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June 6, 2016

Mr. Samuel Unger, Executive Officer
Los Angeles Region
California Regional Water Quality Control Board
320 West Fourth Street, Suite 200
Los Angeles, CA 90013

Attention: Mr. David Hung
Ms. Cassandra Owens

Dear Mr. Unger:

Subject: Comments on Draft Waste Discharge Requirements under the National Pollutant Discharge Elimination System (NPDES) Harbor Generating Station (HGS), NPDES Permit CA0000361, CI-2020

The Los Angeles Department of Water and Power (LADWP) would like to thank the Los Angeles Regional Water Quality Board staff (Regional Board) for meeting with LADWP on the tentative Harbor Generating Station (HGS) National Pollutant Discharge Elimination System (NPDES) permit. As discussed, the HGS is a critical facility for LADWP's electrical grid system. The Once-Through Cooling (OTC) Unit 5 at HGS is not only a reliability must run (RMR) unit, but also imperative to meet the North American Electric Reliability Corporation (NERC) Reliability Standards. Therefore, this unit must be available for LADWP's electrical system at all times. Furthermore, LADWP is in the process of transforming its entire electrical system, which includes the complete elimination of OTC, and at the same time eliminating coal from its power portfolio and integrating more variable energy resources (VERs), such as solar and wind. This is a tremendous effort and makes the HGS Unit 5 even more valuable and critical to the balance and voltage support of LADWP's entire grid system.

LADWP is the largest municipality in the nation, and it owns its own generation, distribution, and transmission. The LADWP is not part of the California Independent System Operator (CAISO) grid system; LADWP operates a separate system and is solely responsible for balancing the electrical supply with the demand in its service area. The transmission system to deliver the required energy has been built out from its

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coastal generating stations. Due to the urbanization of surrounding areas, there is not space to add additional transmission to meet the demand in the Southern area near the coastal generating stations; rather, the coastal generating stations are critical to providing electricity to the surrounding areas. The physical location of LADWP's grid system, and in particular this southern area, makes it much like a cul de sac. A portion of the power in the Southern portion must come from the coastal generating stations. Unlike the CAISO plants, which depend upon a power market, LADWP's generating stations are governed by the City of Los Angeles City Charter, and must provide reliable and affordable electricity in an environmentally responsible manner 24/7 to the Citizens of Los Angeles. Therefore, HGS' ability to operate under the NPDES Permit is of absolute vital importance due to the critical nature of this facility to LADWP's grid system and reliability. Loss of HGS's operations significantly threatens grid reliability in LADWP's electricity service area.

LADWP has several concerns regarding the tentative NPDES permit. As we discussed with Regional Board staff in our recent meeting, a primary concern is that the tentative NPDES permit appears to treat the receiving waters to which the HGS discharges as both an estuary and as an enclosed bay. The classification assigned to the receiving water in turn appears to have been used as the basis for many of the requirements of the tentative NPDES permit. Our comments below are organized first to discuss the classification of the receiving water, and then to discuss additional issues.

1. **Receiving water classification.**

HGS discharges to the Los Angeles Harbor. The 2005 *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (the SIP) defines "enclosed bays" and lists the Los Angeles-Long Beach Harbor as an enclosed bay; the SIP does not distinguish between the Inner Harbor and the Outer Harbor. This definition of an "enclosed bay" is repeated in the tentative HGS NPDES permit under review at p. A-2. Los Angeles Harbor is also named within several state policies as an "enclosed bay" (see, e.g., the Thermal Plan definition of "Enclosed Bay," which includes Los Angeles Harbor (Thermal Plan, definitions, items 6 and 7, pp. 1-2); the Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1 Sediment Quality (effective August 25, 2009, Footnote 1 at p. 2). The Los Angeles Outer Harbor and Inner Harbor are not assigned an estuary ("EST") beneficial use designation in the Los Angeles Region Basin Plan (Table 2-1a, at p. 2-28). Attachment F, Section I, Table F-1, Facility Information (tentative NPDES permit at p. F-3) lists the Receiving Water Type as Enclosed Bay. Finally, water in the vicinity of the HGS is predominantly saline and does not exhibit the characteristics of an estuary. Thus, the HGS receiving water should be classified as an "enclosed bay" and not as an "estuary."

In contrast, in numerous instances (detailed below), the tentative HGS NPDES permit erroneously asserts that the receiving water type is estuarine, therefore effectively re-designating the HGS as an estuarine discharge. This designation difference carries significant ramifications, especially under the California Thermal Plan. LADWP believes

and asserts that the HGS discharge should continue to be regulated as an existing discharge to an enclosed bay discharge (as it was in the prior permit, Order R4-2003-0101) and not as an estuarine discharge.

Below is an itemized list of estuarine requirements for estuarine classification from the tentative draft HGS NPDES permit that LADWP believes was done in error, they are as follows:

1. Order Section IV.A.1.a. Table 4. Pg. 5. Instantaneous Maximum Temperature of 86°F and the corresponding footnote 2 (derived from the estuary requirements of the California Thermal Plan).
2. Order Section IV.A.3.a. Tables 6 and 7. Pg. 7. Instantaneous Maximum Temperature of 86°F (derived from the estuary requirements of the California Thermal Plan).
3. Order Section V.A.2 Table 4. Pg. 8. Surface water temperature to rise greater than 4°F above the natural temperature of the receiving waters at any time or place. (derived from the California Thermal Plan requirements for discharges to an estuary, or for new discharges to an enclosed bay).
4. Attachment F Section II.C. pg. F-6, which states "*In a letter dated January 21, 2003, the Regional Water Board notified the Discharger of reclassification of the Facility from an ocean discharger to an estuarine discharger.*"
5. Attachment F Section III.C.3. pg. F-10–11. "*Water Quality Objective 5A of the Thermal Plan is applicable to existing thermal discharges to the estuaries of California and therefore applicable to discharges from the Facility: [text from the California Thermal Plan requirements for estuaries was inserted*]".
6. Attachment F Section IV.B.2.c. pg. F-20–21. "*The variance from BAT standards is no longer applicable to the discharge because this variance was developed based on a marine receiving water classification, and not on an estuarine receiving water classification. … since the adoption of Order R4-2003-0101, the receiving water has been re-categorized as an estuary.*"
7. Attachment F Section IV.C.4.d.6. Table F-16 pg. F-35. "*The Basin Plan identifies numeric temperature objectives consistent with the Thermal Plan. The Thermal Plan contains a maximum temperature limitation of 86°F for thermal discharges to the Estuaries. Requirements of this Order implement the Thermal Plan.*"
8. Attachment F Section IV.C.4.d.6.g. pg. F-36, regarding effluent limitations for radioactivity. "*These limitations have not been retained in this Order due to the recategorization of the discharge from an ocean discharge to an estuarine discharge.*"

2. Temperature requirements.

The California Thermal Plan requirement for existing discharges to enclosed bays (4.A.(1)) reads, "*Elevated temperature waste discharges shall comply with limitations necessary to assure protection of beneficial uses.*" This was the regulation implemented under Order No. R4-2003-0101 (Item 18, pg. 5). Receiving Water Monitoring conducted

and reported to the Los Angeles Regional Board annually in compliance with the existing NPDES permit monitoring requirements found the beneficial uses of the receiving waters were protected. As noted above, the proposed temperature requirements in the tentative NPDES permit are derived from the California Thermal Plan requirements for estuarine dischargers.

Because no changes have occurred to the relevant beneficial use designations, or to applicable Federal, State, or Regional policies or plans governing aquatic temperatures, LADWP requests all temperature receiving water limitations remain consistent with those designated in Order No. R4-2003-0101 (listed below).

1. Order Section I.B.1. *The temperature of wastes discharged shall not exceed 94°F during normal operations.*

In addition, in the previous HGS NPDES Permit there were exceptions for gate adjustments and heat treatment. Gate adjustments and heat treatment may occur with very little notice and are vital in order for the facility to run efficiently. Therefore, LADWP requests a footnote be added to Table 4. Effluent Limitations at Discharge Point 001, to allow for an increase in the temperature limitation to 135 degrees for gate adjustments and 140 degrees for heat treatment when they occur.

If these changes are not implemented, LADWP requests that a compliance schedule be granted for temperature, as outlined in Enclosure 2.

3. Page F-20 and F-21, Mixing Zone and Dilution Credits

The existing NPDES permit utilizes a dilution ratio of 3.1 parts seawater to 1 part effluent (see Tentative Permit at p. F-7; see also Order R4-2003-0101). On pp. F-20 and F-21, the Tentative NPDES permit Fact Sheet proposes to revoke a variance from BAT standards for total residual chlorine that was part of the prior NPDES permit (Order R4-2003-0101). The Tentative NPDES Permit Fact Sheet states that the variance is no longer applicable because the "variance was developed based upon a marine receiving water classification, and not on an estuarine receiving water classification" (p. F-20) and because "the inclusion of a mixing zone and associated dilution credit which is no longer applicable to this discharge, as discussed in Section II.B of the Fact Sheet" (p. F-21). However it should be noted, Section II.B of the Fact Sheet does not discuss a mixing zone or dilution credit. As a result, the Tentative Permit concludes that the BAT standards for total residual chlorine contained in 40 C.F.R. part 423 are applicable to this discharge.

A mixing zone is discussed in two other places in the Tentative Permit. First, on p. F-30 (point 4.c.), the permit states, "Since many of the streams in the Region have minimal upstream flows, mixing zones and dilution credits are usually not appropriate. Therefore, in this Order, no dilution credit is being allowed." This justification is usually applied to a discharge near the headwaters of a stream, where flow past the discharge

point may be low or variable. This is not the case in Los Angeles Harbor. The Los Angeles Harbor is tidal, and thus mixing and dilution occur there as a result of tidal flows into and out of the Harbor and not solely as a result of upstream fluvial flows. As will be shown below, tidal flows into and out of the Harbor provide substantial dilution for effluent discharged from the HGS's Discharge Point 001, and thus a mixing zone and associated dilution credit are warranted and applicable to the discharge.

