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City Attorney

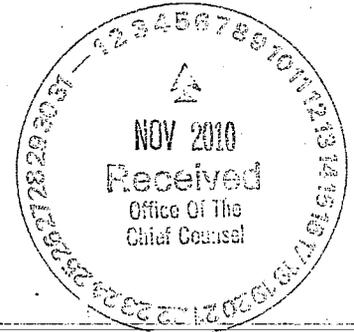
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November 4, 2010

**VIA OVERNIGHT DELIVERY AND ELECTRONIC MAIL**

State Water Resources Control Board  
Office of Chief Counsel  
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Sacramento, CA 95814  
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**Re: City of Redondo Beach's Petition for Review Pursuant to California Water Code Section 13320(a)**

Dear Ms. Bashaw and State Water Resources Control Board:

The City of Redondo Beach ("Petitioner") submits this Petition for Review pursuant to California Water Code Section 13320 and California Code of Regulations ("CCR") Title 23, Section 2050, for review of Order No. R4-2010-0185, NPDES Permit No. CA0064297, which was adopted by the California Regional Water Quality Control Board, Los Angeles Region (the "Regional Board") on October 7, 2010.

**I. NAME, ADDRESS AND TELEPHONE NUMBER OF PETITIONER**

Petitioner is the City of Redondo Beach. All written correspondence and other communications regarding this matter should be addressed as follows:

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**II. SPECIFIC ACTION OF THE REGIONAL BOARD FOR WHICH REVIEW IS SOUGHT**

Petitioner requests that the State Water Resources Control Board ("State Board") review the Regional Board's Order No. R4-2010-0185, adopting NPDES Permit No. CA0064297 (hereafter, the "Permit"). (Exhibit 1.)

**III. DATE OF REGIONAL BOARD'S ACTION**

The Regional Board adopted the Permit on October 7, 2010. (Exhibit 2.) The City requested the transcript from the Regional Board multiple times, but as of the filing of this Petition, the transcript was not available.

**IV. STATEMENT OF REASONS THE ACTION WAS INAPPROPRIATE OR IMPROPER**

As more fully set out in the Points and Authorities below, the action of the Regional Board in setting the Total Suspended Solids ("TSS") effluent limitation at 75 mg/L (parts per million) was inappropriate and improper for numerous reasons.

First, the Regional Board's setting of the 75 mg/L effluent limitation does not meet the best professional judgment requirement set out by the Clean Water Act, Federal and State regulations promulgated thereunder, and case law.

Second, the Regional Board's claim that effluent containing TSS from Seaside Lagoon will impair King Harbor is inaccurate because the Regional Board's own testing, as well as the testing conducted by an independent lab commissioned by the City, indicate that the TSS concentration in King Harbor is higher on average than the effluent exiting Seaside Lagoon and entering King Harbor.

Third, the Regional Board's TSS effluent limitation is inappropriate and improper because the methods for testing TSS in saline environments such as Seaside Lagoon and King Harbor are severely flawed.

Fourth, the Regional Board's claim that raising the TSS effluent limitation would violate the Clean Water Act's "anti-backsliding" provisions is without merit. The anti-backsliding provisions should not apply because of events over which the City has no control and for which there is no reasonably available remedy require a less stringent effluent limitation. Namely, the City has no control over TSS concentrations in King Harbor and from the influent water that comes from the nearby power plant. The City additionally has no control over the TSS measurements, which vary wildly, indicating extreme flaws in the methods of measurement. The anti-backsliding provisions should also not apply because the listing of the 75 mg/L level was originally listed incorrectly as a result of a technical error. Finally, the anti-backsliding provisions should not apply because new information regarding serious problems with methods for testing for TSS in a saline environment has surfaced that was not available at the time of the issuance of the Permit which would have justified the application of a less stringent effluent limitation.

Lastly, the Regional Board's course of action will only lead to the closure of Seaside Lagoon, a popular recreation area enjoyed by families all over Southern California since the early sixties, because the City would be subjected to excessive and potentially bankrupting fines.

For all the foregoing reasons and additional reasons set out below, the actions of the Regional Board in setting Seaside Lagoon's TSS effluent limitation were inappropriate and improper.

## **V. HOW THE PETITIONER IS AGGRIEVED**

If the incorrectly and improperly formulated TSS effluent limitation of 75 mg/L specified in the Permit remains in effect, the City will likely have to close down Seaside Lagoon due to the enormous fines it faces and will continue to face for violations of the Permit.

## **VI. ACTION PETITIONER REQUESTS THE STATE WATER BOARD TO TAKE**

Petitioner requests the State Board to waive monitoring requirements for TSS until the significant problems regarding TSS testing in saline environments are resolved. If the State Board is unwilling to do so, Petitioner requests that the State Board set the TSS effluent ~~limitation for Seaside Lagoon at 150 mg/L instead of the current level of 75 mg/L.~~ If the State Board is unwilling to do so, Petitioner requests that the State Board set the TSS effluent limitation at 120 mg/L, the level in the current Time Scheduling Order pursuant to which Seaside Lagoon is operating. Petitioner also requests that the State Board set the average monthly limit at 60 mg/L.

## **VII. POINTS AND AUTHORITIES**

The following is a brief discussion of the issues Petitioner raises in this Petition. In addition to the issues discussed below, to the extent not addressed by the Regional Board, Petitioner also seeks review of the Permit on the grounds raised in Petitioner's previous written comments, copies of which are attached hereto as Exhibits 4 and 5.

### **A. Background**

This Petition for Review concerns the TSS effluent limitation set by the Los Angeles Regional Water Quality Control Board ("Regional Board") in a Waste Discharge Requirement Order ("Permit") pursuant to the NPDES permit for Seaside Lagoon, a recreational swimming area operated by the petitioner, the City of Redondo Beach ("City"). (**Exhibit 1.**)

Seaside Lagoon is a recreational area that contains a 1.4 million gallon saltwater lagoon. The Lagoon's influent originates from two sources. The first is water from a local, privately owned power plant that is used to cool steam-generation turbines. When the power plant is not in operation, Seaside Lagoon's influent comes directly from King Harbor. The water exiting Seaside Lagoon is carried by pipes back into King Harbor. Thus, seawater serves as the source water for the Lagoon influent and the receiving water for Lagoon effluent.

