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

ORDER NO. R4-2004-0029
NPDES NO. CA0064513

WASTE DISCHARGE REQUIREMENTS for LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY (EASTSIDE LIGHT RAIL TRANSIT PROJECT)

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

Purpose of Order

1. The Los Angeles County Metropolitan Transportation Authority (MTA), a public transportation agency, plans to construct the Eastside Light Rail Transit (ELRT) line and proposes to discharge (from underground construction activities) treated construction site water, storm water, and groundwater under waste discharge requirements (WDRs) and a National Pollutant Discharge Elimination System (NPDES) permit.

2. On January 3, 2003, MTA filed a Report of Waste Discharge and has applied for WDRs and a NPDES permit to discharge wastes to surface waters. This tentative order is the issuance of the WDRs and NPDES permit for discharges from ELRT underground segment construction outfalls.

Description of Facility

3. The MTA is constructing the ELRT Project that will be an extension of the recently operational Pasadena Gold Line and the existing Red Line. The ELRT project begins at Union Station and will run on an overpass that will be built by Caltrans as part of the widening of US Highway 101 at that location. From there, the alignment will continue south on Alameda Street to First Street and turn east. The route will follow First Street, over the Los Angeles River, east to Indian Street where the alignment will jog south to Third Street and continue east to end at Atlantic Boulevard. Figure 1 is a site location map of the ELRT Project.

4. The 5.9-mile ELRT alignment will be at locations at grade, sometimes elevated, and sometimes below ground. The underground segment will be approximately 9,400 feet in length and runs generally west to east under First Street from Clarence Street to Lorena Street. The underground structures include two stations (First/Boyle Street and First/Soto Street), two portal structures, two cut-and-cover tunnel sections, two bored twin-tunnel sections, six cross-passages, and two sump structures located between the bored tunnels and the two stations. The tunnels will be 19 feet inside diameter each in size and will be as much as 80 feet below existing grade at some points along the alignment.

The underground segment will begin at the western portal, located approximately 110 feet east of the centerline of Clarence Street. The portal structure will extend east under First Street for approximately 500 feet. A cut-and-cover tunnel section will extend east under First Street, beginning with the portal structure and continue under US 101 for approximately 500 feet to a station located at Boyle Avenue (First/Boyle Station). US 101 is elevated as it crosses First Street. The First/Boyle Street Station will be approximately 420 feet in length.

A bored tunnel section will extend approximately 2,850 feet east beginning at the First/Boyle Street Station beyond the intersection with Bailey Street. Whereas First Street trends southeast beginning at the intersection with Bailey Street, the tunnel section will continue east from First Street for a few hundred feet before curving southeast to merge under First Street again just before Interstate 5. The bored tunnel section will continue generally under First Street to a station at Soto Street (First/Soto Street Station). The First/Soto Street Station will be approximately 340 feet in total length. Another bored tunnel section will begin at the First/Soto Street Station and extend along First Street, approximately 4,130 feet, to the east portal cut-and-cover tunnel section to be located between Fresno Street and Concord Street. The east portal section will follow and will be approximately 355 feet in total length. The underground portion of the alignment is shown on Figure 2.

5. Water discharge permits for construction of the above ground portions of the alignment will be applied for in separate applications submitted by MTA at later dates, after a contractor is selected. Also, Caltrans will apply for storm water and construction water discharge permits separately for constructing the US101 overpass from Union Station.

6. MTA plans to bore the tunnel segments using a closed-face tunnel boring machine utilizing earth pressure balanced, or pressurized slurry for face support, thereby eliminating the need for extensive dewatering along the tunnel bore. However, construction of the two underground station boxes and emergency exit shafts will require conventional dewatering because groundwater is above the base of the station box/tunnel invert.

   It is expected that the First/Boyle Street Station will be dewatered approximately 7 feet below current levels and that the First/Soto Street Station will be dewatered 35 feet below current levels.

7. MTA is planning to discharge the treated wastewater to the municipal sanitary sewer of the City of Los Angeles. They have obtained an Industrial Discharge Permit from the City of Los Angeles. In case, however, if the discharge flows exceed the hydraulic capacity availability of the sewer lines, then excess water will be discharged to storm drains. Discharge to storm drains, under the NPDES permit, is a secondary option.

8. The MTA Board adopted the Final Supplemental Environmental Impact Statement/Supplemental Environmental Impact Report (SEIS/SEIR) on February 28, 2002. The Federal Transit Administration's Record of Decision on the Final SEIS/SEIR was received in June 2002.

Description of Waste Discharge

9. Historical and current land use, which includes former oil field activity, indicates that contaminated soils may be encountered during tunnel boring. Environmental investigation of soil and groundwater did not encounter wide-spread contamination along the underground segment, although metals, volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPHs) were detected.