Second, the Tentative Permit also states, on p. F-27, "insufficient information is available to assess the appropriateness of establishing [a] dilution credit in relation to requirements in the SIP; therefore, this Order has established WQBELs on the assumption of zero assimilative capacity." Extensive dilution modeling of the HGS discharge was recently performed by Flow Science Incorporated. In response to Regional Board staff's request, this modeling study was resubmitted to the Los Angeles Regional Board on June 2, 2016. Initial dilution—the dilution of a discharge attributable primarily to jet momentum and buoyancy flux near the discharge point—was calculated from Flow Science's modeling results. For a buoyant discharge at depth like the HGS discharge, initial dilution is estimated near the point at which the discharge surfaces.

Flow Science used a three-dimensional computational fluid dynamics model, ELCOM, to simulate a constant tracer concentration of 100% from the HGS discharge in the West Basin of the L.A. Harbor, the immediate receiving water for the discharge. Flow Science simulated five one-week periods that reflected different seasonal, tidal, and operational scenarios: (1) winter with no HGS heat load; (2) winter with HGS heat load; (3) summer with no HGS heat load; (4) summer with HGS heat load; and (5) summer with HGS heat load and low tidal amplitude. For all of these scenarios, HGS discharge rates and temperatures reflected conditions very similar to current operations. Discharge rates ranged from roughly 30 MGD to 95 MGD, and discharge temperatures ranged from 60°F to 84°F.

Flow Science (2010) (Appendix A) found that worst-case dilution occurred when there was a heat load from the HGS. Flow Science (2010) found that worst-case average near-surface dilution of the HGS discharge (with heat loading) ranged from less than 4 near the discharge location to 8 at the confluence with the main channel. Higher dilutions occurred during both summer and winter months when there was no HGS heat load. Figure 5.9 from Flow Science (2010) presents model results from the worst-case (with heat loading) model scenarios (see Flow Science 2010).

On the basis of this information, LADWP requests that the HGS continue to be granted a mixing zone with a dilution credit of 3.1 for all constituents in Table 4 of the Tentative Permit. As detailed in comment 4, we also request that the variance from BAT standards for total residual chlorine be maintained, consistent with the existing NPDES permit.

Alternatively, if a mixing zone and dilution credit are not established on the basis of this information, we request that the effluent limitations for total residual chlorine and

temperature established in the existing NPDES permit—daily maxima of 0.377 mg/L and 94°F, respectively—be maintained until the completion of a special study to evaluate assimilative capacity in the Harbor for these parameters and the potential for a mixing zone and dilution credit. In this case, LADWP requests a compliance schedule as outlined in Enclosure 2.

4. Page F-20, Table F-9 and Table F-10 Chlorine Limitations and the 301(g) Variance

As noted above, the Tentative Permit proposes to discontinue the variance from BAT standards for total residual chlorine, and proposes to establish maximum daily effluent limits for free available chlorine and total residual chlorine of 0.2 mg/L and 0.1 mg/L, respectively (Table 4). While Table F-2 of the Tentative Permit shows that the highest average monthly discharge concentration of free available chlorine was 0.09 mg/L, 27 events identified in LADWP monitoring data for the period 2011-2015 showed maximum daily total residual chlorine concentrations exceeding 0.1 mg/L.

Effluent limitations for free available chlorine and total residual chlorine in the existing NPDES permit (R4-2003-0101), which classified the HGS discharge as an enclosed bay (Item 20, pg. 5 of the Order), are 0.377 mg/L. Within Order R4-2003-0101 language pertaining to total residual chlorine included:

Item 25 pg. 7 – *"Effluent limitations are established in accordance with Sections 301, 304, 306, and 307 of the CWA, and amendments thereto. These requirements, as they are met, will maintain and protect the beneficial uses of the Los Angeles Harbor watershed."*

Items 31-33 pg. 9 - Discussed the 301(g) Variance and its development

Item 34 pg. 10 - Specified that since adoption of the 301(g) variance, the chronic toxicity "have been consistent at 4.1 TUc."

The Tentative NPDES Permit proposes to withdraw the 301(g) variance (p. F-20) on the basis that it was granted based on a marine receiving water classification, and not on an estuarine receiving water classification. As noted in Comment 1, LADWP believes that the estuarine classification here is incorrect, and the discharge is to an enclosed bay. No changes to Federal, State, or Regional regulations have occurred since R4-2003-0101 with regards to total residual chlorine. Furthermore, no toxicity violations have occurred during the monitoring per R-4-2003-0101. Therefore, there is no regulatory or environmental justification for disallowing the existing 301(g) variance.

Thus, LADWP requests that the prior variance from BAT standards be maintained in the new permit, and that the permit maintain the PMELs of 0.377 mg/L for free available chlorine and total residual chlorine.

Alternatively, if the variance is not continued, LADWP requests a compliance schedule for chlorine as outlined in Enclosure 2.

5. Page F-28, IV.C.3.c - Intake Credits

The Tentative Permit establishes effluent limitations for a range of constituents that are not likely contributed by HGS processes. As shown in Table 1, some of these effluent limitations would be difficult for HGS to meet given current operations and monitoring data.

Table 1 – Effluent limitations proposed in the HGS Tentative Permit with recent monitored discharge concentrations. Source: Tentative Permit, Table 4 and Attachment J – Reasonable Potential Analysis and Effluent Limitations Calculations.

Constituent	Proposed effluent limitation (max. daily concentration, ug/L)	Mean effluent concentration (MEC) from recent monitoring data (ug/L)
Mercury	0.10	0.05 (CV = 0.6)
Copper	3.3 (avg. monthly)	5.8
Cyanide	1.0	5.0
Bis(2-ethylhexyl)phthalate	16	33
Heptachlor epoxide	0.00022	0.0025

As noted above, HGS processes are not likely to add to concentrations of these constituents. The Fact Sheet associated with the Tentative Permit states that HGS discharge through Discharge Point 001 consists of wastewater from three different process streams (pp. F-5 and F-6). The largest stream is once-through cooling water.

The second wastewater stream is a small flow (0.025 MGD) of demineralizer regeneration wastes, that consists of reverse osmosis reject water and condensate demineralizer regenerate wastes. These wastes are subject to settling in retention basins prior to discharge through Discharge Point 001. For both RO reject water and condensate demineralizer regenerate wastes, the source water is potable and concentrations of the constituents are either non-detect or de-minimus. The third wastewater stream consists of storm water from the facility that drains to the East and West Yard Drains (0.011 MGD).

The primary source of these constituents in the discharge appears to be the intake water drawn from the Los Angeles Harbor at Slip No. 5. Paired monitoring data for the HGS intake and outfall are shown in Table 2; these data indicate that instantaneous grab samples for both the HGS intake and Discharge Point 001, taken at roughly the same time, reflect similar concentrations of the constituents listed in Table 2. In several cases (two cases in Table 2) the measured concentrations in the intake water were

higher than the concentrations in the outfall water, suggesting that background concentrations in Slip No. 5 are responsible for concentrations measured in effluent, and that there is no significant addition of these pollutants to water discharged by the HGS. These results also indicate that there is some variability in concentration, and/or measurement imprecision, and/or differences in the timing of sample collection; these factors likely also account for the three cases in Table 2 in which an outlet concentration is higher than an inlet concentration.

Table 2 – Paired grab sample monitoring data for the HGS intake and outfall (Discharge Point 001). Source: LADWP monitoring data.

Constituent	Concentration (ug/L)							
	2012		2013		2014		2015	
	Intake	Outfall	Intake	Outfall	Intake	Outfall	Intake	Outfall
Mercury	ND	ND	ND	ND	ND	ND	ND	ND
Copper	3.8	2.4	1.7	1.8	3.3	2.9	2.4	2.8
Cyanide	ND	ND	ND	ND	ND	ND	ND	ND
bis(2-ethylhexyl)phthalate	5.10	11.00	ND	ND	4.20	ND	ND	ND
Heptachlor epoxide	ND	ND	ND	ND	ND	ND	ND	ND

ND: Not detected.

Thus, the source of Table 1 constituents in the HGS discharge appears to be Los Angeles Harbor water from Slip No. 5 and not HGS processes. In addition, there is an obvious and direct hydraulic connection between the receiving water body (West Basin) and the intake water body (Slip No. 5), since both water bodies are part of the larger Los Angeles Harbor water body.

For these reasons, LADWP requests that intake credits be granted for these constituents.

Alternatively, if the an intake credit is not allowed, LADWP requests a compliance schedule for these constituents as outlined in Enclosure 2, to allow time to conduct additional studies to identify and evaluate the feasibility of potential control measures.

6. **Page 8, Section V.A.4 – "The concentration of dissolved oxygen to fall below 5.0 mg/L at any time, and the median dissolved oxygen concentration for any three consecutive months to be less than 80 percent of the dissolved oxygen content at saturation."**

Receiving Water Monitoring is only conducted twice per year. Since receiving water sampling is only conducted twice per year, LADWP cannot verify that the median dissolved oxygen concentration for any three consecutive. The source of the requirement to evaluate dissolved oxygen concentrations for three consecutive months is unclear, as the Basin Plan includes the following requirements for dissolved oxygen (May 2, 2013 Basin Plan pg. 3-29):

Adequate dissolved oxygen levels are required to support aquatic life. Depression of dissolved oxygen can lead to anaerobic conditions resulting in odors or, in extreme cases, in fish kills. Dissolved oxygen requirements are dependent on the beneficial uses of the waterbody.

At a minimum (see specifics below), the mean annual dissolved oxygen concentration of all waters shall be greater than 7 mg/L, and no single determination shall be less than 5.0 mg/L, except when natural conditions cause lesser concentrations.