The City uses only a small portion of the cooling water from the power plant for recreational beneficial use, which would otherwise be discharged directly to King Harbor. To maintain the water level in Seaside Lagoon, the City releases de-chlorinated saltwater to King Harbor when the Lagoon is in use. The water is chlorinated coming into the Lagoon and de-chlorinated before being released into King Harbor. This is the only "processing" of the water in which the City engages.

The Regional Board set the maximum daily effluent limitation for TSS leaving Seaside Lagoon and entering King Harbor at 75 mg/L and the average monthly limit at 50 mg/L. For reasons set out herein, this effluent limitation is inappropriate and improper.

**B. The Permit's TSS Effluent Limitation Does Not Satisfy the Best Professional Judgment Standard**

The Regional Board has failed sufficiently explain how the TSS limitation of 75 mg/L is a result of adequately formulated "best professional judgment" ("BPJ"). In the Regional Board's October 1, 2010 Response to the City's Comments ("Oct. 1 Response"), the Regional Board asserts that the effluent limitation it set for TSS was based on its BPJ. (Exhibit 3, Oct. 1 Response at page 4.) The Regional Board's response does not, however, sufficiently explain the BPJ rationale for setting the TSS limitation at 75 mg/L. The Regional Board's September 21, 2010 Response to the City's comments ("Sept. 21 Response") merely states that "BPJ is a

method used to develop technology-based NPDES permit conditions using all reasonably available and relevant data. (**Exhibit 4.B**, “Sept. 21 Response” at page 13.) Authorization for BPJ limits is found under Section 402(a)(1) of the Clean Water Act and under 40 CFR 125.3.” This tells us nothing about how the Regional Board used its BPJ in determining the TSS effluent limitation.

The Regional Board has failed to cite and make available the relevant data it used to develop the TSS effluent limitation. The only citation to any kind of scientific rationale for its decision is a reference to a “Gold Book” study that found that “TSS at a concentration of 80 mg/L yielded adverse effects to aquatic life.” (**Exhibit 3**, Oct. 1 Response at page 5.) However, this citation to the Gold Book study standing alone is not a sufficient explanation of the Regional Board’s BPJ rationale for the TSS limitation. The Gold Book sections relating to TSS effluent limitations rely on a study performed 40 years ago in 1970, originally published in the “Red Book.” This study was conducted on a freshwater stream, not on an ocean ecosystem like King Harbor. (**Exhibit 4**, Declaration of D.L. Marrin, Ph.D. (“Marrin Decl.”), ¶¶ 5-7.) The City’s expert, Dr. D.L. Marrin, a scientist whose areas of expertise include biogeochemistry, marine/freshwater ecology, and the behavior of organic and inorganic pollutants in surface water, reviewed the record and found no indication of the Regional Board relying on any other, more recent, appropriate, eco-system specific studies or data. (**Exhibit 4**, Marrin Decl., ¶ 9.) His expert opinion is that such review would be necessary to setting an appropriate TSS effluent limitation for Seaside Lagoon. (**Exhibit 4**, Marrin Decl., ¶ 11.)

The Ninth Circuit has held that in issuing permits on a case-by-case basis using its BPJ, a permit-issuing authority “does not have unlimited discretion in establishing permit effluent limitations. EPA’s own regulations implementing this section enumerate the statutory factors

that must be considered in writing permits.” *National Resources Defense Council, Inc. v. EPA*, 863 F.2d 1420, 1425 (9th Cir. 1988) (citing 40 C.F.R. § 125.3(c), (d) and 51 Fed. Reg. at 24915 (“In developing the BPJ permit conditions, [the EPA] Regions are required to consider a number of factors, enumerated in [33 U.S.C. § 1314(b)]....”). The Ninth Circuit also noted that, “[i]n addition, courts reviewing permits issued on a BPJ basis hold [permit granting authorities] to the same factors that must be considered in establishing the national effluent limitations.” *Id.*; *See also, Trustees for Alaska v. EPA*, 749 F.2d 549, 553 (9th Cir. 1984) (EPA must consider statutorily enumerated factors in its BPJ determination of effluent limitations).

Accordingly, the Regional Board should analyze each of the statutorily enumerated factors, including but not limited to 40 C.F.R. §§ 125.3(c) and (d) and 33 U.S.C § 1314(b), in the Board’s BPJ determination of the TSS limitation. For instance, regarding the effluent limitations pursuant to the best conventional pollution control technology standard that applies to TSS, 40 C.F.R. § 125.3(d) requires permit-issuing authorities to consider: (i) the reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived; (ii) the comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources; (iii) the age of equipment and facilities involved; (iv) the process employed; (v) the engineering aspects of the application of various types of control techniques; (vi) process changes; and (vii) non-water quality environmental impact (including energy requirements).

If such analysis has been completed, the Regional Board’s response should have cited to the specific documents and specific page numbers that contain it. However, nowhere in any documents that the City has been provided has the Regional Board sufficiently documented or

explained the BPJ rationale for the TSS effluent limitation. The Regional Board's failure to provide this information can only indicate that its fixall decision to place the daily limit of TSS effluent at 75 mg/L does not satisfy the BPJ standard.

**C. The Regional Board's Alleged Concerns That Water Containing TSS From Seaside Lagoon Will Add To The TSS Concentration Of King Harbor Are Unfounded Because Testing Has Shown That The TSS Levels In King Harbor Are Higher Than In Seaside Lagoon**

The Regional Board has claimed that the TSS effluent limitations from Seaside Lagoon are for the protection of the beneficial uses of the receiving water, King Harbor. (**Exhibit 4.B**, Sept 21 Response at page 15.) The Regional Board claimed that water containing TSS coming from Seaside Lagoon could cause or contribute to impairment of King Harbor and could ultimately result in its inclusion on the 303(d) list of waters not meeting water quality standards.