10. Wastewater produced only from underground construction activities (which includes construction site water, storm water, and groundwater generated from dewatering activities) will be discharged. It is expected that construction site water will be generated from construction activities at two underground station boxes, at each of the two portal stations, and along the tunnel. The volume of construction site water to be discharged is estimated based on historic quantities of water generated during construction activities on MTA's Red Line tunnel segments.

    Storm water will be generated at aboveground construction staging areas located near the underground station boxes and along the alignment. Storm water quantities were estimated using the proposed area of each construction staging location and rainfall data from the Los Angeles County Department of Public Works Water Resources Division for the Los Angeles Civic Center (Station #716). A maximum rainfall volume of 3.61 inches (for a 24-hour duration rainfall based on a five-year return storm frequency) was used to determine storm water maximum quantities for each location.

    Dewatering activities will be associated with construction of the two underground station boxes. Minimal dewatering activities are expected for tunneling operations because MTA plans to use earth-pressure balancing techniques operating a closed-face tunnel boring machine. No dewatering activities are expected for construction of the portals because the construction will probably occur above the groundwater level.

11. MTA plans to discharge treated wastewater through sixteen outfalls (Outfalls 4000, 4010, 4020, 4030, 4040, 4050, 4060, 4070, 4080, 4090, 4100, 4110, 4120, 4130, 4140, and 4150) along the underground section of the ELRT Project. The outfall numbering system was arbitrarily designated to start with 4000 at the west portal of construction and proceed east along the alignment. Water will be discharged only from construction activities between the western portal located near Clarence Street and the eastern portal located at Lorena Street. The outfalls represent locations where sources of wastewater at the construction sites, including minimal storm water, construction process water (wash water, slurry water, fire water, etcetera) and/or groundwater from dewatering, may enter a storm drain catch basin and eventually be conveyed to the Los Angeles River, a water of the United States. The outfall locations are shown in Figure 2. Table 1 summarizes the outfalls and discharges to the storm drain. The maximum permitted cumulative discharge from the outfalls is 4.032 mgd.

12. Wastewater generated from the underground segment of the ELRT Project will be treated by two mobile treatment units, each capable of treating water quantities of 100 gpm and 700 gpm, respectively. These treatment units will be located at the two below grade stations. The larger capacity unit will be placed in a construction area near the First/ Soto Street Station, and the smaller unit will be placed in a construction staging area near the First/Boyle Street Station.

13. Both mobile treatment systems have provisions to treat conventional pollutants, metals, VOCs, TPHs, semi-VOCs, methyl tertiary butyl ether (MTBE), and perchlorate.

    In the proposed treatment system, dewatering fluids enter the system through an inlet manifold to a mixing tank. pH is adjusted and chemicals are added for metal precipitation. The precipitated metals will be removed in an inclined plate clarifier, and the pH will be adjusted to neutral conditions. The settled sludge is removed from the bottom of the inclined plate clarifier and stored in settling tanks, which allows time to form a dense sludge. The sludge tank supernatant is recycled back to the chemical mix tank and the settled sludge is pumped back to a filter press system. The sludge is removed from the filter press and transported offsite. Following metals precipitation and neutralization, the dewatering liquid is treated by filtration and through at least two carbon adsorprtion columns placed in series. Figure 3 is a block diagram of the conceptual water treatment system.

Basis for Fee

14. Title 23, California Code of Regulations (CCR), Division 3, Chapter 9, Article 1, §2200, *Annual Fee Schedule,* requires that all discharges subject to an individual permit shall pay an annual fee based on Threat to Water Quality and Complexity of discharges.

15. Discharges covered under this permit have a Threat to Water Quality rating of Category 2 because they have the potential to impair the designated beneficial uses of the receiving water, cause short-term violations of water quality objectives, cause secondary drinking water standards to be violated, or cause a nuisance. The discharges have a Complexity rating of Category B because they run through a treatment system.

Applicable Plans, Policies, and Regulations

16. The Clean Water Act (CWA) authorizes the U.S. Environmental Protection Agency (USEPA) to permit a state to serve as the NPDES permitting authority in lieu of the USEPA. The State of California has in-lieu authority for an NPDES Program. The Porter-Cologne Water Quality Control Act authorizes the State Water Resources Control Board (State Board), through the Regional Boards, to regulate and control the discharge of pollutants into waters of the State. The State Board entered into a Memorandum of Agreement (MOA) with the USEPA, on September 22, 1989, to administer the NPDES Program governing discharges to waters of the U.S.