The dissolved oxygen content of all surface waters designated as WARM shall not be depressed below 5 mg/L as a result of waste discharges.

The dissolved oxygen content of all surface waters designated as COLD shall not be depressed below 6 mg/L as a result of waste discharges.

The dissolved oxygen content of all surface waters designated as both COLD and SPWN shall not be depressed below 7 mg/L as a result of waste discharges.

For that area known as the Outer Harbor area of Los Angeles-Long Beach Harbors, the mean annual dissolved oxygen concentrations shall be 6.0 mg/L or greater, provided that no single determination shall be less than 5.0 mg/L.

WARM, COLD, and SPWN are not designated beneficial uses in the HGS receiving waters (Table F-6). Therefore, LADWP requests that the dissolved oxygen limits in the Tentative NPDES Permit be changed to eliminate the "three consecutive months" requirement, and to implement only the applicable Basin Plan Water Quality Objectives, which read as follows:

At a minimum (see specifics below), the mean annual dissolved oxygen concentration of all waters shall be greater than 7 mg/L, and no single determination shall be less than 5.0 mg/L, except when natural conditions cause lesser concentrations.

Therefore, LADWP requests that the monitoring for DO remain as twice per year and that the three consecutive months requirement be removed.

7. Page F-16, Section III.D.2.d.i – Water Column Monitoring

Under "Water Column Monitoring," the Fact Sheet associated with the Tentative Permit calls for "a flow measurement" during each water column monitoring event (p. F-16). However, it is not clear which flow is intended here, since the monitoring is to occur in the center of the POLA West Basin (per Table F-7).

LADWP requests that the requirement to monitor flow during "water column monitoring" be eliminated.

8. **Page E-5, Table E-1 – "Bioaccumulation Station Monitoring – Within the West Basin, at the Discharge Point 001 conduit..."**

Accessing the conduit endangers the sampling team. The remaining text of the section "as close to the point of discharge as possible" should be sufficient.

Attempting to get near the discharge conduit could endanger personnel. Therefore, in the name of safety, LADWP recommends to remove "at the Discharge Point 001 conduit" from the text and allowing collection "as close to the point of discharge as possible".

9. **Page E-11, Section V.A.1 – "Test of Significant Toxicity (TST)"**

Recent results from similar testing in marine systems highlights a methodological bias in the TST. During three-species testing, the fish (Topsmelt) requires substantially lower densities than can be used for either giant kelp or the invertebrate tests. Therefore, the sample size for each test is vastly different due to the logistics and space needed to maintain live vertebrates versus live algae or invertebrates. The final results of the most sensitive species screening, measured as percent effect, invariably indicate Topsmelt as a function of sample size.

Unfortunately, the TST method disregards any of the valuable information from the dilution series by focusing exclusively on the 0% control and IWC concentration. Dose response information obtained during WET testing is not utilized in the TST method and is therefore of no value.

Additionally, this methodology has not been through formal rulemaking or been adopted as a policy by the SWRCB. Also, since the State Water Resources Control Board (SWRCB) toxicity policy is not expected to be adopted before the adoption of this permit, the permit should include language that would allow it to be harmonized with any toxicity policy that would be forthcoming from the SWRCB.

Thus LADWP recommends, until the TST is officially adopted as a state policy and/or has been through a federal rulemaking process, the Regional Board should allow use of traditional toxicity evaluation methods. LADWP also recommends that the TST be reevaluated using marine species and conditions to determine what effect this sample size bias has on the ultimate validity of the test.

10. **Page E-11, V.A.4 – "Artificial sea salts shall be used to increase sample salinity."**

LADWP recommends this sentence should be deleted as only seawater with a salinity of at least 33 ppt should be used in any of these tests. Lower salinity waters indicate freshwater intrusion into the seawater system likely resulting from rain.

11. Page E-15, Table E-6, Footnote 4 - "A hand-held field meter may be used for pH and temperature..."

The sample type is "profile," generally denoting a measurement every one meter or some other distance measurement from the surface over the depth of the water column. This is not readily achievable in the water depths characterizing the HGS receiving waters.

Therefore, LADWP recommends the use of a properly calibrated CTD profiler or similar meter to achieve accurate measurements of the required water quality parameters throughout the water column to construct an accurate profile.

12. Page E-16, Section VIII.B.3 - "One liter sediment core samples shall be collected by divers...."

Diving in the harbor environment can pose safety challenges. In recent history, a Van Veen grab has been used in lieu of diver collections to enhance safety. The one-liter sediment core samples are then taken from the Van Veen grab. This methodology was approved in a letter dated July 17, 2002, from the Los Angeles Regional Board Executive Officer to Mr. Michael Curtis of MBC Applied Environmental Sciences, consultant to LADWP.

Therefore, LADWP requests continuing the use of a 0.1 m^2 Van Veen grab in lieu of diver collections to ensure diver safety.

13. Page E-18, Section VIII.C.1.c – Two replicate trawls shall be conducted at each monitoring location for a duration of 10 minutes each at a uniform speed between 2.0 and 2.5 knots.

There is insufficient space to conduct a 10-minute trawl at these stations. The prior permit required five-minute trawls.

LADWP requests the 10-minute requirement be revised to a five-minute requirement.

14. Page E-18, Section VIII.D.1 - Only native California mussels (*Mytilus californianus*) are listed.

California mussels can be difficult to obtain in the area due to natural variability, and transplanted mussels often perish in the harbor.

LADWP requests the species be changed to simply mussels (*Mytilus* spp.) and to include oysters (*Crassostrea* spp.) as oysters have been very common in recent years and provide the same function as mussels by virtue of each filter feeding and therefore bioaccumulating contaminants in the water.

15. **Page E-11, Table E-5, Footnote 2 -** During periods of extended rainfall, no more than one sample per week (or 7-day period) is required to be collected. Sampling shall be during the first hour of discharge..."

LADWP is required to conduct storm water sampling that includes the BOD, during a rain event. If the rain event is on a Friday, unless special arrangements have been made, a laboratory is not available to drop off the BOD sample and analyze that sample within the required holding time. Rain events may be predicted but either do not occur or there is not enough precipitation to collect the sample. Should a sample be collected it would need to be held until Monday due to the unavailability of a laboratory and the 48 hour BOD holding time would be exceeded, thus invalidating the sample.

Therefore, LADWP requests that storm water samples collected on Fridays be granted an exception to the requirement for BOD. The exception would allow for a statement in the monitoring report stating that the storm event occurred on a Friday and therefore BOD was not analyzed since the holding time would be exceeded invalidating the sample.

In closing, LADWP appreciates the opportunity to comment. LADWP also greatly appreciates the time the Regional Board staff spent with LADWP to discuss LADWP's comments and concerns on the proposed tentative draft NPDES Permit. As requested from staff, enclosed with this letter is the revised 2C form (Enclosure 1), the framework for the TSO Request (Enclosure 2), the updated flow schematic diagram (Enclosure 3), and the letter from the State Water Resources Control Board re-designating the Los Angeles-Long Beach Harbor as an Enclosed Bay (Enclosure 4). LADWP looks forward to continue working with the Regional Board staff on the HGS tentative draft NPDES permit.

If you have any questions or require additional information, please contact Mr. Maher (Matt) Qassis of my staff at (213) 367-2976.

Sincerely,

Katherine Rubin
Manager of Wastewater Quality and Compliance

MQ:
Enclosures
c/enc: Ms. Deborah Smith, Assistant Executive Office, LARWQCB
Ms. Rosario Aston, LARWQCB
Mr. Maher Qassis, LADWP

Enclosure 1
Revised 2c Form

Please print or type in the unshaded areas only.

EPA I.D. NUMBER (*copy from Item 1 of Form 1*): CAD000633180

Form Approved.
OMB No. 2040-0086.
Approval expires 3-31-98.

FORM **2C** NPDES

U.S. ENVIRONMENTAL PROTECTION AGENCY
APPLICATION FOR PERMIT TO DISCHARGE WASTEWATER
EXISTING MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURE OPERATIONS
Consolidated Permits Program

I. OUTFALL LOCATION

For each outfall, list the latitude and longitude of its location to the nearest 15 seconds and the name of the receiving water.

A. OUTFALL NUMBER (*list*)	B. LATITUDE			C. LONGITUDE			D. RECEIVING WATER (*name*)
	1. DEG.	2. MIN.	3. SEC.	1. DEG.	2. MIN.	3. SEC.	
001	33	45	59	118	16	12	Los Angeles Harbor (West Basin)

II. FLOWS, SOURCES OF POLLUTION, AND TREATMENT TECHNOLOGIES

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (*e.g., for certain mining activities*), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures. (Attachment B)

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

1. OUTFALL NO. (*list*)	2. OPERATION(S) CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION (*list*)	b. AVERAGE FLOW (*include units*)	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
001	Once-through Cooling Water	108,000,000 gal/day	None	4-B	
	Cooling Water Heat Xchanger	10,080,000 gal/day	None	4-B	
	Demineralizer Regeneration	25,000 gal/day	Settling (Sump A)	1-U	4-B
	Storm Water (Yard Drains)	11,000 gal/day	None	4-B	
	Oxidant use(bio-fouling)*	25 gal/day	None	4-B	
	*Sodium hypochlorite				

OFFICIAL USE ONLY (*effluent guidelines sub-categories*)

CONTINUED FROM THE FRONT

C. Except for storm runoff, leaks, or spills, are any of the discharges described in Items II-A or B intermittent or seasonal?