During the May 17, 2010 Regional Board Panel Hearing on Complaint No. R4-2008-0058-M to assess Mandatory Minimum Penalties against the City, even Heal the Bay requested that the Regional Board reconsider the penalties issued against the City for exceedences of TSS at Seaside Lagoon. Ms. Amanda Griesbach, a water quality microbiologist testifying on behalf of Heal the Bay, stated that Heal the Bay was unconcerned with TSS because it caused no threat to public health and that the Regional Board's demands for testing were "impractical." (**Exhibit 5**, Comments on Revised Tentative Waste Discharge Requirements, August 30, 2010 ("Aug. 30 Comments"), at page 6, referencing pages 81-82 of May 17, 2010 Regional Board Panel Hearing Transcript.) Ms. Griesbach urged the Regional Board to forget about TSS, rescind its fines against the City, and focus its attention on those substances which may actually cause a risk to human health. *Id.*

As noted by Ms. Griesbach in her comments to the Regional Board on May 17, 2010 regarding testing on the TSS levels in Seaside Lagoon and King Harbor, the average

concentration of TSS measured in King Harbor is higher than the average concentration in the discharge from Seaside Lagoon. *Id.* This fact is borne out by the results of average TSS concentration levels mentioned in the Permit. (**Exhibit 1**, Permit Attachment F (“Fact Sheet”) at page F-19.) This concept is also supported by the results of a study, the TSO Source Identification Report, that the Regional Board required the City to conduct at significant expense. (**Exhibit 5.D**, “CDM Report.”) This study, which was conducted by CDM to identify the potential causes of TSS exceedences in the Seaside Lagoon, also found that TSS concentration in the Harbor was higher than that of Seaside Lagoon’s effluent. (**Exhibit 5.D**, CDM Report at page 4.)

Thus, the water discharged from Seaside Lagoon into King Harbor will not increase the average TSS concentration in King Harbor. (See **Exhibit 5.D**, CDM Report at page 4, “The lagoon effluent therefore does not adversely impact the harbor background TSS concentration.”) It is entirely unclear how the Regional Board has determined that outflow from Seaside Lagoon into King Harbor could lead to King Harbor’s impairment.

**D. The Regional Board’s TSS Effluent Limitation Is Inappropriate And Improper Because The Methods For Testing TSS In Saline Environments Such As Seaside Lagoon And King Harbor Are Severely Flawed**

The Regional Board is attempting to impose a highly problematic TSS effluent limitation on the City despite the fact that the methods used to measure TSS in saline environments are severely flawed. This fact has been recognized by the Regional Water Quality Control Board for the San Francisco Bay region (“San Francisco Board”) in its decision to waive TSS monitoring for certain facilities regarding effluent limitations for saline waters.

The San Francisco Board found that TSS testing in a saline environment is not reliable because salinity interferes with the testing results. In Order No. R2-2006-0038, the San Francisco Board rescinded the waste discharge requirement for TSS for two NPDES permits

(NPDES Permit Nos. CA0030139 and CA0030147) based on evidence in a study entitled "Evaluation of the Accuracy and Reliability of EPA Test Method 160.2 to Measure Total Suspended Solids in Effluent from Marine Sand Processing Facilities, June 1, 2005," that showed that the analytical method for TSS is not reliable for saline samples because salinity interferes with the results. (**Exhibit 5.F.**) Based on the evidence, the San Francisco Board found that it was appropriate to waive monitoring for compliance of TSS not only in the General Permit for that particular discharger's facilities, but in other facilities that process sand from saline environments in the Bay Area region.

~~Similarly, the CDM Report related to Seaside Lagoon showed significant variation in the~~ measurement of levels of TSS, ranging between approximately 8 mg/L on June 19, 2007 and approximately 100 mg/L just three days later on June 22, 2007. (**Exhibit 5.D**, CDM Report at page 13.) The inability of CDM to obtain consistent TSS concentration readings is a powerful indication that the methods used to test TSS in saline environments are seriously flawed.

Instead of considering the obvious problems with measuring TSS and taking appropriate action to alleviate the injustice resulting therefrom, the Regional Board has continued to impose monitoring requirements and increasingly larger fines. The Regional Board's actions in this regard are inappropriate and improper. As such, the failure of the Regional Board to act on this information is subject to correction by the State Board.

**E. Adoption Of The TSS Effluent Limitation The City Proposed Would Not Violate Anti-Backsliding Provisions**

The Regional Board raised the question at the October 7, 2010 hearing as to whether adopting the 150 mg/L effluent limitations for the 2010 Permit would violate the anti-backsliding provisions in the Clean Water Act. See, e.g., 33 U.S.C. § 1342(o)(1). As discussed below, doing so would not violate the anti-backsliding provisions for a number of reasons.

1. **Adoption Of The Permit The City Proposed Would Not Violate Anti-Backsliding Provisions Because Events Over Which The City Has No Control And For Which There Is No Reasonably Available Remedy Require A Less Stringent Effluent Limitation**

The anti-backsliding provisions should not apply to Seaside Lagoon because the Clean Water Act provides that a permit may be modified to contain a less stringent effluent limitation applicable to a pollutant if “a less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no available remedy.” 33 U.S.C. § 1342(o)(2)(C); see also 40 C.F.R. § 122.44(l)(i)(C). The events over which the City has no control are the presence of TSS in King Harbor, the presence of TSS in the influent water coming from the power plant, and over the wildly varying TSS measurements.

The City has no control over the TSS levels in King Harbor, nor is it required to control those levels by any NPDES permit. The TSS levels in the power plant’s waters are subject to a separate NPDES permit over which the City also has no control. The Regional Board has sought to correct the problem of the already existing TSS in the influent water coming from the Pacific Ocean via the power plant. Its solution was to grant the City “intake credits.” The Regional Board explained how this works in a response to the City’s comments:

“[t]he intake credits essentially allow the Discharger to discharge up to the maximum amount concentration of TSS detected in the intake water. If the maximum TSS concentration detected in the intake water for that day is 80 mg/L, then the Discharger will be in compliance if discharges from the Lagoon on that day are 80 mg/L or less.” (Exhibit 3, Oct. 1 Response at page 6.)

This means that if the intake water is at or over the daily limit for TSS, adding a mere 1 mg/L of TSS would create a violation. The City would thus be liable for huge fines for adding miniscule amounts of TSS to the water. The CDM Report and the results included in the Permit

indicate that water leaving Seaside Lagoon does have a higher average concentration of TSS than the water coming in from the power plant and King Harbor. (**Exhibit 5.D**, CDM Report at page 4; **Exhibit 1**, Permit Attachment F (“Fact Sheet”) at page F-19.) These results are questionable, among other reasons specified below, because the same studies have found there to be a higher average concentration of TSS in King Harbor than Seaside Lagoon. However, it remains at least possible that the influent coming from the power plant via the Pacific Ocean is the sole source of the influent containing lower concentrations of TSS.

Nonetheless, as indicated below, the CDM Report does indicate that the most likely source of the alleged increase of TSS in Seaside Lagoon’s effluent is swimmers in the Lagoon, but that this increase is, on average, a mere 2 to 3 mg/L, a mere 6% of the TSS in the effluent. (**Exhibit 5.D**, CDM Report at 3-4.) Thus, the lion’s share, roughly 94%, of TSS in the Seaside Lagoon effluent comes from the Lagoon’s influent, over which the City has no control and no duty to control.

