CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LOS ANGELES REGION

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ORDER NO. R4-2009-0112
NPDES NO. CA0001171

WASTE DISCHARGE REQUIREMENTS FOR LONG BEACH GENERATION LLC, LONG BEACH GENERATING STATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger Information

Discharger	Long Beach Generation LLC
Name of Facility	Long Beach Generating Station
Facility Address	2665 West Seaside Boulevard
	Long Beach, CA 90802
	Los Angeles County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

The discharge by the Owner from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Groundwater, storm water, and intermittent low-volume wastewater	33 °, 45 ', 53 " N	118 °, 13 ', 17 " W	Long Beach Inner Harbor

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	November 5, 2009
This Order shall become effective on:	December 5, 2009
This Order shall expire on:	October 10, 2014
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	April 13, 2014

IT IS HEREBY ORDERED, that Order No. 01-079 is terminated upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Tracy J. Egoscue, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on November 5, 2009.

Tracy J. Egoscue, Executive Officer

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I. FACILITY INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 4. Facility Information

Discharger	Long Beach Generation LLC
Name of Facility	Long Beach Generating Station
Facility Address	2665 West Seaside Boulevard
	Long Beach, CA 90802
	Los Angeles County
Facility Contact, Title, and Phone	Ken H. Riesz, Plant Manager (310) 615-6030
Mailing Address	301 Vista Del Mar Boulevard El Segundo, CA 90245
Type of Facility	Electric Power Generating Facility
Facility Design Flow	4.3 million gallons per day (mgd)

II. FINDINGS

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

A. **Background.** Long Beach Generation LLC (hereinafter Discharger) is currently discharging pursuant to Order No. 01-079 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0001171. The Discharger submitted a Report of Waste Discharge (ROWD) in October 2005 and then a revised ROWD on July 30, 2008, and applied for an NPDES permit renewal to discharge up to 4.3 million gallons per day (mgd) of wastewater consisting of groundwater from dewatering systems, storm water, and intermittent low-volume industrial wastewater from the Long Beach Generating Station, hereinafter Facility or LBGS.

B. **Facility Description**. The Discharger owns the Long Beach Generating Station and NRG El Segundo Operations, Inc. (NRG) operates the Facility. In December 2005, NRG shut down operation of the LBGS. However, in April 2007, the Discharger was permitted by the Port of Long Beach to repower a portion of the LBGS with the refurbishment of four natural-gas fueled, air-cooled combustion turbines within the footprint of two retired steam turbines. The refurbished combustion turbines were commercially available on August 1, 2007 to produce peak demand electricity. In October 2007 the once-through cooling system utilized by the retired steam turbines was abandoned by plugging intake and outfall tunnels. These changes eliminate the possible discharges of the once-through cooling water.

In addition to energy generating equipment, LBGS is also equipped with a groundwater dewatering system, storm water handling equipment, and a groundwater treatment system. Under the asset sale agreement in 1998, LBGS continues to allow groundwater and storm water originating from the nearby Plains All American Pipeline's Tank Farm and the Southern California Edison's high voltage electrical switch yards to be discharged through the LBGS's outfall.

Wastewater is mainly composed of groundwater and storm water with a minor contribution from the intermittent low-volume industrial wastewater generated from general housekeeping activities, drips of demineralized water used in plant processes, and fire water discharged during annual testing of the LBGS's fire prevention system. All wastewaters are collected within the retention basin during regular operations (i.e. dry weather and light storm events). Wastewater collected in the basin would then be pumped into the oil/water separator and then to the onsite treatment system that will be in operation by the effective date of the permit. The treatment system consists of a filtration system, granular activated carbon (GAC) columns and an ion exchange vessel. The treated wastewater is discharged from Discharge Point 001 to the Back Channel of Long Beach Inner Harbor, a water of the United States. During a severe storm event, when the volume of water generated at the site greatly exceeds the volume that can be handled by the retention basin and the associated wastewater treatment system, a portion of the collected water that bypasses the treatment system will be discharged directly from Discharge Point 001. However, operation procedures are in place to

ensure that the first flush from any storm event is subjected to the treatment system prior to discharge, until the condition of potential volume exceedance at the basin is reached. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. **Legal Authorities.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

D. **Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and the rationale for the Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E and G through L are also incorporated into this Order.

E. **California Environmental Quality Act (CEQA).** Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.

F. **Technology-based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations[1], require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

G. **Water Quality-Based Effluent Limitations.** Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using:

[1] All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

(1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

H. **Watershed Management Approach and Total Maximum Daily Loads (TMDLs)**

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 Water Board's "many diverse programs, particularly TMDLs, to better assess cumulative impacts of pollutants from all point and nonpoint 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 allocations (WLAs) and load allocations (LAs) for point and non-point sources, and will result in achieving water quality standards for the waterbody.

The USEPA approved the State's 2006 303(d) list of impaired water bodies on June 28, 2007. Certain receiving waters in the Los Angeles and Ventura County watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 2006 303(d) list and have been scheduled for TMDL development. LBGS discharges into Long Beach Inner Harbor. The 2006 State Water Board's California 303(d) List classifies the Los Angeles/Long Beach Inner Harbor as impaired. The pollutants of concern include beach closures, benthic community effects, copper, DDT, PCBs, sediment toxicity and zinc. A total maximum daily load (TMDL) is developed for the pollutants of concern in a 303(d) listed waterbody to facilitate the waterbody's recovery of its ability to fully support its beneficial uses. To date, the Los Angeles Harbor Bacteria TMDL (Inner Cabrillo Beach and Main Ship Channel) received the Regional Water Board approval on July 1, 2004 (Resolution No. 2004-011) and the State Water Board approval with adoption of Resolution No. 2004-0071 on October 21, 2004. The Office of Administrative Law (OAL) and USEPA approval dates were January 5, 2005 and, March 1, 2005, respectively. However, this TMDL addresses only the elevated bacterial indicator densities that are causing impairment of the REC-1 beneficial use of Inner Cabrillo Beach and the potential REC-1 uses of the Main Ship Channel in the Los Angeles Inner Harbor and waterbodies within the Long Beach Inner Harbor are not included. No other TMDLs have ever been developed for the Los Angeles/Long Beach Inner Harbor. Regional Water Board staff are currently preparing TMDLs for copper and zinc. TMDLs for other listed pollutants are scheduled for development in 2019.

Water Quality Control Plans. The Regional Water Board adopted a Water Quality Control Plan for the Los Angeles Region (hereinafter Basin Plan) on June 13, 1994, that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to the Los Angeles/Long Beach Inner Harbor are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Los Angeles/Long Beach Inner Harbor	Existing: Industrial Service Supply (IND); Navigation (NAV); Non-contact Water Recreation (REC-2); Commercial and Sport Fishing (COMM); Marine Habitat (MAR); and Rare, Threatened, or Endangered Species (RARE). Potential: Water Contact Recreation (REC-1); Shellfish Harvesting (SHELL)

Requirements of this Order implement the Basin Plan.

The State Water Board adopted a Basin Plan amendment for Ammonia. The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Table 3-1 through Table 3-4. However, those ammonia objectives were revised on March 4, 2004, by the Regional Water Board with the adoption of Resolution No. 2004-022, *Amendment to the Water Quality Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters Not Characteristic of Freshwater (including enclosed bays, estuaries and wetlands)* with the Beneficial Use designations for protection of "Aquatic Life". The ammonia Basin Plan amendment was approved by the Office of Administrative Law on September 14, 2004 and by USEPA on May 19, 2005. The amendment revised the Basin Plan by updating the ammonia objectives for inland surface waters not characteristic of freshwater such that they are consistent with the USEPA "Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989." The amendment revised the regulatory provisions of the Basin Plan by adding language to Chapter 3, "Water Quality Objectives."

The amendment contains objectives for a 4-day average concentration of un-ionized ammonia of 0.035 mg/L, and a 1-hour average concentration of un-ionized ammonia of 0.233 mg/L. These objectives are fixed concentrations of un-ionized ammonia, independent of pH, temperature, or salinity. The amendment also contains an implementation procedure to convert un-ionized ammonia objectives to total ammonia effluent limitations.

The State Water Board adopted the 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 inland and coastal surface waters. Discharges from the Facility are not considered thermal wastes or elevated temperature wastes since the discharge of the once-through cooling water was permanently terminated in October 2007.

I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

J. **State Implementation Policy.** On March 2, 2000, the State Water 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 became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

K. **Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 17, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Water Quality Control Plan Los Angeles Region, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does include a compliance schedule and interim effluent limitations. A detailed discussion of the basis for the compliance schedule and interim effluent limitations is included in the Fact Sheet.

L. **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 C.F.R. § 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA 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 USEPA.

M. **Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand (BOD), oil and grease, total suspended solids (TSS), settleable solids, and turbidity. Restrictions on BOD, oil and grease, TSS, settleable solids, and turbidity are discussed in IV.B.2 of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

N. Antidegradation Policy. Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

O. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Some effluent limitations in this Order are less stringent than those in the previous Order. As discussed in detail in the Fact Sheet this relaxation of effluent limitations is consistent with the anti-backsliding requirement of the CWA and federal regulations.

P. **Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

Q. **Monitoring and Reporting.** Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

R. **Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

S. **Provisions and Requirements Implementing State Law.** The provisions/requirements in subsection VI.C. of this Order is included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

T. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.

U. **Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

THEREFORE, IT IS HEREBY ORDERED, that this Order supercedes Order No. 01-079 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

III. DISCHARGE PROHIBITIONS

A. Wastes discharged shall be limited to a maximum of 4.3 MGD of commingled wastewater including groundwater from dewatering systems, storm water runoff, and intermittent low-volume industrial wastewater from the Facility as described in the findings. The discharge of wastes from accidental spills, cooling water systems or other sources is prohibited.

B. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, Long Beach Inner Harbor (Back Channel), or other waters of the State, are prohibited.

C. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or a nuisance as defined by Section 13050 of the Water Code.

D. Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.

E. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or the State Water Resources Control Board as required by the Federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Federal CWA, and amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

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

G. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP (Attachment E):

Table 6. Effluent Limitations

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Conventional and Nonconventional Pollutants					
Biochemical Oxygen Demand (BOD)(5-day @20 Deg. C)	mg/L	20	30	--	--
	lbs/day[1]	710	1100	--	--
Oil and Grease	mg/L	10	15	--	--
	lbs/day[1]	360	540	--	--
Total Suspended Solids (TSS)	mg/L	50	75	--	--
	lbs/day[1]	1800	2700	--	--
Settleable Solids	ml/L	0.1	0.3	--	--
Turbidity	NTU	50	75	--	--
pH	s.u.	--	--	6.5	8.5
Temperature	°F	--	--	--	86
Chlorine, Total Residual	mg/L	--	--	--	0.1
Ammonia Nitrogen	mg/L	1.0[2]	2.1[2]	--	--
	lbs/day[1]	36[2]	75[2]	--	--
Priority Pollutants					
Arsenic, Total Recoverable	µg/L	29	59	--	--
	lbs/day[1]	1.0	2.1	--	--
Cadmium, Total Recoverable	µg/L	7.7	15	--	--
	lbs/day[1]	0.28	0.54	--	--
Copper, Total Recoverable	µg/L	2.9[2]	5.8[2]	--	--
	lbs/day[1]	0.10[2]	0.21[2]	--	--
Lead, Total Recoverable	µg/L	7.0	14	--	--
	lbs/day[1]	0.25	0.50	--	--
Mercury, Total Recoverable	µg/L	0.051	0.10	--	--
	lbs/day[1]	0.0018	0.0036	--	--
Nickel, Total Recoverable	µg/L	6.8[2]	14[2]	--	--
	lbs/day[1]	0.24[2]	0.50[2]	--	--
Selenium, Total Recoverable	µg/L	58	120	--	--
	lbs/day[1]	2.1	4.3	--	--
Zinc, Total Recoverable	µg/L	47[2]	95[2]	--	--
	lbs/day[1]	1.7[2]	3.4[2]	--	--

1. Based on a flow of 4.3 mgd.

2 Effluent limitations become effective on May 19, 2010. From December 5, 2009 through May 18, 2010, the compliance shall be evaluated using the interim effluent limitations in Section IV.A.2.

b. There shall be no acute toxicity in the discharge. 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. Compliance with the toxicity objectives will be determined by the method described in section V of the MRP.

c. The chronic toxicity of the effluent shall not exceed the monthly median trigger of 1.0 TU_c in a critical life stage test. 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. It is not an effluent limitation. However, if the effluent exceeds 1.0 TU_c, the Discharger shall immediately implement accelerated chronic toxicity testing, as required in section V of the MRP (Attachment E).

2. Interim Effluent Limitations

a. During the period beginning December 5, 2009 and ending on May 18, 2010, the Discharger shall maintain compliance with the following limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP. These interim effluent limitations shall apply in lieu of the corresponding final effluent limitations specified for the same parameters during the time period indicated in this provision.

Table 7. Interim Effluent Limitations

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Ammonia Nitrogen	mg/L	--	5.4
	lbs/day[1]	--	190
Copper, Total Recoverable	µg/L	--	44
	lbs/day[1]	--	1.6
Nickel, Total Recoverable	µg/L	--	84
	lbs/day[1]	--	3.0
Zinc, Total Recoverable	µg/L	--	310
	lbs/day[1]	--	11

1. Based on a flow of 4.3 mgd.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in Long Beach Inner Harbor:

1. The normal ambient pH to fall below 6.5 nor exceed 8.5 units nor vary from normal ambient pH levels by more than 0.5 units.

2. Surface water temperature to rise greater than 5^{o}F above the natural temperature of the receiving waters at any time or place. At no time the temperature be raised above 80^{0} F as a result of waste discharged.

3. In waters designated for non-water contact recreation (REC-2) and not designated for water contact recreation (REC-1), the fecal coliform concentration shall not exceed a log mean of 2000/100 ml (based on a minimum of not less than four samples for any 30-day period), nor shall more than 10 percent of samples collected during any 30-day period exceed 4000/100 ml.

4. Depress the concentration of dissolved oxygen to fall below 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.

5. Exceed total ammonia (as N) concentrations specified in the Regional Water Board Resolution No. 2004-022. Resolution No. 2004-022 revised the ammonia water quality objectives for inland surface waters not characteristic of freshwater in the 1994 Basin Plan, to be consistent with USEPA's *"Ambient Water Quality Criteria for Ammonia (Saltwater) - 1989"*. Adopted on March 4, 2004, Resolution No. 2004-022 was approved by State Water Board, Office of Administrative Law (OAL) and USEPA on July 22, 2004, September 14, 2004, and May 19, 2005, respectively and is now in effect.

6. The presence of visible, floating, suspended or deposited macroscopic particulate matter or foam.

7. 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.

8. Suspended or settleable materials, chemical substances or pesticides in amounts that cause nuisance or adversely affect any designated beneficial use.

9. Toxic or other deleterious substances 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.

10. Accumulation of bottom deposits or aquatic growths.

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

12. The presence of substances that result in increases of BOD that adversely affect beneficial uses.

13. 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.

14. Alteration of turbidity, or apparent color beyond present natural background levels.

15. Damage, discolor, nor cause formation of sludge deposits on flood control structures or facilities nor overload the design capacity.

16. Degrade surface water communities and populations including vertebrate, invertebrate, and plant species.

17. Problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.

18. Create nuisance, or adversely effect beneficial uses of the receiving water.

19. Violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or State Water Board. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board will revise or modify this Order in accordance with such standards.

VI. PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions. The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

2. Regional Water Board Standard Provisions. The Discharger shall comply with the following provisions:

a. This Order may be modified, revoked, reissued, or terminated in accordance with the provisions of 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.

b. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management program developed to comply with NPDES permits issued by the Regional Water Board to local agencies.

c. Discharge of wastes to any point other than specifically described in this Order and permit is prohibited and constitutes a violation thereof.

d. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to sections 301, 302, 303(d), 304, 306, 307, 316, 318, 405, and 423 of the Federal CWA and amendments thereto.

e. These requirements do not exempt the operator of the waste disposal facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste disposal facility, and they leave unaffected any further restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.

f. Oil or oily material, chemicals, refuse, or other pollutionable materials shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.

g. A copy of these waste discharge specifications shall be maintained at the discharge facility so as to be available at all times to operating personnel.

h. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

   i. Violation of any term or condition contained in this Order;

   ii. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;

   iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

i. If there is any storage of hazardous or toxic materials or hydrocarbons at this facility and if the facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.

j. The Discharger shall notify the Regional Water Board not later than 120 days in advance of implementation of any plans to alter production capacity of the product line of the manufacturing, producing or processing facility by more than ten percent. Such notification shall include estimates of proposed production

rate, the type of process, and projected effects on effluent quality. Notification shall include submittal of a new report of waste discharge appropriate filing fee.

k. The Discharger shall file with the Regional Water Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.

l. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.

m. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify this Regional Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Regional Water Board.

n. The Water Code provides that any person who violates a waste discharge requirement or a provision of the Water Code is subject to civil penalties of up to $5,000 per day, $10,000 per day, or $25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to $10 per gallon per day or $25 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.

   Violation of any of the provisions of the NPDES program or of any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.

o. 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.

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

q. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to the planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

   i. Name and general composition of the chemical,

   ii. Frequency of use,

iii. Quantities to be used,

iv. Proposed discharge concentrations, and

v. USEPA registration number, if applicable.

r. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

s. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, monthly average effluent limitation, instantaneous minimum, or instantaneous maximum, or receiving water limitation of this Order, the Discharger shall notify the Regional Water Board by telephone (213) 576-6600 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order.

C. Special Provisions

1. Reopener Provisions

a. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal CWA, and amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

b. This Order may be reopened to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more comprehensive monitoring program included as part of this Order and based on the results of the RPA.

c. This Order may be reopened and modified, 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 or to include new MLs.

d. This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments, such as an update of an objective or the adoption of a TMDL for the Los Angeles/Long Beach Inner Harbor.

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

f. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Toxicity Reduction Requirement

If the discharge exceeds acute toxicity limitation or chronic toxicity trigger that may cause or contribute to acute or chronic toxicity in the receiving water, a Toxicity Reduction Evaluation (TRE) shall be required as defined in Attachment A. The Regional Water Board shall require the Discharger to conduct a TRE if repeated tests reveal toxicity in the effluent or in the receiving water as a result of waste discharge under this Order. The Discharger shall take all reasonable steps to control toxicity once the source of toxicity is identified. Failure to conduct the required toxicity tests or a TRE shall result in the establishment of effluent limitations for chronic toxicity under this Order and/or appropriate enforcement action. Whole effluent toxicity testing requirements are described in section V. of the MRP, Attachment E.

3. Best Management Practices and Pollution Prevention (BMPP)

a. Storm Water Pollution Prevention Plan (SWPPP)

The Discharger shall submit, **within 90 days** of the effective date of this Order an updated 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 G.

b. Spill Contingency Plan (SCP)

This Regional Water Board requires the Discharger to file with the Regional Water Board, **within 90 days** after the effective date of this Order, a Spill Contingency Plan (SCP) that describes the preventive (failsafe) and contingency

(cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. The SCP shall be reviewed at a minimum once per year and updated as needed. Any changes or revisions shall be summarized in the annual summary report.

4. Construction, Operation and Maintenance Specifications

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

5. Compliance Schedule

The compliance schedule and the interim limitations in Section IV.A.2. of this Order are authorized under State Water Board's Resolution No. 2008-0025, *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits,* which was adopted on April 15, 2008 and effective on December, 17, 2008. The Discharger shall complete construction of the wastewater treatment system by October 2009. After conducting the preliminary testing and optimization, the wastewater treatment system shall be in full operation and the Discharger shall comply with final effluent limitations after May 18, 2010.

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below:

A. Single Constituent Effluent Limitation.

If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (see Reporting Requirement I.G. of the MRP), then the Discharger is out of compliance.

B. Effluent Limitations Expressed as a Sum of Several Constituents.

If the sum of the individual pollutant concentrations is greater than the effluent limitation, then the Discharger is out of compliance. In calculating the sum of the concentrations of a group of pollutants, consider constituents reported as ND or DNQ to have concentrations equal to zero, provided that the applicable ML is used.

C. Multiple Sample Data.

When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

D. Average Monthly Effluent Limitation (AMEL).

If the average (or when applicable, the median determined by subsection C above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

In determining compliance with the AMEL, the following provisions shall also apply to all constituents:

1. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for that constituent, the Discharger has demonstrated compliance with the AMEL for that month;

2. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any constituent, the Discharger shall collect four additional samples at approximately equal intervals during the month. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later.

   When all sample results are greater than or equal to the reported Minimum Level (see Reporting Requirement I.G. of the MRP), the numerical average of the analytical results of these five samples will be used for compliance determination.

   When one or more sample results are reported as “Not-Detected (ND)” or “Detected, but Not Quantified (DNQ)” (see Reporting Requirement I.G. of the MRP), the median value of these four samples shall be used for compliance determination. If one or both of the middle values is ND or DNQ, the median shall be the lower of the two middle values.

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

4. If only one sample was obtained for the month or more than a monthly period and the result exceeds the AMEL, then the Discharger is in violation of the AMEL.

E. Maximum Daily Effluent Limitations (MDEL).

If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

F. Instantaneous Minimum Effluent Limitation.

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

G. Instantaneous Maximum Effluent Limitation.

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

H. Mass and Concentration Limitations

Compliance with mass and concentration effluent limitations for the same parameter shall be determined separately with their respective limitations. When the concentration of a constituent in an effluent sample is determined to be ND or DNQ, the corresponding mass emission rate determined from that sample concentration shall also be reported as ND or DNQ.

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)
Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)
The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative
Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic
Pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)
CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge
Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)
DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit
Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA)
ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in USEPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays
Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries
Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters
All surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation
The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation
The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median
The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (*n*) is odd, then the median = $X_{(n+1)/2}$. If *n* is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the *n*/2 and *n*/2+1).