☑ YES (*complete the following table*) ☐ NO (*go to Section III*)

1. OUTFALL NUMBER (*list*)	2. OPERATION(s) CONTRIBUTING FLOW (*list*)	3. FREQUENCY		4. FLOW				
		a. DAYS PER WEEK (*specify average*)	b. MONTHS PER YEAR (*specify average*)	a. FLOW RATE (*in mgd*)		B. TOTAL VOLUME (*specify with units*)		C. DURATION (*in days*)
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	1. LONG TERM AVERAGE	2. MAXIMUM DAILY	
001	Demineralizer Regeneration Waste	1	10	0.0244	0.0459	24,400 gallons	45,800 gallons	1
	Sodium hypochlorite use to control bio-fouling	4	12	*	*	*	*	(0.1) 2hr/d
	*negligle (chlorination does not exceed 2 hours/day for the facility's only unit using once-through cooling)							

III. PRODUCTION

A. Does an effluent guideline limitation promulgated by EPA under Section 304 of the Clean Water Act apply to your facility?

☑ YES (*complete Item III-B*) ☐ NO (*go to Section IV*)

B. Are the limitations in the applicable effluent guideline expressed in terms of production (*or other measure of operation*)?

☐ YES (*complete Item III-C*) ☑ NO (*go to Section IV*)

C. If you answered "yes" to Item III-B, list the quantity which represents an actual measurement of your level of production, expressed in the terms and units used in the applicable effluent guideline, and indicate the affected outfalls.

1. AVERAGE DAILY PRODUCTION			2. AFFECTED OUTFALLS (*list outfall numbers*)
a. QUANTITY PER DAY	b. UNITS OF MEASURE	c. OPERATION, PRODUCT, MATERIAL, ETC. (*specify*)	

IV. IMPROVEMENTS

A. Are you now required by any Federal, State or local authority to meet any implementation schedule for the construction, upgrading or operations of wastewater treatment equipment or practices or any other environmental programs which may affect the discharges described in this application? This includes, but is not limited to, permit conditions, administrative or enforcement orders, enforcement compliance schedule letters, stipulations, court orders, and grant or loan conditions.

☐ YES (*complete the following table*) ☑ NO (*go to Item IV-B*)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
	a. NO.	b. SOURCE OF DISCHARGE		a. REQUIRED	b. PROJECTED

B. OPTIONAL: You may attach additional sheets describing any additional water pollution control programs (*or other environmental projects which may affect your discharges*) you now have underway or which you plan. Indicate whether each program is now underway or planned, and indicate your actual or planned schedules for construction.

☐ MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED

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CONTINUED FROM PAGE 2

V. INTAKE AND EFFLUENT CHARACTERISTICS

A, B, & C: See instructions before proceeding – Complete one set of tables for each outfall – Annotate the outfall number in the space provided.
NOTE: Tables V-A, V-B, and V-C are included on separate sheets numbered V-1 through V-9.

D. Use the space below to list any of the pollutants listed in Table 2c-3 of the instructions, which you know or have reason to believe is discharged or may be discharged from any outfall. For every pollutant you list, briefly describe the reasons you believe it to be present and report any analytical data in your possession.

1. POLLUTANT	2. SOURCE	1. POLLUTANT	2. SOURCE

VI. POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

Is any pollutant listed in Item V-C a substance or a component of a substance which you currently use or manufacture as an intermediate or final product or byproduct?

☐ YES (*list all such pollutants below*) ☑ NO (*go to Item VI-B*)

CONTINUED FROM THE FRONT

VII. BIOLOGICAL TOXICITY TESTING DATA

Do you have any knowledge or reason to believe that any biological test for acute or chronic toxicity has been made on any of your discharges or on a receiving water in relation to your discharge within the last 3 years?

☑ YES (*identify the test(s) and describe their purposes below*) ☐ NO (*go to Section VIII*)

Chronic toxicity bioassays are performed annually (in February) as required by the current NPDES permit.

VIII. CONTRACT ANALYSIS INFORMATION

Were any of the analyses reported in Item V performed by a contract laboratory or consulting firm?

☑ YES (*list the name, address, and telephone number of, and pollutants analyzed by, each such laboratory or firm below*) ☐ NO (*go to Section IX*)

A. NAME	B. ADDRESS	C. TELEPHONE (*area code & no.*)	D. POLLUTANTS ANALYZED (*list*)
EMS Laboratory Services	117 West Bellevue Drive Pasadena, CA 91105	(626) 568-4065	Asbestos
Weck Laboratories, Inc.	14859 East Clark Avenue Industry, CA 91745	(626) 336-2139	Acid & Base/Neutral Extractibles, PCBs, pesticides, and metals (EPA 1640M)
Vista Analytical Laboratory	1104 Winfield Way El Dorado Hills, CA 95762	(919) 673-1520	Dioxins
Bureau of Standards	2319 Dorris Place Los Angeles, CA 90031	(323) 226-1665	NH3-N, BOD, Color, Fecal Coliform, MBAS, Phosphorus, Sulfide, and Sulfate

IX. 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.

A. NAME & OFFICIAL TITLE (*type or print*)	B. PHONE NO. (*area code & no.*)
Robert P. Gonzalez, Elec.Serv.Mgr.IV, Steam Generation	(213) 367-7182
C. SIGNATURE	D. DATE SIGNED

PLEASE PRINT OR TYPE IN THE UNSHADED AREAS ONLY. You may report some or all of this information on separate sheets (*use the same format*) instead of completing these pages. SEE INSTRUCTIONS.

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V. INTAKE AND EFFLUENT CHARACTERISTICS *(continued from page 3 of Form 2-C)*

OUTFALL NO. 001

PART A –You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	3. UNITS (*specify if blank*) a. CONCEN-TRATION	3. UNITS b. MASS	4. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	4. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	4. INTAKE b. NO. OF ANALYSES
a. Biochemical Oxygen Demand (*BOD*)	6	4,804			4.3	1,614	16	mg/L	lbs	<1	<33	16
b. Chemical Oxygen Demand (*COD*)	172	137,710			127	47,663	4	mg/L	lbs	119	3,970	4
c. Total Organic Carbon (*TOC*)	<0.2	<80			<0.2	<38	4	mg/L	lbs	<0.2	<3	4
d. Total Suspended Solids (*TSS*)	12	9,608			6.6	2,477	16	mg/L	lbs	4.9	163	16
e. Ammonia (*as N*)	0.1	80			<0.1	38	4	mg/L	lbs	0.14	5	4
f. Flow	VALUE 96,000,000		VALUE		VALUE 45,000,000		365	gal/day	-	VALUE 45,000,000		365
g. Temperature (*winter*)	VALUE 22.8		VALUE		VALUE 20.9		90	°C		VALUE 12.2		1
h. Temperature (*summer*)	VALUE 30.0		VALUE		VALUE 27.6		92	°C		VALUE 17.2		1
i. pH	MINIMUM 7.4	MAXIMUM 8.2	MINIMUM	MAXIMUM			244	STANDARD UNITS				

PART B – Mark "X" in column 2-a for each pollutant you know or have reason to believe is present. Mark "X" in column 2-b for each pollutant you believe to be absent. If you mark column 2a for any pollutant which is limited either directly, or indirectly but expressly, in an effluent limitations guideline, you must provide the results of at least one analysis for that pollutant. For other pollutants for which you mark column 2a, you must provide quantitative data or an explanation of their presence in your discharge. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NO. (*if available*)	2. MARK "X" a. BELIEVED PRESENT	2. MARK "X" b. BELIEVED ABSENT	3. EFFLUENT a. MAXIMUM DAILY VALUE (1) CONCENTRATION	a. MAXIMUM DAILY VALUE (2) MASS	b. MAXIMUM 30 DAY VALUE (*if available*) (1) CONCENTRATION	b. MAXIMUM 30 DAY VALUE (*if available*) (2) MASS	c. LONG TERM AVRG. VALUE (*if available*) (1) CONCENTRATION	c. LONG TERM AVRG. VALUE (*if available*) (2) MASS	d. NO. OF ANALYSES	4. UNITS a. CONCEN-TRATION	4. UNITS b. MASS	5. INTAKE (*optional*) a. LONG TERM AVERAGE VALUE (1) CONCENTRATION	5. INTAKE a. LONG TERM AVERAGE VALUE (2) MASS	5. INTAKE b. NO. OF ANALYSES
a. Bromide (24959-67-9)	X		67.8	54,283			58.4	46,757	4	mg/L	lbs	58	1,935	4
b. Chlorine, Total Residual	X		0.28	224			0.20	160	197	mg/L	lbs	<0.01	<1	16
c. Color			ND	-			ND	-	4	CU	-	ND	-	4
d. Fecal Coliform	X		66	-			10^	-	16	CFU/100ml	-	10^	-	16
e. Fluoride (16984-48-8)	X		0.5	400			0.4	320	4	mg/L	lbs	0.4	13	4
f. Nitrate-Nitrite (*as N*)	X		0.3	240			0.3	240	4	mg/L	lbs	0.3	10	4