Thus, the unreliable test results for TSS in this saline environment could expose the City to enormous fines. This result is absurd when one considers the fact that the average TSS concentration exiting Seaside Lagoon is less than that already present in King Harbor. Thus, the City could be held in violation for contributing water with less TSS to King Harbor than King Harbor already contains simply because it may add a small amount of TSS to water coming from the power plant and King Harbor. This result is not only illogical, it is inequitable because the City has no control over the effluent levels in either King Harbor or in the influent water coming from the power plant and King Harbor.

This inequity is compounded by the wild variability in the measurements for TSS concentrations. The City has no control over this wild variation that indicates that on, on one

day of a week, the TSS concentration in the Lagoon's effluent is less than 10% of the daily limitation and another day the same week it's over 130% of the daily limitation. (**Exhibit 5.D**, CDM Report at page 11.) This problem becomes even more acute when one once again considers the fact that, at worst, Seaside Lagoon only adds a very small amount of TSS to the water, the vast majority of which is already present in the Lagoon's influent water.

To correct this senseless result, at a bare minimum, the intake credit should allow for the City to discharge pollutants using an appropriate delta measurement that is a measure of the proportional change between the influent water and the effluent water that accounts for variability. ~~In the alternative, the more sensible solution is to require the Regional Board to, as~~ the San Francisco Board did, waive monitoring compliance for TSS altogether given the obvious problems with measuring TSS in saline environments, at least until those problems are resolved.

Given the wild variation in TSS concentration measurements, it is questionable as to whether Seaside Lagoon is even adding TSS to the effluent water. Regarding the CDM Report, the alleged amount of average TSS added to the water by Seaside Lagoon was insignificant as it was within the standard deviation for the study. (**Exhibit 5.D**, CDM Report at page 18.) The CDM report additionally cites yard drains and condensate as other possible contributors to TSS when the power plant is idle. (**Exhibit 5.D**, CDM Report at page 21-22.) Also, water stagnating in the pipes is subject to evaporation, which would increase the concentration of TSS. Furthermore, evaporation from Seaside Lagoon itself, which obviously has significantly less surface area than King Harbor, could cause an increase in the relative TSS concentrations of Seaside Lagoon. The Regional Board has not produced any results that contradict the problems with the TSS concentration measurements identified in the CDM report and otherwise brought up by the City.

For all the foregoing reasons, events over which the City has no control and for which there is no reasonably available remedy require a less stringent effluent limitation.

**2. Adoption Of The Permit The City Proposed Would Not Violate Anti-Backsliding Provisions Because The Effluent Level Listed In The Permit Is Incorrect And The Result Of A Technical Error**

The Clean Water Act provides that a permit may be modified to contain a less stringent effluent limitation applicable to a pollutant if the "Administrator determines that technical mistakes . . . were made in issuing the [NPDES] permit under [Clean Water Act] section 402(a)(1)(b)." 33 U.S.C. § 1342(o)(2)(B)(ii); see also 40 C.F.R. § 122.44(l)(i)(B)(2). The 2005 ~~Permit's effluent limitation of 75 mg/L of TSS reflects a technical error and, therefore, correcting~~ the 2010 Permit to reflect the correct, intended level of 150 mg/L per day would not violate the "anti-backsliding" provision of the Clean Water Act.

The Regional Board seems to have mistakenly included an incorrect, lower daily effluent limitation for TSS in the 2005 Permit. It listed the Daily Maximum Effluent Limitation as 75 mg/L, the level the Regional Board is now claiming applies to the City and Seaside Lagoon. It is clear, however, from the Permit and supporting documentation that the intention of the Regional Board was to keep the effluent limitation for TSS at the same level it had been in the previous permit, 150 mg/L.

The Fact Sheet in the 2005 Permit confirms, in two separate places, that the TSS limitation should have been set at the existing permit limitation level, 150 mg/L. First, the first paragraph under Section 4 of page F-13 of the 2005 Fact Sheet provides: "**The requirements in the proposed permit for TSS, BOD oil and grease, turbidity, Fecal Coliform, Total Coliform, Enterococcus, and total residual chlorine (shown in the table below) are based on limitations specified in the City's existing permit.**" (Exhibit 5, Aug. 30 Comments at pages 7-8.)

The second error occurs in a table on page F-14. This table does list the Daily Maximum Effluent Limitations as 75 mg/L, however, in the very next column entitled "Rationale," the Regional Board listed "E" as reason the effluent limitation was set at the level listed. Footnote 1 to the table provides that "E" stands for "existing permit limitation," which, as stated, was 150 mg/L per day and not 75 mg/L per day. (Exhibit 5, Aug. 30 Comments at page 8.) In its response to the City's comments, the Regional Board acknowledged it made a mistake and referred to the "inadvertent omission of the rationale in the Fact Sheet," but nonetheless stated that the limit itself remained valid. (Exhibit 3, Oct. 1 Response at page 4.) The Regional Board did not indicate anywhere in the 2005 Permit that it was relying on BPJ as a rationale for the limitation in question.

Nevertheless, it seems highly unlikely that Regional Board would make two separate typographical errors indicating that the TSS effluent limitation was based on the existing permit limitation of 150 mg/L, especially given that one of these statements unambiguously asserts the fact in plain English. The far more likely explanation is that the Regional Board staff intended to set the TSS limitation in the Permit at 150 mg/L, the limitation specified in the City's existing permit, but mistakenly typed in 75 mg/L. The Regional Board's continued insistence that this is not the case remains a mystery to the City.

The City contends that the Regional Board made a technical mistake in the 2005 Permit by setting the TSS limitation at 75 mg/L, when the Fact Sheet indicates it should have been set at the then-existing level of 150 mg/L. It is precisely this type of typographical, technical mistake that permits the Board to modify the 2010 Permit to correct the TSS effluent limitation back to 150 mg/L.

In fact, it is far more accurate to say that the City is not “backsliding” at all insofar as the City is not requesting a less stringent limitation for TSS; it is merely asking for the Board to correct the typographical mistake in the 2005 Permit by setting the TSS effluent limitation back to the Regional Board’s intended level of 150 mg/L.