17. On June 13, 1994, the Regional Board adopted a revised *Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) as amended on January 27, 1997 by Regional Board Resolution No. 97-02. The Basin Plan (i) designates beneficial uses for surface and groundwaters, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state antidegradation policy (*Statement of Policy with Respect to Maintaining High Quality Waters in California*, State Board Resolution No. 68-16, October 28, 1968), and (iii) describes implementation programs to protect all waters in the Region. In addition, the Basin Plan incorporates (by reference) applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. The Regional Board prepared the 1994 update of the Basin Plan to be consistent with all previously adopted State and Regional Board plans and policies. This Order implements the plans, policies and provisions of the Regional Board's Basin Plan.

18. The Basin Plan contains water quality objectives and beneficial uses for inland surface waters and for the Pacific Ocean. Inland surface waters consist of rivers, streams, lakes, reservoirs, and inland wetlands. Beneficial uses for a surface water can be designated, whether or not they have been attained on a waterbody, in order to implement either federal or state mandates and goals (such as fishable and swimmable for regional waters). Beneficial uses of streams that have intermittent flows, as is true for many Southern California streams, are designated as intermittent. The beneficial uses of inland surface waters generally include water contact recreation, warm freshwater habitat, cold freshwater habitat, inland saline water habitat and commercial and sport fishing.

19. The Basin Plan contains water quality objectives, and lists the following beneficial uses:

    Los Angeles River (Upstream of Figueroa Street – Hydrologic Unit 405.21).

    Existing: groundwater recharge, contact and non-contact water recreation, warm freshwater habitat, wildlife habitat, and wetland habitat.

    Potential: municipal and domestic supply (MUN) and industrial service supply.

    The potential MUN beneficial use for the water body is consistent with Regional Board Resolution 89-03; however the Regional Board has only conditionally designated the MUN beneficial uses and at this time cannot establish effluent limitations designed to protect the conditional designation.

    Los Angeles River (downstream of Figueroa Street - Hydrologic Unit 405.15)

    Existing: groundwater recharge, water contact1 recreation and non-contact recreation, and warm freshwater habitat.

    Potential: MUN, and industrial process supply.

Los Angeles River (to Estuary - Hydrologic Unit 405.12)

Existing: groundwater recharge, water contact1 recreation and non-contact water recreation, warm freshwater habitat, marine habitat, wildlife habitat, and rare, threatened, or endangered species.

Potential: MUN, industrial service 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 contact1 recreation and non-contact water recreation, commercial and sport fishing, estuarine habitat, marine habitat, wildlife habitat, rare, threatened, or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development, and wetland habitat.

Potential: shellfish harvesting.

20. The State Board adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for the Los Angeles River.

21. On May 18, 2000, the USEPA promulgated numeric criteria for priority pollutants for the State of California [known as the *California Toxics Rule* (CTR) and codified as 40 CFR section 131.38]. 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.

22. On March 2, 2000, the State Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP*).* The SIP was effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through National Toxics Rule (NTR) and to the priority pollutant objectives established by the Regional Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by the USEPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP was effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The protocols identified in the SIP provide a rationale approach for determining reasonable potential and represent the best available science with respect to minimum levels for all surface water discharges. The SIP requires the dischargers' submittal of data sufficient to conduct the determination of priority pollutants requiring Water Quality Based Effluent Limitations (WQBELs) and to calculate

the effluent limitations. The CTR criteria for fresh water or human health for consumption of organisms, whichever is more stringent, are used to develop the effluent limitations in this Order to protect the beneficial uses of the Los Angeles River.

23. Under 40 CFR 122.44(d), Water Quality Standards and State Requirements, "Limitations must control all pollutants or pollutant parameters (either conventional, non-conventional, or toxic pollutants), which the Director [permitting authority] 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, including State narrative criteria for water quality." Where numeric effluent limitations for a pollutant or pollutant parameter have not been established in the applicable state water quality control plan, 40 CFR section 122.44(d)(1)(vi) specifies that WQBELs may be set based on USEPA criteria, and may be supplemented where necessary by other relevant information to attain and maintain narrative water quality criteria, and to fully protect designated beneficial uses.

24. Effluent limitation guidelines requiring the application of best practicable control technology currently available (BPT), best conventional pollutant control technology (BCT), and best available technology economically achievable (BAT), were promulgated by the USEPA for some pollutants in this discharge. Effluent limitations for pollutants not subject to the USEPA effluent limitation guidelines are based on one of the following: best professional judgment (BPJ) of BPT, BCT or BAT; or WQBELs. The WQBELs are based on the Basin Plan, other State plans and policies, or USEPA water quality criteria which are taken from the CTR. These requirements, as they are met, will protect and maintain existing beneficial uses of the receiving water. The attached fact sheet for this Order includes specific bases for the effluent limitations.