Method Detection Limit (MDL)
MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML)
ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone
Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

Ocean Waters
The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Persistent Pollutants
Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention
Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

Reporting Level (RL)
RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Satellite Collection System
The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

Standard Deviation (σ)
Standard Deviation is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

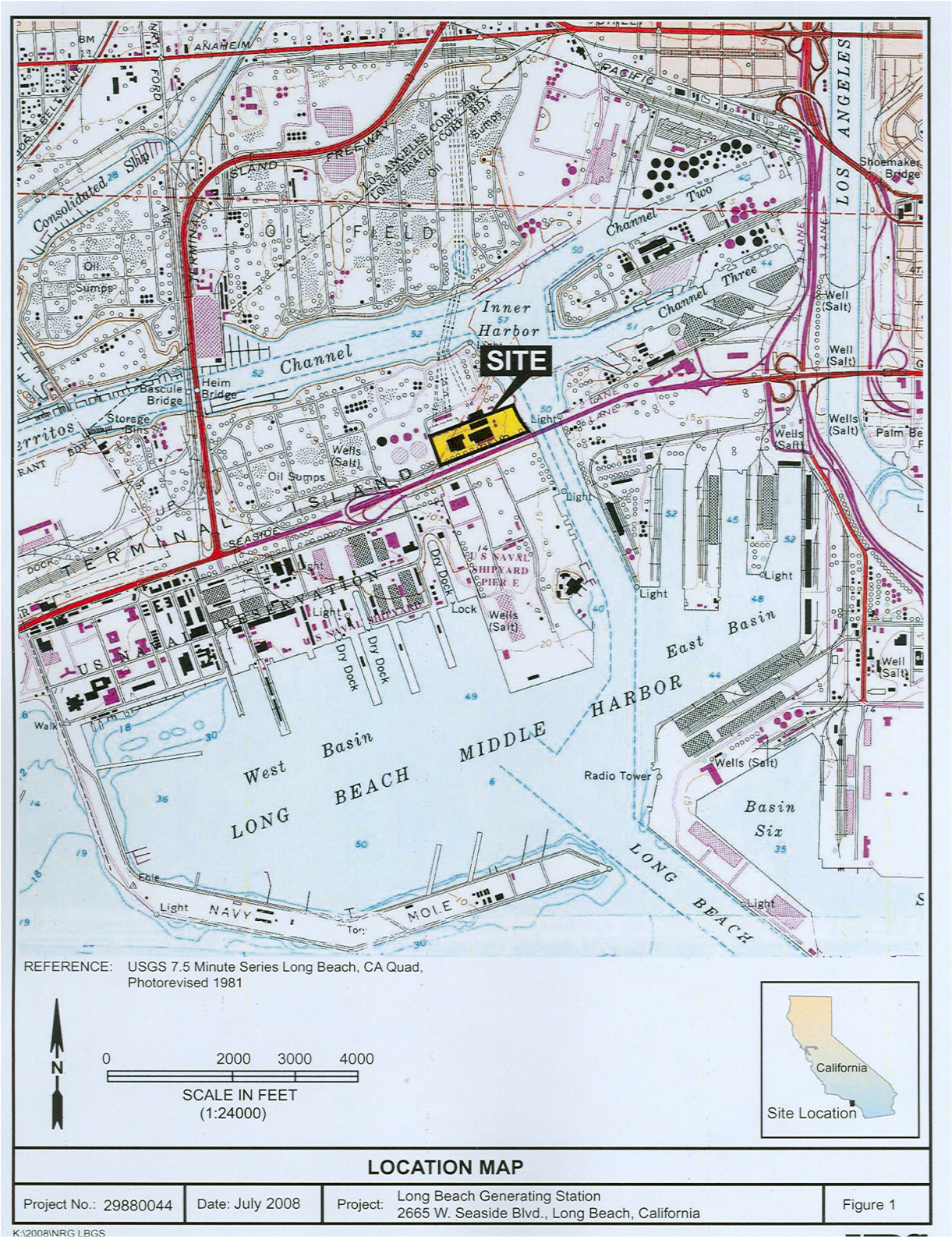
Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ACRONYMS AND ABBREVIATIONS

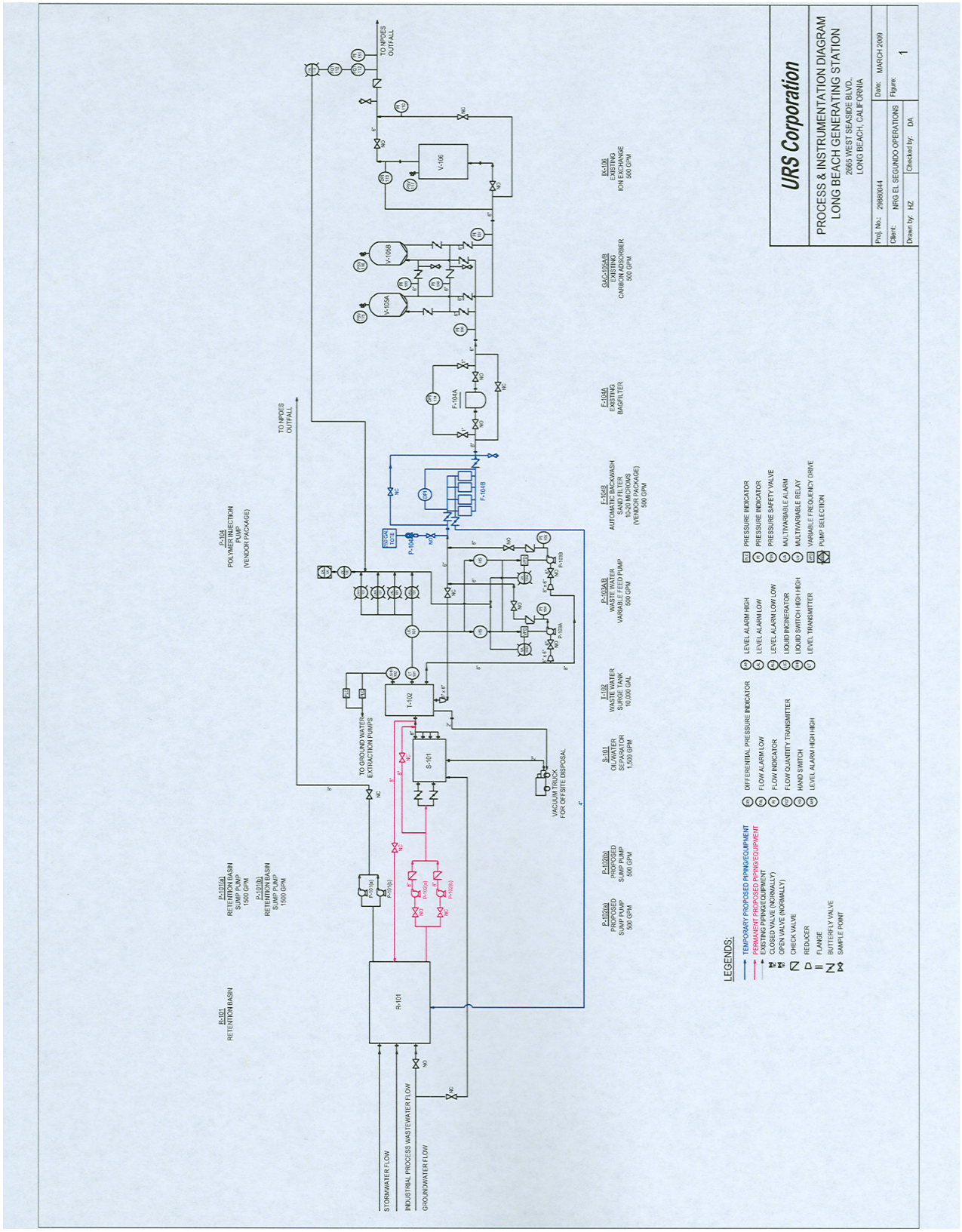
AMEL	Average Monthly Effluent Limitation
B	Background Concentration
BAT	Best Available Technology Economically Achievable
Basin Plan	*Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BMPP	Best Management Practices Plan
BPJ	Best Professional Judgment
BOD	Biochemical Oxygen Demand 5-day @ 20 ℃
BPT	Best Practicable Treatment Control Technology
C	Water Quality Objective
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
CWC	California Water Code
Discharger	Long Beach Generation LLC
DMR	Discharge Monitoring Report
DNQ	Detected But Not Quantified
ELAP	California Department of Public Health Environmental Laboratory Accreditation Program
ELG	Effluent Limitations, Guidelines and Standards
Facility	Long Beach Generating Station
gpd	gallons per day
IC	Inhibition Coefficient
IC_{15}	Concentration at which the organism is 15% inhibited
IC_{25}	Concentration at which the organism is 25% inhibited
IC_{40}	Concentration at which the organism is 40% inhibited
IC_{50}	Concentration at which the organism is 50% inhibited
LA	Load Allocations
LOEC	Lowest Observed Effect Concentration
µg/L	micrograms per Liter
mg/L	milligrams per Liter
MDEL	Maximum Daily Effluent Limitation
MEC	Maximum Effluent Concentration
MGD	Million Gallons Per Day
ML	Minimum Level
MRP	Monitoring and Reporting Program
ND	Not Detected
NOEC	No Observable Effect Concentration
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards

NTR	National Toxics Rule
OAL	Office of Administrative Law
PMEL	Proposed Maximum Daily Effluent Limitation
PMP	Pollutant Minimization Plan
POTW	Publicly Owned Treatment Works
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
Ocean Plan	*Water Quality Control Plan for Ocean Waters of California*
Regional Water Board	California Regional Water Quality Control Board, Los Angeles Region
RPA	Reasonable Potential Analysis
SCP	Spill Contingency Plan
SIP	State Implementation Policy (*Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California)*
SMR	Self Monitoring Reports
State Water Board	California State Water Resources Control Board
SWPPP	Storm Water Pollution Prevention Plan
TAC	Test Acceptability Criteria
Thermal Plan	*Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California*
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TRE	Toxicity Reduction Evaluation
TSD	Technical Support Document
TSS	Total Suspended Solid
TU_c	Chronic Toxicity Unit
USEPA	United States Environmental Protection Agency
WDR	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WLA	Waste Load Allocations
WQBELs	Water Quality-Based Effluent Limitations
WQS	Water Quality Standards
%	Percent

ATTACHMENT B – MAP



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application [section 122.41(a)].

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement [section 122.41(a)(1)].

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order [section 122.41(c)].

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment [section 122.41(d)].

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order [section 122.41(e)].

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges [section 122.41(g)].

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations [section 122.5(c)].

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [section 122.41(i)] [Water Code section 13383]:

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [section 122.41(i)(1)];

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [section 122.41(i)(2)];

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [section 122.41(i)(3)]; and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location [section 122.41(i)(4)].

G. Bypass

1. Definitions

   i. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [section 122.41(m)(1)(i)].

   ii. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production [section 122.41(m)(1)(ii)].

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below [section 122.41(m)(2)].

3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless [section 122.41(m)(4)(i)]:

   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [section 122.41(m)(4)(i)(A)];

   b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance [section 122.41(m)(4)(i)(B)]; and

   c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below [section 122.41(m)(4)(i)(C)].

4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above [section 122.41(m)(4)(ii)].

5. Notice

   a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass [section 122.41(m)(3)(i)].

   b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice) [section 122.41(m)(3)(ii)].

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [section 122.41(n)(1)].

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [section 122.41(n)(2)].

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [section 122.41(n)(3)]:

   a. An upset occurred and that the Discharger can identify the cause(s) of the upset [section 122.41(n)(3)(i)];

   b. The permitted facility was, at the time, being properly operated [section 122.41(n)(3)(ii)];

   c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) [section 122.41(n)(3)(iii)]; and

   d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [section 122.41(n)(3)(iv)].

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [section 122.41(n)(4)].

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition [section 122.41(f)].

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit [section 122.41(b)].

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code [section 122.41(l)(3) and section 122.61].

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [section 122.41(j)(1)].

B. Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order [section 122.41(j)(4) and section 122.44(i)(1)(iv)].

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [section 122.41(j)(2)].

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements [section 122.41(j)(3)(i)];

2. The individual(s) who performed the sampling or measurements [section 122.41(j)(3)(ii)];

3. The date(s) analyses were performed [section 122.41(j)(3)(iii)];

4. The individual(s) who performed the analyses [section 122.41(j)(3)(iv)];

5. The analytical techniques or methods used [section 122.41(j)(3)(v)]; and

6. The results of such analyses [section 122.41(j)(3)(vi)].

C. Claims of confidentiality for the following information will be denied [section 122.7(b)]:

1. The name and address of any permit applicant or Discharger [section 122.7(b)(1)]; and

2. Permit applications and attachments, permits and effluent data [section 122.7(b)(2)].

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance

with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order [section 122.41(h)] [Water Code section 13267].

B. **Signatory and Certification Requirement**s

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below [section 122.41(k)].

2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. [section 122.22(a)(1)].

2. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above [section 122.22(b)(1)];

b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) [section 122.22(b)(2)]; and

c. The written authorization is submitted to the Regional Water Board and State Water Board [section 122.22(b)(3)].

3. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall

operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative [section 122.22(c)].

4. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." [section 122.22(d)].

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order [section 122.22(l)(4)].

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices [section 122.41(l)(4)(i)].

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [section 122.41(l)(4)(ii)].

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order [section 122.41(l)(4)(iii)].

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date [section 122.41(l)(5)].

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time

the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [section 122.41(l)(6)(i)].

2. The following shall be included as information that must be reported within 24 hours under this paragraph [section 122.41(l)(6)(ii)]:

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order [section 122.41(l)(6)(ii)(A)].

   b. Any upset that exceeds any effluent limitation in this Order [section 122.41(l)(6)(ii)(B)].

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [section 122.41(l)(6)(iii)].

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when [section 122.41(l)(1)]:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) [section 122.41(l)(1)(i)]; or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [section 122.41(l)(1)(ii)].

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [section 122.41(l)(1)(iii)].

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements [section 122.41(l)(2)].

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above [section 122.41(l)(7)].

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information [section 122.41(l)(8)].

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

B. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be

subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions [*section 122.41(a)(2)*] [*Water Code sections 13385 and 13387*].

C. Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000 [*section 122.41(a)(3)*].

D. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both [*section 122.41(j)(5)*].

E. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both [*section 122.41(k)(2)*].

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe [section 122.42(a)]:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [section 122.42(a)(1)]:

   a. 100 micrograms per liter (µg/L) [section 122.42(a)(1)(i)];

b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony [section 122.42(a)(1)(ii)];

c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [section 122.42(a)(1)(iii)]; or

d. The level established by the Regional Water Board in accordance with section 122.44(f) [section 122.42(a)(1)(iv)].

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels" [section 122.42(a)(2)]:

a. 500 micrograms per liter (µg/L) [section 122.42(a)(2)(i)];

b. 1 milligram per liter (mg/L) for antimony [section 122.42(a)(2)(ii)];

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [section 122.42(a)(2)(iii)]; or

d. The level established by the Regional Water Board in accordance with section 122.44(f) [section 122.42(a)(2)(iv)].

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP NO. 5764)

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) NO. 5764

The Code of Federal Regulations section 122.48 requires that all NPDES permits specify monitoring and reporting requirements. Water Code Sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. An effluent sampling station shall be established for the point of discharge (Discharge Point 001 [Latitude 33°, 45', 53" N, Longitude 118°, 13', 17" W]) and shall be located where representative samples of that effluent can be obtained.

B. Effluent samples shall be taken downstream of any addition to treatment works and prior to entering the receiving water.

C. The Regional Water Board shall be notified in writing of any change in the sampling stations once established or in the methods for determining the quantities of pollutants in the individual waste streams.

D. Pollutants shall be analyzed using the analytical methods described in sections 136.3, 136.4, and 136.5 (revised March 12, 2007); or, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

   Laboratories analyzing effluent samples and receiving water samples shall be certified by the California Department of Public Health Environmental Laboratory Accreditation Program (ELAP), in accordance with the provision of Water Code section 13176, or approved by the Executive Officer and must include quality assurance/quality control (QA/QC) data in their reports. A copy of the laboratory certification shall be provided each time a new certification and/or renewal of the certification is obtained from ELAP.

E. For any analyses performed for which no procedure is specified in the USEPA guidelines or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.

F. Each monitoring report must affirm in writing that "all analyses were conducted at a laboratory certified for such analyses by the Department of Public Health or approved by the Executive Officer and in accordance with current USEPA guideline procedures or as specified in this MRP".

G. The monitoring reports shall specify the analytical method used, the Method Detection Limit (MDL), and the Minimum Level (ML) for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported by one of the following methods, as appropriate:

1. An actual numerical value for sample results greater than or equal to the ML; or

2. "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML. The estimated chemical concentration of the sample shall also be reported; or

3. "Not-Detected (ND)" for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used.

Analytical data reported as "less than" for the purpose of reporting compliance with permit limitations shall be the same or lower than the permit limit(s) established for the given parameter.

Current MLs (Attachment H) are those published by the State Water Board in the *Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, February 24, 2005.

H. Where possible, the MLs employed for effluent analyses shall be lower than the permit limitations established for a given parameter. If the ML value is not below the effluent limitation, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test and associated laboratory QA/QC procedures.

The Regional Water Board, in consultation with the State Water Board Quality Assurance Program, shall establish a ML that is not contained in Attachment H to be included in the Discharger's permit in any of the following situations:

1. When the pollutant under consideration is not included in Attachment H;

2. When the Discharger and Regional Water Board agree to include in the permit a test method that is more sensitive than that specified in 40 CFR Part 136 (revised March 12, 2009);

3. When the Discharger agrees to use an ML that is lower than that listed in Attachment H;

4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment H, and proposes an appropriate ML for their matrix; or,

5. When the Discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the USEPA-approved method 1613 for dioxins and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, the Regional Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

I. Water/wastewater samples must be analyzed within allowable holding time limits as specified in section 136.3. All QA/QC items must be run on the same dates the samples were actually analyzed, and the results shall be reported in the Regional Water Board format, when it becomes available, and submitted with the laboratory reports. Proper chain of custody procedures must be followed, and a copy of the chain of custody shall be submitted with the report.

J. All analyses shall be accompanied by the chain of custody, including but not limited to data and time of sampling, sample identification, and name of person who performed sampling, date of analysis, name of person who performed analysis, QA/QC data, method detection limits, analytical methods, copy of laboratory certification, and a perjury statement executed by the person responsible for the laboratory.

K. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to insure accuracy of measurements, or shall insure that both equipment activities will be conducted.

L. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. The annual summary report required in Section X.D shall also summarize the QA activities for the previous year. Duplicate chemical analyses must be conducted on a minimum of ten percent (10%) of the samples, or at least one sample per sampling period, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples.

M. When requested by the Regional Water Board or USEPA, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger must have a success rate equal to or greater than 80%.

N. For parameters that both average monthly and daily maximum limits are specified and the monitoring frequency is less than four times a month, the following shall apply. If an analytical result is greater than the average monthly limit, the Discharger shall collect four additional samples at approximately equal intervals during the month, until compliance with the average monthly limit has been demonstrated. All five analytical results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later. In the event of noncompliance with an average monthly effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the average monthly effluent limitation has been demonstrated. The Discharger shall provide for the approval of the Executive Officer a program to ensure future compliance with the average monthly limit.

O. In the event wastes are transported to a different disposal site during the reporting period, the following shall be reported in the monitoring report:

1. Types of wastes and quantity of each type;

2. Name and address for each hauler of wastes (or method of transport if other than by hauling); and

3. Location of the final point(s) of disposal for each type of waste.

   If no wastes are transported off-site during the reporting period, a statement to that effect shall be submitted.

P. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	Effluent shall be sampled at a point located downstream of any treatment process and upstream of the discharge point into the Back Channel of Long Beach Inner Harbor, where representative samples of the effluent can be obtained.
	RSW-001	A sampling station shall be established 50 feet from the discharge point. In the previous permit this location was referred to as “RW7”.

III. INFLUENT MONITORING REQUIREMENTS

Not applicable

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor the effluent at EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-2. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	gal/day	continuous[1]	daily	--
Chorine, Total Residual	mg/L	grab/contimuous[1]	daily	[2]
pH	s.u.	grab/continuous[1]	daily	[2]
Temperature	ºC or ºF	continuous[1]	daily	--
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L	grab	monthly	[2]
Total Suspended Solids (TSS)	mg/L	grab	monthly	[2]
Turbidity	NTU	grab	monthly	[2]
Settleable Solids	ml/L	grab	monthly	[2]
Oil and Grease	mg/L	grab	monthly	[2]
Salinity	ppt (parts per thousand)	grab	monthly	[2]
Methylene Blue Active Substances (MBAS)	mg/L	grab	monthly	[2]
Total Petroleum Hydrocarbons (TPH) as Gasoline (C_4-C_{12})	µg/L	grab	monthly	EPA method 503 or EPA method 624
TPH as Diesel (C_{13}-C_{22})	µg/L	grab	monthly	EPA method 503.1
TPH as Kerosene (Waste Oil) (C_{23}+)	µg/L	grab	monthly	EPA method 524.1
Total Coliform	MPN/100ml or CFU/100ml	grab	4/quarter[3]	[2]
Fecal Coliform	MPN/100ml or CFU/100ml	grab	4/quarter[3]	[2]
Enterococcus	MPN/100ml or CFU/100ml	grab	4/quarter[3]	[2]
Ammonia Nitrogen, Total (as N)	mg/L	grab	quarterly	[2]
Arsenic, Total Recoverable[4]	µg/L	grab	quarterly	[2]
Cadmium, Total Recoverable[4]	µg/L	grab	quarterly	[2]
Copper, Total Recoverable[4]	µg/L	grab	quarterly	[2]
Lead, Total Recoverable[4]	µg/L	grab	quarterly	[2]
Mercury, Total Recoverable[3]	µg/L	grab	quarterly	[2]
Nickel, Total Recoverable[4]	µg/L	grab	quarterly	[2]
Selenium, Total Recoverable[4]	µg/L	grab	quarterly	[2]
Zinc, Total Recoverable[4]	µg/L	grab	quarterly	[2]
Methyl Tertiary Butyl Ether (MTBE)	µg/L	grab	quarterly	[2]
Toxicity, chronic	TU_c	24-hour composite	quarterly	[2]
Toxicity, acute	% survival	24-hour composite	annually	[2]
TCDD Equivalents[5]	µg/L	grab	semiannually	[2,5]
Remaining Priority Pollutants [4, 6] excluding asbestos	µg/L	grab	semiannually	[2]
Radioactivity	pCi/L	grab	annually	[2]

[1] When continuous monitoring of temperature, pH, total residual chlorine and flow is required, the following shall be included in the report:

Temperature, pH and total residual chlorine: the maximum value and the average value of each calendar day for each respective parameter.

Flow: total daily flow.

[2] Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP (Attachment H of this permit package), where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

[3] Four (4) samples should be taken with equal space in the monitoring month (February, May, August, or November) for the required quarter. The results will provide sufficient data for the calculation of the log mean values.

[4] All metals shall be reported as Total Recoverable

[5] The Discharger shall monitor for the presence of the 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD or Dioxin) congeners. TCDD equivalents represent the sum of concentrations of chlorinated dibenzodioxins (2,3,7,8-CDDs) and chlorinated dibenzofurans (2,3,7,8-CDFs) multiplied by their respective toxicity factors, as shown by the table below. USEPA Method 1613B may be used to analyze TCDD equivalents.

Congeners	Toxicity Equivalence Factor
2,3,7,8 - tetra CDD	1.0
1,2,3,7,8 - penta CDD	1.0
1,2,3,4,7,8 - hexa CDD	0.1
1,2,3,6,7,8 - hexa CDD	0.1
1,2,3,7,8,9 - hexa CDD	0.1
1,2,3,4,6,7,8 - hepta CDD	0.01
Octa CDD	0.0001
2,3,7,8 - tetra CDF	0.1
1,2,3,7,8 - penta CDF	0.05
2,3,4,7,8 - penta CDF	0.5
1,2,3,4,7,8 - hexa CDF	0.1
1,2,3,6,7,8 - hexa CDF	0.1
1,2,3,7,8,9 - hexa CDF	0.1
2,3,4,6,7,8 - hexa CDF	0.1
1,2,3,4,6,7,8 - hepta CDFs	0.01
1,2,3,4,7,8,9 - hepta CDFs	0.01
Octa CDF	0.0001

[6] Priority Pollutants as defined by the California Toxics Rule (CTR) defined in Finding II.I of the Limitations and Discharge Requirements of this Order, and included as Attachment I.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity

1. Definition of Acute Toxicity.

   Acute toxicity is a measure of primarily lethal effects that occur over a 96-hour period. Acute toxicity shall be measured in percent survival measured in undiluted (100%) effluent.

   a 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

   b. No single test shall produce less than 70% survival.

2. Acute Toxicity Effluent Monitoring Program

   a. Method. The Discharger shall conduct acute toxicity tests on 24-hour composite 100% effluent samples, generally by methods specified in 40 CFR Part 136 which cites USEPA's *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, October 2002, USEPA, Office of Water, Washington D.C. (EPA/821/R-02/012) or a more recent edition to ensure compliance. Effluent samples shall be collected after all treatment processes and before discharge to the receiving water.

   b. Test Species. The fathead minnow, *Pimephales promelas* (Acute Toxicity Test Method 2000.0), shall be used as the test species for fresh water discharges and the topsmelt, *Atherinops affinis*, shall be used as the test species for brackish effluent. However, if the salinity of the receiving water is between 1 to 32 parts per thousand (ppt), the Discharger may have the option of using the inland silverslide, *Menidia beryllina* (Acute Toxicity Test Method 2006.0), instead of the topsmelt. The method for topsmelt (Larval Survival and Growth Test Method 1006.0) is found in USEPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms, First Edition, August 1995* (EPA/600/R-95/136).

   c. Alternate Reporting. For the acute toxicity testing with topsmelt , the Discharger may elect to report the results or endpoint from the first 96 hours of the chronic toxicity test as the results of the acute toxicity test, using USEPA's August 1995 method (EPA/600/R-95/136) to conduct the chronic toxicity test.

   d. Acute Toxicity Accelerated Monitoring**.** If either of the above requirements (sections 1.a and 1.b) is not met, the Discharger shall conduct six additional tests, approximately every two weeks, over a 12-week period. The Discharger shall ensure that they receive results of a failing toxicity test within 24 hours of the close of the test and the additional tests shall begin within 5 business days of the receipt of the result. If the additional tests indicate compliance with the toxicity limitation, the Discharger may resume regular testing.

   e. Toxicity Identification Evaluation (TIE).

      i. If the results of any two of the six accelerated tests are less than 90% survival, then the Discharger shall immediately begin a Toxicity Identification Evaluation (TIE) and implement the Initial Investigation Toxicity Reduction Evaluation (TRE) workplan. The TIE shall include all reasonable steps to identify the sources of toxicity. Once the sources are identified, the Discharger shall take all reasonable steps to reduce toxicity to meet the objective.

      ii. If the initial test and any of the additional six acute toxicity bioassay tests results are less than 70% survival, the Discharger shall immediately begin a Toxicity Identification Evaluation (TIE) and implement Initial Investigation Toxicity Reduction Evaluation (TRE) workplan. Once the sources are

identified the Discharger shall take all reasonable steps to reduce toxicity to meet the requirements.