**3. Adoption Of The TSS Effluent Limitation The City Proposed Would Not Violate Anti-Backsliding Provisions Because New Information Regarding The Inability To Test For TSS In A Saline Environment Has Surfaced That Was Not Available At The Time Of The Issuance Of The Permit Which Would Have Justified The Application Of A Less Stringent Effluent Limitation**

The anti-backsliding provisions should not apply in this situation because the Clean Water Act provides that a permit may be modified to contain a less stringent effluent limitation applicable to a pollutant if “information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.” 33 U.S.C. § 1342(o)(2)(B)(ii); see also 40 C.F.R. § 122.44(l)(i)(B)(2).

During the comment period prior to the Regional Board’s adoption of the Permit, the City raised its objections to its faulty scientific and factual support for setting the daily effluent limitation at 75mg/L. (Exhibit 3, Oct. 1 Response at pages 3-4.) The Regional Board responded that the City’s objection was untimely because the effluent limitation of 75 mg/L was present in the 2005 Permit. The Regional Board contended that it was therefore doing nothing more than maintaining the TSS effluent limitation it had set in the prior permit. The Regional Board also stated that the analysis which provided them with the 75 mg/L limitation was made in the year 2000. (Exhibit 3, Oct. 1 Response at page 5.)

However, the Regional Board is equitably estopped from making this assertion because the 2005 Permit issued by the Regional Board contained mistakes that led the City to reasonably

believe that the TSS effluent limitation was 150 mg/L, and not 75 mg/L. Among the other factors set out above, the 2005 Fact Sheet provided that the requirements for TSS were "based on limitations specified in the City's existing permit." (**Exhibit 5**, Aug. 30 Comments at page 8.) The City reasonably, foreseeably and detrimentally relied on the Regional Board's representation to this effect and believed itself to be complying with the 150 mg/L TSS limitation. Consequently, the Regional Board is now equitably estopped from imposing the 75 mg/L TSS limitation. See *City of Long Beach v. Mansell*, 3 Cal. 3d 462, 496-497 (1970) (California Supreme Court holding that the government may be bound by equitable estoppel); see also *J.H. McKnight Ranch, Inc. v. Franchise Tax Board*, 110 Cal. App. 4th 978, 991 (2003).

The Regional Board now wishes to use its own drafting mistakes against the City in order to claim that the 75 mg/L level was already set in place at the time of the issuance of the 2010 Permit. It claims that 75 mg/L effluent limitation was set in 2005 and first formulated in 2000. (**Exhibit 3**, Oct. 1 Response at 5.) However, if this is the case, the level was adopted without the knowledge of the aforementioned subsequent order by the San Francisco Board and a study upon which that decision was based, which found that the testing methods used in making that determination were fundamentally flawed.

The San Francisco Board found that TSS testing in a saline environment is not reliable because salinity interferes with the testing results. (**Exhibit 5.F**.) Were the San Francisco Board's decision and the study upon which it was based available to the Los Angeles Regional Board at the time of the 2000 TSS limitation determination or at the time of its 2005 effluent limitation decision, it would have justified the application of either a less stringent effluent limitation or, as the San Francisco Board did, justified waiving monitoring for compliance of TSS altogether.

**F. If Forced To Comply With The Current Permit TSS Effluent Limitation, The City Will Likely Have To Shut Down Seaside Lagoon And Possibly Find Itself Facing Total Financial Ruin**

Seaside Lagoon is a quality recreational facility located near King Harbor in Redondo Beach that contains a 1.4 million gallon man-made saltwater lagoon, sandy beaches, waterslides, a children's play area, snackbar facilities, and other recreational facilities. It first opened in 1963 and has since been open to the public from Memorial Day to Labor Day. (The fact that Seaside Lagoon is only open approximately three months of the year and then that it only discharges effluent 12 hours a day lends further support to the arguments herein.)

Individuals from all over the South Bay and Southern California enjoy Seaside Lagoon, 80% of whom are not residents of Redondo Beach.

The CDM Report performed at significant expense to the City indicates that TSS levels in Seaside Lagoon were measured as being higher than the adopted 75 mg/L effluent limitation on numerous days. (Exhibit 5.D, CDM Report at pages 10-21.) The City has spent more than \$275,000 dollars in the past ten years on modifications and studies to address permit requirements. The City was already fined in 2002 and cost the City \$45,000. (Exhibit 6.) This fine was largely predicated on TSS effluent level exceedences. The City simply cannot afford keep paying such exorbitant fines.

The Regional Board is asking the City for a significant financial commitment in connection with the proposed Work Plan and Special Study contained in the 2010 Order. (Exhibit 1, Permit section VI.C.2.) The City remains concerned, however, about dedicating its scarce resources to such an expensive undertaking when the TSS limitations in the permit will invariably subject the City to significant penalties for noncompliance. This danger was demonstrated most recently in connection with the Notice of Violation and resultant Directive

for Administrative Civil Liability sent to the City on September 15, 2010, which claims a liability of up to \$ 150,000. (**Exhibit 7**.)

At a "Panel Hearing" on May 17, 2010, the Regional Board created a power point presentation that, along with a letter to the City dated March 26, 2010, indicated that the "Potential Maximum Civil Liability" the City could face regarding Seaside Lagoon is \$21.2 **billion** dollars. (**Exhibit 8**, at page 5.) Obviously, a fine of this amount would bankrupt the City. Furthermore, the absurd amount of the fine is a clear indication of a Regional Board that has become so peculiarly obsessed with the City's alleged TSS effluent limitation exceedences ~~that it has lost all touch with reality.~~

The only option for the City if the current TSS effluent limitation remains in place will likely be to close down Seaside Lagoon. This will not only hurt the area's economy but it will deprive approximately 150,000 visitors a year, approximately 80 % of whom are not residents of the City, of the enjoyment of a facility that has been a huge part of the community since the early 1960s. Furthermore, Seaside Lagoon is adjacent to the King Harbor. If it is true that swimmers are adding TSS to the water in Seaside Lagoon and it closes, those same swimmers are likely to just go swim in King Harbor, adding to the TSS levels there and completely invalidating any effort to reduce TSS in the Harbor.

As stated above, even Heal the Bay is unconcerned with the TSS in Seaside Lagoon's effluent coming into King Harbor. At the May 17, 2010, Panel Hearing, Heal the Bay asked the Regional Board to rescind its fines and cease placing expensive monitoring requirements on the City. (**Exhibit 5**, August 30, 2010 Comments, at page 6, referencing pages 81-82 of May 17, 2010 Regional Board Panel Hearing Transcript.) The Regional Board's actions regarding the establishment of the TSS effluent limitation and its actions in requiring the City to pay for

monitoring and fines simply go beyond the pale. Its actions are improper, inappropriate and are thus subject to correction by the State Board.