25. State and Federal antibacksliding and antidegradation policies require that Regional Board actions to protect the water quality of a water body and to ensure that the waterbody will not be further degraded. The antibacksliding provisions are specified in section 402(o) of the Clean Water Act (CWA) and in Title 40, Code of Federal Regulations (40 CFR), section 122.44(i).

26. Effluent limitations are established in accordance with sections 301, 304, 306, and 307 of the federal CWA, and amendments thereto. These requirements, as they are met, will maintain and protect the beneficial uses of the Los Angeles River.

Watershed Management and Total Maximum Daily Loads

27. The Regional Board has implemented the Watershed Management Approach to address water quality issues in the region. Watershed Management may include diverse issues as defined by stakeholders to identify comprehensive solutions to protect, maintain, enhance, and restore water quality and beneficial uses. To achieve this goal, the Watershed Management Approach integrates the Regional Board's many diverse programs, particularly Total Maximum Daily Loads (TMDLs), to better assess cumulative impacts of pollutants from all point and non-point sources. A TMDL is a tool for implementing water

quality standards and is based on the relationship between pollution sources and in-stream water quality conditions. The TMDL establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby provides the basis to establish water quality-based controls. These controls should provide the pollution reduction necessary for a waterbody to meet water quality standards. This process facilitates the development of watershed-specific solutions that balance the environmental and economic impacts within the watershed. The TMDLs will establish waste load allocation (WLAs) and load allocations (LAs) for point and non-point sources, and will result in achieving water quality standards for the waterbody.

28. The Los Angeles River Watershed is one of the largest in the Region. It is also one of the most diverse in terms of land use patterns. The Los Angeles River flows for 55 miles from the Santa Monica Mountains (at the western end of the San Fernando Valley) to the Pacific Ocean at San Pedro Bay. The natural hydrology of the river and many of its tributaries has been altered by flood control efforts including the channelization of much of the river and construction of flood control reservoirs. Most of the mainstream of the Los Angeles River and most of the tributaries are concrete-lined. Approximately 324 square miles of the watershed are covered by forest or open space land. The rest of the watershed is highly developed. Major tributieries to the river include: Pacoima Wash, Tujunga Wash, Burbank Western Channel, Verdugo Wash, Arroyo Seco, Rio Hondo, and Compton Creek.

29. The 2002 California 303(d) list, approved by the USEPA on July 25, 2003, identified the following pollutants of concern for Los Angeles River:

    Los Angeles River - Reach 2 (Carson to Figueroa Street): ammonia, coliform, lead, nutrients (algae), odors, oil, scum, and trash;

    Los Angeles River - Reach 1 (Estuary to Carson Street): total aluminum, ammonia, dissolved cadmium, dissolved copper, coliform, lead, nutrients (algae), pH, scum/foam-unnatural, and dissolved zinc;

    Los Angeles River Estuary (Queensway Bay): chlordane (sediment), DDT (sediment), lead (sediment), PCBs (sediment), and zinc (sediment).

30. Section 303(d) of the CWA requires that the State identify a list of impaired water bodies and develop and implement Total Maximum Daily Loads (TMDL) for these water bodies. A TMDL specifies the maximum amount of a pollutant that a water body can receive and still protect beneficial uses. The USEPA entered into a consent decree with the Natural Resources Defense Council (NRDC), Heal the Bay, and the Santa Monico BayKeeper on March 22, 1999, under which the Regional Board must adopt all TMDLs for the Los Angeles Region within 13 years from that date. This permit incorporates a provision to implement and enforce approved load allocations for wastewater discharge from ELRT Project and require changes to comply with the allocated discharge loads.

31. To prevent further degradation of the water quality of the Los Angeles River and to protect its beneficial uses, mixing zones and dilution credits are not allowed in this Order. This determination is based on:

    - The 303(d)-listed pollutants exceed water column criteria. Since there is no assimilative capacity of the receiving water, a dilution factor is not appropriate, and the final WQBEL should be a numeric objective applied at end-of-pipe.

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

      The proposed human health and wildlife criteria may be sufficiently protective for persistent bioaccumulative chemicals. It is necessary that mass-based limits be established to assure that the discharge will not cause, or contribute to, an exceedance of water quality standards, including narrative standards.

Data Availability and Reasonable Potential Monitoring

32. 40 CFR 122.44(d)(1)(ii) requires that each toxic pollutant be analyzed with respect to its reasonable potential when determining whether a discharge (1) causes; (2) has the reasonable potential to cause; or (3) contributes to the exceedance of a receiving water quality objective. This is done by performing a reasonable potential analysis (RPA) for each pollutant.