B. Chronic Toxicity.

1. Definition of Chronic Toxicity**.**

   Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms. Chronic toxicity shall be measured in TU_c, where TU_c = 100/NOEC. The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

   This Order includes a chronic toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed, 1 TU_c in a critical life stage test.)

2. Chronic Toxicity Effluent Monitoring Program

   a. Test Species and Methods:

      i. The Discharger shall conduct critical life stage chronic toxicity tests on 24-hour composite 100% effluent samples. For freshwater discharge, the Discharger shall conduct the chronic toxicity test in accordance with USEPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, October 2002 (EPA/821/R-02/013) or a more recent edition. For brackish effluent, the Discharger shall conduct the chronic toxicity test in accordance with USEPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms, First Edition, August 1995* (EPA/600/R-95/136) or *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, Third Edition, October 2002, (EPA/821/R-02/014), or a more recent edition.

      ii. The Discharger shall conduct tests as follows: with a vertebrate, an invertebrate, and a plant for the first three suites of tests. After the screening period, monitoring shall be conducted using the most sensitive species.

      iii. The Discharger shall conduct the first chronic toxicity test screening for three consecutive months in the first required chronic toxicity testing. Re-screening is required every 24 months. The Discharger shall rescreen with the three species listed above and continue to monitor with the most sensitive species. If the first suite of re-screening tests demonstrates that the same species is the most sensitive then re-screening does not need to include more than one suite of tests. If a different species is the most sensitive or if there is

ambiguity then the Discharger shall proceed with suites of screening tests for a minimum of three, but not to exceed five suites.

iv. In brackish waters, the presence of chronic toxicity may be estimated as specified using West Coast marine organisms according to USEPA's *Short-Term Methods for Estimating Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms*, August 1995 (EPA/600/R-95/136), or a more recent edition.

v. After the screening period, monitoring shall be conducted quarterly using the most sensitive species.

vi. Effluent samples shall be collected after all treatment processes and before discharge to the receiving water.

b. Chronic Toxicity Accelerated Monitoring.

If the chronic toxicity of the effluent exceeds the monthly trigger median of 1.0 TU_c, the Discharger shall conduct six additional tests, approximately every two weeks, over a 12-week period. The Discharger shall ensure that they receive results of a failing chronic toxicity test within 24 hours of the completion of the test and the additional tests shall begin within 5 business days of the receipt of the result.

i. If any three out of the initial test and the six additional tests results exceed 1.0 TU_c, the Discharger shall immediately implement the Initial Investigation TRE workplan.

ii. If implementation of the initial investigation TRE workplan indicates the source of toxicity (e.g., a temporary plant upset, etc.), then the Discharger shall return to the normal sampling frequency required in Table E-2 of this MRP.

iii. If all of the six additional tests required above do not exceed 1 TU_c, then the Discharger may return to the normal sampling frequency.

iv. If a TRE/TIE is initiated prior to completion of the accelerated testing schedule required, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer.

C. Quality Assurance

1. Concurrent testing with a reference toxicant shall be conducted. Reference toxicant tests shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).

2. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the test methods manuals (EPA/600/4-91/002 and/or EPA/821-R-02-014), then the Discharger must re-sample and re-test at the earliest time possible.

3. Control and dilution water should be receiving water (if non-toxic) or laboratory water, as appropriate, as described in the manual. If the dilution water used is different from the water the test species are grown in (culture water), a second control using culture water shall be used.

D. Preparation of an Initial Investigation TRE Workplan

The Discharger shall prepare and submit a copy of the Discharger's initial investigation Toxicity Reduction Evaluation (TRE) workplan to the Executive Officer of the Regional Water Board for approval within **90 days** of the effective date of this permit. If the Executive Officer does not disapprove the workplan within 60 days, the workplan shall become effective. The Discharger shall use USEPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance. This workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at a minimum:

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

2. 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 the operation of the facility; and,

3. If a toxicity identification evaluation (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 V.E.3. for guidance manuals.

E. Steps in Toxicity Reduction Evaluation (TRE) and Toxicity Identification Evaluation (TIE)

1. If results of the implementation of the facility's initial investigation TRE workplan indicate the need to continue the TRE/TIE, the Discharger shall expeditiously develop a more detailed TRE workplan for submittal to the Executive Officer within 30 days of completion of the initial investigation TRE. The detailed workplan shall include, but not be limited to:

   a. Further actions to investigate and identify the cause of toxicity;

   b. Actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and

   c. A schedule for these actions.

2. The following section summarizes the stepwise approach used in conducting the TRE:

   a. Step 1 includes basic data collection. Data collected for the accelerated monitoring requirements may be used to conduct the TRE;

   b. Step 2 evaluates optimization of the treatment system operation, facility housekeeping, and selection and use of in-plant process chemicals;

   c. If Steps 1 and 2 are unsuccessful, Step 3 implements a Toxicity Identification Evaluation (TIE) and employment of all reasonable efforts using currently available TIE methodologies. The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity;

   d. Assuming successful identification or characterization of the toxicant(s), Step 4 evaluates final effluent treatment options;

   e. Step 5 evaluates in-plant treatment options; and

   f. Step 6 consists of confirmation once a toxicity control method has been implemented.

   Many recommended TRE elements parallel source control, pollution prevention, and storm water control program best management practices (BMPs). To prevent duplication of efforts, evidence of compliance with those requirements may be sufficient to comply with TRE requirements. By requiring the first steps of a TRE to be accelerated testing and review of the facility's TRE workplan, a TRE may be ended in its early stages. All reasonable steps shall be taken to reduce toxicity to the required level. The TRE may be ended at any stage if monitoring indicates there are no longer toxicity (or six consecutive chronic toxicity test results are less than or equal to 1.0 TU_c or six consecutive acute toxicity test results are greater than 90% survival).

3. The Discharger shall initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. The Discharger shall use the USEPA acute manual, chronic manual, EPA/600/6-91/005F (Phase I)/EPA/600/R-96-054 (for marine), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III), as guidance.

4. If a TRE/TIE is initiated prior to completion of the accelerated testing required in Section V.A.2.d and V.B.2.b. of this program, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer .

5. Toxicity tests conducted as part of a TRE/TIE may also be used for compliance determination, if appropriate.

6. The Regional Water Board recognizes that toxicity may be episodic and identification of causes of and reduction of sources of toxicity may not be successful

in all cases. Consideration of enforcement action by the Board will be based, in part, on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

F. Ammonia Removal

1. Except with prior approval from the Executive Officer of the Regional Water Board, ammonia shall not be removed from bioassay samples. The Discharger must demonstrate the effluent toxicity is caused by ammonia *because of* increasing test pH when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following may be steps to demonstrate that the toxicity is caused by ammonia and not other toxicants before the Executive Officer would allow for control of pH in the test.

    a. There is consistent toxicity in the effluent and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.

    b. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.

    c. Conduct graduated pH tests as specified in the toxicity identification evaluation methods. For example, mortality should be higher at pH 8 and lower at pH 6.

    d. Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite treated effluent should be lower than the non-zeolite treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity due to ammonia.

2. When it has been demonstrated that toxicity is due to ammonia because of increasing test pH, pH may be controlled using appropriate procedures which do not significantly alter the nature of the effluent, after submitting a written request to the Regional Water Board, and receiving written permission expressing approval from the Executive Officer of the Regional Water Board.

G. Reporting

The Discharger shall submit a full report of the toxicity test results, including any accelerated testing conducted during the month as required by this permit. Test results shall be reported as % survival for acute toxicity test results and as TU_c for chronic toxicity test results with the self monitoring reports (SMR) for the month in which the test is conducted. If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, then those results also shall be submitted with the SMR for the period in which the Investigation occurred.

If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, pursuant to Sections V.A.2.d. and V.B.2.b., then those results also shall be submitted with the SMR for the period in which the investigation occurred.

1. The full report shall be submitted on or before the end of the month in which the SMR is submitted.

2. The full report shall consist of (1) the results; (2) the dates of sample collection and initiation of each toxicity test; (3) the acute toxicity average limit or chronic toxicity limit or trigger and (4) printout of the ToxCalc or CETIS (Comprehensive Environmental Toxicity Information System) program results.

3. Test results for toxicity tests also shall be reported according to the appropriate manual chapter on Report Preparation and shall be attached to the SMR. Routine reporting shall include, at a minimum, as applicable, for each test:

   a. Sample date(s);

   b. Test initiation date;

   c. Test species;

   d. End point values for each dilution (e.g., number of young, growth rate, percent survival);

   e. LC_{50} value(s) in percent effluent;

   f. TU_a values $\left(TU_a = \frac{100}{LC_{50}} \right)$;

   g. NOEC value(s) in percent effluent;

   h. IC_{15}, IC_{25}, IC_{40} and IC_{50} values in percent effluent;

   i. TU_c values $\left(TU_c = \frac{100}{NOEC} \right)$;

   j. Mean percent mortality (+standard deviation) after 96 hours in 100% effluent (if applicable);

   k. NOEC and LOEC (Lowest Observable Effect Concentration) values for reference toxicant test(s);

   l. IC_{25} value for reference toxicant test(s);

   m. Any applicable charts; and

   n. Available water quality measurements for each test (e.g., pH, D.O., temperature, conductivity, hardness, salinity, ammonia).

4. The Discharger shall provide a compliance summary, which includes a summary table of toxicity data from all samples collected during that year.

5. The Discharger shall notify by telephone or electronically, this Regional Water Board of any toxicity exceedance of the limit or trigger within 24 hours of receipt of the results followed by a written report within 14 calendar days of receipt of the results. The verbal or electronic notification shall include the exceedance and the plan the Discharger has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by the permit, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

Not applicable

VII. RECLAMATION MONITORING REQUIREMENTS

Not applicable

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

A. Monitoring Location RSW-001

Table E-3. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	s.u.	Grab	Quarterly	[1,2]
Temperature	°F	Grab	Quarterly	[1,2]
Salinity	ppt	Grab	Quarterly	[1,2]
Ammonia Nitrogen, Total (as N)	mg/L	Grab	Quarterly	[1,2]
Total Coliform	MPN/100ml or CFU/100ml	Grab	4/Quarter[3]	[2]
Fecal Coliform	MPN/100ml or CFU/100ml	Grab	4/Quarter[3]	[2]
Enterococcus	MPN/100ml or CFU/100ml	Grab	4/Quarter[3]	[2]
Priority Pollutants excluding asbestos [4]	µg/L	Grab	Annually	[2]

1. Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for Priority Pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, provided as Attachment H. Where no methods are specified for a given pollutant, the methods must be approved by this Regional Water Board or the State Water Board.
2. Receiving water samples for pH, temperature, salinity and ammonia must be collected at the same time.
3. Four (4) samples should be taken with equal space in the monitoring month (February, May, August, or November) for the required quarter. The results will provide sufficient data for the calculation of the log mean values.
4. Priority Pollutants as defined by the CTR defined in Finding II.I of the Limitations and Discharge Requirements of this Order, and included as Attachment I.

IX. OTHER MONITORING REQUIREMENTS

A. SWPPP, BMPP and Spill Contingency Plan Status and Effectiveness Report

1. As required under Special Provision VI.C.3 of this Order, the Discharger shall submit an updated SWPPP to the Executive Officer of the Regional Water Board within 90 days of the effective date of this permit.

2. Annually the Discharger shall report the status of the implementation and the effectiveness of the SWPPP required under Special Provision VI.C.3 of this Order. The SWPPP, BMPP and Spill Contingency Plan status shall be reviewed at a minimum once per year and updated as needed to ensure all actual or potential sources of pollutants in wastewater and storm water discharged from the Facility are addressed in the SWPPP. All changes or revisions to the SWPPP, BMPP and Spill Contingency Plan shall be summarized in the annual summary report required under Attachment E, Monitoring and Reporting Program, Section X.D.

B. Chemical Use Report

1. The Discharger shall submit to the Regional Water Board, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect the waste discharge, including quantities of each.

2. The Discharger shall report annually in the annual summary report summarizing the quantities of all chemicals, listed by both trade and chemical names, which are used at the facility and which are discharged or have the potential to be discharged.

3. The Discharger shall monitor the chemicals used in the facility. Prior to any change in the use of chemicals at the facility the Discharger must inform the Regional Water Board. No changes in the type or amount of chemicals added to the process water shall be made without the written approval of the Regional Water Board's Executive Officer. To comply with this provision, the Discharger must submit a complete report of the change to the Regional Water Board before the proposed date of change. This requirement does not apply to changes of chemical brand names where the chemical composition and Material Safety Data Sheet (MSDS) information for the new brand is essentially identical to the previous chemical used. The change in brand or manufacturer with a copy of the new MSDS sheet need only be reported to the Regional Water Board in the Discharger's quarterly DMRs.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

2. If there is no discharge during any reporting period, the report shall so state.

3. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with waste discharge requirements, as well as all excursions of effluent limitations.

4. Quarterly analyses shall be performed during the months of February, May, August, and November. Semiannual analyses shall be performed during the months of February and August. Annual analyses shall be performed during the month of August. Should there be instances when monitoring could not be done during these specified months, the Discharger must notify the Regional Water Board, state the reason why the monitoring could not be conducted, and obtain approval from the Executive Officer for an alternate schedule. Results of annual analyses shall be reported in the quarterly monitoring report following the analysis.

5. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.

6. The Discharger shall report the results of acute and chronic toxicity testing, TRE and TIE as required in the Attachment E, Monitoring and Reporting Program, section V.G.

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit quarterly SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-4. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Daily	December 5, 2009	All	Submit with quarterly SMR

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Monthly	January 1, 2010	1st day of calendar month through last day of calendar month	Submit with quarterly SMR
Quarterly	January 1, 2010	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
Semiannually	January 1, 2010	January 1 through June 30 July 1 through December 30	August 1 February 1
Annually	January 1, 2010	January 1 through December 31	February 1 of the following year

4. Reporting Protocols. The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in Part 136.

The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

b. Sample results less than the reporting level (RL)(see definition at Attachment A), but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. Compliance Determination. Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachments A and H of this Order. For purposes of reporting and administrative

enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

6. Multiple Sample Data. When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

7. The Discharger shall submit SMRs in accordance with the following requirements:

a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

c. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

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

C. Discharge Monitoring Reports (DMRs)

1. As described in section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

STANDARD MAIL	**FEDEX/UPS/ OTHER PRIVATE CARRIERS**
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

2. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated will not be accepted unless they follow the exact same format of EPA Form 3320-1.

D. Other Reports

1. **Within 90 days** of the effective date of this permit, the Discharger is required to submit the following to the Regional Water Board:

   a. Initial Investigation TRE workplan (Section V.D of the MRP)

   b. Updated SWPPP (Section VI.C.3 of the Order)

   c. Spill Contingency Plan (Section VI.C.3 of the Order)

2. By **March 1** of each year, the Discharger shall submit an **annual summary report** to the Regional Water Board. The report shall contain the following:

   a. Both tabular and graphical summaries of the monitoring data obtained during the previous year,

   b. A discussion on the compliance record and the corrective actions taken or planned to bring the discharge into full compliance with the waste discharge requirements,

   c. A report discussing the following: 1) operation/maintenance problems; 2) changes to the facility operations and activities; 3) potential discharge of the pollutants associated with the changes and how these changes are addressed in

the BMPP; 3) calibration of flow meters or other equipment/device used to demonstrate compliance with effluent limitations of this Order.

d. A report summarizing the quantities of all chemicals, listed by both trade and chemical names, which are used at the facility and which are discharged or have the potential to be discharged.

e. A report on the status of the implementation and the effectiveness of the SWPPP and BMPP.

f. A report summarizes all changes or revisions to BMPP and Spill Contingency Plan.

3. As discussed in Section IX.B of the MRP, Attachment E, the Discharger shall submit to the Regional Water Board, together with the first monitoring report required by this permit, a list of all chemicals and proprietary additives which could affect this waste discharge, including quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly.

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	4B192111002
Discharger	Long Beach Generation LLC
Name of Facility	Long Beach Generating Station
Facility Address	2665 West Seaside Boulevard
	Long Beach, CA 90802
	Los Angeles County
Facility Contact, Title and Phone	Ken H. Riesz, Sr. Plant Manager (310) 615-6030
Authorized Person to Sign and Submit Reports	Ken H. Riesz, Sr. Plant Manager (310) 615-6030
Mailing Address	301 Vista Del Mar Boulevard, El Segundo, CA 90245
Billing Address	SAME
Type of Facility	Electric Power Generating Facility
Major or Minor Facility	Minor
Threat to Water Quality	3
Complexity	B
Pretreatment Program	Not Applicable
Reclamation Requirements	Not Applicable
Facility Permitted Flow	4.3 million gallons per day (mgd)
Facility Design Flow	4.3 mgd
Watershed	Dominguez Channel Watershed
Receiving Water	Long Beach Inner Harbor (Back Channel)
Receiving Water Type	Enclosed Bay

A. Long Beach Generation LLC (hereinafter Discharger) owns and NRG El Segundo Operations, Inc. (NRG) operates the Long Beach Generating Station (hereinafter Facility or LBGS), an electric power generating facility.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. The Facility discharges wastewater consisting of groundwater from dewatering systems, storm water, and intermittent low-volume industrial wastewater from the LBGS to the Back Channel of Long Beach Harbor (a part of Long Beach Inner Harbor), a water of the United States. The LBGS is currently regulated by Order No. 01-079 which was adopted on May 24, 2001 and expired on April 10, 2006. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements (WDR) and a National Pollutant Discharge Elimination System (NPDES) permit are adopted pursuant to this Order.

C. The Discharger filed a report of waste discharge (ROWD) and submitted an application for renewal of its WDRs and NPDES permit in October 2005. A revised ROWD that reflects plant changes which have occurred since October 2005 was submitted on July 30, 2008. A pre-permit site visit was conducted on March 27, 2009, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

LBGS is located at 2665 West Seaside Boulevard on Terminal Island in the City of Long Beach, California. LBGS contains two switchyards, a boiler room, a gas turbine room, and a steam turbine room. In December 2005, NRG shut down operation of the LBGS. However, in April 2007, the Discharger was permitted by the Port of Long Beach to repower a portion of the LBGS. The Facility currently operates four combustion turbine generators (CTG) to generate up to 260-mega watts (MW) of energy for the region's power grid for peak energy demand. Each CTG provides a nominal 65 MWs and is equipped with Best Available Control Technology (BACT) to meet the existing air emission control requirements of the South Coast Air Quality Management District (SCAQMD). Referred to as Units 1-4, these CTGs are a refurbishment of the prior CTGs which were retired on January 1, 2005 – along with five other units. LBGS previously operated a once-through cooling system, serving Units 1-9. In October 2007, the once-through cooling system utilized by the retired steam turbines was abandoned by plugging the intake and outfall tunnels. These changes eliminate the possible discharges of the once-through cooling water.

A. Description of Wastewater and Treatment

In addition to energy generating equipment, LBGS is also equipped with a groundwater dewatering system, storm water handling equipment, and a groundwater treatment system. Under the asset sale agreement in 1998, LBGS continues to allow groundwater and storm water originating from the nearby Plains All American Pipeline's

tank farm and the Southern California Edison's high voltage electrical switch yards to be discharged through the LBGS's outfall.

Wastewater is mainly composed of groundwater and storm water with a small amount of the low-volume industrial wastewater generated from general housekeeping activities, drips of demineralized water used in plant processes, and fire water discharged during annual testing of the LBGS's fire prevention system. All wastewaters are collected within the retention basin during regular operations (i.e. dry weather and light storm events). Wastewater collected in the basin would then be pumped into the oil/water separator and treated in the onsite treatment system that will be in operation by the effective date of the permit. The treatment system consists of a filtration system, granular activated carbon (GAC) columns and an ion exchange vessel. The treated wastewater is discharged from Discharge Point 001 (see table on cover page) to the Back Channel of Long Beach Harbor, a water of the United States. During a severe storm event, when the volume of water generated at the site greatly exceeds the volume that can be handled by the retention basin and the associated wastewater treatment system, a portion of the collected water that bypasses the treatment system will be discharged directly from Discharge Point 001. However, operation procedures are in place to ensure that the first flush from any storm event is subjected to the treatment system prior to discharge, until the condition of potential volume exceedance at the basin is reached.

The maximum daily flow reported was 1.9 mgd on February 24, 2008 and the average flow was 0.5 mgd in 2008.