**VIII. THE PETITION HAS BEEN SENT TO THE APPROPRIATE REGIONAL BOARD**

This petition has been sent to the appropriate regional board on November 4, 2010:

Sam Unger  
Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 West Fourth Street, Suite 200  
Los Angeles, CA 90013

**IX. ~~THE SUBSTANTIVE ISSUES OR OBJECTIONS RAISED IN THE PETITION~~**  
**WERE RAISED BEFORE THE REGIONAL BOARD**

All of the substantive issues discussed in this Petition for Review were raised before the Regional Board before the Regional Board acted on October 7, 2010.

\* \* \*

For all of the foregoing reasons, the City respectfully requests that the State Board grant this Petition for Review regarding the Regional Board's October 7, 2010 decision regarding the TSS effluent limitations at Seaside Lagoon. The City respectfully requests that the State Board conduct a hearing for oral argument as to this matter.

Sincerely Yours,



Michael W. Webb  
City Attorney  
City of Redondo Beach

---

Attachments: Exhibits 1-8

cc: Sam Unger, Executive Officer, Los Angeles Regional Water Quality Control Board



**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**

**LOS ANGELES REGION**

320 W. 4<sup>th</sup> Street, Suite 200, Los Angeles, California 90013  
Phone (213) 576 - 6600 • Fax (213) 576 - 6640  
<http://www.waterboards.ca.gov>

**ORDER NO. R4-2010-0185**  
**NPDES NO. CA0064297**

**WASTE DISCHARGE REQUIREMENTS  
FOR THE CITY OF REDONDO BEACH, SEASIDE LAGOON**

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

**Table 1. Discharger Information**

<b>Discharger</b>	City of Redondo Beach
<b>Name of Facility</b>	Seaside Lagoon, City of Redondo Beach
<b>Facility Address</b>	200 Portofino Way
	Redondo Beach, CA 90277
	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 City of Redondo Beach from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

**Table 2. Discharge Location**

<b>Discharge Point No.</b>	<b>Effluent Description</b>	<b>Discharge Point Latitude</b>	<b>Discharge Point Longitude</b>	<b>Receiving Water</b>
001	Swimming Lagoon Discharge	33 ° 50' 38" N	118 ° 23' 41" W	King Harbor

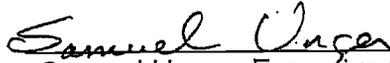
February 18, 2010  
Revised: July 12, 2010  
Revised September 21, 2010  
Revised September 30, 2010

**Table 3. Administrative Information**

This Order was adopted by the Regional Water Quality Control Board on:	October 7, 2010
This Order shall become effective on:	November 6, 2010
This Order shall expire on:	September 10, 2015
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:	180 days prior to the Order expiration date

IT IS HEREBY ORDERED, that Order No. R4-2005-0016 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, Samuel Unger, 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 October 7, 2010.

  
Samuel Unger, Executive Officer

February 18, 2010  
Revised: July 12, 2010  
Revised September 21, 2010  
Revised September 30, 2010

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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**

<b>Discharger</b>	City of Redondo Beach
<b>Name of Facility</b>	Seaside Lagoon
<b>Facility Address</b>	200 Portofino Way
	Redondo Beach, CA 90277
	Los Angeles County
<b>Facility Contact, Title, and Phone</b>	Maggie Healy Acting Recreation & Community Services Director Tel.: (310)-318-0671
<b>Mailing Address</b>	<del>320 Knob Hill</del>
	Redondo Beach, CA 90277
	Los Angeles County
<b>Type of Facility</b>	Swimming Lagoon
<b>Facility Design Flow</b>	2.3 million gallons per day (MGD)

## II. FINDINGS

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

A. **Facility Description.** The Seaside Lagoon Facility (Seaside Lagoon or Facility) is located at 200 Portofino Way, Redondo Beach, California, and is owned and operated by the City of Redondo Beach (hereinafter, the City or Discharger). The Facility is a city park and consists of a 1.4 million gallon man-made saltwater lagoon, artificial beaches, children's play area, snack bar facilities, and other recreational areas. The Lagoon was constructed in 1962 and has since been open to the public for swimming from Memorial Day to Labor Day (operating season) each year. At other times, the City may allow the use of the Facility for social functions which may result in discharges into the receiving water outside the designated operational season. The surface area of the water in the Lagoon is approximately 1.2 acres with a maximum depth of 7 feet. Wastewater is discharged from Discharge Point No. 001 (see table on cover page) to the King Harbor, a water of the United States.

B. **Discharge Description.** Water for the Lagoon comes from a nearby Redondo Beach Generating Station (RBGS or Power Plant) where the seawater is used to cool turbines. The Power Plant is located at 1100 Harbor Drive, Redondo Beach. RBGS currently operates four steam generating units (Units 5 – 8) in the city of Redondo Beach, Los Angeles County. The RBGS is owned and operated by AES Redondo Beach, LLC. Four other steam units (Units 1-4) have been retired but remain at the facility. The power plant is a "peak-demand" generation facility and as such operates intermittently. Cooling water for Units 5 and 6 is withdrawn through two submerged conduits extending into King Harbor and the Redondo Beach Marina. Cooling water for Units 7 and 8 is withdrawn through a submerged conduit that extends approximately 3000 feet from the facility and is located at the mouth of King Harbor. When operated at design capacity, the AES Power Plant discharges up to 898 million gallons per day (mgd) of once-through cooling water through two outfalls; one discharges to Pacific Ocean and the second one discharges to King Harbor. The Outfall which discharges to King Harbor is permitted to discharge up to 674 mgd. These discharges from RBGS are regulated under separate waste discharge requirements (WDRs) contained in Board Order No. 00-085.

The Lagoon influent is the Power Plant cooling water outfall conduit source that discharges to King Harbor. Approximately 3,200 gallons per minute (gpm), which is equivalent to approximately 2.3 mgd, of once-through cooling water, is directed to the Lagoon from the Power Plant Outfall that discharges to King Harbor. When the Power Plant is not in operation, the Lagoon influent is the King Harbor water that is in the discharge pipe as a result of tidal influences. Thus the King Harbor seawater serves as the source water for the Lagoon influent and the receiving water for Lagoon effluent.