33. Section 1.3 of the SIP requires that a limit be imposed for a toxic pollutant if (1) the maximum effluent concentration (MEC) is greater than the most stringent CTR criteria, or (2) the background concentration is greater than the CTR criteria. However, for the pollutants on the 303(d) list, due to the impairment of the Los Angeles River, the background concentrations have already been determined to be higher than the CTR criteria. Sufficient effluent data are needed for this analysis.

    Toxic data is not available for conduction of RPAs. Priority pollutants are being required to monitor to gather data to be used in RPAs for future permit renewals and updates.

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

35. On October 8, 1997, the State of California then Governor, Pete Wilson, signed Assembly Bill 592. Assembly Bill 592 requires the State of California, Department of Health Services (DHS) to adopt primary and secondary drinking water standards for MTBE. In

January 1999, the DHS adopted 5 µg/L as the secondary standard for MTBE based on taste and odor threshold. In April 2000, the DHS adopted 13 µg/L as the primary Maximum Contaminant Level (MCL) for MTBE. This order includes a revise effluent limitation for MTBE of 13 µg/L.

36. Tertiary Butyl Alcohol (TBA) is a gasoline constituent, an impurity in commercial-grade MTBE, and/or a breakdown product of MTBE. In 1999, California's Office of Environmental Health Hazard Assessment (OEHHA) conducted an interim assessment based on preliminary calculations of the carcinogenicity of TBA, concluding that exposures to TBA via the oral route represent a one in a million excess cancer risk or 12 µg/L. Based on this assessment, OEHHA has set an Action Level for TBA at 12 µg/L.

37. Effluent limitations prescribed in this Order are based on the CTR, SIP, Basin Plan, and best professional judgment (BPJ) These requirements, as they are met, will protect and maintain existing beneficial uses of the receiving water.

38. The Regional Board adopted the *Nitrogen Compounds and Related Effects TMDL for Los Angeles River Watershed*, Resolution No. 03-009, on July 10, 2003. The State Board approved the Regional Board's Nitrogen TMDL for the Los Angeles River on November 19, 2003. The TMDL is still pending approval from Office of Administrative Law (OAL), and USEPA.

    The TMDL development for the remaining of 303(d)-listed pollutants will include WLAs. Upon completion of the TMDL, the Board will adopt a WQBEL consistent with the corresponding WLA.

IV. CEQA and Notifications

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

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

41. This Order shall serve as a NPDES permit pursuant to Section 402 of the Federal Clean Water Act or amendments thereto, and shall take effect at the end of 50 days from the date of its adoption provided the Regional Administrator, USEPA, has no objections.

42. Pursuant to California Water Code Section 13320, any aggrieved party may seek review of this Order by filing a petition with the State Board. A petition must be sent to the State Water Resources Control Board, Office of Chief Counsel, ATTN: Elizabeth Miller Jennings, Senior Staff Counsel, 1001 I Street, 22nd Floor, Sacramento, California, 95814, within 30 days of adoption of the Order.

43. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public

Resources Code (CEQA) in accordance with the California Water Code, Section 13389.

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

I. Discharge Requirements

A. Discharge Prohibition

1. Wastes discharged shall be limited to treated wastewater from underground construction activities for the ELRT Project, as proposed. The discharge of water from accidental spills or other sources is prohibited.

2. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to the Los Angeles River, or waters of the State, are prohibited.

3. The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.

B. Effluent Limitations

The discharge of wastes from sixteen outfalls (Outfalls: 4000, 4010, 4020, 4030, 4040, 4050, 4060, 4070, 4080, 4090, 4100, 4110, 4120, 4130, 4140, and 4150) shall comply with the following requirements:

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

2. Temperature:

   a. A temperature greater than 86 °Fof the effluent will not be discharged; and

   b. The maximum temperature of the discharge shall not exceed the natural receiving water temperature by more than 20 ^{o}F.

3. Toxicity limitations:

   a. Acute Toxicity Limitation and Requirements

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

aa. If the acute toxicity of the effluent exceeds the effluent limitations in Section I.B.3.a.i, the Discharger shall immediately implement accelerated acute toxicity testing according to Monitoring and Reporting Program XXXX, Item IV.C.1. If the results of two of the six accelerated tests exceed the effluent limitations, the Discharger shall initiate a TIE and implement the Initial Investigation TRE Workplan, described below.

ii. Preparation of an Initial Investigation TRE Workplan

The Discharger shall submit a detailed copy of the Discharger's initial investigation Toxicity Reduction Evaluation (TRE) workplan (1 2 pages) to the Executive Officer of the Regional Board for approval within 90 days of the effective date of this permit. If the Regional Board Executive Officer does not disapprove the workplan within 60 days, the workplan shall become effective. The Discharger shall use EPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance, or most current version. At a minimum, the TRE Work Plan must contain the provisions in Attachment C. This workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at a minimum:

aa. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency;

ab. A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility; and,

ac. If a TIE is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor) (See MRP Section IV.D.1. for guidance manuals.)