B. Discharge Points and Receiving Waters

The Facility proposes to discharge up to 4.3 million gallons per day (mgd) of wastewater to the Back Channel of Long Beach Harbor (a part of Long Beach Inner Harbor), a water of the United States, through Discharge Point 001 located at Latitude 33°, 45', 53" North, Longitude 118°, 13', 17" West.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in the existing Order for discharges from Discharge Point 001 (Monitoring Location EFF-001) and monitoring data representing the quality of effluent discharged after the shut down of the steam turbines in 2005 and when the once-through cooling water system was not in operation are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation[1]		Monitoring Data (From June 2006 – To April 2009)	
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
Flow [2]	mgd	--	--	0.6	1.9

Parameter	Units	Effluent Limitation[1]		Monitoring Data (From June 2006 – To April 2009)	
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
Temperature	°F	105 (Instantaneous Max)		85.4	87.9
pH	pH unit	6.0 – 9.0		7.8	8.1
Chronic toxicity	TU_c	--	4.2	NR	16
Acute toxicity	% survival	--	--	NR	> 92% in 100% effluent
Antimony	µg/L	--	--	NR	0.21
Arsenic	µg/L	24	125	NR	11.2
Cadmium	µg/L	4.2	17	NR	0.14
Chromium VI	µg/L	8.4	34	NR	0.34
Copper	µg/L	6.2	44	NR	2.66
Cyanide	µg/L	--	--	NR	< 5
Lead	µg/L	8.4	34	NR	0.57
Mercury	µg/L	0.17	0.67	NR	0.01
Nickel	µg/L	21	84	NR	2.0
Selenium	µg/L	63	252	NR	0.042
Silver	µg/L	2.4	11	NR	< 0.02
Thallium	µg/L	--	--	NR	0.01
Zinc	µg/L	58	310	NR	66
2,3,7,8 TCDD	ug/L	--	--	NR	< 0.0000016
Acrolein	µg/L	--	--	NR	< 0.5
Acrylonitrile	µg/L	--	--	NR	< 0.03
Benzene	µg/L	--	--	NR	< 0.03
Bromoform	µg/L	--	--	NR	6.5
Carbon tetrachloride	µg/L	--	--	NR	< 0.04
Chlorobenzene	µg/L	--	--	NR	< 0.03
Chlorodibromomethane	µg/L	--	--	NR	0.3 (DNQ[3])
Chloroethane	ug/L	--	--	NR	< 0.03
2-Chloroethylvinyl ether	µg/L	--	--	NR	< 0.1
Chloroform	µg/L	--	--	NR	0.4
Dichlorobromomethane	µg/L	--	--	NR	0.3
1,1-Dichloroethane	µg/L	--	--	NR	< 0.04

Parameter	Units	Effluent Limitation[1]		Monitoring Data (From June 2006 – To April 2009)	
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
1,2-Dichloroethane	µg/L	--	--	NR	< 0.04
1,1-Dichloroethylene	µg/L	--	--	NR	< 0.07
1,2-Dichloropropane	µg/L	--	--	NR	< 0.03
1,3-Dichloropropylene	µg/L	--	--	NR	< 0.03
Ethylbenzene	µg/L	--	--	NR	< 0.04
Methyl bromide	µg/L	--	--	NR	< 0.06
Methyl chloride	µg/L	--	--	NR	< 0.06
Methylene chloride	µg/L	--	--	NR	0.11 (DNQ[3])
1,1,2,2-tetrachloroethane	µg/L	--	--	NR	< 0.04
Tetrachloroethylene	µg/L	--	--	NR	< 0.04
Toluene	µg/L	--	--	NR	< 0.06
Trans 1,2-Dichloroethylene	µg/L	--	--	NR	< 0.06
1,1,1-Trichloroethane	µg/L	--	--	NR	< 0.03
1,1,2-Trichloroethane	µg/L	--	--	NR	< 0.05
Trichloroethylene	µg/L	--	--	NR	< 0.05
Vinyl Chloride	µg/L	--	--	NR	< 0.06
2-chlorophenol	µg/L	--	--	NR	< 0.05
2,4-dichlorophenol	µg/L	--	--	NR	< 0.05
2,4-dimethylphenol	µg/L	--	--	NR	< 0.1
4,6-dinitro-o-cresol (aka 2-methyl-4,6-Dinitrophenol)	µg/L	--	--	NR	< 0.1
2,4-dinitrophenol	µg/L	--	--	NR	< 0.1
2-nitrophenol	µg/L	--	--	NR	< 0.1
4-nitrophenol	µg/L	--	--	NR	< 0.1
3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	µg/L	--	--	NR	< 0.1
Pentachlorophenol	µg/L	--	--	NR	< 0.1
Phenol	µg/L	--	--	NR	< 0.1
2,4,6-trichlorophenol	µg/L	--	--	NR	< 0.05
Acenaphthene	µg/L	--	--	NR	0.0022
Acenaphthylene	µg/L	--	--	NR	0.0031(DNQ[3])

Parameter	Units	Effluent Limitation[1]		Monitoring Data (From June 2006 – To April 2009)	
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
Anthracene	µg/L	--	--	NR	0.0087
Benzidine	µg/L	--	--	NR	< 0.05
Benzo(a)Anthracene	µg/L	--	--	NR	< 0.001
Benzo(a)Pyrene	µg/L	--	--	NR	< 0.001
Benzo(b)Fluoranthene	µg/L	--	--	NR	0.004 (DNQ[3])
Benzo(ghi)Perylene	µg/L	--	--	NR	0.0047 (DNQ[3])
Benzo(k)Fluoranthene	µg/L	--	--	NR	0.0027 (DNQ[3])
Bis(2-Chloroethoxy) methane	µg/L	--	--	NR	< 0.05
Bis(2-Chloroethyl) Ether	µg/L	--	--	NR	< 0.05
Bis(2-Chloroisopropyl) Ether	µg/L	--	--	NR	< 0.05
Bis(2-Ethylhexyl) Phthalate	µg/L	--	--	NR	0.1
4-Bromophenyl Phenyl Ether	µg/L	--	--	NR	< 0.05
Butylbenzyl Phthalate	µg/L	--	--	NR	0.037 (DNQ[3])
2-Chloronaphthalene	µg/L	--	--	NR	< 0.05
4-Chlorophenyl Phenyl Ether	µg/L	--	--	NR	< 0.05
Chrysene	µg/L	--	--	NR	0.0026 (DNQ[3])
Dibenzo(a,h) Anthracene	µg/L	--	--	NR	0.0022 (DNQ[3])
1,2-Dichlorobenzene	µg/L	--	--	NR	< 0.01
1,3-Dichlorobenzene	µg/L	--	--	NR	< 0.01
1,4-Dichlorobenzene	µg/L	--	--	NR	< 0.01
3-3'-Dichlorobenzidine	µg/L	--	--	NR	< 0.005
Diethyl Phthalate	µg/L	--	--	NR	0.115
Dimethyl Phthalate	µg/L	--	--	NR	< 0.005
Di-n-Butyl Phthalate	µg/L	--	--	NR	0.075
2-4-Dinitrotoluene	µg/L	--	--	NR	< 0.05
2-6-Dinitrotoluene	µg/L	--	--	NR	< 0.05
Di-n-Octyl Phthalate	µg/L	--	--	NR	<0.005
1,2-Diphenylhydrazine	µg/L	--	--	NR	< 0.05
Fluoranthene	µg/L	--	--	NR	0.018

Parameter	Units	Effluent Limitation[1]		Monitoring Data (From June 2006 – To April 2009)	
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
Fluorene	µg/L	--	--	NR	0.0156
Hexachlorobenzene	µg/L	--	--	NR	< 0.001
Hexachlorobutadiene	µg/L	--	--	NR	< 0.005
Hexachlorocyclopentadiene	µg/L	--	--	NR	< 0.005
Hexachloroethane	µg/L	--	--	NR	< 0.005
Indeno(1,2,3-cd)Pyrene	µg/L	--	--	NR	0.0029 (DNQ[3])
Isophorone	µg/L	--	--	NR	< 0.005
Naphthalene	µg/L	--	--	NR	0.369
Nitrobenzene	µg/L	--	--	NR	< 0.05
N-Nitrosodimethylamine	µg/L	--	--	NR	< 0.05
N-Nitrosodi-n-Propylamine	µg/L	--	--	NR	< 0.05
N-Nitrosodiphenylamine	µg/L	--	--	NR	< 0.05
Phenanthrene	µg/L	--	--	NR	0.02
Pyrene	µg/L	--	--	NR	0.0077
1,2,4-Trichlorobenzene	µg/L	--	--	NR	0.014
Aldrin	µg/L	--	--	NR	< 0.001
Alpha-BHC	µg/L	--	--	NR	< 0.001
Beta-BHC	µg/L	--	--	NR	< 0.001
Gamma-BHC (aka Lindane)	µg/L	--	--	NR	< 0.001
delta-BHC	µg/L	--	--	NR	< 0.001
Chlordane	µg/L	--	--	NR	< 0.001
4,4'-DDT	µg/L	--	--	NR	< 0.001
4,4'-DDE	µg/L	--	--	NR	< 0.001
4,4'-DDD	µg/L	--	--	NR	< 0.001
Dieldrin	µg/L	--	--	NR	< 0.001
Alpha-Endosulfan	µg/L	--	--	NR	< 0.001
Beta-Endosulfan	µg/L	--	--	NR	< 0.001
Endosulfan Sulfate	µg/L	--	--	NR	< 0.001
Endrin	µg/L	--	--	NR	< 0.001
Endrin Aldehyde	µg/L	--	--	NR	< 0.001

Parameter	Units	Effluent Limitation[1]		Monitoring Data (From June 2006 – To April 2009)	
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Daily Discharge
Heptachlor	µg/L	--	--	NR	< 0.001
Heptachlor Epoxide	µg/L	--	--	NR	< 0.001
PCB sum	µg/L	--	--	NR	< 0.01
Toxaphene	µg/L	--	--	NR	< 0.01

NR - Not Reported either because there is no AMEL or because the sample frequency was equal to or less than 1 per month.

[1] Except for temperature and pH limitations, effluent limitations were based on the 1997 California Ocean Plan criteria using a minimum initial dilution of 3.2 to 1 (Receiving water : Effluent).

[2] Monitoring data from November 2007 to April 2009. The once-through cooling water system was decommissioned during September and October 2007 by plugging intake and outfall tunnels.

[3] DNQ (Detected, but Not Quantified). The concentration was greater than the MDL, but lower than the ML.

D. Compliance Summary

Data submitted to the Regional Water Board indicate that the Discharger has exceedances, as outlined in the table below, of the chronic toxicity limitation in the effluent when the receiving water is used as the dilution water in the chronic toxicity test. Also shown in the table are the chronic toxicity testing results for the receiving water that had been consistently above the effluent limitation of 4.2 TU_c. Therefore, it can only be concluded that both the effluent and the receiving water do cause chronic toxicity. In order to determine if the chronic toxicity is only caused by the effluent, the Discharger should conduct the effluent chronic toxicity testing using Lab seawater or uncontaminated receiving water as the dilution water. This Order updates the chronic toxicity testing requirements in the MRP for this purpose.

Table F-3. Summary of Compliance History

Date	Type of Sample	Violation Type	Parameter	Reported Value	Permit Limit[1]	Units
02/12/2007	Effluent with Receiving Water	Daily Maximum	Chronic Toxicity	16	4.2	TU_c
	Receiving Water with Lab Seawater	--	Chronic Toxicity	>16	--	TU_c
08/28/2007	Effluent with Receiving Water	Daily Maximum	Chronic Toxicity	8	4.2	TU_c
	Receiving Water with Lab Seawater	--	Chronic Toxicity	>16	--	TU_c
11/26/2007	Effluent with Receiving Water	Daily Maximum	Chronic Toxicity	16	4.2	TU_c
	Receiving Water with Lab Seawater	--	Chronic Toxicity	>16	--	TU_c
01/03/2008	Effluent with Receiving Water	Daily Maximum	Chronic Toxicity	16	4.2	TU_c
	Receiving Water with Lab Seawater	--	Chronic Toxicity	8	--	TU_c

Date	Type of Sample	Violation Type	Parameter	Reported Value	Permit Limit[1]	Units
01/09/2008	Effluent with Receiving Water	Daily Maximum	Chronic Toxicity	16	4.2	TU_c
	Receiving Water with Lab Seawater	--	Chronic Toxicity	>16	--	TU_c
01/23/2008	Effluent with Receiving Water	Daily Maximum	Chronic Toxicity	16	4.2	TU_c
	Receiving Water with Lab Seawater	--	Chronic Toxicity	8	--	TU_c
01/30/2008	Effluent with Receiving Water	Daily Maximum	Chronic Toxicity	>16	4.2	TU_c
	Receiving Water with Lab Seawater	--	Chronic Toxicity	16	--	TU_c
02/06/2008	Effluent with Receiving Water	Daily Maximum	Chronic Toxicity	>16	4.2	TU_c
	Receiving Water with Lab Seawater	--	Chronic Toxicity	16	--	TU_c
08/04/2008	Effluent with Receiving Water	Daily Maximum	Chronic Toxicity	>16	4.2	TU_c
	Receiving Water with Lab Seawater	--	Chronic Toxicity	4	--	TU_c

1. Chronic toxicity limitation was based on the 1997 California Ocean Plan criteria using a minimum initial dilution ratio of 3.2 to 1 (Receiving water : Effluent)

E. Planned Changes

Not applicable

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

B. **California Environmental Quality Act (CEQA)**

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100 through 21177.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Quality Control Board (Regional Water Board) adopted a Water Quality Control Plan for the Los Angeles Region (hereinafter Basin Plan) on June 13, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to Long Beach Inner Harbor are as follows:

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Los Angeles/Long Beach Inner Harbor	Existing: Industrial Service Supply (IND); Navigation (NAV); Non-contact Water Recreation (REC-2); Commercial and Sport Fishing (COMM); Marine Habitat (MAR); and Rare, Threatened, or Endangered Species (RARE). Potential: Water Contact Recreation (REC-1); Shellfish Harvesting (SHELL)

Requirements of this Order implement the Basin Plan.

2. **Thermal Plan.** The State Water 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 surface waters. Discharges from the Facility are not considered thermal wastes or elevated temperature wastes since the discharge of the once-through cooling water has been permanently terminated in October 2007. Requirements of this Order implement the Thermal Plan and a white paper developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region.* The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. The new temperature effluent limit is reflective of the new information available that indicates that the 100°F temperature is not protective of aquatic organisms. Therefore, a maximum effluent temperature limitation of 86°F is included in this Order.

3. **Ammonia Basin Plan Amendment.** The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through 3-4. However, those ammonia objectives were revised on March 4, 2004, by the Regional Water Board with the adoption of Resolution No. 2004-022, *Amendment to the Water Quality Plan for the Los Angeles Region to Update the Ammonia Objectives for*

Inland Surface Waters Not Characteristic of Freshwater (including enclosed bays, estuaries and wetlands) with the Beneficial Use designations for protection of "Aquatic Life". The ammonia Basin Plan amendment was approved by the State Water Board on July 22, 2004, Office of Administrative Law on September 14, 2004, and by USEPA on May 19, 2005. The amendment revised the Basin Plan by updating the ammonia objectives for inland surface waters not characteristic of freshwater such that they are consistent with USEPA's *"Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989."* The amendment revised the regulatory provisions of the Basin Plan by adding language to Chapter 3, "Water Quality Objectives."

For inland surface waters not characteristic of freshwater (including enclosed bays, estuaries, and wetlands), the objectives are a 4-day average concentration of unionized ammonia of 0.035 mg/L, and a 1-hour average concentration of unionized ammonia of 0.233 mg/L. The objectives are fixed concentrations of unionized ammonia, independent of pH, temperature, or salinity. The amendment includes an implementation procedure to convert un-ionized ammonia objectives to total ammonia effluent limits. The amendment also simplifies the implementation procedures for translating ammonia objectives into effluent limits in situations where a mixing zone has been authorized by the Regional Water Board. Finally, the amendment revises the implementation procedure for determining saltwater, brackish or freshwater conditions, to be consistent with the proposed objectives. The objectives apply only to inland surface waters not characteristic of freshwater (including enclosed bays, estuaries and wetlands) and do not impact the Ammonia Water Quality Objectives for ocean waters contained in the California Ocean Plan.

4. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995, and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

5. **State Implementation Policy.** On March 2, 2000, the State Water 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 became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

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 C.F.R. § 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA 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 USEPA.

7. **Antidegradation Policy.** Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

8. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations[1] section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. All limits in the permit are as stringent as the previous permit.

D. **Watershed Management Approach**

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 TMDLs, to better assess cumulative impacts of pollutants from all point and nonpoint 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 allocations (WLAs) and load allocations (LAs) for point and non-point sources, and will result in achieving water quality standards for the waterbody.

[1] All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

E. Impaired Water Bodies on CWA 303(d) List

Section 303(d) of the CWA requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d)-listed water bodies and pollutants, the Regional Water Board plans to develop and adopt TMDLs that will specify WLAs for point sources and load allocations (LAs) for non-point sources, as appropriate.

The USEPA approved the State's 2006 303(d) list of impaired water bodies on June 28, 2007. Certain receiving waters in the Los Angeles and Ventura County watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 2006 303(d) list and have been scheduled for TMDL development. The 2006 State Water Board's California 303(d) List classifies the Los Angeles/Long Beach Inner Harbor that is the receiving water of the LBGS discharge as impaired. The pollutants of concern include beach closures, benthic community effects, copper, DDT, PCBs, sediment toxicity and zinc. A total maximum daily load (TMDL) is developed for the pollutants of concern in a 303(d) listed waterbody to facilitate the waterbody's recovery of its ability to fully support its beneficial uses. To date, the Los Angeles Harbor Bacteria TMDL (Inner Cabrillo Beach and Main Ship Channel) received the Regional Water Board approval on July 1, 2004 (Resolution No. 2004-011) and the State Water Board approval with adoption of Resolution No. 2004-0071 on October 21, 2004. The Office of Administrative Law (OAL) and USEPA approval dates were January 5, 2005 and, March 1, 2005, respectively. However, this TMDL addresses only the elevated bacterial indicator densities that are causing impairment of the REC-1 beneficial use of Inner Cabrillo Beach and the potential REC-1 uses of the Main Ship Channel in the Los Angeles Inner Harbor and waterbodies within the Long Beach Inner Harbor are not included. No other TMDLs have been developed for the Los Angeles/Long Beach Inner Harbor. Currently, Regional Water Board staff are preparing TMDLs for copper and zinc. TMDLs for other listed pollutants are scheduled for development in 2019.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: section 122.44(a) requires that permits include applicable technology-based limitations and standards; and section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

The once-through cooling system was decommissioned during September and October 2007. LBGS currently only discharges wastewater consisting of groundwater, storm water and the low-volume industrial wastewater. The list of pollutants of concern is based on constituents that are regulated in the Basin Plan or CTR and were detected in the effluent. Effluent limitations for BOD, TSS, oil and grease, settleable solids, turbidity, pH and total residual chlorine are based on water quality objectives contained in the Basin Plan as well as the typical limitations prescribed in similar permits. Effluent limitations for priority

pollutants are based on an analysis of effluent monitoring data and applicable water quality criteria.

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. Section 122.45(f)(1) requires that all permit limitations, standards or prohibitions be expressed in terms of mass units except under the following conditions: (1) for pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations; (2) when applicable standards or limitations are expressed in terms of other units of measure; or (3) if in establishing technology-based permit limitation on a case-by-case basis limitation based on mass are infeasible because the mass or pollutant cannot be related to a measure of production. The limitations, however, must ensure that dilution will not be used as a substitute for treatment.

A. Discharge Prohibitions

The discharge prohibitions are based on the requirements of the Basin Plan, State Water Board's plans and policies, the Water Code, and previous permit provisions, and they are consistent with the requirements set for other discharges to Los Angeles/Long Beach Inner Harbor that are regulated by an NPDES permit.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations, require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

a. Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after

considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and section 125.3 of the Code of Federal Regulations authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in section 125.3.

2. Applicable Technology-Based Effluent Limitations

This Order includes technology-based effluent limitations based on BPJ in accordance with 40 CFR § 125.3. Since the once-through cooling water discharge was terminated in October 2007, discharges from the Facility consisting of groundwater from dewatering systems, storm water and intermittent low-volume wastewater are not currently regulated under effluent guidelines. As such, BPJ is used to develop technology-based limitations for the control of some pollutants. Effluent limitations for total suspended solids (TSS), BOD, oil and grease, turbidity, and settleable solids have been prescribed using those in the NPDES permits for similar discharges.

Table F-5. Summary of Technology-based Effluent Limitations

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
BOD_5 @ 20°C	mg/L	20	30
Oil and Grease	mg/L	10	15
TSS	mg/L	50	75
Settleable Solids	ml/L	0.1	0.3
Turbidity	NTU	50	75

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR. The specific procedures for determining reasonable potential for discharges from the Long Beach Generating Station, and if necessary for calculating WQBELs, are contained in the SIP.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

As noted in section II of the Limitations and Discharge Requirements, the Regional Water Board adopted a Basin Plan that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The beneficial uses applicable to Long Beach Inner Harbor are summarized in section III.C.1 of this Fact Sheet. The Basin Plan includes both narrative and numeric water quality objectives applicable to the receiving water.

Priority pollutant water quality criteria in the CTR are applicable to Long Beach Inner Harbor. The CTR contains both saltwater and freshwater criteria. As specified in the CTR, saltwater criteria apply at salinities of 10 parts per thousand (ppt) and above at locations where this occurs 95 percent or more of the time. Because of the proximity of Long Beach Inner Harbor to the open ocean, the salinity of the receiving water is well above 10 parts per thousand and CTR saltwater criteria were used to conduct the RPA and establish effluent limitations.

Tables F-6 and F-7 summarize the applicable numeric water quality criteria/objective for priority pollutants and non-priority pollutants reported in detectable concentrations in the effluent. Table F-6 criteria were used in conducting the RPA for this Order.

Table F-6. Applicable Water Quality Criteria

CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria					
			Freshwater		Saltwater		Human Health for Consumption of:	
			Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms only
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
1	Antimony	4300	N/A		--	--	N/A	4300
2	Arsenic	36			69	36		--
3	Beryllium	Narrative			--	--		Narrative
4	Cadmium	9.3			42	9.4		Narrative
5a	Chromium (III)	--						--
5b	Chromium (VI)	50			1100	50		--
6	Copper	3.7			5.8	3.7		--
7	Lead	8.5			220	8.5		--
8	Mercury	0.051			--	--		0.051
9	Nickel	8.3			75	8.3		4600
10	Selenium	71			290	71		Narrative
11	Silver	2.2			2.2			--
12	Thallium	6.3			--	--		6.3
13	Zinc	86			95	86		--
20	Bromoform	360			--	--		360
23	Chlorodibromomethane	34			--	--		34
26	Chloroform	--			--	--		--
27	Dichlorobromomethane	46			--	--		46
36	Methylene Chloride	1600			--	--		1600
56	Acenaphthene	2700			--	--		2700
57	Acenaphthylene	--			--	--		--
58	Anthracene	110000			--	--		110000
62	Benzo(b)Fluoranthene	0.049			--	--		0.049
63	Benzo(ghi)Perylene	--			--	--		--
64	Benzo(k)Fluoranthene	0.049			--	--		0.049
68	Bis(2-Ethylhexyl)Phthalate	5.9			--	--		5.9
70	Butylbenzyl Phthalate	5200			--	--		5200
73	Chrysene	0.049			--	--		0.049
74	Dibenzo(a,h)Anthracene	0.049			--	--		0.049
79	Diethyl Phthalate	120000			--	--		120000
80	Dimethyl Phthalate	2900000			--	--		2900000

CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria					
			Freshwater		Saltwater		Human Health for Consumption of:	
			Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms only
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
81	Di-n-Butyl Phthalate	12000			--	--		12000
86	Fluoranthene	370			--	--		370
87	Fluorene	14000			--	--		14000
92	Indeno(1,2,3-cd)Pyrene	0.049			--	--		0.049
99	Phenanthrene	--			--	--		--
100	Pyrene	11000			--	--		11000
101	1,2,4-Trichlorobenzene	--			--	--		--

"N/A" indicates that the water quality criteria for the protection of human health for the consumption of water and organisms are not applicable.

Numeric criterion for TCDD equivalents:

The CTR establishes a numeric water quality objective for 2,3,7,8-tetrachlorinated dibenzo-p-dioxin (2,3,7,8-TCDD) of 1.4 x 10^{-8} µg/L for the protection of human health, when aquatic organisms are consumed. When CTR was promulgated, USEPA stated its support of the regulation of other dioxin and dioxin-like compounds through the use of toxicity equivalencies (TEQs) in NPDES permits. For California waters, USEPA stated specifically, "if the discharge of dioxin or dioxin-like compounds has reasonable potential to cause or contribute to a violation of a narrative criterion, numeric water quality-based effluent limitations for dioxin or dioxin-like compounds should be included in NPDES permits and should be expressed using a TEQ scheme" [65 Fed. Reg. 31682, 31695 (2000)]. This procedure, developed by the World Health Organization (WHO) in 1988, uses a set of toxicity equivalency factors (TEFs) to convert the concentration of any congener of dioxin or furan into an equivalent concentration of 2,3,7,8-TCDD. When the CTR was promulgated, USEPA also stated that the Agency will continue to assess the risks posed by dioxin to public health and the water quality criteria for dioxin that it had promulgated. To determine if the discharge of dioxin or dioxin-like compounds from the Facility has reasonable potential to cause or contribute to a violation of the Basin Plan's narrative water quality objective regarding bioaccumulation, Regional Water Board staff has therefore used TEFs to express the measured concentrations of 16 dioxin congeners in effluent and background samples as 2,3,7,8-TCDD. These "equivalent" concentrations are then compared to the numeric criterion, established by the CTR for 2,3,7,8-TCDD of 1.4 x 10^{-8} µg/L.

Table F-7. Applicable Basin Plan Numeric Water Quality Objectives

Constituent	Units	Water Quality Criteria
pH	s.u.	Between 6.5 and 8.5 at all times, ambient pH shall not be changed more than 0.2 units from natural conditions

Constituent	Units	Water Quality Criteria
Ammonia	mg/L	0.035 mg unionized NH_3/L 4-day average, 0.233 mg unionized NH_3/L 1-hour average
Temperature	ºF	Receiving water shall not be altered by more than 5 ºF above the natural temperature.
Turbidity	NTU	Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%. Where natural turbidity is greater than 50 NTU increases shall not exceed 10%.