The City is using only a small portion (0.26 %) of the cooling water from the Power Plant for recreational beneficial use, which would otherwise be discharged directly to

the King Harbor. To maintain the water level in the Seaside Lagoon, the City discharges roughly 3,200 gpm (approximately 2.3 mgd) of dechlorinated saltwater to King Harbor when the Lagoon is in use. The water is discharged through three overflow structures located along the northwest edge of the Lagoon. The water then flows by gravity to a manhole, then to a conduit that empties into King Harbor (see Table on cover page) at the shoreline (Latitude 33° 50' 38" N and Longitude 118° 23' 47" W) embankment through Discharge Serial 001. During periods when the Lagoon is not open for public use, the lagoon water will be flushed periodically.

The Seaside Lagoon is equipped with both chlorination and de-chlorination facilities. The treatment system consists of adding sodium hypochlorite solution to the influent to maintain a residual chlorine level of approximately 1.0 parts per million (ppm or mg/L) in the lagoon. Effluent is dechlorinated with sodium bisulfite to reduce the residual chlorine below 10 parts per billion (ppb or µg/L). The chlorination system consists of one, 1,000-gallon storage tank which holds 17% sodium hypochlorite, dual chemical feed pumps with manual controls, and related piping. The de-chlorination system consists of one, 1,000-gallon storage tank which holds 38% bi-sulfate, dual chemical feed pumps with manual controls, and related piping. The de-chlorination piping terminates at the overflow structures at which point the bi-sulfite solution is added to the effluent. Bi-sulfite is added at all three overflow structures. Attachment B provides a map of the area around the facility. Attachment C provides flow schematics of the Facility.

Sampling Conditions: The sample collection location is tidally influenced. During high tide conditions, the sampling vault would be almost completely inundated with sea water and the effluent pipe would be completely submerged. Therefore, the grab samples collected during high tide may not be representative of the effluent. Sampling should be conducted when there is a discharge and during low tide conditions based on data provided by the National Oceanic and Atmospheric Administration's (NOAA), Station No. 9410840 (Santa Monica, CA).

- C. Three Time Schedule Orders (TSOs) (Order Nos.: R4-2007-0024, R4-2008-0002, and R4-2010-0066) were issued at the request of the City of Redondo Beach (City or Discharger) to provide time for the Facility to come into full compliance with final effluent limitations or to plan and implement an alternative use for the recreation area. The first TSO (Order No. R4-2007-0024) prescribed interim effluent limitations for Total Suspended Solids (TSS) and biological oxygen demand (BOD), required the Discharger to conduct a study to determine the cause of TSS exceedances, and find solutions to achieve compliance with the final TSS effluent limitations prescribed for Seaside Lagoon. The City conducted monitoring and submitted the Source Identification Report (SIR) as required by the TSO. As part of the SIR study, a Monitoring Plan was developed and implemented between May 28, 2007 and September 7, 2007. The Monitoring Plan examined not only the condition of the effluent but also the influent, interior lagoon, and harbor water quality. Samples were taken at a total of seven locations. The Executive Summary of the SIR states "The conclusion of this Source Identification Study is that the Lagoon influent is the source of the majority of the TSS in the Lagoon effluent". The SIR study data indicated that

the Facility's contributions of TSS were minimal. The study also found that similar concentrations of TSS existed in the influent and in King Harbor (receiving water). Based on the SIR data obtained in 2007, the City requested and was granted interim effluent limitations for TSS in the second TSO (R4-2008-0002). The TSS interim limits were 60 mg/L for monthly average and 120 mg/L for daily maximum.

On January 19, 2010, Redondo Beach City Council members and staff met with the Regional Board Executive Officer and staff and requested further TSS relief based on the SIR. A follow-up letter submitted by the City requested that the TSS limits be set at 60 mg/L for monthly average and 120 mg/L for daily maximum. A third TSO (R4-2010-0066) was issued at the request of the City and the interim limits included for TSS are the same as those included in the previous TSO.

The table below is a summary of the three TSOs:

Time Schedule Orders					
TSO Order No.	Effective Date	Expiration Date	Interim Limits		
			TSS, mg/L		BOD, mg/L
			Monthly Average	Daily Maximum	Monthly Average/ Daily Maximum
R4-2007-0024 *	May 1, 2007	January 31, 2008	200	250	100/100
R4-2008-0002 *	February 1, 2008	February 28, 2010	60	120	--
R4-2010-0066 **	May 10, 2010	September 10, 2013	60	120	--

- \* TSO has expired
- \*\* TSO currently in-effect.

**D. Observation of Temporal Variability – Influent/Effluent Sampling Results**

The monitoring data collected for metals showed temporal variability in the collected influent and effluent sample results. The water samples collected from the same locations on different days displayed large differences in metal concentrations and effluent samples collected at different times during the same day also displayed considerable variability. This variability coupled with the limited number of samples available (five samples with only one sample with contaminant concentration that exceeded the applicable water quality criteria) make it difficult to utilize statistics to calculate appropriate interim effluent concentrations (95 or 99 percentile concentration) or to determine reasonable potential. This permit includes a requirement to develop a Work Plan and conduct a study which includes enhanced monitoring to provide a more robust data set, address sample variability, and determine sampling logistics in order

to have the best data set for determining reasonable potential, intake credits, and other permit provisions related to metals.

- E. Legal Authorities.** This Order is issued pursuant to section 402 of the federal CWA and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (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).
- F. Background and Rationale for Requirements.** The Regional Water Quality Control Board, Los Angeles Region (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 rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through F and G and I are also incorporated into this Order.
- G. 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.
- H. 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<sup>1</sup>, 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).
- I. 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

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<sup>1</sup> All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

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).

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

The Regional Water 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. The facility discharges directly into King Harbor. King Harbor receives discharges from highly industrial areas. However, the 2006 State Board's California 303(d) List does not classify King Harbor as impaired.

**K. 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 King Harbor located in the Santa Monica Bay are as follows:

**Table 5. Basin Plan Beneficial Uses**

Discharge Point No.	Receiving Water Name	Beneficial Use(s)
001	King Harbor	<u>Existing:</u> Industrial service supply (IND), navigation (NAV), contact (REC-1) and non-contact (REC-2) water recreation, commercial and sport fishing (COMM), marine habitat (MAR), wildlife habitat (WILD), preservation or rare, threatened or endangered species (RARE).

Requirements of this Order implement the Basin Plan.

The Basin Plan includes a narrative water quality objective for solids, suspended, or settleable materials. The objective states “Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses.” This narrative objective was translated into a numeric effluent limit in the City’s prior permit.

