. CV was determined to be 0.6 in a previous step.
AMEL Multiplier = 1.55
MDEL Multiplier = 3.11

b. AMEL aquatic life = lowest LTA (from Step4) x AMEL Multiplier
= 2.74 µg/L x 1.55 = 4.2576 µg/L

c. MDEL aquatic life = lowest LTA (from Step4) x AMEL Multiplier
= 2.74 µg/L x 3.11 = 8.5226 µg/L

Step 6 – Find the Average Monthly Effluent Limitation (AMEL) & Maximum Daily Effluent Limitation (MDEL) for HUMAN HEALTH.

a. Find factors. Given CV = 0.6 and n = 4.
For AMEL human health limit, there is no factor.
The MDEL/AMEL human health factor = 2.01

b. AMEL human health = ECA = 700 µg/L

c. MDEL human health = ECA x MDEL/AMEL factor
= 700 µg/L x 2.01 = 1407

Step 7 – Compare the AMELs for Aquatic life and Human health and select the lowest. Compare the MDELs for Aquatic life and Human health and select the lowest.

a. Lowest AMEL = 4.3 µg/L (Based on Aquatic life protection)

b. Lowest MDEL = 8.5 µg/L (Based on Aquatic life protection)

G. A numerical limit has not been prescribed for a toxic constituent if it has been determined that it has no reasonable potential to cause or contribute to excursions of water quality standards. A narrative limit to comply with all water quality objectives is provided in *Standard Provisions* for the priority pollutants which have no available numeric criteria.

H. The numeric limitations contained in the accompanying Order were derived using best professional judgement and are based on applicable state and federal authorities, and as they are met, will be in conformance with the goals of the aforementioned water quality control plans, and water quality criteria; and will protect and maintain existing and potential beneficial uses of the receiving waters.

XIII. INTERIM REQUIREMENTS

1. Pollutant Minimization Program

A. The accompanying Order provides for the use of Pollutant Minimization Program, developed in conformance with Section 2.4.5.1 of the SIP, when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods included in the permit in accordance with sections 2.4.2 or 2.4.3 above, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organisms tissue sampling) that a priority pollutant is present in the discharger's effluent above an effluent limitation.

B. The Discharger shall develop a Pollutant Minimization Program (PMP), in accordance with Section 2.4.5.1.,of the SIP, if all of the following conditions are true, and shall submit the PMP to the Regional Board within 120 days of determining the conditions are true:

a. when there is evidence that the priority pollutant is present in the effluent above an effluent limitation and either:

i. A sample result is reported as detected but not quantified (DNQ) and the effluent limitation is less than the reported ML; or

ii. A sample result is reported as nondetect (ND) and the effluent limitation is less than the MDL.

b. Examples of evidence that the priority pollutant is present in the effluent above an effluent limitation are:

i. sample results reported as DNQ when the effluent limitation is less than the method detection limit (MDL);

ii. sample results from analytical methods more sensitive than those methods included in the permit in accordance with Sections 2.4.2 or 2.4.3;

iii. presence of whole effluent toxicity;

iv. health advisories for fish consumption; or,

v. results of benthic or aquatic organism tissue sampling.

C. The goal of the PMP is to reduce all potential sources of a priority pollutant(s) through pollution minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the WQBEL.

D. The Discharger shall propose a plan with a logical sequence of actions to achieve full compliance with the limits in this Order. The first phase of the plan is to investigate the sources of the high levels of contaminants in the collection system. If the sources can be identified, source reduction measures (including, when appropriate, Pollution Minimization Plans) will be instituted. At the time this Order

is considered, the Discharger is unsure whether or not all sources contributing to the high contaminant levels can be identified. Therefore, a parallel effort will be made to evaluate the appropriateness of Site Specific Objectives (SSO) and, where appropriate, Use Attainability Analyses (UAA), and modifications to and/or construction of treatment facilities. If it is determined that a SSO or UAA is necessary and appropriate, the Discharger will submit a written request for a SSO study, accompanied by a preliminary commitment to fund the study, to the Regional Board. The Discharger will then develop a workplan and submit it to the Regional Board for approval prior to the initiation of the studies.

2. Interim Limits

A. The Tapia WRF may not be able to achieve immediate compliance with the limits for mercury, cyanide, selenium, dichlorobromomethane and bis(2-ethylhexyl)phthalate contained in the accompanying Order Section I.A.2.b Data submitted in previous self-monitoring reports indicate that these constituents have been detected in the effluent/receiving water, at least once, at a concentration greater than the new limit proposed in the accompanying Order.

B. 40 CFR, Section 131.38(e) provides conditions under which interim effluent limits and compliance schedules may be issued. However, until recently, the Basin Plan did not allow inclusion of interim limits and compliance schedules in NPDES permits for effluent limits.

1. With the Regional Board adoption and USEPA approval of Resolution No. 2003-001, compliance schedules can be allowed in NPDES permits if:

a. the effluent limit implements new, revised, or newly interpreted water quality standards, or

b. the effluent limit implements TMDLs for new, revised or newly interpreted water quality standards.

However, the provisions under Resolution No. 2003-001 do not apply to any constituent with a final effluent limitation.

2. The SIP allows inclusion of interim limits in NPDES permits for CTR-based priority pollutants. The CTR provides for a five-year maximum compliance schedule, while the SIP allows for longer, TMDL-based compliance schedule. CTR's Compliance Schedule provisions sunseted on May 18, 2005. After this date, the provisions of the SIP allow for Compliance Schedules not to exceed five years from issuance or past May 17, 2010, which ever is sooner. However, the USEPA has yet to approve the longer compliance schedules. Therefore, this Order includes interim limits and compliance schedules for CTR-based priority pollutant limits, for a maximum of five years, when the Discharger has been determined to have problems in meeting the new limits. This Order also includes a reopener to allow the Regional Board to grant TMDL-based compliance

schedules if the USEPA approves the longer compliance schedule provisions of the SIP.

3. For new non-CTR-based limits nitrate (for both the Malibu Creek and Los Angeles River discharge) and (bis(2-ethylhexyl)phthalate) (for the Los Angeles River discharge) prescribed in this Order, for which the Discharger will not be able to meet immediately, interim limits and compliance dates are provided in an accompanying Time Schedule Order R4-2005-0075.

C. The Discharger has in place a source control and pollutant minimization approach through its existing pollutant minimization strategies and through the pretreatment program. The duration of interim requirements established in this Order was developed in coordination with Regional Board staff and the Discharger, and the proposed schedule is as short as practicable. The five-year compliance schedule is based on the maximum allowable compliance schedule. However, the Discharger anticipates it may take longer than five years to achieve some of the final limits.