Notes: ^ reported as the geometric mean

ND - Not Detected

CONTINUE ON REVERSE

ITEM V-B CONTINUED FROM FRONT

1. POLLUTANT AND CAS NO. (if available)	2. MARK "X"		3. EFFLUENT							4. UNITS		5. INTAKE (optional)		
	a. BELIEVED PRESENT	b. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (if available)		c. LONG TERM AVRG. VALUE (if available)		d. NO. OF ANALYSES	a. CONCEN-TRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
g. Nitrogen, Total Organic (as N)	X		0.26	208			0.18	144	4	mg/L	lbs	0.3	10	4
h. Oil and Grease	X		0.8	640			0.6	480	16	mg/L	lbs	<0.5	<8	16
i. Phosphorus (as P), Total (7723-14-0)	X		0.06	48			<0.05	<20	4	mg/L	lbs	<0.05	<1	4
j. Radioactivity														
(1) Alpha, Total		X												
(2) Beta, Total		X												
(3) Radium, Total		X												
(4) Radium 226, Total		X												
k. Sulfate ($as\ SO_4$) (14808-79-8)	X		2,765	2.2EE6			2,564	2.1EE6	4	mg/L	lbs	2,644	88,203	4
l. Sulfide (as S)		X	ND	-			ND	-	4	mg/L	lbs	ND	-	4
m. Sulfite ($as\ SO_3$) (14265-45-3)		X	No Data	-			No Data	-	-	mg/L	lbs	No Data	-	-
n. Surfactants	X		0.14	112			0.03	24	16	mg/L	lbs	0.05	2	16
o. Aluminum, Total (7429-90-5)	X		130	104			75	60	4	ug/L	lbs	93.1	3	4
p. Barium, Total (7440-39-3)	X		12	10			11	9	4	ug/L	lbs	10.1	<1	4
q. Boron, Total (7440-42-8)	X		3,700	2,962			3,610	2,890	4	ug/L	lbs	3,682	123	4
r. Cobalt, Total (7440-48-4)	X		2.8	2			2.2	2	4	ug/L	lbs	2.6	<1	4
s. Iron, Total (7439-89-6)	X		57	46			44	35	4	ug/L	lbs	53	2	4
t. Magnesium, Total (7439-95-4)	X		1,256,000	1.0EE6			1,175,000	940,752	4	ug/L	lbs	1,158,750	38,656	4
u. Molybdenum, Total (7439-98-7)	X		16	13			15	12	4	ug/L	lbs	15	1	4
v. Manganese, Total (7439-96-5)	X		9.7	8			8.6	7	4	ug/L	lbs	9.2	<1	4
w. Tin, Total (7440-31-5)		X	ND	-			ND	-	4	ug/L	lbs	2.8	<1	4
x. Titanium, Total (7440-32-6)	X		22	18			11	9	4	ug/L	lbs	15.2	1	4

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
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CONTINUED FROM PAGE 3 OF FORM 2-C

PART C - If you are a primary industry and this outfall contains process wastewater, refer to Table 2c-2 in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-a for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. If you are not required to mark column 2-a (*secondary industries, nonprocess wastewater outfalls, and nonrequired GC/MS fractions*), mark "X" in column 2-b for each pollutant you know or have reason to believe is present. Mark "X" in column 2-c for each pollutant you believe is absent. If you mark column 2a for any pollutant, you must provide the results of at least one analysis for that pollutant. If you mark column 2b for any pollutant, you must provide the results of at least one analysis for that pollutant if you know or have reason to believe it will be discharged in concentrations of 10 ppb or greater. If you mark column 2b for acrolein, acrylonitrile, 2,4 dinitrophenol, or 2-methyl-4, 6 dinitrophenol, you must provide the results of at least one analysis for each of these pollutants which you know or have reason to believe that you discharge in concentrations of 100 ppb or greater. Otherwise, for pollutants for which you mark column 2b, you must either submit at least one analysis or briefly describe the reasons the pollutant is expected to be discharged. Note that there are 7 pages to this part; please review each carefully. Complete one table (*all 7 pages*) for each outfall. See instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-0)	X			0.25	<1			0.21	<1	8	ug/L	lbs	0.20	<1	8
2M. Arsenic, Total (7440-38-2)	X			18	14			13	10	8	ug/L	lbs	9.9	<1	8
3M. Beryllium, Total (7440-41-7)	X		X	ND	-			ND	-	8	ug/L	lbs	0.04	<1	8
4M. Cadmium, Total (7440-43-9)	X			0.27	<1			0.09	<1	8	ug/L	lbs	0.06	<1	8
5M. Chromium, Total (7440-47-3)	X			1.8	1			0.9	<1	4	ug/L	lbs	0.8	<1	4
6M. Copper, Total (7440-50-8)	X			2.9	2			2.6	2	8	ug/L	lbs	2.4	<1	8
7M. Lead, Total (7439-92-1)	X			0.90	1			0.49	<1	8	ug/L	lbs	0.39	<1	8
8M. Mercury, Total (7439-97-6)	X			ND	-			ND	-	8	ug/L	lbs	ND	-	8
9M. Nickel, Total (7440-02-0)	X			1.17	1			0.72	<1	8	ug/L	lbs	0.65	<1	8
10M. Selenium, Total (7782-49-2)	X			6.1	5			1.8	1	8	ug/L	lbs	1.2	<1	8
11M. Silver, Total (7440-22-4)	X			ND	-			ND	-	8	ug/L	lbs	0.01	<1	8
12M. Thallium, Total (7440-28-0)	X			0.38	<1			0.09	<1	8	ug/L	lbs	0.16	<1	8
13M. Zinc, Total (7440-66-6)	X			20	16			14.5	12	8	ug/L	lbs	10.9	<1	8
14M. Cyanide, Total (57-12-5)	X			11	9			1.0	1	16	ug/L	lbs	1.1	<1	16
15M. Phenols, Total	X			140	112			23	18	16	ug/L	lbs	19	1	16
DIOXIN															
2,3,7,8-Tetrachlorodibenzo-P-Dioxin (1764-01-6)	X		X	DESCRIBE RESULTS Sixteen samples were collected and analyzed using EPA Method 1613. Dioxin was not detected.											

ND - Not Detected

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS															
1V. Accrolein (107-02-8)	X		X	ND						16			ND		16
2V. Acrylonitrile (107-13-1)	X		X	ND						16			ND		16
3V. Benzene (71-43-2)	X		X	ND						16			ND		16
4V. Bis (*Chloromethyl*) Ether (542-88-1)	X		X	ND						16			ND		16
5V. Bromoform (75-25-2)	X			8.08	6			1.05	1	16	ug/L	lbs	ND		16
6V. Carbon Tetrachloride (56-23-5)	X		X	ND						16			ND		16
7V. Chlorobenzene (108-90-7)	X		X	ND						16			ND		16
8V. Chlorodibromomethane (124-48-1)	X			0.31	<1			<0.18	<1	16	ug/L	lbs	ND		16
9V. Chloroethane (75-00-3)	X		X	ND						16			ND		16
10V. 2-Chloroethylvinyl Ether (110-75-8)	X		X	ND						16			ND		16
11V. Chloroform (67-66-3)	X		X	ND						16			ND		16
12V. Dichlorobromomethane (75-27-4)	X		X	ND						16			ND		16
13V. Dichlorodifluoromethane (75-71-8)	X		X	ND						16			ND		16
14V. 1,1-Dichloroethane (75-34-3)	X		X	ND						16			ND		16
15V. 1,2-Dichloroethane (107-06-2)	X		X	ND						16			ND		16
16V. 1,1-Dichloroethylene (75-35-4)	X		X	ND						16			ND		16
17V. 1,2-Dichloropropane (78-87-5)	X		X	ND						16			ND		16
18V. 1,3-Dichloropropylene (542-75-6)	X		X	ND						16			ND		16
19V. Ethylbenzene (100-41-4)	X		X	ND						16			ND		16
20V. Methyl Bromide (74-83-9)	X		X	ND						16			ND		16
21V. Methyl Chloride (74-87-3)	X		X	ND						16			ND		16

ND - Not Detected

CONTINUE ON PAGE V-5

CONTINUED FROM PAGE V-4

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – VOLATILE COMPOUNDS (*continued*)															
22V. Methylene Chloride (75-09-2)	X		X	ND						16			ND		16
23V. 1,1,2,2-Tetrachloroethane (79-34-5)	X		X	ND						16			ND		16
24V. Tetrachloroethylene (127-18-4)	X		X	ND						16			ND		16
25V Toluene (108-88-3)	X		X	ND						16			ND		16
26V. 1,2-Trans-Dichloroethylene (156-60-5)	X		X	ND						16			ND		16
27V. 1,1,1-Trichloroethane (71-55-6)	X		X	ND						16			ND		16
28V. 1,1,2-Trichloroethane (79-00-5)	X		X	ND						16			ND		16
29V Trichloroethylene (79-01-6)	X		X	ND						16			ND		16
30V. Trichlorofluoromethane (75-69-4)	X		X	ND						16			ND		16
31V. Vinyl Chloride (75-01-4)	X		X	ND						16			ND		16
GC/MS FRACTION – ACID COMPOUNDS															
1A. 2-Chlorophenol (95-57-8)	X		X	ND						16			ND		16
2A. 2,4-Dichlorophenol (120-83-2)	X		X	ND						16			ND		16
3A. 2,4-Dimethylphenol (105-67-9)	X		X	ND						16			ND		16
4A. 4,6-Dinitro-O-Cresol (534-52-1)	X		X	ND						16			ND		16
5A. 2,4-Dinitrophenol (51-28-5)	X		X	ND						16			ND		16
6A. 2-Nitrophenol (88-75-5)	X		X	ND						16			ND		16
7A. 4-Nitrophenol (100-02-7)	X		X	ND						16			ND		16
8A. P-Chloro-M-Cresol (59-50-7)	X		X	ND						16			ND		16
9A. Pentachlorophenol (87-86-5)	X		X	ND						16			ND		16
10A. Phenol (108-95-2)	X		X	ND						16			ND		16
11A. 2,4,6-Trichlorophenol (88-05-2)	X		X	ND						16			ND		16