Translation of un-ionized ammonia (NH_3) water quality objectives to total ammonia water quality objectives:

Total un-ionized ammonia (NH_3) water quality objectives of 0.035 mg/L for the 4-day average and 0.233 mg/L for the 1-hour average are to be translated to total ammonia (NH_4^+ +NH_3) utilizing the implementation procedure contained in Resolution No. 2004-022 which revised the saltwater ammonia water quality objectives in the 1994 Basin Plan. The equation for the translation is as follows:

$$[NH_4^+] + [NH_3] = [NH_3] + [NH_3]*10\text{^}(pK_a^s + 0.0324(298 - T) + 0.0415\ P/T - pH)$$

Where: P = 1 atm
T = temperature (ºK)
pK_a^s = 0.116 * i + 9.425, the stoichiometric acid hydrolysis constant of ammonium ions in saltwater based on i
i = 19.9273 S (1000 – 1.005109 S)$^{-1}$, the molal ionic strength of saltwater based on S
S = salinity

In order to calculate total ammonia objectives, receiving water pH, temperature, and salinity data are required. Monitoring data (pH and temperature) of the receiving water at monitoring station RW7 collected semiannually (winter and summer) from winter 2001 to summer 2008 were used in the calculation. The average salinity of the receiving water is 33.18 ppt during the monitoring period. The calculated total ammonia water quality objectives are as follows:

One hour average total ammonia objective: 4.95 mg NH_3/L
based on: 90 percentile pH (8.13),
90 percentile temperature (21.55 ºC) and
salinity (33.18ppt)

4-day average total ammonia objective: 1.52 mg NH_3/L
based on: 50 percentile pH (7.98),
50 percentile temperature (16.26 ºC) and
salinity (33.18ppt)

The reasonable potential analysis for ammonia was conducted based on these two total ammonia objectives.

3. Determining the Need for WQBELs

In accordance with Section 1.3 of the SIP, the Regional Water Board conducts a reasonable potential analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Water Board analyzes effluent and receiving water data and identifies the maximum observed effluent concentration (MEC) and maximum background concentration (B) in the receiving water for each constituent. To determine reasonable potential, the MEC and the B are then compared with the applicable water quality objectives (C) outlined in the CTR, NTR, as well as the Basin Plan. For all pollutants that have a reasonable potential to cause or contribute to an excursion above a state water quality standard, numeric WQBELs are required. The RPA considers water quality criteria from the CTR and NTR, and when applicable, water quality objectives specified in the Basin Plan. To conduct the RPA, the Regional Water Board identifies the MEC and maximum background concentration in the receiving water for each constituent, based on data provided by the Discharger.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete a RPA:

1) Trigger 1 – If the MEC ≥ C, a limit is needed.

2) Trigger 2 – If the background concentration (B) > C and the pollutant is detected in the effluent, a limit is needed.

3) Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates that a WQBEL is required.

Sufficient effluent and receiving water data are needed to conduct a complete RPA. If data are not sufficient, the Discharger will be required to gather the appropriate data for the Regional Water Board to conduct the RPA. Upon review of the data, and if the Regional Water Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

The RPA was performed for the priority pollutants regulated in the CTR for which data are available. Five sets of discharge data (three full sets of priority pollutants and two sets of priority metals) that may represent the quality of the current discharge (not containing cooling water) are available for Discharge Point 001. Effluent data for discharges through Discharge Point 001 are available for August 2006, August 2007, February 2008 (metals only), August 2008, and February 2009 (metals only). No receiving water data are available. However, monitoring data for the intake water in February 2006 and August 2006 were used as receiving water data. In addition to monitoring data, Regional Water Board staff considered the fact that some metals were consistently detected in the effluent and in the retention basin water samples as well as the 303(d) listing for two of the metals: copper and zinc.

Based on the RPA, the pollutants that demonstrate reasonable potential for discharge through Discharge Point 001 are identified in Table F-8. Refer to Attachment J for a summary of the RPA and associated effluent limitation calculations.

For ammonia, since it is not a CTR constituent, the determination of reasonable potential is based on the procedures outlined in USEPA guidance, *Technical Support Document for Water Quality–based Toxics Control* (EPA/505/2-90-001, March 1991) with the application of ammonia objectives calculated in the previous section. The RPA result (Attachment K) indicates that ammonia has a reasonable potential to cause or contribute to an excursion above the state water quality objective for ammonia.

Table F-8. Summary of Reasonable Potential Analysis

CTR No.	Constituent	Applicable Water Quality Criteria (C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc. (B) µg/L	RPA Result - Need Limit?	Reason
2	Arsenic	36	11	1.1	Yes	Trigger 3[1]
4	Cadmium	9.4	0.047	0.017	Yes	Trigger 3[1]
6	Copper	3.7	2.7	1.7	Yes	Trigger 3[1]
7	Lead	8.5	0.57	0.15	Yes	Trigger 3[1]
8	Mercury	0.051	0.01	< 0.01	Yes	Trigger 3[1]
9	Nickel	8.3	2	0.3	Yes	Trigger 3[1]
10	Selenium	71	0.042	0.038	Yes	Trigger 3[1]
13	Zinc	86	66	7.2	Yes	Trigger 3[1]
	Ammonia	1.3	14 (projected)	--	Yes	Projected Max > C

[1] The metals were consistently detected in the effluent and in the retention basin water samples. Therefore, it was determined that these metals have reasonable potential to exceed water quality objectives utilizing BPJ. The Regional Water Board staff may conduct another reasonable potential analysis after additional effluent monitoring data are available.

4. **WQBEL Calculations**

The WQBELs for CTR/NTR constituents are calculated according to procedures outlined in the SIP, as described below.

a. If a reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one or more of the three procedures contained in Section 1.4 of the SIP. These procedures include:

i. If applicable and available, use of the WLA established as part of a TMDL.

ii. Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).

iii. Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the Regional Water Board.

b. Water quality-based effluent limits (final) for the constituents identified in Table F-9 are based on monitoring results and following the procedure based on the steady-state model, available in Section 1.4 of the SIP.

c. The Discharger has not requested dilution credit or submitted a mixing zone study, therefore, no dilution credit is included. However, in accordance with the reopener provision in Section VI.C.1.e in the Order, this Order may be reopened upon the submission by the Discharger of adequate information to establish appropriate dilution credits or a mixing zone, as determined by the Regional Water Board.

d. WQBELs Calculation Example

Using copper as an example, the following demonstrates how WQBELs were established for this Order. The tables in Attachment J summarize the development and calculation of all WQBELs for this Order using the process described below.

Concentration-Based Effluent Limitations

A set of AMEL and MDEL values are calculated separately, one set for the protection of aquatic life and the other for the protection of human health. The AMEL and MDEL limitations for aquatic life and human health are compared, and the most restrictive AMEL and the most restrictive MDEL are selected as the WQBEL.

Calculation of aquatic life AMEL and MDEL:

Step 1: For each constituent requiring an effluent limit, identify the applicable water quality criteria or objective. For each criterion determine the effluent concentration allowance (ECA) using the following steady state equation:

$$ECA = C + D(C-B) \quad \text{when } C > B, \text{ and}$$
$$ECA = C \quad \text{when } C \leq B$$

Where: C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators
D = The dilution credit, and
B = The background concentration

As discussed above, for this Order, dilution was not allowed; therefore:

$ECA = C$

For copper the applicable water quality criteria are (reference Table F-6):

ECA_{acute}= 5.8 µg/L
$ECA_{chronic}$= 3.7 µg/L

Step 2: For each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 3 of the SIP and will not be repeated here.

$LTA_{acute} = ECA_{acute} \times Multiplier_{acute\ 99}$

$LTA_{chronic} = ECA_{chronic} \times Multiplier_{chronic\ 99}$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80 percent of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6.

For copper, the following data was used to develop the acute and chronic LTA using equations provided in Section 1.4, Step 3 of the SIP (Table 1 of the SIP also provides this data up to three decimals):

No. of Samples	CV	ECA Multiplier$_{acute\ 99}$	ECA Multiplier$_{chronic\ 99}$
5	0.6	0.32	0.53

LTA_{acute} = 5.8 µg/L x 0.32 = 1.856 µg/L

$LTA_{chronic}$ = 3.7 µg/L x 0.53 = 1.961 µg/L

Step 3: Select the most limiting (lowest) of the LTA.

LTA = most limiting of LTA_{acute} or $LTA_{chronic}$

For copper, the most limiting LTA was the LTA_{acute}

LTA = 1.856 µg/L

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as an Average Monthly Effluent Limitation (AMEL) and Maximum Daily Effluent Limitation (MDEL). The multiplier is a statistically-based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the CV of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 5 of the SIP and will not be repeated here.

$AMEL_{aquatic\ life} = LTA \times AMEL_{multiplier\ 95}$

$MDEL_{aquatic\ life} = LTA \times MDEL_{multiplier\ 99}$

AMEL multipliers are based on a 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4).

For copper, the following data was used to develop the AMEL and MDEL for aquatic life using equations provided in Section 1.4, Step 5 of the SIP (Table 2 of the SIP also provides this data up to two decimals):

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$
4	0.6	3.11	1.55

$AMEL_{aquatic\ life} = 1.856 \times 1.55 = 2.88\ \mu g/L$

$MDEL_{aquatic\ life} = 1.856 \times 3.11 = 5.77\ \mu g/L$

Calculation of human health AMEL and MDEL:

Step 5: For the ECA based on human health, set the AMEL equal to the $ECA_{human\ health}$

$AMEL_{human\ health} = ECA_{human\ health}$

However, for copper

$ECA_{human\ health}$ = Not Available. The CTR does not contain a numeric copper criterion protective of human health; therefore, it was not possible to develop a cadmium AMEL based on human health criteria.

Step 6: Calculate the MDEL for human health by multiplying the AMEL by the ratio of the $Multiplier_{MDEL}$ to the $Multiplier_{AMEL}$. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

$MDEL_{human\ health} = AMEL_{human\ health}$ x ($Multiplier_{MDEL}$ / $Multiplier_{AMEL}$)

A copper $MDEL_{human\ health}$ could not be calculated because a copper $AMEL_{human\ health}$ was not available. There are no criteria protective of human health for copper; therefore, none of the limitations for copper are based on human health criteria.

Step 7: Select the lower of the AMEL and MDEL based on aquatic life and human health as the WQBEL for the Order.

Therefore, for copper

$AMEL_{aq.\ life}$	$MDEL_{aq.\ life}$	$AMEL_{HH}$	$MDEL_{HH}$
2.9	5.8	Not applicable	Not applicable

The lowest (most restrictive) effluent limits are based on aquatic toxicity and were incorporated into this Order. For arsenic, cadmium, copper, lead, selenium, and zinc, there are no human health criteria; therefore, the AMEL and MDEL based on aquatic life criteria are established as the WQBELs. For mercury, parameter that only has Human Health criteria applicable, there are no aquatic life criteria; therefore, the AMEL and MDEL based on the human health criteria are established as the WQBELs. These limits will be protective of aquatic life.

e. Expression of WQBELs

NPDES regulations at 40 CFR 122.45(d) require that all effluent limitations be expressed, unless impracticable, as both maximum daily and average monthly effluent limits (MDEL and AMEL).

The calculations of ammonia effluent limitations are based on the procedures outlined in Resolution No. 2004-022 and presented in Attachment L.

5. **WQBELs based on Basin Plan Objectives**

The Basin Plan states that the discharge shall not cause the following in the Long Beach Inner Harbor:

- The normal ambient pH falls below 6.5 nor exceed 8.5 units.
- Depress the concentration of dissolved oxygen to fall below 5.0 mg/L anytime nor shall allow the mean annual concentration of dissolved oxygen to fall below 7 mg/L.

To meet the water quality objectives in the Basin Plan and to protect the beneficial uses of the receiving water, the above requirements are included as effluent or receiving water limitations in the Order. The Basin Plan also contains water quality coliform objectives for the protection of REC-1, REC-2, and SHELL beneficial uses. This Order includes receiving water limitations for fecal coliform in order to protect the non-contact water recreation (REC-2) beneficial use of the receiving water.

Other constituents addressed in the Basin Plan were evaluated as follows:

a. **Chlorine, total residual.** The Basin Plan requires that 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. The Facility occasionally applies chlorination treatment in the retention basin. As such, an instantaneous maximum effluent limitation for residual chlorine is included in the Order.

b. **Temperature.** The Basin Plan identifies numeric temperature objectives consistent with the Thermal Plan. A white paper was developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region*. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. After the once-through cooling system was decommissioned during September and October 2007, the Discharger does not undertake activities that significantly alter the temperature of the effluent. Therefore, this Order includes an effluent maximum temperature limitation of 86º F, which was based on the findings included in the white paper.

c. **Turbidity.** The Basin Plan requirements for turbidity are as follows:

   i. where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%.

   ii. where natural turbidity is greater than 50 NTU, increases shall not exceed 10%.

   This order applies the water quality objective for turbidity as a receiving water limitation in addition to the technology-based effluent limitation.

6. **Whole Effluent Toxicity (WET)**

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative “no toxics in toxic amounts” criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses by aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota.

a. Acute Toxicity Limitation:

This Order includes acute toxicity limitations and requires acute toxicity monitoring. In accordance with the Basin Plan, the acute toxicity objective for discharges dictates that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival. Acute toxicity provisions in the 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.

b. Chronic Toxicity Trigger and Requirements:

In addition to the Basin Plan requirements, section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. The discharge from Discharge Point 001 has been determined to have the reasonable potential to contribute chronic toxicity in receiving waters. 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 Water 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 Water Board adopted Order No. 2003-0012 deferring the issue of numeric chronic toxicity effluent limitations until a subsequent Phase of the SIP is adopted. In the meantime, the State Water 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 narrative chronic toxicity effluent limitation with a numeric trigger for accelerated monitoring. Phase II of the SIP has been adopted, however, the toxicity control provisions were not revised.

On January 17, 2006, the State Board Division of Water Quality held a California Environmental Quality Act (CEQA) scoping meeting to seek input on the scope and content of the environmental information that should be considered in the planned revisions of the Toxicity Control Provisions of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). However, the Toxicity Control Provisions of the SIP continue unchanged.

This Order contains a reopener to allow the Regional Water Board to modify the permit, if necessary, consistent with any new policy, law, or regulation. Until such time, this Order will have toxicity limitations that are consistent with the State Board's precedential decision.

Chronic toxicity provisions in the 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 TUc 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 I.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 for setting up maximum daily limit: using 2.0 TUc as the maximum daily limit; or using a statistical approach outlined in the TSD to develop a maximum daily effluent limitation. In this permit, neither a maximum daily limitation nor a trigger for chronic toxicity is prescribed.

7. Final WQBELs

A summary of final WQBELs proposed in this Order is provided in Table F-9.

Table F-9. Summary of Water Quality-based Effluent Limitations

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	s.u.	--	--	6.5	8.5
Temperature	°F	--	--	--	86
Chlorine, Total Residual	mg/L	--	--	--	0.1
Ammonia Nitorgen	mg/L	1.0	2.1	--	--
Arsenic, Total Recoverable	µg/L	29	59	--	--
Cadmium, Total Recoverable	µg/L	7.7	15	--	--
Copper, Total Recoverable	µg/L	2.9	5.8	--	--
Lead, Total Recoverable	µg/L	7.0	14	--	--
Mercury, Total Recoverable	µg/L	0.051	0.10	--	--
Nickel, Total Recoverable	µg/L	6.8	14	--	--
Selenium, Total Recoverable	µg/L	58	120	--	--
Zinc, Total Recoverable	µg/L	47	95	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Toxicity, Acute	% survival	See footnote [1]		--	--

[1] 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 bioassay tests shall be at least 90%, and (ii) no single test producing less than 70% survival.

D. Final Effluent Limitations

Section 402(o) of the CWA and section 122.44(l) require that effluent limitations or conditions in reissued Orders be at least as stringent as those in the existing Order based on the submitted sampling data. In this Order, effluent limitations for total suspended solids (TSS), BOD, oil and grease, turbidity, and settleable solids were prescribed using those in the NPDES permits for similar discharges. These effluent limitations were not included in the existing Order (Order No. 01-079). Effluent limitations for metals (arsenic, cadmium, copper, lead, mercury, nickel, selenium, and zinc) were not carried over from Order No. 01-079 because these existing metal limitations were derived based on the California Ocean Plan. The Facility discharges into the Long Beach Inner Harbor, which is considered an enclosed bay, an inland surface water, not the Pacific Ocean. Therefore, water quality objectives for inland surface waters which are included in the CTR are applicable to this discharge and effluent limitations for these metals were prescribed using the SIP procedures. In addition, the effluent limitation for temperature has been revised to reflect WQO changes based on new information and the termination of the once-through cooling water. An effluent limitation for total residual chlorine was included in this Order to ensure that chlorination at the retention basin does not result in an excursion of the Basin Plan Objective in the effluent for total residual chlorine.

1. Satisfaction of Anti-Backsliding Requirements

Effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order. Effluent limitations for total suspended solids (TSS), BOD, oil and grease, turbidity, and settleable solids were newly prescribed using those in the NPDES permits for similar discharges. Effluent limitations for metals (arsenic, cadmium, copper, lead, mercury, nickel, selenium, and zinc) were prescribed based on the CTR and SIP instead of the California Ocean Plan being applied in the previous permit. The relaxations in some effluent metal limitations are consistent with anti-backsliding requirements because it reflected “new information” that was not available during the previous permit renewal. The Long Beach Inner Harbor is considered an enclosed bay as defined in the SIP and, therefore, water quality objectives in the CTR are applicable.

2. Satisfaction of Antidegradation Policy

Section 131.12 requires that the state water quality standards include an anti-degradation policy consistent with the federal policy. The State Water Board established California’s antidegradation policy in State Water Board Resolution No.

68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies.

The permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16. The final limitations in this Order are in compliance with antidegradation requirements and meet the requirements of the SIP because these limits hold the Discharger to performance levels that will not cause or contribute to water quality impairment or further quality degradation that could result from an increase in permitted design flow or a reduction in the level of treatment. In addition, a new onsite treatment system will be in operation by the effective date of the permit so that the Facility will generate better quality effluent. Further, the Facility permanently decommissioned the once-through cooling water system in October 2007, that will significantly reduce the permitted discharge from 265 mgd to 4.3 mgd (the average daily flow rate at approximate 0.5 mgd) and eliminate impingement and entrainment of marine life and other environmental impacts associated with the once-through cooling system. Therefore, the issuance of this permit is consistent with the state's antidegradation policy.

3. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on TSS, turbidity, BOD, oil and grease, and settleable solids. Restrictions on these pollutants are discussed in section IV.B. of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. Most beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). The remaining water quality objectives and beneficial uses implemented by this Order, specifically ammonia, were approved by USEPA on May 19, 2005, and are applicable water quality standards pursuant to section 131.21(c)(2). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

4. Mass-based Effluent Limitations

   Mass-based effluent limitations are established using the following formula:

   Mass (lbs/day) = flow rate (mgd) x 8.34 x effluent limitation (mg/L)
   where: Mass = mass limitation for a pollutant (lbs/day)
   Effluent limitation = concentration limit for a pollutant (mg/L)
   Flow rate = discharge flow rate (MGD)

Summary of Final Effluent Limitations
Discharge Point 001

Table F-10. Summary of Final Effluent Limitations for Discharge Point 001

Parameter	Units	Effluent Limitations				Basis
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
BOD_5@20°C	mg/L	20	30	--	--	Similar Order and BPJ[2]
	lbs/day[1]	710	1100	--	--	
TSS	mg/L	50	75	--	--	Similar Order and BPJ[2]
	lbs/day[1]	1800	2700	--	--	
Oil and Grease	mg/L	10	15	--	--	Similar Order and BPJ[2]
	lbs/day[1]	360	540	--	--	
Settleable Solids	ml/L	0.1	0.3	--	--	Similar Order and BPJ[2]
Turbidity	NTU	50	75	--	--	Similar Order and BPJ[2]
pH	s.u.	--	--	6.5	8.5	Basin Plan Objective
Temperature	°F	--	--	--	86	Basin Plan, Thermal Plan and White Paper
Chlorine, Total Residual	mg/L	--	--	--	0.1	Basin Plan Objective
Ammonia Nitorgen	mg/L	1.0	2.1	--	--	Basin Plan Objective
	lbs/day[1]	36	75	--	--	
Arsenic, Total Recoverable	µg/L	29	59	--	--	SIP[3]
	lbs/day[1]	1.0	2.1	--	--	
Cadmium, Total Recoverable	µg/L	7.7	15	--	--	SIP[3]
	lbs/day[1]	0.28	0.54	--	--	
Copper, Total Recoverable	µg/L	2.9	5.8	--	--	SIP[3]
	lbs/day[1]	0.10	0.21	--	--	
Lead, Total Recoverable	µg/L	7.0	14	--	--	SIP[3]
	lbs/day[1]	0.25	0.50	--	--	
Mercury, Total Recoverable	µg/L	0.051	0.10	--	--	SIP[3]
	lbs/day[1]	0.0018	0.0036	--	--	
Nickel, Total Recoverable	µg/L	6.8	14	--	--	SIP[3]
	lbs/day[1]	0.24	0.50	--	--	

Parameter	Units	Effluent Limitations				Basis
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Selenium, Total Recoverable	µg/L	58	120	--	--	SIP[3]
	lbs/day[1]	2.1	4.3	--	--	
Zinc, Total Recoverable	µg/L	47	95	--	--	SIP[3]
	lbs/day[1]	1.7	3.4	--	--	

[1] Based on a flow of 4.3 mgd

[2] Based on best professional judgment (BPJ) in accordance with 40 CFR Section 125.3.

[3] These effluent limitations are established based on the California Toxics Rule (CTR) and the State Implementation Policy (SIP).

a. **Acute Toxicity Limitation**: There shall be no acute toxicity in the discharge. The acute toxicity of the effluent shall be such that the average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least ninety percent (90%) and no single test producing less than 70% survival. Compliance with the toxicity objectives will be determined by the method described in Attachment E (Monitoring and Reporting Program).

E. Interim Effluent Limitations

Since the LBGS retired the once-through cooling water system by plugging intake and outfall tunnels in October 2007, most of the wastewater discharged in dry season is from the dewatering system which surrounds the LBGS. The historical data of monitoring well samples provided by the Discharger indicate exceedances of the effluent limitations for copper, nickel and zinc prescribed in this Order. The contamination is associated with groundwater underlying the historically industrial Terminal Island with land uses including decades of oil extraction, petroleum bulk storage, naval shipyard activities, a former refinery waste site and power generation. Therefore, the Discharger may not be able to achieve immediate compliance with the effluent limitations based on CTR criterion for these constituents.

The effluent limitations in Order No. 01-079 were based on the California Ocean Plan. The discharge from LBGS has been reclassified as a discharge to an enclosed bay, not an ocean discharge. Therefore, the effluent limitations included in this Order are based on CTR criteria instead of the water quality objectives in the California Ocean Plan. The CTR criteria for copper, nickel and zinc are more stringent than the Ocean Plan objectives included in the previous Order (No. 01-079). Therefore, interim effluent limitations have been included for these constituents.

In addition, the Discharger is not able to achieve immediate compliance with the ammonia limitations. These limitations are new and they are based on water quality objectives in the Ammonia Basin Plan Amendment (Resolution No. 2004-022).

The numeric interim effluent limitations for copper, nickel and zinc in this Order are based on effluent limitations in Order No. 01-079. The maximum detected effluent concentration for ammonia is used as the interim effluent limitation because there is no ammonia limitation in Order No 01-079.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (section 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water and are based on the water quality objectives contained in the Basin Plan.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring

Since the Facility terminated the once-through cooling water system, the influent monitoring is no longer required.

B. Effluent Monitoring

Monitoring for those pollutants expected to be present in the effluent at Monitoring Location EFF-001 for Discharge Point 001 will be required as shown in the MRP. To determine compliance with effluent limitations and further characterize the discharge waste stream, the MRP requires extensive effluent monitoring but eliminates the In-Plant waste streams monitoring requirement specified in the previous Order No. 01-079. Because of the changes in operation specifically by eliminating the once-through cooling water system, the discharge is basically composed of groundwater, storm water and the low-volume industrial wastewater (less than 0.01mgd).