iii. If, after the initial 6-month testing period, the Discharger has met compliance with acute toxicity limitations and has resumed quarterly toxicity testing, and then subsequently either of the above requirements [Section I.B.3.a.i] is not met, the Discharger shall conduct six additional tests over a six-week period. The Discharger shall ensure that they receive results of a failing acute toxicity test

within 24 hours of the completion of the test, and the additional tests shall begin within 3 business days of the receipt of the result. If the additional tests indicate compliance with acute toxicity limitation, the Discharger may resume regular testing. However if the results of any two of the six accelerated tests are less than 90% survival, then the Discharger shall begin a Toxicity Identification Evaluation (TIE). The TIE shall include all reasonable steps to identify the source(s) of toxicity. Once the source(s) of toxicity is identified, the Discharger shall take all reasonable steps to reduce the toxicity to meet the objective.

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

v. The Discharger shall conduct acute toxicity monitoring as specified in Monitoring and Reporting Program No. CI 8702.

4. Discharge of an effluent in excess of the following limitations is prohibited:

Constituents	Units	Discharge Limitations	
		Monthly Average	Daily Maximum
Total suspended solids	mg/L	50	75
$BOD_5 20^{\circ}C$	mg/L	20	30
Oil and grease	mg/L	10	15
Settleable solids	ml/L	0.1	0.3
Turbidity	NYU	50	75
Sulfides	mg/L	-	1
Phenol	mg/L	-	1
Methylene Blue Active Substance (MBAS)	mg/L	-	0.5
Total dissolved solids	mg/L	-	950
Sulfate	mg/L	-	300
Chloride	mg/L	-	150
Ammonia	mg/L	1/, 2/	1/, 2/, 3/
Nitrate-nitrogen	mg/L	10 1/	-
Nitrite-nitrogen	mg/L	1	-
Nitrate-nitrogen plus nitrite-nitrogen	mg/L	10 1/	-
Total ammonia as nitrogen	mg/L	2.4 4/	8.7 4/
Nitrate-nitrogen	mg/L	8 4/	-
Nitrite-nitrogen	mg/L	1	-
Nitrate-nitrogen plus nitrite-nitrogen	mg/L	8 4/	-
Arsenic	µg/L		50

Constituents	Units	Discharge Limitations	
		Monthly Average	Daily Maximum
Cadmium	µg/L	2.2	4.3
Chromium III	µg/L	-	50
Chromium VI	µg/L	8	16
Copper	µg/L	9	13
Cyanide	µg/L	5.2	22
Lead	µg/L	2.5	65
Mercury	µg/L	-	0.051
Nickel	µg/L	52	470
Selenium	µg/L	5	-
Silver	µg/L	-	3.4
Thallium	µg/L	-	6.3
Zinc	µg/L	-	120
1,1-Dichloroethane	µg/L	-	5
1,1,2,2-Tetrachloroethane	µg/L	-	11
1,2-Dichloroethane	µg/L	-	0.5
Acrylonitrile	µg/L	-	0.66
Benzene	µg/L	-	1
Carbon tetrachloride	µg/L	-	4.4
Chlorodibromomethane	µg/L	-	34
Dichlorobromomethane	µg/L	-	46
Methyl tertiary butyl ether (MTBE)	µg/L	-	13
Tetrachloroethylene	µg/L	-	8.85
Toluene	µg/L	-	150
Trichloroethylene	µg/L	-	5
Xylene	µg/L		1750
4,4-DDD	µg/L	-	0.00084
4,4-DDE	µg/L	-	0.00059
Aldrin	µg/L	-	0.00014
alpha-BHC	µg/L	-	0.013
Beta-BHC	µg/L	-	0.046
Endosufan sulfate	µg/L	-	240
Endrin aldehyde	µg/L	-	0.81
Gamma BHC	µg/L	-	0.063
Polychlorinated biphenyls (PCBs)	µg/L	-	0.00017
1,2-Diphenylhydrazine	µg/L	-	0.54
2,4-Dichlorophenol	µg/L	-	790
2,4-Dinitrotoluene	µg/L	-	9.1
2,4,6-Trichlorophenol	µg/L	-	6.5
2-Chlorophenol	µg/L	-	400
3,3-Dichlorobenzidine	µg/L	-	0.077
Benzidine	µg/L	-	0.00054