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS															
1B. Acenaphthene (83-32-9)	X		X	ND						16			ND		16
2B. Acenaphtylene (208-96-8)	X		X	ND						16			ND		16
3B. Anthracene (120-12-7)	X		X	ND						16			ND		16
4B. Benzidine (92-87-5)	X		X	ND						16			ND		16
5B. Benzo (*a*) Anthracene (56-55-3)	X		X	ND						16			ND		16
6B. Benzo (*a*) Pyrene (50-32-8)	X		X	ND						16			ND		16
7B. 3,4-Benzo-fluoranthene (205-99-2)	X		X	ND						16			ND		16
8B. Benzo (*ghi*) Perylene (191-24-2)	X		X	ND						16			ND		16
9B. Benzo (*k*) Fluoranthene (207-08-9)	X		X	ND						16			ND		16
10B. Bis (*2-Chloro-ethoxy*) Methane (111-91-1)	X		X	ND						16			ND		16
11B. Bis (*2-Chloro-ethyl*) Ether (111-44-4)	X		X	ND						16			ND		16
12B. Bis (*2-Chloroisopropyl*) Ether (102-80-1)	X		X	ND						16			ND		16
13B. Bis (*2-Ethyl-hexyl*) Phthalate (117-81-7)	X			120	96			13	10	16	ug/L	lbs	0.93	<1	16
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	X		X	ND						16			ND		16
15B. Butyl Benzyl Phthalate (85-68-7)	X		X	ND						16			ND		16
16B. 2-Chloro-naphthalene (91-58-7)	X		X	ND						16			ND		16
17B. 4-Chloro-phenyl Phenyl Ether (7005-72-3)	X		X	ND						16			ND		16
18B. Chrysene (218-01-9)	X		X	ND						16			ND		16
19B. Dibenzo (*a,h*) Anthracene (53-70-3)	X		X	ND						16			ND		16
20B. 1,2-Dichloro-benzene (95-50-1)	X		X	ND						16			ND		16
21B. 1,3-Di-chloro-benzene (541-73-1)	X		X	ND						16			ND		16

ND - Not Detected

CONTINUE ON PAGE V-7

CONTINUED FROM PAGE V-6

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
22B. 1,4-Dichlorobenzene (106-46-7)	X		X	ND						16			ND		16
23B. 3,3-Dichlorobenzidine (91-94-1)	X		X	ND						16			ND		16
24B. Diethyl Phthalate (84-66-2)	X		X	ND						16			ND		16
25B. Dimethyl Phthalate (131-11-3)	X		X	ND						16			ND		16
26B. Di-N-Butyl Phthalate (84-74-2)	X		X	ND						16			ND		16
27B. 2,4-Dinitrotoluene (121-14-2)	X		X	ND						16			ND		16
28B. 2,6-Dinitrotoluene (606-20-2)	X		X	ND						16			ND		16
29B. Di-N-Octyl Phthalate (117-84-0)	X		X	ND						16			ND		16
30B. 1,2-Diphenylhydrazine (*as Azobenzene*) (122-66-7)	X		X	ND						16			ND		16
31B. Fluoranthene (206-44-0)	X		X	ND						16			ND		16
32B. Fluorene (86-73-7)	X		X	ND						16			ND		16
33B. Hexachlorobenzene (118-74-1)	X		X	ND						16			ND		16
34B. Hexachlorobutadiene (87-68-3)	X		X	ND						16			ND		16
35B. Hexachlorocyclopentadiene (77-47-4)	X		X	ND						16			ND		16
36B Hexachloroethane (67-72-1)	X		X	ND						16			ND		16
37B. Indeno (*1,2,3-cd*) Pyrene (193-39-5)	X		X	ND						16			ND		16
38B. Isophorone (78-59-1)	X		X	ND						16			ND		16
39B. Naphthalene (91-20-3)	X		X	ND						16			ND		16
40B. Nitrobenzene (98-95-3)	X		X	ND						16			ND		16
41B. N-Nitrosodimethylamine (62-75-9)	X			0.0015	<1			0.0005	<1	16	ug/L	lbs	0.0004	<1	16
42B. N-Nitrosodi-N-Propylamine (621-64-7)	X		X	ND						16			ND		16

ND - Not Detected

CONTINUE ON REVERSE

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – BASE/NEUTRAL COMPOUNDS (*continued*)															
43B. N-Nitrosodiphenylamine (86-30-6)	X		X	ND						16			ND		16
44B. Phenanthrene (85-01-8)	X		X	ND						16			ND		16
45B. Pyrene (129-00-0)	X		X	ND						16			ND		16
46B. 1,2,4-Trichlorobenzene (120-82-1)	X		X	ND						16			ND		16
GC/MS FRACTION – PESTICIDES															
1P. Aldrin (309-00-2)	X		X	ND						16			ND		16
2P. α-BHC (319-84-6)	X		X	ND						16			ND		16
3P. β-BHC (319-85-7)	X			0.0066	<1			<0.0004	<1	16	ug/L	lbs	<0.0002	<1	16
4P. γ-BHC (58-89-9)	X		X	ND						16			ND		16
5P. δ-BHC (319-86-8)	X			0.0062	<1			<0.0004	<1	16	ug/L	lbs	ND		16
6P. Chlordane (57-74-9)	X		X	ND						16			ND		16
7P. 4,4'-DDT (50-29-3)	X		X	ND						16			ND		16
8P. 4,4'-DDE (72-55-9)	X		X	ND						16			ND		16
9P. 4,4'-DDD (72-54-8)	X		X	ND						16			ND		16
10P. Dieldrin (60-57-1)	X		X	ND						16			ND		16
11P. α-Enosulfan (115-29-7)	X		X	ND						16			ND		16
12P. β-Endosulfan (115-29-7)	X		X	ND						16			ND		16
13P. Endosulfan Sulfate (1031-07-8)	X		X	ND						16			ND		16
14P. Endrin (72-20-8)	X		X	ND						16			ND		16
15P. Endrin Aldehyde (7421-93-4)	X		X	ND						16			ND		16
16P. Heptachlor (76-44-8)	X		X	ND						16			ND		16

ND - Not Detected

CONTINUE ON PAGE V-9

EPA I.D. NUMBER (*copy from Item 1 of Form 1*)	OUTFALL NUMBER
CAD000633180	001

CONTINUED FROM PAGE V-8

1. POLLUTANT AND CAS NUMBER (*if available*)	2. MARK "X"			3. EFFLUENT							4. UNITS		5. INTAKE (*optional*)		
	a. TESTING REQUIRED	b. BELIEVED PRESENT	c. BELIEVED ABSENT	a. MAXIMUM DAILY VALUE		b. MAXIMUM 30 DAY VALUE (*if available*)		c. LONG TERM AVRG. VALUE (*if available*)		d. NO. OF ANALYSES	a. CONCENTRATION	b. MASS	a. LONG TERM AVERAGE VALUE		b. NO. OF ANALYSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION – PESTICIDES (*continued*)															
17P. Heptachlor Epoxide (1024-57-3)	X		X	ND						16			ND		16
18P. PCB-1242 (53469-21-9)	X		X	ND						16			ND		16
19P. PCB-1254 (11097-69-1)	X		X	ND						16			ND		16
20P. PCB-1221 (11104-28-2)	X		X	ND						16			ND		16
21P. PCB-1232 (11141-16-5)	X		X	ND						16			ND		16
22P. PCB-1248 (12672-29-6)	X		X	ND						16			ND		16
23P. PCB-1260 (11096-82-5)	X		X	ND						16			ND		16
24P. PCB-1016 (12674-11-2)	X		X	ND						16			ND		16
25P. Toxaphene (8001-35-2)	X		X	ND						16			ND		16

ND - Not Detected

Enclosure 2
Framework for the TSO Request

June 6, 2016

Mr. Samuel Unger, Executive Officer
Los Angeles Region
California Regional Water Quality Control Board
320 West Fourth Street, Suite 200
Los Angeles, CA 90013

Attention: Mr. David Hung
Ms. Cassandra Owens

Dear Mr. Unger:

Subject: Request for Compliance Schedule or TSO for Total Residual Chlorine
Harbor Generating Station (HGS), NPDES Permit CA0000361, CI-2020

The Los Angeles Department of Water and Power (LADWP) submits the framework for a request for a compliance schedule as discussed at the meeting with the Regional Water Quality Control Board staff and LADWP. As mentioned at the meeting, the HGS is a critical facility for LADWP's electrical grid system. The Once-Through Cooling (OTC) Unit 5 at HGS is not only a reliability must run (RMR) unit, but also imperative to meet the North American Electric Reliability Corporation (NERC) Reliability Standards. Therefore, this unit must be available for LADWP's electrical system at all times. Furthermore, LADWP is in the process of transforming its entire electrical system, which includes the complete elimination of OTC, and at the same time eliminating coal from its power portfolio and integrating more variable energy resources (VERs) such as solar and wind. This is a tremendous effort and makes the HGS Unit 5 even more valuable and critical to the balance and voltage support of LADWP's entire grid system.

LADWP is the largest municipality in the nation, and it owns its own generation, distribution, and transmission. The LADWP is not part of the California Independent System Operator (CAISO) grid system; LADWP operates a separate system and is solely responsible for balancing the electrical supply with the demand in its service area. The transmission system to deliver the required energy grid has been built out from its coastal generating stations. Due to the urbanization of surrounding areas, there is not space to add additional transmission to meet the demand in the Southern area near the coastal generating stations; rather, the coastal generating stations are critical to providing electricity to the surrounding areas. The physical location of LADWP's grid system, and in particular this southern area, makes it much like a cul de sac. A portion of the power in the Southern portion must come from the coastal generating stations. Unlike the CAISO plants, which depend upon a power market, LADWP's generating stations are governed by the City of Los Angeles City Charter, and must provide reliable and affordable electricity in an environmentally responsible manner 24/7 to the Citizens of Los Angeles. Therefore, HGS' ability to operate under the NPDES Permit is of absolute vital

111 N. Hope Street, Los Angeles, California 90012-2607 *Mailing address:* Box 51111, Los Angeles, CA 90051-5700
Telephone: (213) 367-4211 www.LADWP.com

importance due to the critical nature of this facility to LADWP's grid system and reliability. Loss of HGS's operations significantly threatens grid reliability in the Los Angeles Department of Water and Power electricity service area.