For conventional and non-conventional pollutants, this Order prescribes at least the same level of monitoring requirements for the effluent contained in the previous Order. This Order adds a monthly monitoring requirement for turbidity since it is one of the major parameters in the monitoring program for facilities with similar discharges. Further, to verify that the discharge is not fresh water, monitoring for salinity is also required monthly.

This Order requires quarterly monitoring for total petroleum hydrocarbons (gasoline, diesel and kerosene) and methyl tertiary butyl ether (MTBE). Because the previous monitoring data of water samples from the retention basin that stores the drainage, groundwater and storm water from the adjacent tank farm consistently indicated the

presence of TPHs and MTBE, which is an additive in petroleum products, they are pollutants of concern. Data for these pollutants is necessary to evaluate reasonable potential.

This Order includes the monitoring requirements for bacteria including total coliform, fecal coliform and enterococcus. Because the open system of the retention basin may result in exposure to potential sources of pathogens and the effluent is not disinfected prior to final discharge, the bacterial monitoring frequency has been established as 4 times per quarter in the same monitoring month to ensure protection of the non-contact water recreation (REC-2) beneficial use of the receiving water.

For CTR priority pollutants with limitations and ammonia, this Order requires quarterly monitoring. The monitoring frequency for the remaining CTR pollutants has also been increased from annually to semiannually. Since LBGS has significantly changed its operation during the past few years, the monitoring frequency increase is necessary in order to obtain sufficient data for the determination of reasonable potential.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

This requirement establishes conditions and protocol by which compliance with the Basin Plan narrative water quality objective for toxicity will be demonstrated and in accordance with Section 4.0 of the SIP. Conditions include required monitoring and evaluation of the effluent for acute and chronic toxicity and numerical values for chronic toxicity evaluation to be used as 'triggers' for initiating accelerated monitoring and toxicity reduction evaluation(s).

D. Receiving Water Monitoring

1. Surface Water

This Order includes receiving water limitations and therefore, monitoring requirements are included in the MRP to determine compliance with the receiving water limitations established in Limitations and Discharge Requirements, Receiving Water Limitations, Section V.A. This Order implements the revised ammonia water quality objectives which are expressed as un-ionized ammonia. Since the equation for conversion of un-ionized ammonia objectives to total ammonia objectives relies on pH, temperature and salinity, this Order includes monitoring requirements for these parameters. This Order also includes annual monitoring for the CTR pollutants in order to obtain necessary data of the receiving water as background information for the determination of reasonable potential.

E. Other Monitoring Requirements

Not applicable

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

These provisions are based on section 123 and the previous Order. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new federal regulations, modification in toxicity requirements, completion of mixing zone or dilution credits studies, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

Toxicity Reduction Requirements. This provision is based on section 4 of the SIP, Toxicity Control Provisions, which establishes minimum toxicity control requirements for implementing the narrative toxicity objective for aquatic life protection established in the basin plans of the State of California.

3. Best Management Practices and Pollution Prevention

This provision is based on section 122.44(k) and includes the requirement to develop a SWPPP and BMPs.

a. Storm Water Pollution Prevention Plan (SWPPP). The Discharger is required to update and continue to implement a SWPPP in accordance with Attachment G.

The SWPPP will outline site-specific management processes for minimizing storm water runoff contamination and for preventing contaminated storm water runoff from being discharged directly into the receiving water.

b. Spill Contingency Plan (SCP). Since spill or overflow may occur in the facility, this Order requires the Discharger to prepare a SCP for the Facility. The Discharger shall review and update, if necessary, the SCP after each incident and make it available for the facility personnel at all times.

4. Construction, Operation, and Maintenance Specifications

This provision is based on the requirements of section 122.41(e) and the previous Order.

5. Compliance Schedules

The compliance schedule and the interim limitations in Section IV.A.2. of this Order are authorized under State Water Board's Resolution No. 2008-0025, *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits*, which was adopted on April 15, 2008 and became effective on December, 17, 2008. This Policy authorizes a Water Board to include a compliance schedule in a permit for an existing discharger to implement a new, revised, or newly interpreted water quality objective or criterion in a water quality standard that results in a permit limitation more stringent than the limitation previously imposed where the Water Board determines that the discharge has complied with the application requirements and has demonstrated that the discharger needs additional time to implement actions to comply with the limitation. Since the compliance schedule for copper, nickel, and zinc is implementing CTR criteria, it may not extend beyond May 18, 2010, as specified in section 2.1 (Compliance Schedule) of the SIP.

In order to meet the CTR-based effluent limitations, the Discharger began design and construction of the wastewater treatment system in 2007. The additional design and construction will be completed in October 2009. The compliance schedule provides time for testing and optimization of the wastewater treatment system.

VIII. PUBLIC PARTICIPATION

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

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and

has provided them with an opportunity to submit their written comments and recommendations.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on **October 5, 2009**.

C. Public Hearing

The Regional Water 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 5, 2009
Time: 9:00 A.M.
Location: Metropolitan Water District of Southern California, Board Room
700 North Alameda Street
Los Angeles, California

Interested persons are invited to attend. At the public hearing, the Regional Water 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 **http://www.waterboards.ca.gov/losangeles** where you can access the current agenda for changes in dates and locations.

D. Nature of Hearing

This will be a formal adjudicative hearing pursuant to section 648 et seq. of title 23 of the California Code of Regulations. Chapter 5 of the California Administrative Procedure Act (commencing with section 11500 of the Government Code) will not apply to this proceeding.

Ex Parte Communications Prohibited: As a quasi-adjudicative proceeding, no board member may discuss the subject of this hearing with any person, except during the public hearing itself. Any communications to the Regional Board must be directed to staff.

E. Parties to the Hearing

The following are the parties to this proceeding:

1. The applicant/permittee

   Any other persons requesting party status must submit a written or electronic request to staff not later than 20 business days before the hearing. All parties will be notified if other persons are so designated.

F. Public Comments and Submittal of Evidence

Persons wishing to comment upon or object to the tentative waste discharge requirements, or submit evidence for the Board to consider, are invited to submit them in writing to the above address. To be evaluated and responded to by staff, included in the Board's agenda folder, and fully considered by the Board, written comments must be received no later than close of business October 5, 2009. Comments or evidence received after that date will be submitted, ex agenda, to the Board for consideration, but only included in administrative record with express approval of the Chair during the hearing. Additionally, if the Board receives only supportive comments, the permit may be placed on the Board's consent calendar, and approved without an oral testimony.

G. Hearing Procedure

The meeting, in which the hearing will be a part of, will start at 9:00 a.m. Interested persons are invited to attend. Staff will present the matter under consideration, after which oral statements from parties or interested persons will be heard. For accuracy of the record, all important testimony should be in writing. The Board will include in the administrative record written transcriptions of oral testimony that is actually presented at the hearing. Oral testimony may be limited to 3 minutes maximum or less for each speaker, depending on the number of persons wishing to be heard. Parties or persons with similar concerns or opinions are encouraged to choose one representative to speak. At the conclusion of testimony, the Board will deliberate in open or close session, and render a decision.

Parties or persons with special procedural requests should contact staff. Any procedure not specified in this hearing notice will be waived pursuant to section 648(d) of title 23 of the California Code of Regulations. Objections to any procedure to be used during this hearing must be submitted in writing not later than close of 15 business days prior to the date of the hearing. Procedural objections will not be entertained at the hearing.

H. Waste Discharge Requirements Petitions

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

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

I. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (213) 576 – 6600.

J. Register of Interested Persons

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

K. Additional Information

Requests for additional information or questions regarding this order should be directed to Jau Ren Chen at (213) 576-6656.

ATTACHMENT G – STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

I. Implementation Schedule

A storm water pollution prevention plan (SWPPP) shall be developed and submitted to the Regional Water Board within 90 days following the adoption of this Order. The SWPPP shall be implemented for each facility covered by this Permit within 10 days of approval from the Regional Water Board, or 6-months from the date of the submittal of the SWPPP to the Regional Water Board (whichever comes first).

II. Objectives

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify and implement site- specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, over-head coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

III. Planning and Organization

A. Pollution Prevention Team

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Attachment E of this Permit. The SWPPP shall clearly identify the Permit related responsibilities, duties, and activities of each team member. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

B. Review Other Requirements and Existing Facility Plans

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, State, and Federal requirements that impact, complement, or are consistent with the requirements of this General Permit. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of this Permit. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

IV. Site Map

The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

TABLE A
FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS

PLANNING AND ORGANIZATION
Form Pollution Prevention Team Review other plans

ASSESSMENT PHASE
Develop a site map Identify potential pollutant sources Inventory of materials and chemicals List significant spills and leaks Identify non-storm water discharges Assess pollutant risks

BEST MANAGEMENT PRACTICES IDENTIFICATION PHASE
Non-structural BMPs Structural BMPs Select activity and site-specific BMPs

IMPLEMENTATION PHASE
Train employees Implement BMPs Conduct recordkeeping and reporting

EVALUATION / MONITORING
Conduct annual site evaluation Review monitoring information Evaluate BMPs Review and revise SWPPP

The following information shall be included on the site map:

A. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.

B. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

C. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.

D. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in Section A.6.a.iv. below have occurred.

E. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

V. List of Significant Materials

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, describe the locations where the material is being stored,

received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

VI. Description of Potential Pollutant Sources

A. The SWPPP shall include a narrative description of the facility's industrial activities, as identified in Section A.4.e above, associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

1. **Industrial Processes.** Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

2. **Material Handling and Storage Areas.** Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

3. **Dust and Particulate Generating Activities.** Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

4. **Significant Spills and Leaks.** Describe materials that have spilled or leaked in significant quantities in storm water discharges or non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 CFR, Part 302) that have been discharged to storm water as reported on U.S. Environmental Protection Agency (USEPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 Code of Federal Regulations [CFR], Parts 110, 117, and 302).

   The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water discharges, and the preventative measures taken to ensure spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this Permit.

5. **Non-Storm Water Discharges.** Facility operators shall investigate the facility to identify all non-storm water discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

   All non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area.

   Non-storm water discharges (other boiler blowdown and boiler condensate permitted under the Order) that contain significant quantities of pollutants or that do not meet the conditions provided in Special Conditions D of the storm water general permit are prohibited by this Permit (Examples of prohibited non-storm water discharges are contact and non-contact cooling water, rinse water, wash water, etc.). Non-storm water discharges that meet the conditions provided in Special Condition D of the general storm water permit are authorized by this Permit. The SWPPP must include BMPs to prevent or reduce contact of non-storm water discharges with significant materials or equipment.

6. **Soil Erosion.** Describe the facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.

B. The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and potential pollutants. This information should be summarized similar to Table B. The last column of Table B, "Control Practices", should be completed in accordance with Section A.8. below.

VII. Assessment of Potential Pollutant Sources

A. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in A.6. above to determine:

1. Which areas of the facility are likely sources of pollutants in storm water discharges and authorized non-storm water discharges, and

2. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.

B. Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. The BMPs will be narratively described in Section 8 below.

VIII. Storm Water Best Management Practices

The SWPPP shall include a narrative description of the storm water BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (Sections A.6. and 7. above). The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

TABLE B

EXAMPLE
ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES SUMMARY

Area	Activity	Pollutant Source	Pollutant	Best Management Practices
Vehicle & Equipment Fueling	Fueling	Spills and leaks during delivery. Spills caused by topping off fuel tanks. Hosing or washing down fuel oil fuel area. Leaking storage tanks. Rainfall running off fuel oil, and rainfall running onto and off fueling area.	fuel oil	Use spill and overflow protection. Minimize run-on of storm water into the fueling area. Cover fueling area. Use dry cleanup methods rather than hosing down area. Implement proper spill prevention control program. Implement adequate preventative maintenance program to preventive tank and line leaks. Inspect fueling areas regularly to detect problems before they occur. Train employees on proper fueling, cleanup, and spill response techniques.

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table B.

Facility operators shall consider the following BMPs for implementation at the facility:

A. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs options before considering additional

structural BMPs (see Section A.8.b. below). Below is a list of non-structural BMPs that should be considered:

1. **Good Housekeeping.** Good housekeeping generally consist of practical procedures to maintain a clean and orderly facility.

2. **Preventive Maintenance.** Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

3. **Spill Response.** This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

4. **Material Handling and Storage.** This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

5. **Employee Training.** This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.

6. **Waste Handling/Recycling.** This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

7. **Recordkeeping and Internal Reporting.** This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

8. **Erosion Control and Site Stabilization.** This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

9. **Inspections.** This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.

10. **Quality Assurance.** This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

B. Structural BMPs.

Where non-structural BMPs as identified in Section A.8.a. above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that should be considered:

1. **Overhead Coverage.** This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

2. **Retention Ponds.** This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.

3. **Control Devices.** This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

4. **Secondary Containment Structures.** This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

5. **Treatment.** This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

IX. Annual Comprehensive Site Compliance Evaluation

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

A. A review of all visual observation records, inspection records, and sampling and analysis results.

B. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.

C. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.

D. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv)

schedule, as required in Section A.10.e, for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this General Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions V.D.5 of Attachment D.

X. SWPPP General Requirements

A. The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.

B. The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this Section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.

C. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.

D. The SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this Permit.

E. When any part of the SWPPP is infeasible to implement due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

F. The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional Water Board under Section 308(b) of the Clean Water Act.

ATTACHMENT H – STATE WATER BOARD MINIMUM LEVELS

The Minimum Levels (MLs) in this appendix are for use in reporting and compliance determination purposes in accordance with section 2.4 of the State Implementation Policy. These MLs were derived from data for priority pollutants provided by State certified analytical laboratories in 1997 and 1998. These MLs shall be used until new values are adopted by the State Water Board and become effective. The following tables (Tables 2a - 2d) present MLs for four major chemical groupings: volatile substances, semi-volatile substances, inorganics, and pesticides and PCBs.

Table 2a - VOLATILE SUBSTANCES*	GC	GCMS
1,1 Dichloroethane	0.5	1
1,1 Dichloroethylene	0.5	2
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
1,1,2,2 Tetrachloroethane	0.5	1
1,2 Dichlorobenzene (volatile)	0.5	2
1,2 Dichloroethane	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichlorobenzene (volatile)	0.5	2
1,3 Dichloropropene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Methyl Bromide	1.0	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromo-methane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Chloromethane	0.5	2
Dichlorobromo-methane	0.5	2
Dichloromethane	0.5	2
Ethylbenzene	0.5	2
Tetrachloroethylene	0.5	2
Toluene	0.5	2
Trans-1,2 Dichloroethylene	0.5	1
Trichloroethene	0.5	2
Vinyl Chloride	0.5	2

*The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Benzo (a) Anthracene	10	5		
1,2 Dichlorobenzene (semivolatile)	2	2		
1,2 Diphenylhydrazine		1		
1,2,4 Trichlorobenzene	1	5		

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
1,3 Dichlorobenzene (semivolatile)	2	1		
1,4 Dichlorobenzene (semivolatile)	2	1		
2 Chlorophenol	2	5		
2,4 Dichlorophenol	1	5		
2,4 Dimethylphenol	1	2		
2,4 Dinitrophenol	5	5		
2,4 Dinitrotoluene	10	5		
2,4,6 Trichlorophenol	10	10		
2,6 Dinitrotoluene		5		
2- Nitrophenol		10		
2-Chloroethyl vinyl ether	1	1		
2-Chloronaphthalene		10		
3,3' Dichlorobenzidine		5		
Benzo (b) Fluoranthene		10	10	
3-Methyl-Chlorophenol	5	1		
4,6 Dinitro-2-methylphenol	10	5		
4- Nitrophenol	5	10		
4-Bromophenyl phenyl ether	10	5		
4-Chlorophenyl phenyl ether		5		
Acenaphthene	1	1	0.5	
Acenaphthylene		10	0.2	
Anthracene		10	2	
Benzidine		5		
Benzo(a) pyrene		10	2	
Benzo(g,h,i)perylene		5	0.1	
Benzo(k)fluoranthene		10	2	
bis 2-(1-Chloroethoxyl) methane		5		
bis(2-chloroethyl) ether	10	1		
bis(2-Chloroisopropyl) ether	10	2		
bis(2-Ethylhexyl) phthalate	10	5		
Butyl benzyl phthalate	10	10		
Chrysene		10	5	
di-n-Butyl phthalate		10		
di-n-Octyl phthalate		10		
Dibenzo(a,h)-anthracene		10	0.1	
Diethyl phthalate	10	2		
Dimethyl phthalate	10	2		
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	
Hexachloro-cyclopentadiene	5	5		
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
N-Nitroso diphenyl amine	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Phenol **	1	1		50
Pyrene		10	0.05	

* With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1,000; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1,000.

** Phenol by colorimetric technique has a factor of 1.

Table 2c – INORGANICS*	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1,000
Arsenic		2	10	2	2	1		20	1,000
Beryllium	20	0.5	2	0.5	1				1,000
Cadmium	10	0.5	10	0.25	0.5				1,000
Chromium (total)	50	2	10	0.5	1				1,000
Chromium VI	5							10	
Copper	25	5	10	0.5	2				1,000
Cyanide								5	
Lead	20	5	5	0.5	2				10,000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1,000
Selenium		5	10	2	5	1			1,000
Silver	10	1	10	0.25	2				1,000
Thallium	10	2	10	1	5				1,000
Zinc	20		20	1	10				1,000

* The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2d – PESTICIDES – PCBs*	GC
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
a-Endosulfan	0.02
alpha-BHC	0.01
Aldrin	0.005
b-Endosulfan	0.01
Beta-BHC	0.005
Chlordane	0.1
Delta-BHC	0.005
Dieldrin	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Gamma-BHC (Lindane)	0.02
PCB 1016	0.5
PCB 1221	0.5

Table 2d – PESTICIDES – PCBs*	GC
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

* The normal method-specific factor for these substances is 100; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.

Techniques:

GC - Gas Chromatography
GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR – Colorimetric

ATTACHMENT I – LIST OF PRIORITY POLLUTANTS

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
1	Antimony	7440360	Methods in 40 CFR part 136
2	Arsenic	7440382	Methods in 40 CFR part 136
3	Beryllium	7440417	Methods in 40 CFR part 136
4	Cadmium	7440439	Methods in 40 CFR part 136
5a	Chromium (III)	16065831	Methods in 40 CFR part 136
5a	Chromium (VI)	18540299	Methods in 40 CFR part 136
6	Copper	7440508	Methods in 40 CFR part 136
7	Lead	7439921	Methods in 40 CFR part 136
8	Mercury	7439976	Methods in 40 CFR part 136
9	Nickel	7440020	Methods in 40 CFR part 136
10	Selenium	7782492	Methods in 40 CFR part 136
11	Silver	7440224	Methods in 40 CFR part 136
12	Thallium	7440280	Methods in 40 CFR part 136
13	Zinc	7440666	Methods in 40 CFR part 136
14	Cyanide	57125	Methods in 40 CFR part 136
15	Asbestos	1332214	Methods in 40 CFR part 136
16	2,3,7,8-TCDD	1746016	Methods in 40 CFR part 136
17	Acrolein	107028	Methods in 40 CFR part 136
18	Acrylonitrile	107131	Methods in 40 CFR part 136
19	Benzene	71432	Methods in 40 CFR part 136
20	Bromoform	75252	Methods in 40 CFR part 136
21	Carbon Tetrachloride	56235	Methods in 40 CFR part 136
22	Chlorobenzene	108907	Methods in 40 CFR part 136
23	Chlorodibromomethane	124481	Methods in 40 CFR part 136
24	Chloroethane	75003	Methods in 40 CFR part 136
25	2-Chloroethylvinyl Ether	110758	Methods in 40 CFR part 136
26	Chloroform	67663	Methods in 40 CFR part 136
27	Dichlorobromomethane	75274	Methods in 40 CFR part 136
28	1,1-Dichloroethane	75343	Methods in 40 CFR part 136
29	1,2-Dichloroethane	107062	Methods in 40 CFR part 136
30	1,1-Dichloroethylene	75354	Methods in 40 CFR part 136
31	1,2-Dichloropropane	78875	Methods in 40 CFR part 136
32	1,3-Dichloropropylene	542756	Methods in 40 CFR part 136
33	Ethylbenzene	100414	Methods in 40 CFR part 136
34	Methyl Bromide	74839	Methods in 40 CFR part 136
35	Methyl Chloride	74873	Methods in 40 CFR part 136
36	Methylene Chloride	75092	Methods in 40 CFR part 136
37	1,1,2,2-Tetrachloroethane	79345	Methods in 40 CFR part 136
38	Tetrachloroethylene	127184	Methods in 40 CFR part 136
39	Toluene	108883	Methods in 40 CFR part 136
40	1,2-Trans-Dichloroethylene	156605	Methods in 40 CFR part 136
41	1,1,1-Trichloroethane	71556	Methods in 40 CFR part 136
42	1,12-Trichloroethane	79005	Methods in 40 CFR part 136

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
43	Trichloroethylene	79016	Methods in 40 CFR part 136
44	Vinyl Chloride	75014	Methods in 40 CFR part 136
45	2-Chlorophenol	95578	Methods in 40 CFR part 136
46	2,4-Dichlorophenol	120832	Methods in 40 CFR part 136
47	2,4-Dimethylphenol	105679	Methods in 40 CFR part 136
48	2-Methyl-4,6-Dinitrophenol	534521	Methods in 40 CFR part 136
49	2,4-Dinitrophenol	51285	Methods in 40 CFR part 136
50	2-Nitrophenol	88755	Methods in 40 CFR part 136
51	4-Nitrophenol	100027	Methods in 40 CFR part 136
52	3-Methyl-4-Chlorophenol	59507	Methods in 40 CFR part 136
53	Pentachlorophenol	87865	Methods in 40 CFR part 136
54	Phenol	108952	Methods in 40 CFR part 136
55	2,4,6-Trichlorophenol	88062	Methods in 40 CFR part 136
56	Acenaphthene	83329	Methods in 40 CFR part 136
57	Acenaphthylene	208968	Methods in 40 CFR part 136
58	Anthracene	120127	Methods in 40 CFR part 136
59	Benzidine	92875	Methods in 40 CFR part 136
60	Benzo(a)Anthracene	56553	Methods in 40 CFR part 136
61	Benzo(a)Pyrene	50328	Methods in 40 CFR part 136
62	Benzo(b)Fluoranthene	205992	Methods in 40 CFR part 136
63	Benzo(ghi)Perylene	191242	Methods in 40 CFR part 136
64	Benzo(k)Fluoranthene	207089	Methods in 40 CFR part 136
65	Bis(2-Chloroethoxy)Methane	111911	Methods in 40 CFR part 136
66	Bis(2-Chloroethyl)Ether	111444	Methods in 40 CFR part 136
67	Bis(2-Chloroisopropyl)Ether	108601	Methods in 40 CFR part 136
68	Bis(2-Ethylhexyl)Phthalate	117817	Methods in 40 CFR part 136
69	4-Bromophenyl Phenyl Ether	101553	Methods in 40 CFR part 136
70	Butylbenzyl Phthalate	85687	Methods in 40 CFR part 136
71	2-Chloronaphthalene	91587	Methods in 40 CFR part 136
72	4-Chlorophenyl Phenyl Ether	7005723	Methods in 40 CFR part 136
73	Chrysene	218019	Methods in 40 CFR part 136
74	Dibenzo(a,h)Anthracene	53703	Methods in 40 CFR part 136
75	1,2-Dichlorobenzene	95501	Methods in 40 CFR part 136
76	1,3-Dichlorobenzene	541731	Methods in 40 CFR part 136
77	1,4-Dichlorobenzene	106467	Methods in 40 CFR part 136
78	3,3'-Dichlorobenzidine	91941	Methods in 40 CFR part 136
79	Diethyl Phthalate	84662	Methods in 40 CFR part 136
80	Dimethyl Phthalate	131113	Methods in 40 CFR part 136
81	Di-n-Butyl Phthalate	84742	Methods in 40 CFR part 136
82	2,4-Dinitrotoluene	121142	Methods in 40 CFR part 136
83	2,6-Dinitrotoluene	606202	Methods in 40 CFR part 136
84	Di-n-Octyl Phthalate	117840	Methods in 40 CFR part 136
85	1,2-Diphenylhydrazine	122667	Methods in 40 CFR part 136
86	Fluoranthene	206440	Methods in 40 CFR part 136