Constituents	Units	Discharge Limitations	
		Monthly Average	Daily Maximum
Benzo (a) Anthracene	µg/L	-	0.049
Benzo (b) Pyrene	µg/L	-	0.049
Benzo (b) Fluoranthene	µg/L	-	0.049
Benzo (k) Fluoranthene	µg/L	-	0.049
Bis (2-Chloroethyl) Ether	µg/L		1.4
Bis (2-Ethylhexyl) Phthalate	µg/L	-	5.9
Chrysene	µg/L	-	0.049
Dibenzo (a,h) Anthracene	µg/L	-	0.049
Hexachlorobenzene	µg/L	-	0.00077
Hexachlorobutadiene	µg/L	-	50
Indeno (1,2,3-cd) Pyrene	µg/L	-	0.049
N-Nitrosodi-n-Propylamine	µg/L	-	1.4
N-Nitrosodiphenylamine	µg/L	-	16
Pentachlorophenol	µg/L	-	8.2
2,3,7,8-TCDD (Dioxin)	µg/L	-	0.000000014
Tertiary butyl alchol	µg/L	-	12
Total petroleum hydrocarbon	µg/L	-	100

1/ This is the water quality objective in the current Basin Plan. This effluent limitation will stay in effect until the Nitrogen Compound and Related Effects TMDL for the Los Angeles River, Resolution No. 03-009, *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 will remain in effect until revised by the Regional Board.

2/ Discharger must comply with the updated ammonia water quality objectives in the Basin Plan (Attachment H) Table 3-1 (for daily maximum limit) and Table 3-3 (for monthly average limit) which resulted from Resolution No. 2002-011 adopted by the Regional Board on April 25, 2002

3/ For compliance with Maximum Concentration (CMC) in 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. Shall there be no receiving water present, the pH of the effluent at the end of pipe shall be determined and reported.

4/ This is the waste load allocation (WLA), according to the *Nitrogen Compound and Related Effects TMDL for the Los Angeles River*, Resolution No. 03-009, adopted by Regional Board on July 10, 2003. The State Board approved the Regional Board's Nitrogen TMDL for the Los Angeles River on November 19, 2003. The TMDL is still pending approval from OAL and USEPA. This limit becomes effective after the USEPA approves the Nitrogen TMDL.

C. Receiving Water Limitations

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

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

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

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

    d. Bottom deposits or aquatic growths; or,

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

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

3. The temperature at any time or place and within any given 24-hour period to be altered by more than $5^{o}F$ above natural temperature; but at no time be raised above $80^{0}F$ for waters with a beneficial use of WARM (Warm Freshwater Habitat)

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

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

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

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

5. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Board or State Board. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional

Board will revise or modify this Order in accordance with such standards.

6. The discharge shall not cause the following to be present in receiving waters:

   a. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses;

   b. Chemical substances in amounts that adversely affect any designated beneficial use;

   c. Oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the receiving water or on objects in the water;

   d. Suspended or settleable materials in concentrations that cause nuisance or adversely affect beneficial uses;

   e. Taste or odor-producing substances in concentrations that alter the natural taste, odor, and/or color of fish, shellfish, or other edible aquatic resources; cause nuisance; or adversely affect beneficial uses;

   f. Substances that result in increases of $BOD_5 20^0C$ that adversely affect beneficial uses;

7. The discharge shall not alter the color, create a visual contrast with the natural appearance, nor cause aesthetically undesirable discoloration of the receiving waters.

8. The discharge shall not degrade surface water communities and population including vertebrate, invertebrate, and plant species.

9. The discharge shall not damage, discolor, nor cause formation of sludge deposits on flood control structures or facilities nor overload their design capacity.

10. The discharge shall not cause problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.

II. Requirements

A. The Discharger shall submit not later than 60 days prior to the start of construction activities of the underground segment of ELRT Project, a pollution prevention document that will include, at a minimum;

   1. An updated Storm Water Pollution Prevention Plan (SWPPP) that describes site-

specific management practices for minimizing contamination of storm water runoff and for preventing contaminated storm water runoff from being discharged directly to waters of the State. The SWPPP shall be developed in accordance with the requirements in Attachment A (General NPDES Permit for Discharges of Storm Water Associated with Construction Activities, Order No. 99-08-DWQ).

2. Best Management Practices Plan (BMPP) that entails site-specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the State. The BMPP shall be consistent with the general guidance contained in the EPA *Guidance Manual for Developing Best Management Practices (BMPs)* (EPA 833-B-93-004) and the construction handbook prepared by California Storm Water Association which can be accessed at http://www.cabmphandbooks.org/Construction.asp. In particular, a risk assessment of each area identified by the Discharger shall be performed to determine the potential for hazardous or toxic waste/material discharge to surface waters.

3. An updated Spill Contingency Plan that shall be site-specific and shall cover all areas of the facility. The Contingency Plan shall be reviewed at the same time as the SWPPP and BMPP.