Therefore, a compliance schedule that follows the OTC Policy schedule is necessary. In addition, and as noted in our comment letter (dated June 6, 2016), a compliance schedule may be necessary for additional constituents, potentially including temperature and additional chemical constituents. Although the request below is written for chlorine, we anticipate that this request would be updated to include a request for additional constituents if and when it becomes apparent that a compliance schedule for those constituents is needed.

LADWP submits for your review and discussion the following framework. It is understood that further details will follow once we have met and discussed, and once we have received a response to our comment letter, in order to determine if a compliance schedule is needed for additional constituents.

Request for Compliance Schedule for Total Residual Chlorine

- Prior to 2001, the Harbor Generating Station (HGS) discharge was regulated as an ocean discharge. The discharge was not required to meet the Los Angeles Region Basin Plan (Basin Plan) water quality objective for total residual chlorine (TRC) of 0.1 mg/L (maximum daily concentration). Instead, a 301(g) variance for chlorine was granted, and the discharge was allowed a TRC effluent limitation of 0.377 mg/L (maximum daily concentration) (see Order 95-027 at p. 9).
- On July 18, 2001, the State Water Resources Control Board (State Board) re-designated the HGS discharge as a discharge to an "enclosed bay."
- In the HGS NPDES permit adopted in 2003 (Order R4-2003-0101)—the permit currently applicable to the facility—the 301(g) variance from Best Available Technology (BAT) requirements was carried forward and the TRC effluent limitation of 0.377 mg/L was maintained.
- During the current (2016) permit renewal process, the Tentative Permit for the HGS discharge proposes to eliminate the waiver of BAT requirements for TRC and to impose the Basin Plan objective of 0.1 mg/L as an effluent limitation. This proposed chlorine requirement amounts to a new or revised water quality objective for the HGS discharge.
- In 2008 the State Board established the "Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits" (Resolution 2008-0025), which states, "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..." (p. 3).
- Recent monitoring data suggest that LADWP will not be able to consistently meet the new, proposed TRC effluent limitation given HGS's current mode of operation. For example, monitoring data for the period 2011-2015 indicate 27 events in which the maximum daily TRC concentration exceeded 0.1 mg/L.
- Recent monitoring data also demonstrates that beneficial uses are attained in receiving waters under the current discharge regime.

- To meet the proposed TRC effluent limitation, LADWP needs to implement new or modified control measures, and these measures cannot be designed, installed, and put into operation within 30 calendar days.
- LADWP submitted an Implementation Plan in response to the State's once-through cooling (OTC) policy on April 10, 2010; the SWRCB prepared and adopted an Amendment to the Policy on July 19, 2011, which was approved by the Office of Administrative Law on March 12, 2012. This amendment detailed LADWP's dates for complying with the OTC policy, specifying compliance dates for each of LADWP's three coastal generating stations. The compliance date for HGS Unit 5 is December 31, 2029.
- If the Regional Board imposes the chlorine requirements proposed in the Tentative Permit without schedule relief, LADWP will have to cease operations at HGS. In order to avoid this threat to the reliability of the power grid in Los Angeles, the HGS NPDES permit should be crafted to accommodate continued operation of HGS while LADWP implements the planned repowering projects and moves away from OTC. As detailed above, LADWP believes that the requirements for granting a compliance schedule have been met, and that a compliance schedule would be consistent with the OTC Implementation Plan approved by the SWRCB.
- Therefore, LADWP requests that the HGS discharge be granted a 10-year compliance schedule to meet the new TRC requirement as part of the terms of its new NPDES permit. This is as short possible due to grid reliability and the need to be able to operate with OTC until 2029.

Alternative Request for TSO for Total Residual Chlorine

- If the Regional Board does not grant a compliance schedule within the permit as outlined above, LADWP requests a Time Schedule Order (TSO) for a five-year period to provide time to evaluate and implement options for complying with the new effluent limitation for TRC.
- California Water Code 13300 states, "Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board,...the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements."
- The TSO is being requested for the same reasons that a compliance schedule has been requested above: (1) the proposed TRC limitation amounts to a new effluent limitation for the HGS discharge; (2) the proposed TRC limitation is more stringent than the limitation in the existing permit; (3) recent monitoring data demonstrate that the HGS discharge would be unable to meet the new TRC requirement under the current operating regime; (4) to meet the new TRC requirement, the Discharger would need to implement new or modified control measures which cannot be implemented within 30 days; (5) recent monitoring data show that beneficial uses are currently attained in the HGS receiving water under the existing discharge regime; and (6) imposition of the proposed TRC limitation without schedule relief would threaten power grid reliability and run counter to the State Board's approved long-term schedule for eliminating OTC at HGS.

- During the five-year TSO period, the Discharger will achieve compliance with the proposed TRC effluent limitation (the Basin Plan objective) according to the following milestones:
    - Milestone 1 (2017): Research options for compliance with new TRC effluent limitations.
    - Milestone 2 (2018): Evaluate the feasibility of compliance options.
    - Milestone 3 (2019): If necessary, implement a pilot program to test the most feasible compliance options.
    - Milestone 4 (2020): Develop a report describing the findings of the research and evaluation, and (if necessary) pilot program.
    - Milestone 5 (2021): Implement the preferred alternative and come into compliance with the proposed final effluent limitation for TRC.
- During the five-year period of the TSO, the Discharger proposes an interim TRC effluent limitation of 0.377 mg/L (maximum daily concentration), consistent with the effluent limitation in the existing NPDES permit. Proposed interim limits for temperature would be 94 degrees Fahrenheit for regular operations and 135 and 140 degrees Fahrenheit for gate adjustments and heat treatments.

In closing, LADWP appreciates the Regional Board staff spent with LADWP to discuss LADWP's comments and concerns on the proposed tentative draft NPDES Permit. LADWP looks forward to continue working with the Regional Board staff on the HGS tentative draft NPDES permit.

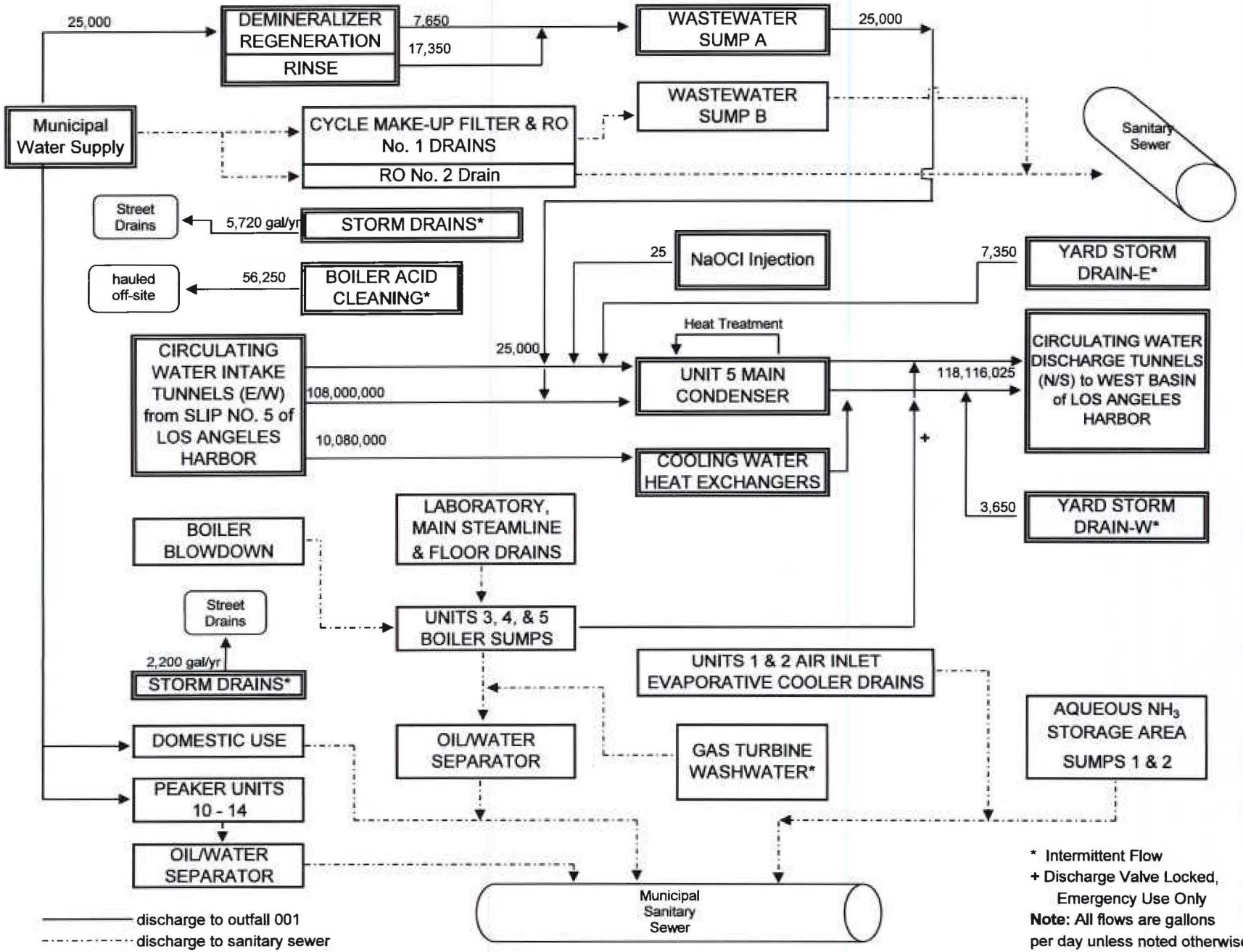
If you have any questions or require additional information, please contact Mr. Maher (Matt) Qassis of my staff at (213) 367-2976.