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
87	Fluorene	86737	Methods in 40 CFR part 136
88	Hexachlorobenzene	118741	Methods in 40 CFR part 136
89	Hexachlorobutadiene	87863	Methods in 40 CFR part 136
90	Hexachlorocyclopentadiene	77474	Methods in 40 CFR part 136
91	Hexachloroethane	67721	Methods in 40 CFR part 136
92	Indeno(1,2,3-cd)Pyrene	193395	Methods in 40 CFR part 136
93	Isophorone	78591	Methods in 40 CFR part 136
94	Naphthalene	91203	Methods in 40 CFR part 136
95	Nitrobenzene	98953	Methods in 40 CFR part 136
96	N-Nitrosodimethylamine	62759	Methods in 40 CFR part 136
97	N-Nitrosodi-n-Propylamine	621647	Methods in 40 CFR part 136
98	N-Nitrosodiphenylamine	86306	Methods in 40 CFR part 136
99	Phenanthrene	85018	Methods in 40 CFR part 136
100	Pyrene	129000	Methods in 40 CFR part 136
101	1,2,4-Trichlorobenzene	120821	Methods in 40 CFR part 136
102	Aldrin	309002	Methods in 40 CFR part 136
103	alpha-BHC	319846	Methods in 40 CFR part 136
104	beta-BHC	319857	Methods in 40 CFR part 136
105	gamma-BHC	58899	Methods in 40 CFR part 136
106	delta-BHC	319868	Methods in 40 CFR part 136
107	Chlordane	57749	Methods in 40 CFR part 136
108	4,4'-DDT	50293	Methods in 40 CFR part 136
109	4,4'-DDE	72559	Methods in 40 CFR part 136
110	4,4'-DDD	72548	Methods in 40 CFR part 136
111	Dieldrin	60571	Methods in 40 CFR part 136
112	alpha-Endosulfan	959988	Methods in 40 CFR part 136
113	beta-Endosulfan	33213659	Methods in 40 CFR part 136
114	Endosulfan Sulfate	1031078	Methods in 40 CFR part 136
115	Endrin	72208	Methods in 40 CFR part 136
116	Endrin Aldehyde	7421934	Methods in 40 CFR part 136
117	Heptachlor	76448	Methods in 40 CFR part 136
118	Heptachlor Epoxide	1024573	Methods in 40 CFR part 136
119	PCB-1016	12674112	Methods in 40 CFR part 136
120	PCB-1221	11104282	Methods in 40 CFR part 136
121	PCB-1232	11141165	Methods in 40 CFR part 136
122	PCB-1242	53469219	Methods in 40 CFR part 136
123	PCB-1248	12672296	Methods in 40 CFR part 136
124	PCB-1254	11097691	Methods in 40 CFR part 136
125	PCB-1260	11096825	Methods in 40 CFR part 136
126	Toxaphene	8001352	Methods in 40 CFR part 136

ATTACHMENT J – RPA ANALYSIS FOR CTR CONSTITUENTS

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Long Beach Generating Station (CA0001171)

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)						Lowest C	MEC >= Lowest C	Tier 1 - Need limit?
					Freshwater		Saltwater		Human Health for consumption of:				
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only			
1	Antimony	ug/L		0.21						4300.00	4300.00	No	No
2	Arsenic	ug/L	0.6	11.21			69.00	36.00			36.00	No	No
3	Beryllium	ug/L	0.6	No Criteria						Narrative	No Criteria	No Criteria	No Criteria
4	Cadmium	ug/L	0.6	0.14			42.25	9.36		Narrative	9.36	No	No
5a	Chromium (III)		0.6	No Criteria						Narrative	No Criteria	No Criteria	No Criteria
5b	Chromium (VI)	ug/L	0.6				1107.75	50.35		Narrative	50.35		
6	Copper	ug/L	0.6	2.661			5.78	3.73			3.73	No	No
7	Lead	ug/L	0.6	0			220.82	8.52		Narrative	8.52	No	No
8	Mercury	ug/L	0.6	0.01			Reserved	Reserved		0.051	0.051	No	No
9	Nickel	ug/L	0.6	2			74.75	8.28		4600.00	8.28	No	No
10	Selenium	ug/L	0.6	0.042			290.58	71.14		Narrative	71.14	No	No
11	Silver	ug/L	0.6	0.02			2.24	No Criteria			2.24	No	No
12	Thallium	ug/L	0.6	0.01						6.30	6.30	No	No
13	Zinc	ug/L	0.6	66.48			95.14	85.62			85.62	No	No
14	Cyanide	ug/L	0.6				1.00	1.00		220000.00	1.00		
15	Asbestos	Fibers/L		No Criteria							No Criteria	No Criteria	No Criteria
16	2,3,7,8 TCDD	ug/L	0.6							0.000000014	0.000000014		
	TCDD Equivalents	ug/L	0							0.000000014	0.000000014		
17	Acrolein	ug/L	0.6	0.5						780	780	No	No
18	Acrylonitrile	ug/L	0.6	0.58						0.66	0.660	No	No
19	Benzene	ug/L	0.6	0.03						71	71.0	No	No
20	Bromoform	ug/L	0.6	6.5						360	360.0	No	No
21	Carbon Tetrachloride	ug/L	0.6	0.04						4.4	4.40	No	No
22	Chlorobenzene	ug/L	0.6	0.03						21000	21000	No	No
23	Chlorodibromomethane	ug/L	0.6	0.3						34	34	No	No
24	Chloroethane	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
25	2-Chloroethylvinyl ether	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
26	Chloroform	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
27	Dichlorobromomethane	ug/L	0.6	0.3						46	46.00	No	No
28	1,1-Dichloroethane	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
29	1,2-Dichloroethane	ug/L	0.6	0.04						99	99.00	No	No
30	1,1-Dichloroethylene	ug/L	0.6	0.07						3.2	3.200	No	No
31	1,2-Dichloropropane	ug/L	0.6	0.03						39	39.00	No	No
32	1,3-Dichloropropylene	ug/L	0.6	0.03						1700	1700	No	No
33	Ethylbenzene	ug/L	0.6	0.04						29000	29000	No	No
34	Methyl Bromide	ug/L	0.6	0.06						4000	4000	No	No
35	Methyl Chloride	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
36	Methylene Chloride	ug/L	0.6	0.11						1600	1600.0	No	No
37	1,1,2,2-Tetrachloroethane	ug/L	0.6	0.04						11	11.00	No	No
38	Tetrachloroethylene	ug/L	0.6	0.04						8.85	8.9	No	No
39	Toluene	ug/L	0.6	0.06						200000	200000	No	No
40	1,2-Trans-Dichloroethylene	ug/L	0.6	0.06						140000	140000	No	No
41	1,1,1-Trichloroethane	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
42	1,1,2-Trichloroethane	ug/L	0.6	0.05						42	42.0	No	No

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Long Beach Generating Station (CA0001171)

CTR#	Parameters	Units	REASONABLE POTENTIAL ANALYSIS (RPA)							
			B Available (Y/N)?	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?
1	Antimony	ug/L	Y	N		0.15		B<=C, Step 7		No
2	Arsenic	ug/L	Y	N		1.138		B<=C, Step 7	Detected in RB	Yes
3	Beryllium	ug/L	Y	Y	0.005		N	No Criteria	No Criteria	Uc
4	Cadmium	ug/L	Y	N		0.017		B<=C, Step 7	Detected in RB	Yes
5a	Chromium (III)		N					No Criteria	No Criteria	Uc
5b	Chromium (VI)	ug/L	Y	N		0.41		B<=C, Step 7		Ud
6	Copper	ug/L	Y	N		1.689		B<=C, Step 7	303(d) list	Yes
7	Lead	ug/L	Y	N		0.146		B<=C, Step 7	Detected in RB	Yes
8	Mercury	ug/L	Y	Y	0.005		N	No detected value of B, Step 7	Detected in RB	Yes
9	Nickel	ug/L	Y	N		0.307		B<=C, Step 7	Detected in RB	Yes
10	Selenium	ug/L	Y	N		0.038		B<=C, Step 7	Detected in RB	Yes
11	Silver	ug/L	Y	Y	0.005		N	No detected value of B, Step 7		No
12	Thallium	ug/L	Y	N		0.007		B<=C, Step 7		No
13	Zinc	ug/L	Y	N		7.174		B<=C, Step 7	303(d) list	Yes
14	Cyanide	ug/L	Y	N		1		B<=C, Step 7		No
15	Asbestos	Fibers/L	N					No Criteria	No Criteria	Uc
16	2,3,7,8 TCDD	ug/L	N					No detected value of B, Step 7		No
	TCDD Equivalents	ug/L	N					No detected value of B, Step 7		Ud
17	Acrolein	ug/L	Y	Y	0.56		N	No detected value of B, Step 7		No
18	Acrylonitrile	ug/L	Y	Y	0.33		N	No detected value of B, Step 7		No
19	Benzene	ug/L	Y	Y	0.06		N	No detected value of B, Step 7		No
20	Bromoform	ug/L	Y	N		0.2		B<=C, Step 7		No
21	Carbon Tetrachloride	ug/L	Y	Y	0.06		N	No detected value of B, Step 7		No
22	Chlorobenzene	ug/L	Y	Y	0.06		N	No detected value of B, Step 7		No
23	Chlorodibromomethane	ug/L	Y	Y	0.06		N	No detected value of B, Step 7		No
24	Chloroethane	ug/L	Y	Y	0.07		N	No Criteria	No Criteria	Uc
25	2-Chloroethylvinyl ether	ug/L	Y	Y	0.1		N	No Criteria	No Criteria	Uc
26	Chloroform	ug/L	Y	Y				No Criteria	No Criteria	Uc
27	Dichlorobromomethane	ug/L	Y	Y	0.06		N	No detected value of B, Step 7		No
28	1,1-Dichloroethane	ug/L	Y	Y	0.05		N	No Criteria	No Criteria	Uc
29	1,2-Dichloroethane	ug/L	Y	Y	0.06		N	No detected value of B, Step 7		No
30	1,1-Dichloroethylene	ug/L	Y	Y	0.07		N	No detected value of B, Step 7		No
31	1,2-Dichloropropane	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
32	1,3-Dichloropropylene	ug/L	Y	Y	0.06		N	No detected value of B, Step 7		No
33	Ethylbenzene	ug/L	Y	Y	0.06		N	No detected value of B, Step 7		No
34	Methyl Bromide	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
35	Methyl Chloride	ug/L	N					No Criteria	No Criteria	Uc
36	Methylene Chloride	ug/L	Y	Y	0.07		N	No detected value of B, Step 7		No
37	1,1,2,2-Tetrachloroethane	ug/L	Y	Y	0.06		N	No detected value of B, Step 7		No
38	Tetrachloroethylene	ug/L	Y	Y	0.06		N	No detected value of B, Step 7		No
39	Toluene	ug/L	Y	Y	0.06		N	No detected value of B, Step 7		No
40	1,2-Trans-Dichloroethylene	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
41	1,1,1-Trichloroethane	ug/L	Y	Y	0.06		N	No Criteria	No Criteria	Uc
42	1,1,2-Trichloroethane	ug/L	Y	Y	0.07		N	No detected value of B, Step 7		No

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Long Beach Generating Station (CA0001171)

CTR#	Parameters	Units	Reason	HUMAN HEALTH CALCULATIONS			AQUATIC LIFE CALC				
				Organisms only			Saltwater / Freshwater				
				AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh	ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA
1	Antimony	ug/L	MEC<C & B<=C								
2	Arsenic	ug/L	Trigger 3		2.01		0.32	22.15	0.53	18.99	18.99
3	Beryllium	ug/L	No Criteria								
4	Cadmium	ug/L	Trigger 3		2.01		0.32	13.57	0.53	4.93	4.93
5a	Chromium (III)		No Criteria								
5b	Chromium (VI)	ug/L	No effluent data & B<=C								
6	Copper	ug/L	Trigger 3		2.01		0.32	1.86	0.53	1.97	1.86
7	Lead	ug/L	Trigger 3		2.01		0.32	70.90	0.53	4.49	4.49
8	Mercury	ug/L	Trigger 3	0.051	2.01	0.10232					
9	Nickel	ug/L	Trigger 3	4600	2.01	9228.47012	0.32	24.00	0.53	4.37	4.37
10	Selenium	ug/L	Trigger 3		2.01		0.32	93.30	0.53	37.52	37.52
11	Silver	ug/L	MEC<C & B is ND								
12	Thallium	ug/L	MEC<C & B<=C								
13	Zinc	ug/L	Trigger 3		2.01		0.32	30.55	0.53	45.16	30.55
14	Cyanide	ug/L	UD; effluent ND, MDL>C & B<								
15	Asbestos	Fibers/L	No Criteria								
16	2,3,7,8 TCDD	ug/L	UD;Effluent ND,MDL>C & No								
	TCDD Equivalents	ug/L	No effluent data & no B								
17	Acrolein	ug/L	MEC<C & B is ND								
18	Acrylonitrile	ug/L	MEC<C & B is ND								
19	Benzene	ug/L	MEC<C & B is ND								
20	Bromoform	ug/L	MEC<C & B<=C								
21	Carbon Tetrachloride	ug/L	MEC<C & B is ND								
22	Chlorobenzene	ug/L	MEC<C & B is ND								
23	Chlorodibromomethane	ug/L	MEC<C & B is ND								
24	Chloroethane	ug/L	No Criteria								
25	2-Chloroethylvinyl ether	ug/L	No Criteria								
26	Chloroform	ug/L	No Criteria								
27	Dichlorobromomethane	ug/L	MEC<C & B is ND								
28	1,1-Dichloroethane	ug/L	No Criteria								
29	1,2-Dichloroethane	ug/L	MEC<C & B is ND								
30	1,1-Dichloroethylene	ug/L	MEC<C & B is ND								
31	1,2-Dichloropropane	ug/L	MEC<C & B is ND								
32	1,3-Dichloropropylene	ug/L	MEC<C & B is ND								
33	Ethylbenzene	ug/L	MEC<C & B is ND								
34	Methyl Bromide	ug/L	MEC<C & B is ND								
35	Methyl Chloride	ug/L	No Criteria								
36	Methylene Chloride	ug/L	MEC<C & B is ND								
37	1,1,2,2-Tetrachloroethane	ug/L	MEC<C & B is ND								
38	Tetrachloroethylene	ug/L	MEC<C & B is ND								
39	Toluene	ug/L	MEC<C & B is ND								
40	1,2-Trans-Dichloroethylene	ug/L	MEC<C & B is ND								
41	1,1,1-Trichloroethane	ug/L	No Criteria								
42	1,1,2-Trichloroethane	ug/L	MEC<C & B is ND								

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Long Beach Generating Station (CA0001171)

CTR#	Parameters	Units	ULATIONS / Basin Plan AMEL multiplier 95	AMEL aq life	MDEL multiplier 99	MDEL aq life	LIMITS Lowest AMEL	Lowest MDEL	Recommendation	Comment
1	Antimony	ug/L							No Limit	No RP
2	Arsenic	ug/L	1.55	29.48	3.11	59.13608	**29**	**59**		Trigger 3, other information
3	Beryllium	ug/L							No Limit	No RP
4	Cadmium	ug/L	1.55	7.66	3.11	15.36904	**7.7**	**15**		Trigger 3, other information
5a	Chromium (III)								No Limit	No RP
5b	Chromium (VI)	ug/L							No Limit	No RP
6	Copper	ug/L	1.55	2.88	3.11	5.783133	**2.9**	**5.8**		Trigger 3, other information
7	Lead	ug/L	1.55	6.97	3.11	13.99119	**7.0**	**14**		Trigger 3, other information
8	Mercury	ug/L	1.55		3.11		**0.051**	**0.10**		Trigger 3, other information
9	Nickel	ug/L	1.55	6.78	3.11	13.60595	**6.8**	**14**		Trigger 3, other information
10	Selenium	ug/L	1.55	58.25	3.11	116.8632	**58**	**1.2E+02**		Trigger 3, other information
11	Silver	ug/L							No Limit	No RP
12	Thallium	ug/L							No Limit	No RP
13	Zinc	ug/L	1.55	47.42	3.11	95.13742	**47**	**95**		Trigger 3, other information
14	Cyanide	ug/L							No Limit	No RP
15	Asbestos	Fibers/L							No Limit	No RP
16	2,3,7,8 TCDD	ug/L							No Limit	No RP
	TCDD Equivalents	ug/L							No Limit	No RP
17	Acrolein	ug/L							No Limit	No RP
18	Acrylonitrile	ug/L							No Limit	No RP
19	Benzene	ug/L							No Limit	No RP
20	Bromoform	ug/L							No Limit	No RP
21	Carbon Tetrachloride	ug/L							No Limit	No RP
22	Chlorobenzene	ug/L							No Limit	No RP
23	Chlorodibromomethane	ug/L							No Limit	No RP
24	Chloroethane	ug/L							No Limit	No RP
25	2-Chloroethylvinyl ether	ug/L							No Limit	No RP
26	Chloroform	ug/L							No Limit	No RP
27	Dichlorobromomethane	ug/L							No Limit	No RP
28	1,1-Dichloroethane	ug/L							No Limit	No RP
29	1,2-Dichloroethane	ug/L							No Limit	No RP
30	1,1-Dichloroethylene	ug/L							No Limit	No RP
31	1,2-Dichloropropane	ug/L							No Limit	No RP
32	1,3-Dichloropropylene	ug/L							No Limit	No RP
33	Ethylbenzene	ug/L							No Limit	No RP
34	Methyl Bromide	ug/L							No Limit	No RP
35	Methyl Chloride	ug/L							No Limit	No RP
36	Methylene Chloride	ug/L							No Limit	No RP
37	1,1,2,2-Tetrachloroethane	ug/L							No Limit	No RP
38	Tetrachloroethylene	ug/L							No Limit	No RP
39	Toluene	ug/L							No Limit	No RP
40	1,2-Trans-Dichloroethylene	ug/L							No Limit	No RP
41	1,1,1-Trichloroethane	ug/L							No Limit	No RP
42	1,1,2-Trichloroethane	ug/L							No Limit	No RP

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Long Beach Generating Station (CA0001171)

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)						Lowest C	MEC >= Lowest C	Tier 1 - Need limit?
					Freshwater		Saltwater		Human Health for consumption of:				
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only			
43	Trichloroethylene	ug/L	0.6	0.05						81	81.0	No	No
44	Vinyl Chloride	ug/L	0.6	0.06						525	525	No	No
45	2-Chlorophenol	ug/L	0.6	0.05						400	400	No	No
46	2,4-Dichlorophenol	ug/L	0.6	0.05						790	790	No	No
47	2,4-Dimethylphenol	ug/L	0.6	0.1						2300	2300	No	No
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L	0.6	0.1						765	765.0	No	No
49	2,4-Dinitrophenol	ug/L	0.6	0.1						14000	14000	No	No
50	2-Nitrophenol	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
51	4-Nitrophenol	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
53	Pentachlorophenol	ug/L	0.6	0.1			13.00	7.90		8.2	7.90	No	No
54	Phenol	ug/L	0.6	0.1						4600000	4600000	No	No
55	2,4,6-Trichlorophenol	ug/L	0.6	0.05						6.5	6.5	No	No
56	Acenaphthene	ug/L	0.6	0.0022						2700	2700	No	No
57	Acenaphthylene	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
58	Anthracene	ug/L	0.6	0.0087						110000	110000	No	No
59	Benzidine	ug/L	0.6							0.00054	0.00054		
60	Benzo(a)Anthracene	ug/L	0.6	0.001						0.049	0.0490	No	No
61	Benzo(a)Pyrene	ug/L	0.6	0.001						0.049	0.0490	No	No
62	Benzo(b)Fluoranthene	ug/L	0.6	0.004						0.049	0.0490	No	No
63	Benzo(ghi)Perylene	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
64	Benzo(k)Fluoranthene	ug/L	0.6	0.0027						0.049	0.0490	No	No
65	Bis(2-Chloroethoxy)Methan	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
66	Bis(2-Chloroethyl)Ether	ug/L	0.6	0.05						1.4	1.400	No	No
67	Bis(2-Chloroisopropyl)Ether	ug/L	0.6	0.05						170000	170000	No	No
68	Bis(2-Ethylhexyl)Phthalate	ug/L	0.6	0.1						5.9	5.9	No	No
69	4-Bromophenyl Phenyl Ethe	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
70	Butylbenzyl Phthalate	ug/L	0.6	0.037						5200	5200	No	No
71	2-Chloronaphthalene	ug/L	0.6	0.05						4300	4300	No	No
72	4-Chlorophenyl Phenyl Ethe	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
73	Chrysene	ug/L	0.6	0.0026						0.049	0.0490	No	No
74	Dibenzo(a,h)Anthracene	ug/L	0.6	0.0022						0.049	0.0490	No	No
75	1,2-Dichlorobenzene	ug/L	0.6	0.01						17000	17000	No	No
76	1,3-Dichlorobenzene	ug/L	0.6	0.01						2600	2600	No	No
77	1,4-Dichlorobenzene	ug/L	0.6	0.01						2600	2600	No	No
78	3,3 Dichlorobenzidine	ug/L	0.6	0.05						0.077	0.08	No	No
79	Diethyl Phthalate	ug/L	0.6	0.115						120000	120000	No	No
80	Dimethyl Phthalate	ug/L	0.6	0.005						2900000	2900000	No	No
81	Di-n-Butyl Phthalate	ug/L	0.6	0.075						12000	12000	No	No
82	2,4-Dinitrotoluene	ug/L	0.6	0.05						9.10	9.10	No	No
83	2,6-Dinitrotoluene	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
84	Di-n-Octyl Phthalate	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Long Beach Generating Station (CA0001171)

			REASONABLE POTENTIAL ANALYSIS (RPA)							
CTR#	Parameters	Units	B Available (Y/N)?	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?
43	Trichloroethylene	ug/L	Y	Y	0.06		N	No detected value of B, Step 7		No
44	Vinyl Chloride	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
45	2-Chlorophenol	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
46	2,4-Dichlorophenol	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
47	2,4-Dimethylphenol	ug/L	Y	Y	0.1		N	No detected value of B, Step 7		No
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L	Y	Y	0.1		N	No detected value of B, Step 7		No
49	2,4-Dinitrophenol	ug/L	Y	Y	0.1		N	No detected value of B, Step 7		No
50	2-Nitrophenol	ug/L	Y	Y	0.1		N	No Criteria	No Criteria	Uc
51	4-Nitrophenol	ug/L	Y	Y	0.1		N	No Criteria	No Criteria	Uc
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	ug/L	Y	Y	0.1		N	No Criteria	No Criteria	Uc
53	Pentachlorophenol	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
54	Phenol	ug/L	Y	Y	0.1		N	No detected value of B, Step 7		No
55	2,4,6-Trichlorophenol	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
56	Acenaphthene	ug/L	Y	N		0.0081		B<=C, Step 7		No
57	Acenaphthylene	ug/L	Y	Y	0.001		N	No Criteria	No Criteria	Uc
58	Anthracene	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
59	Benzidine	ug/L	Y	Y	0.05		Y	No detected value of B, Step 7		No
60	Benzo(a)Anthracene	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
61	Benzo(a)Pyrene	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
62	Benzo(b)Fluoranthene	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
63	Benzo(ghi)Perylene	ug/L	Y	Y	0.001		N	No Criteria	No Criteria	Uc
64	Benzo(k)Fluoranthene	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
65	Bis(2-Chloroethoxy)Methan	ug/L	Y	Y	0.05		N	No Criteria	No Criteria	Uc
66	Bis(2-Chloroethyl)Ether	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
67	Bis(2-Chloroisopropyl)Ether	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
68	Bis(2-Ethylhexyl)Phthalate	ug/L	Y	N		0.0381		B<=C, Step 7		No
69	4-Bromophenyl Phenyl Ethe	ug/L	Y	Y	0.05		N	No Criteria	No Criteria	Uc
70	Butylbenzyl Phthalate	ug/L	Y	N		0.0104		B<=C, Step 7		No
71	2-Chloronaphthalene	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
72	4-Chlorophenyl Phenyl Ethe	ug/L	Y	Y	0.05		N	No Criteria	No Criteria	Uc
73	Chrysene	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
74	Dibenzo(a,h)Anthracene	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
75	1,2-Dichlorobenzene	ug/L	Y	Y	0.01		N	No detected value of B, Step 7		No
76	1,3-Dichlorobenzene	ug/L	Y	Y	0.01		N	No detected value of B, Step 7		No
77	1,4-Dichlorobenzene	ug/L	Y	Y	0.04		N	No detected value of B, Step 7		No
78	3,3 Dichlorobenzidine	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
79	Diethyl Phthalate	ug/L	Y	N		0.0764		B<=C, Step 7		No
80	Dimethyl Phthalate	ug/L	Y	N		0.0428		B<=C, Step 7		No
81	Di-n-Butyl Phthalate	ug/L	Y	N		0.016		B<=C, Step 7		No
82	2,4-Dinitrotoluene	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
83	2,6-Dinitrotoluene	ug/L	Y	Y	0.05		N	No Criteria	No Criteria	Uc
84	Di-n-Octyl Phthalate	ug/L	Y	Y	0.005		N	No Criteria	No Criteria	Uc