   The plans shall cover all areas of the facility and shall include an updated drainage map for the facility. The Discharger shall identify on a map of appropriate scale the areas that contribute runoff to the permitted discharge points; describe the activities in each area and the potential for contamination of storm water runoff and the discharge of hazardous waste/material; and address the feasibility of containment and/or treatment of the storm water. The plans shall be reviewed annually and at the same time. Updated information shall be submitted within 30 days of revision.

B. The Discharger shall implement or require the implementation of the most effective combination of BMPs for storm water pollution control. When implemented, BMPs are intended to result in the reduction of pollutants in storm water to the maximum extent practicable.

C. Oil or oily materials, chemicals, refuse, or other materials that may cause pollution in storm water and/or urban runoff shall not be stored or deposited in areas where they may be picked up by rainfall/urban runoff and discharged to surface waters. Any spill of such materials shall be contained, removed, and cleaned immediately.

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

122.42(a).

E. The Discharger shall at all times properly operate and maintain all facilities and systems installed or used to achieve compliance with this Order.

F. The Discharger shall comply with the waste load allocations that will be developed from the TMDL process for the 303(d)-listed pollutants.

G. The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to waters of the United States, is prohibited unless specifically authorized elsewhere in this permit or another NPDES permit. This requirement is not applicable to products used for lawn and agricultural purposes.

H. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream which ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.

I. The Discharger shall notify the Executive Officer in writing no later than six months prior to the planned discharge of any chemical, other than chlorine or other product previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

a. Name and general composition of the chemical,
b. Frequency of use,
c. Quantities to be used,
d. Proposed discharge concentrations, and
e. USEPA registration number, if applicable.

No discharge of such chemical shall be made prior to the Executive Officer's approval.

J. The Regional Board and USEPA shall be notified immediately, by telephone, of the presence of adverse conditions in the receiving waters or on beaches and shores as a result of wastes discharged; written confirmation shall follow as soon as possible but not later than five working days after occurrence.

H. In the determination of compliance with the monthly average limitations, the following provisions shall apply to all constituents:

1. If the analytical result of a single sample, monitored monthly or at a lesser frequency, does not exceed the monthly average limit for that constituent, the Discharger will have demonstrated compliance with the monthly average limit for that month.

2. If the analytical result of a single sample, monitored monthly or at a lesser frequency, exceeds the monthly average limit for any constituent, the Discharger shall collect three additional samples at approximately equal intervals during the month. All four analytical results shall be reported in the monitoring report for that month, or 45 days after the sample was obtained, whichever is later.

   If the numerical average of the analytical result of these four samples does not exceed the monthly average limit for that constituent, compliance with the monthly average limit has been demonstrated for that month. Otherwise, the monthly average limit has been violated.

3. In the event of noncompliance with a monthly average effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until until compliance with the monthly average effluent limitation has been demonstrated.

I. Any single reported value which exceeds a daily maximum effluent concentration of the waste discharge requirements shall be considered a violation of said limit.

III. Provisions

A. The Discharger shall comply with all the applicable items of the *Standard Provisions and Reporting for Waste Discharge Requirements* (Standard Provisions, Attachment N). If there is any conflict between provisions stated herein and the Standard Provisions, those provisions stated herein prevail.

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

C. This Order neither exempt the discharger from compliance with any other laws, regulations, or ordinances that may be applicable, nor legalize the waste disposal facility.

D. The discharger shall at all times properly operate and maintain all facilities and systems installed or used to achieve compliance with this Order.

E. Pursuant to 40CFR §122.61(b), coverage under this Order may be transferred in case of change of ownership of land or discharge facility provided the existing discharger notifies the Executive Officer at least 30 days before the proposed transfer date, and the notice includes a written agreement between the existing and new dischargers containing a specific date of transfer of coverage, responsibility for compliance with this Order, and liability between them.

F. This Order may be modified, revoked, reissued, or terminated in accordance with the provisions of 40 CFR Sections 122.44, 122.62, 122.63, 122.64, 125.62 and 125.64. Causes for taking such actions include, but are not limited to: failure to comply with any condition of this Order; endangerment to human health or the environment resulting from the permitted activity; or acquisition of newly-obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the Discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

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

IV. Reopeners

A. Pursuant to 40CFR §122.62 and 122.63, this Order may be modified, revoked and reissued, or terminated for cause. Reasons for modification may include new information on the impact of discharges regulated under this Order become available, promulgation of new effluent standards and/or regulations, adoption of new policies and/or water quality objectives, and/or new judicial decisions affecting requirements of this Order,

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

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

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

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

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

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

V. EXPIRATION DATE

This Order expires on December 10, 2008.

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

I, Dennis Dickerson, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on January 29, 2004.

Dennis A. Dickerson
Executive Officer