Sincerely,

Katherine Rubin
Manager of Wastewater Quality and Compliance

MQ:
Enclosures
c/enc: Ms. Deborah Smith, Assistant Executive Office, LARWQCB
Ms. Rosario Aston, LARWQCB
Mr. Maher Qassis, LADWP

Enclosure 3
Revised Flow Schematic Diagram



SCHEMATIC of WATER FLOW for the HARBOR GENERATING STATION

revision date: 4/29/16

Enclosure 4
Letter from State Water Resources Control Board
Re-Designating the Los Angeles-Long Beach Harbor
As an Enclosed Bay

DEM

State Water Resources Control Board

Executive Office
1001 I Street • Sacramento, California 95814 • (916) 341-5615
Mailing Address: P.O. Box 100 • Sacramento, California • 95812-0100
FAX (916) 341-5621 • Web Site Address: http://www.swrcb.ca.gov

Winston H. Hickox
Secretary for Environmental Protection

Gray Davis
Governor

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website at http://www.swrcb.ca.gov.

TO: Dennis Dickerson
Executive Officer
Los Angeles Regional Water Quality
Control Board

ORIGINAL SIGNED BY

FROM: Celeste Cantú
Executive Director
EXECUTIVE OFFICE

DATE: JUL 18 2001

SUBJECT: APPLICABILITY OF THE POLICY FOR IMPLEMENTATION OF TOXICS STANDARDS FOR INLAND SURFACE WATERS, ENCLOSED BAYS, AND ESTUARIES OF CALIFORNIA (SIP) TO DISCHARGERS FROM GENERATING STATIONS IN THE LOS ANGELES REGION

This is in response to your June 4, 2001 memorandum, which is seeking State Water Resources Control Board direction for possible applicability of the California Toxics Rule (CTR) and SIP for regulating discharges from nine specified generating stations located within the Los Angeles Region.

As you noted, in May 2000, the U. S. Environmental Protection Agency promulgated the CTR. The CTR established priority pollutant water quality criteria for "inland surface waters and enclosed bays and estuaries" (40 CFR Section 131.38).

The SIP implements the CTR, National Toxics Rule criteria, and applicable priority pollutant objectives in Regional Water Quality Control Board (RWQCB) Basin Plans. Together, these priority pollutant criteria, existing beneficial use designations, and the SIP comprise water quality standards and implementation procedures for priority toxic pollutants in inland surface waters, enclosed bays, and estuaries.

The SIP defines enclosed bays as:

> "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." (SIP, 2000)

Based on the definitions found in the SIP, four of the nine generating stations identified in your memorandum would fall under CTR/SIP jurisdiction. The location of the wastewater discharge is the determining factor. These four are: (1) Alamitos/Haynes facility, which discharges into the San Gabriel River; (2) Long Beach facility, which discharges into the inner harbor; (3) Harbor facility, which discharges into the Cerritos Channel of the inner harbor; and (4) Redondo Beach units 7-8 (only).

If necessary, some provisions of the SIP may provide flexibility for these facilities. These provisions can be found in sections such as compliance schedules, intake water credits, and case-by-case exceptions.

The CTR and SIP only address priority toxic pollutants listed in 40 CFR, Appendix A to Part 423. Other constituents, such as chlorine, continue to be regulated according to your Basin Plan and other applicable water quality standards regulations.

The dilution ratios approved in the May 4, 1984 memorandum may still be appropriate for these generating stations. These dilution factors were based on studies completed in 1984.

If you have any questions, please feel free to contact Christine Bailey, Chief of the Freshwater Standards Unit, Division of Water Quality, at (916) 341-5571, or Gordon Innes, Senior Water Resources Control Engineer, Regulation Unit, Division of Water Quality, at (916) 341-5517.

cc: Sheila Vassey
Office of the Chief Counsel

D.MCCANN:jhisao/klh/jhisao
6/28/01; 6/29/01; 7/2/01;7/10/01;7/12/01
e:hursk\data\division\ & e:\hisaj\Controls2001:T-255 – DEM Applicability of SIP.doc

California Regional Water Quality Control Board

Los Angeles Region

Winston H. Hickox
Secretary for Environmental Protection

320 W. 4th Street, Suite 200, Los Angeles, CA 90013
Phone (213) 576-6600 FAX (213) 576-6640

Gray Davis
Governor

TO: Celeste Cantú
Executive Director
State Water Resources Control Board

cy: ECA
TH
dcc
DWQ

FROM: Dennis Dickerson
Executive Officer

DATE: June 4, 2001

SUBJECT: APPLICABILITY OF THE POLICY FOR IMPLEMENTATION OF TOXICS STANDARDS FOR INLAND SURFACE WATERS, ENCLOSED BAYS AND ESTUARIES OF CALIFORNIA (SIP) TO DISCHARGES FROM GENERATING STATIONS IN THE LOS ANGELES REGION

On May 4, 1984, based on *Table B Guidelines in the Ocean Waters of California, 1978* (Ocean Plan), the State Water Resources Control Board (State Board) approved dilution ratios for chlorine residual and toxics for nine electric generating stations located in the Los Angeles Region (copy attached). These generating stations were regulated as ocean discharges, and have been continued to be regulated as such.

As you are aware, in May 2000, federal criteria for priority pollutants were promulgated by the U.S. Environmental Protection Agency via the California Toxics Rule (CTR). The State Board also developed a *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP also applies to discharges of toxic pollutants into the inland surface waters, enclosed bays, and estuaries of California.

Currently, this Regional Board is in the process of renewing National Pollutants Discharge Elimination System (NPDES) permits for many of the generating stations in the Los Angeles area, several of which discharge to harbor or estuarine areas. Therefore, we are seeking State Board direction for applicability of the CTR/SIP to those generating stations that discharge their wastewater into these waters. In the interim, absent further direction from the State Board, discharge of wastewater from these generating stations has continued to be regulated under the Ocean Plan with approved dilution ratios.

We are looking forward to hearing from you soon regarding the subject issue as several recently adopted permits may be appealed on this issue. Should you have any questions, please call me at 213/576-6605.

Attachment: May 4, 1984 memo from State Board to Regional Board

P:/npdes/memo2swrcb

State of California

ATTACHMENT 3

Memorandum

To : Robert P. Ghirelli
Executive Officer
Los Angeles Regional Board

Date : MAY 4 1984

From : STATE WATER RESOURCES CONTROL BOARD

Subject: MINIMUM INITIAL DILUTION RATIOS FOR POWER GENERATING STATIONS: ALAMITOS, HAYNES, LONG BEACH, HARBOR, EL SEGUNDO, ORMAND BEACH, REDONDO BEACH, SCATTERGOOD, AND MANDALAY

We have reevaluated the procedure proposed by Southern California Edison (SCE) to determine initial dilution ratios. The proposed method is hereby approved with the following exceptions:

1. Surface dilution ratios should be multiplied by 1.5 (not 2.12) to obtain flux-weighted initial dilution ratios.

2. The definition of initial dilution as used by SCE is not consistent with the "Water Quality Control Plan for Ocean Waters of California" (Ocean Plan), 1983. Therefore, the flux-averaged dilution ratios should be reduced by 1.0.

The approved initial dilution ratios are:

Alamitos/Haynes	= 4.5	El Segundo Units 1-4	= 11.5
Long Beach	= 3.2	Ormand Beach	= 6.5
Mandalay	= 2.6	Redondo Beach Units 1-6	= 11.5
Harbor	= 3.1	Redondo Beach Units 7-8	= 7.0
Scattergood	= 6.5		

Discussion

The zone of initial dilution (ZID) is bounded by an irregular curve defined by a specific isotherm. Receiving water limitations can be exceeded within the ZID. However, we wish to ensure that the flux-weighted average concentration of pollutants emitting from the ZID is within Ocean Plan limitations.

According to the "Table B Guidelines, Ocean Waters of California", 1978, initial dilution is complete when turbulent entrainment due to momentum ceases and "lateral spreading increases". If the extent of the ZID is properly chosen, centerline velocities are approximately equal to the lateral spreading velocities; the plume has degraded to a spreading front. Therefore, the flux-weighted

average should be obtained along the isotherm which defines the ZID, not along a plane perpendicular to the plume centerline.

- Since the surface dilution ratios are constant along any isotherm, horizontal averaging yields a trivial solution. The average (flux-weighted or not) of a constant is the same constant. Adopting SCE's assumed linear thermal and velocity vertical profiles yield a factor of 1.5 which should be used to convert surface dilution ratios to flux-weighted dilution ratios.

- SCE defined surface dilution S as:

$$S_1 = \frac{Tdisc - Tamb}{Tx - Tamb} \quad (1)$$

Where: Tx = measured surface temperature at a distance of x
Tdisc = discharge temperature at origin
Tamb = ambient surface temperature

The Ocean Plan defines dilution Dm as:

$$Dm = \frac{Tdisc - Tx}{Tx - Tamb} \quad (2)$$

These two expressions differ by unity. Therefore, the dilution ratios proposed by SCE should be reduced by 1, or:

$$Dm = S_1 - 1 \quad (3)$$

- Combining the two corrections presented above results in:

$$Dm = 1.5\ S_1 - 1 \quad (4)$$

or

$$Dm = \frac{1.5}{2.12}\ Sa - 1 \quad (5)$$

Where: Sa = surface dilution ratios as proposed in SCE's February 26, 1982 letter

Formula (4) was used to convert proposed surface dilution ratios to Ocean Plan-consistent flux-weighted dilution ratios for Alamitos, Haynes, Long Beach, Mandalay, and Harbor.

Formula (5) can also be used to convert the proposed average surface dilution ratios (Sa) to Ocean Plan-consistent dilution ratios for the same five generating stations.

The remaining stations (El Segundo, Ormand Beach, Redondo Beach, and Scattergood) were already properly averaged. Therefore, they were corrected to Ocean Plan-consistent dilution ratios using formula (3).

Your staff should refer technical questions to Ken Smarkel of the Division of Technical Services at ATSS 485-9552.

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