CTR#	Parameters	Units	Reason	HUMAN HEALTH CALCULATIONS			AQUATIC LIFE CALC				
				Organisms only			Saltwater / Freshwater				
				AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh	ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA
43	Trichloroethylene	ug/L	MEC<C & B is ND								
44	Vinyl Chloride	ug/L	MEC<C & B is ND								
45	2-Chlorophenol	ug/L	MEC<C & B is ND								
46	2,4-Dichlorophenol	ug/L	MEC<C & B is ND								
47	2,4-Dimethylphenol	ug/L	MEC<C & B is ND								
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L	MEC<C & B is ND								
49	2,4-Dinitrophenol	ug/L	MEC<C & B is ND								
50	2-Nitrophenol	ug/L	No Criteria								
51	4-Nitrophenol	ug/L	No Criteria								
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	ug/L	No Criteria								
53	Pentachlorophenol	ug/L	MEC<C & B is ND								
54	Phenol	ug/L	MEC<C & B is ND								
55	2,4,6-Trichlorophenol	ug/L	MEC<C & B is ND								
56	Acenaphthene	ug/L	MEC<C & B<=C								
57	Acenaphthylene	ug/L	No Criteria								
58	Anthracene	ug/L	MEC<C & B is ND								
59	Benzidine	ug/L	UD; effluent ND, MDL>C, and								
60	Benzo(a)Anthracene	ug/L	MEC<C & B is ND								
61	Benzo(a)Pyrene	ug/L	MEC<C & B is ND								
62	Benzo(b)Fluoranthene	ug/L	MEC<C & B is ND								
63	Benzo(ghi)Perylene	ug/L	No Criteria								
64	Benzo(k)Fluoranthene	ug/L	MEC<C & B is ND								
65	Bis(2-Chloroethoxy)Methan	ug/L	No Criteria								
66	Bis(2-Chloroethyl)Ether	ug/L	MEC<C & B is ND								
67	Bis(2-Chloroisopropyl)Ether	ug/L	MEC<C & B is ND								
68	Bis(2-Ethylhexyl)Phthalate	ug/L	MEC<C & B<=C								
69	4-Bromophenyl Phenyl Ethe	ug/L	No Criteria								
70	Butylbenzyl Phthalate	ug/L	MEC<C & B<=C								
71	2-Chloronaphthalene	ug/L	MEC<C & B is ND								
72	4-Chlorophenyl Phenyl Ethe	ug/L	No Criteria								
73	Chrysene	ug/L	MEC<C & B is ND								
74	Dibenzo(a,h)Anthracene	ug/L	MEC<C & B is ND								
75	1,2-Dichlorobenzene	ug/L	MEC<C & B is ND								
76	1,3-Dichlorobenzene	ug/L	MEC<C & B is ND								
77	1,4-Dichlorobenzene	ug/L	MEC<C & B is ND								
78	3,3 Dichlorobenzidine	ug/L	MEC<C & B is ND								
79	Diethyl Phthalate	ug/L	MEC<C & B<=C								
80	Dimethyl Phthalate	ug/L	MEC<C & B<=C								
81	Di-n-Butyl Phthalate	ug/L	MEC<C & B<=C								
82	2,4-Dinitrotoluene	ug/L	MEC<C & B is ND								
83	2,6-Dinitrotoluene	ug/L	No Criteria								
84	Di-n-Octyl Phthalate	ug/L	No Criteria								

CTR#	Parameters	Units	ULATIONS / Basin Plan AMEL multiplier 95	AMEL aq life	MDEL multiplier 99	MDEL aq life	LIMITS Lowest AMEL	Lowest MDEL	Recommendation	Comment
43	Trichloroethylene	ug/L							No Limit	No RP
44	Vinyl Chloride	ug/L							No Limit	No RP
45	2-Chlorophenol	ug/L							No Limit	No RP
46	2,4-Dichlorophenol	ug/L							No Limit	No RP
47	2,4-Dimethylphenol	ug/L							No Limit	No RP
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L							No Limit	No RP
49	2,4-Dinitrophenol	ug/L							No Limit	No RP
50	2-Nitrophenol	ug/L							No Limit	No RP
51	4-Nitrophenol	ug/L							No Limit	No RP
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	ug/L							No Limit	No RP
53	Pentachlorophenol	ug/L							No Limit	No RP
54	Phenol	ug/L							No Limit	No RP
55	2,4,6-Trichlorophenol	ug/L							No Limit	No RP
56	Acenaphthene	ug/L							No Limit	No RP
57	Acenaphthylene	ug/L							No Limit	No RP
58	Anthracene	ug/L							No Limit	No RP
59	Benzidine	ug/L							No Limit	No RP
60	Benzo(a)Anthracene	ug/L							No Limit	No RP
61	Benzo(a)Pyrene	ug/L							No Limit	No RP
62	Benzo(b)Fluoranthene	ug/L							No Limit	No RP
63	Benzo(ghi)Perylene	ug/L							No Limit	No RP
64	Benzo(k)Fluoranthene	ug/L							No Limit	No RP
65	Bis(2-Chloroethoxy)Methan	ug/L							No Limit	No RP
66	Bis(2-Chloroethyl)Ether	ug/L							No Limit	No RP
67	Bis(2-Chloroisopropyl)Ether	ug/L							No Limit	No RP
68	Bis(2-Ethylhexyl)Phthalate	ug/L							No Limit	No RP
69	4-Bromophenyl Phenyl Ethe	ug/L							No Limit	No RP
70	Butylbenzyl Phthalate	ug/L							No Limit	No RP
71	2-Chloronaphthalene	ug/L							No Limit	No RP
72	4-Chlorophenyl Phenyl Ethe	ug/L							No Limit	No RP
73	Chrysene	ug/L							No Limit	No RP
74	Dibenzo(a,h)Anthracene	ug/L							No Limit	No RP
75	1,2-Dichlorobenzene	ug/L							No Limit	No RP
76	1,3-Dichlorobenzene	ug/L							No Limit	No RP
77	1,4-Dichlorobenzene	ug/L							No Limit	No RP
78	3,3 Dichlorobenzidine	ug/L							No Limit	No RP
79	Diethyl Phthalate	ug/L							No Limit	No RP
80	Dimethyl Phthalate	ug/L							No Limit	No RP
81	Di-n-Butyl Phthalate	ug/L							No Limit	No RP
82	2,4-Dinitrotoluene	ug/L							No Limit	No RP
83	2,6-Dinitrotoluene	ug/L							No Limit	No RP
84	Di-n-Octyl Phthalate	ug/L							No Limit	No RP

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Long Beach Generating Station (CA0001171)

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)						Lowest C	MEC >= Lowest C	Tier 1 - Need limit?
					Freshwater		Saltwater		Human Health for consumption of:				
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only			
85	1,2-Diphenylhydrazine	ug/L	0.6	0.05						0.54	0.540	No	No
86	Fluoranthene	ug/L	0.6	0.018						370	370	No	No
87	Fluorene	ug/L	0.6	0.0156						14000	14000	No	No
88	Hexachlorobenzene	ug/L	0.6							0.00077	0.00077		
89	Hexachlorobutadiene	ug/L	0.6	0.005						50	50.00	No	No
90	Hexachlorocyclopentadiene	ug/L	0.6	0.005						17000	17000	No	No
91	Hexachloroethane	ug/L	0.6	0.005						8.9	8.9	No	No
92	Indeno(1,2,3-cd)Pyrene	ug/L	0.6	0.0029						0.049	0.0490	No	No
93	Isophorone	ug/L	0.6	0.005						600	600.0	No	No
94	Naphthalene	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
95	Nitrobenzene	ug/L	0.6	0.05						1900	1900	No	No
96	N-Nitrosodimethylamine	ug/L	0.6	0.05						8.10	8.10000	No	No
97	N-Nitrosodi-n-Propylamine	ug/L	0.6	0.05						1.40	1.400	No	No
98	N-Nitrosodiphenylamine	ug/L	0.6	0.05						16	16.0	No	No
99	Phenanthrene	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
100	Pyrene	ug/L	0.6	0.0077						11000	11000	No	No
101	1,2,4-Trichlorobenzene	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
102	Aldrin	ug/L	0.6				1.30			0.00014	0.00014		
103	alpha-BHC	ug/L	0.6	0.001						0.013	0.0130	No	No
104	beta-BHC	ug/L	0.6	0.001						0.046	0.046	No	No
105	gamma-BHC	ug/L	0.6	0.001			0.16			0.063	0.063	No	No
106	delta-BHC	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria
107	Chlordane	ug/L	0.6				0.09	0.004		0.00059	0.00059		
108	4,4'-DDT	ug/L	0.6				0.13	0.001		0.00059	0.00059		
109	4,4'-DDE (linked to DDT)	ug/L	0.6							0.00059	0.00059		
110	4,4'-DDD	ug/L	0.6							0.00084	0.00084		
111	Dieldrin	ug/L	0.6				0.71	0.0019		0.00014	0.00014		
112	alpha-Endosulfan	ug/L	0.6	0.001			0.034	0.0087		240	0.0087	No	No
113	beta-Endolsulfan	ug/L	0.6	0.001			0.034	0.0087		240	0.0087	No	No
114	Endosulfan Sulfate	ug/L	0.6	0.001						240	240	No	No
115	Endrin	ug/L	0.6	0.001			0.037	0.0023		0.81	0.0023	No	No
116	Endrin Aldehyde	ug/L	0.6	0.001						0.81	0.81	No	No
117	Heptachlor	ug/L	0.6				0.053	0.0036		0.00021	0.00021		
118	Heptachlor Epoxide	ug/L	0.6				0.053	0.0036		0.00011	0.00011		
119-125	PCBs sum (2)	ug/L	0.6					0.03		0.00017	0.00017		
126	Toxaphene	ug/L	0.6				0.21	0.0002		0.00075	0.0002		

Notes:
Ud = Undetermined due to lack of data
Uc = Undetermined due to lack of CTR Water Quality Criteria
C = Water Quality Criteria
B = Background receiving (intake) water data

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Long Beach Generating Station (CA0001171)

			REASONABLE POTENTIAL ANALYSIS (RPA)							
CTR#	Parameters	Units	B Available (Y/N)?	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required	Tier 3 - other info. ?	RPA Result - Need Limit?
85	1,2-Diphenylhydrazine	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
86	Fluoranthene	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
87	Fluorene	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
88	Hexachlorobenzene	ug/L	Y	Y	0.001		Y	No detected value of B, Step 7		No
89	Hexachlorobutadiene	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
90	Hexachlorocyclopentadiene	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
91	Hexachloroethane	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
92	Indeno(1,2,3-cd)Pyrene	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
93	Isophorone	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
94	Naphthalene	ug/L	Y	Y	0.001		N	No Criteria	No Criteria	Uc
95	Nitrobenzene	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
96	N-Nitrosodimethylamine	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
97	N-Nitrosodi-n-Propylamine	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
98	N-Nitrosodiphenylamine	ug/L	Y	Y	0.05		N	No detected value of B, Step 7		No
99	Phenanthrene	ug/L	Y	N		0.0075		No Criteria	No Criteria	Uc
100	Pyrene	ug/L	Y	N		0.0049		B<=C, Step 7		No
101	1,2,4-Trichlorobenzene	ug/L	Y	Y	0.01		N	No Criteria	No Criteria	Uc
102	Aldrin	ug/L	Y	Y				No detected value of B, Step 7		No
103	alpha-BHC	ug/L	Y	Y				No detected value of B, Step 7		No
104	beta-BHC	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
105	gamma-BHC	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
106	delta-BHC	ug/L	Y	Y	0.001		N	No Criteria	No Criteria	Uc
107	Chlordane	ug/L	Y	Y	0.001		Y	No detected value of B, Step 7		No
108	4,4'-DDT	ug/L	Y	Y	0.001		Y	No detected value of B, Step 7		No
109	4,4'-DDE (linked to DDT)	ug/L	Y	Y	0.001		Y	No detected value of B, Step 7		No
110	4,4'-DDD	ug/L	Y	Y	0.001		Y	No detected value of B, Step 7		No
111	Dieldrin	ug/L	Y	Y	0.001		Y	No detected value of B, Step 7		No
112	alpha-Endosulfan	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
113	beta-Endolsulfan	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
114	Endosulfan Sulfate	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
115	Endrin	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
116	Endrin Aldehyde	ug/L	Y	Y	0.001		N	No detected value of B, Step 7		No
117	Heptachlor	ug/L	Y	Y	0.001		Y	No detected value of B, Step 7		No
118	Heptachlor Epoxide	ug/L	Y	Y	0.001		Y	No detected value of B, Step 7		No
119-125	PCBs sum (2)	ug/L	Y	Y	0.01		Y	No detected value of B, Step 7		No
126	Toxaphene	ug/L	Y	Y	0.01		Y	No detected value of B, Step 7		No

Notes:
Ud = Undetermined due to lack of data
Uc = Undetermined due to lack of CTR Water (
C = Water Quality Criteria
B = Background receiving (intake) water data

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Long Beach Generating Station (CA0001171)

CTR#	Parameters	Units	Reason	HUMAN HEALTH CALCULATIONS			AQUATIC LIFE CALC				
				Organisms only			Saltwater / Freshwater				
				AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh	ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA
85	1,2-Diphenylhydrazine	ug/L	MEC<C & B is ND								
86	Fluoranthene	ug/L	MEC<C & B is ND								
87	Fluorene	ug/L	MEC<C & B is ND								
88	Hexachlorobenzene	ug/L	UD; effluent ND, MDL>C, and								
89	Hexachlorobutadiene	ug/L	MEC<C & B is ND								
90	Hexachlorocyclopentadiene	ug/L	MEC<C & B is ND								
91	Hexachloroethane	ug/L	MEC<C & B is ND								
92	Indeno(1,2,3-cd)Pyrene	ug/L	MEC<C & B is ND								
93	Isophorone	ug/L	MEC<C & B is ND								
94	Naphthalene	ug/L	No Criteria								
95	Nitrobenzene	ug/L	MEC<C & B is ND								
96	N-Nitrosodimethylamine	ug/L	MEC<C & B is ND								
97	N-Nitrosodi-n-Propylamine	ug/L	MEC<C & B is ND								
98	N-Nitrosodiphenylamine	ug/L	MEC<C & B is ND								
99	Phenanthrene	ug/L	No Criteria								
100	Pyrene	ug/L	MEC<C & B<=C								
101	1,2,4-Trichlorobenzene	ug/L	No Criteria								
102	Aldrin	ug/L	UD; effluent ND, MDL>C, and								
103	alpha-BHC	ug/L	MEC<C & B is ND								
104	beta-BHC	ug/L	MEC<C & B is ND								
105	gamma-BHC	ug/L	MEC<C & B is ND								
106	delta-BHC	ug/L	No Criteria								
107	Chlordane	ug/L	UD; effluent ND, MDL>C, and								
108	4,4'-DDT	ug/L	UD; effluent ND, MDL>C, and								
109	4,4'-DDE (linked to DDT)	ug/L	UD; effluent ND, MDL>C, and								
110	4,4'-DDD	ug/L	UD; effluent ND, MDL>C, and								
111	Dieldrin	ug/L	UD; effluent ND, MDL>C, and								
112	alpha-Endosulfan	ug/L	MEC<C & B is ND								
113	beta-Endolsulfan	ug/L	MEC<C & B is ND								
114	Endosulfan Sulfate	ug/L	MEC<C & B is ND								
115	Endrin	ug/L	MEC<C & B is ND								
116	Endrin Aldehyde	ug/L	MEC<C & B is ND								
117	Heptachlor	ug/L	UD; effluent ND, MDL>C, and								
118	Heptachlor Epoxide	ug/L	UD; effluent ND, MDL>C, and								
119-125	PCBs sum (2)	ug/L	UD; effluent ND, MDL>C, and								
126	Toxaphene	ug/L	UD; effluent ND, MDL>C, and								

Notes:
Ud = Undetermined due to lack of data
Uc = Undetermined due to lack of CTR Water
C = Water Quality Criteria
B = Background receiving (intake) water data

Attachment J
Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)
Long Beach Generating Station (CA0001171)

CTR#	Parameters	Units	ULATIONS / Basin Plan AMEL multiplier 95	AMEL aq life	MDEL multiplier 99	MDEL aq life	LIMITS Lowest AMEL	Lowest MDEL	Recommendation	Comment
85	1,2-Diphenylhydrazine	ug/L							No Limit	No RP
86	Fluoranthene	ug/L							No Limit	No RP
87	Fluorene	ug/L							No Limit	No RP
88	Hexachlorobenzene	ug/L							No Limit	No RP
89	Hexachlorobutadiene	ug/L							No Limit	No RP
90	Hexachlorocyclopentadiene	ug/L							No Limit	No RP
91	Hexachloroethane	ug/L							No Limit	No RP
92	Indeno(1,2,3-cd)Pyrene	ug/L							No Limit	No RP
93	Isophorone	ug/L							No Limit	No RP
94	Naphthalene	ug/L							No Limit	No RP
95	Nitrobenzene	ug/L							No Limit	No RP
96	N-Nitrosodimethylamine	ug/L							No Limit	No RP
97	N-Nitrosodi-n-Propylamine	ug/L							No Limit	No RP
98	N-Nitrosodiphenylamine	ug/L							No Limit	No RP
99	Phenanthrene	ug/L							No Limit	No RP
100	Pyrene	ug/L							No Limit	No RP
101	1,2,4-Trichlorobenzene	ug/L							No Limit	No RP
102	Aldrin	ug/L							No Limit	No RP
103	alpha-BHC	ug/L							No Limit	No RP
104	beta-BHC	ug/L							No Limit	No RP
105	gamma-BHC	ug/L							No Limit	No RP
106	delta-BHC	ug/L							No Limit	No RP
107	Chlordane	ug/L							No Limit	No RP
108	4,4'-DDT	ug/L							No Limit	No RP
109	4,4'-DDE (linked to DDT)	ug/L							No Limit	No RP
110	4,4'-DDD	ug/L							No Limit	No RP
111	Dieldrin	ug/L							No Limit	No RP
112	alpha-Endosulfan	ug/L							No Limit	No RP
113	beta-Endolsulfan	ug/L							No Limit	No RP
114	Endosulfan Sulfate	ug/L							No Limit	No RP
115	Endrin	ug/L							No Limit	No RP
116	Endrin Aldehyde	ug/L							No Limit	No RP
117	Heptachlor	ug/L							No Limit	No RP
118	Heptachlor Epoxide	ug/L							No Limit	No RP
119-125	PCBs sum (2)	ug/L							No Limit	No RP
126	Toxaphene	ug/L							No Limit	No RP

Notes:
Ud = Undetermined due to lack of data
Uc = Undetermined due to lack of CTR Water (
C = Water Quality Criteria
B = Background receiving (intake) water data

ATTACHMENT K – RPA ANALYSIS FOR AMMONIA

Attachment K

Reasonable Potential Analysis for Ammonia Nitrogen
Long Baech Generating Station
(CA0001171)

CONSTITUENT	Units	Number of Samples	Maximum Observed Effluent Concentration	CV	Multiplier	Projected Maximum Effluent Concentration (99/99)	Dilution Ratio	Background Concentration	Projected Maximum Receiving Water Concentration	Water Quality Objectives*	BU - Beneficial use protection NC-Human noncarcinogen AP-Aquatic life protection	REASONABLE POTENTIAL	
Ammonia Nitrogen	mg/L	9	4.5	0.6	3.16	14.22	0		14.22	1.25	AP	Yes	Projected Max > WQO
	* WQO (NH3-N/L)		= 4-day Ammonia Objective (NH3/L) x Conversion Factor (14/17)										
			= 1.52 x (14/17) = 1.25										
				Monitoring Data									
	Year	2001	2002	2003	2004	2005		2006	2007	2008			
Ammonia Nitrogen	mg/L	0.1	0.1	0.07	<0.05	<0.05	1.9	2.59	0.6	4.5			

ATTACHMENT L – CALCULATIONS OF WATER QUALITY OBJECTIVES AND EFFLUENT LIMITATIONS FOR AMMONIA

Attachment L
Calculations of Water Quality Objectives and Effluent Limitations for Ammonia
Long Beach Generating Station
(CA0001171)

Long Beach Generating Station

	Reveiving Water	
	pH	Temperature
50 percentile	**7.98**	**16.26**
90 percentile	**8.13**	**21.549**

Data set: 2001 winter to 2008 summer

Caculatiosn for Total Ammonia Water Quality Objectives Based on Un-ionized Ammonia Objectives

	Un-ionized NH3 Objective: [NH3]	P (atm)	pH	Temp (K)	Salinity (ppt)	Molal Ionic Strength (i)	pK_a^s	Total Ammonia Objectives (mg NH3/L)
One-hour Average	0.233	1	8.13	294.55	33.18	0.683998845	9.324343866	**4.95**
4-day Average	0.035	1	7.98	289.26	33.18	0.683998845	9.324343866	**1.52**

Molal ionic strength (i) = $19.9273\ S\ (1000-1.005109S)^{-1}$
pKa = 0.116 * i + 9.245
Total Ammonia = [NH4+]+[NH3] = [NH3] + [NH3]*10 ^ (pK_a^s + 0.0324 (298-T) + 0.0415 P/T - pH)

Caculatiosn for Final Effluent Monthly Average (AMEL) and Daily Maximum (MDEL) Limitations for Ammonia Nitrogen
(Long Beach Generating Station)

CALCULATION USING N (Sampling Frequency) =4

	Ammonia Water Quality Objective	ECA=WQO (No dilution allowed)	CV	ECA Multiplier (Table 3-6)	LTA	Multiplier (Table 3-7) n=4	Conversion Factor (mg NH3/L) to (mg NH3-N/L)	MDEL (mg NH3-N/L)	AMEL (mg NH3-N/L)
One-hour Average	4.95	4.95	0.6	0.321	1.5888	3.11	**0.824**	**2.05**	
4-day Average	1.52	1.52	0.6	0.527	0.8010	1.55	**0.824**		**1.02**

most limiting LTA

MDEL = 0.8010 (most limiting LTA) x 3.11 x 0,824 = 2.05
AMEL = 0.8010 (most limiting LTA) x 1.55 x 0,824 = 1.02

Input data:	Receiving water pH and temperature (90th and 50th percentile)
	CV (Coefficient of Variation) CV=6 if the number of data is less than 10
	Multipliers from Tables 3-6 and 3-7 of Basin Plan Amendment - Ammonia Objectives in Inland Surface Waters (Resolution No. 2002-011)