In Order No. 99-057, the TSS limits were prescribed at 50 mg/L and 150 mg/L for monthly average and daily maximum, respectively. In early 2000, Regional Board staff reviewed the TSS limits in the City’s permit. Since the Basin Plan does not contain a numeric objective for TSS, Regional Board staff looked to the U.S. Environmental Protection Agency’s (USEPA) Quality Criteria for Water (known as the “Gold Book”) as guidance. The Gold Book contains criteria for solids (suspended and settleable) and turbidity. In the Gold Book, USEPA notes that “In a study downstream from the discharge of a rock quarry where inert suspended solids were increased to 80 mg/L, the density of macroinvertebrates decreased by 60 percent...”.

Since the Gold Book indicates that TSS at 80 mg/L causes impairment to aquatic life, staff utilized its best professional judgment to recommend 75 mg/L as the daily maximum limit for TSS. The Regional Board prescribed this limit when it issued Order No. R4-2005-0016. As they were renewed, several other individual industrial permits were also changed to reflect the new TSS limit of 75 mg/L. The 50 mg/L monthly average limit for TSS was retained in the City’s permit.

Thus, the TSS limits in Order No. R4-2005-0016 were based on the TSS limits in the previous permit (Order No. 99-057) and best professional judgment (BPJ). In Order No. R4-2005-0016, the monthly average TSS limit of 50 mg/L was based on Order No. 99-057 and the daily maximum TSS limit of 75 mg/L was based on BPJ. In the Fact Sheet associated with Order No. R4-2005-0016, Regional Board staff inadvertently omitted the BPJ rationale for the TSS daily maximum limit of 75 mg/L.

**Thermal Plan.** 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. Requirements of this Order implement the Thermal Plan.

**Ammonia Basin Plan Amendment.** 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 15, 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. The 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.

**Bays and Estuaries Policy.** The Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Enclosed Bay and Estuaries Policy), adopted by the State Water Board as Resolution No. 95-84 on November 16, 1995, states that:

*"It is the policy of the State Board that the discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries, other than the San Francisco Bay-Delta system, shall be phased out at the earliest practicable date. Exceptions to this provision may be granted by a Regional Board only when the Regional Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge."*

While the effluent from the Facility discharges into King Harbor, within the Santa Monica Bay, the wastewater is comprised primarily of once-through cooling water from AES Redondo Beach Power Plant, and therefore is not considered to be industrial process wastewater. Nonetheless, this Order contains provisions necessary to protect all beneficial uses.

- L. **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.

- M. **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.

**Intake Water Credits.** Section 1.4.4 of the SIP provides that, intake water credits for a pollutant may be established in an NPDES permit based on a Discharger's demonstration that the following conditions are met:

1. The observed maximum ambient background concentration, as determined in section 1.4.3.1, and the intake water concentration of the pollutant exceeds the most stringent applicable criterion/objective for that pollutant;
2. The intake water credits provided are consistent with any total maximum daily load (TMDL) applicable to the discharge that has been approved by the Regional Water Board, State Water Board, and USEPA;
3. The intake water is from the same water body as the receiving water body. The discharger may demonstrate this condition by showing that:
  - a. the ambient background concentration of the pollutant in the receiving water, excluding any amount of the pollutant in the facility's discharge, is similar to that of the intake water;
  - b. there is a direct hydrological connection between the intake and discharge points;
  - c. the water quality characteristics are similar in the intake and receiving waters; and
  - d. the intake water pollutant would have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effect had it not been diverted by the discharger.

The Regional Water Board may also consider other factors when determining whether the intake water is from the same water body as the receiving water body;

4. The facility does not alter the intake water pollutant chemically or physically in a manner that adversely affects water quality and beneficial uses; and
5. The timing and location of the discharge does not cause adverse effects on water

quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body.

Based on the monitoring data submitted as part of Source Identification Study in 2007 and additional information, the Discharger has demonstrated that the above conditions are met. Therefore, this Order includes effluent limitations for TSS, based on the intake water credits. A detailed discussion of the basis for the intake water credits is included in the Fact Sheet (Attachment F)

- N. 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 18, 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 not include compliance schedules and interim effluent limitations and/or discharge specifications.
- O. Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 CFR § 131.21; 65 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.
- P. 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 turbidity, 5-day biochemical oxygen demand (BOD), oil and grease, total suspended solids (TSS), and total residual chlorine. Restrictions on turbidity, BOD, oil and grease, TSS, pH, and total residual chlorine are discussed in section IV.B.2 of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the CWA.

Water quality-based effluent limitations for ammonia, have been established in this Order. 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.

- Q. 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.
- R. 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. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order (No. R4-2005-0016).
- S. 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.
- T. 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.

**U. 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.

**V. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections VI.C.2 of this Order are 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.

**W. 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.

**X. 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. R4-2005-0016 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 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 2.3 MGD of dechlorinated wastewater as described in the findings. The discharge of wastes from accidental spills 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, King Harbor, 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 No. 001

1. Final Effluent Limitations – Discharge Point No. 001

- a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP (Attachment E):

**Table 6. Effluent Limitations for Discharge Point No. 001**

Parameter	Units	Effluent Limitations			
		Average Monthly <sup>1</sup>	Maximum Daily	Instantaneous	
				Minimum	Maximum
pH	Std. units	--	--	6.5	8.5
BOD (5-day @ 20 Deg. C)	mg/L	20	30	--	--
	lbs/day <sup>2</sup>	384	575	--	--
TSS <sup>8</sup>	mg/L	50 <sup>8</sup>	75 <sup>8</sup>	--	--
	lbs/day <sup>2</sup>	960	1,439	--	--
Oil and Grease	mg/L	10	15	--	--
	lbs/day <sup>2</sup>	192	288	--	--
Turbidity	NTU	50	75	--	--
Temperature	°F	--	--	--	86 <sup>3</sup>
Chlorine, Total Residual	µg/L	2	8	--	--
	lbs/day <sup>2</sup>	0.038	0.15	--	--
Total Coliform	mpn/100ml	1,000 <sup>4,5</sup>	10,000	--	--
Fecal Coliform	mpn/100ml	200 <sup>5,6</sup>	400	--	--
Enterococcus	mpn/100ml	35 <sup>5,7</sup>	104	--	--

<sup>1</sup> If only one sample is collected during the operating season in May, then this result may be included in the June monthly average.

- 2 Mass based effluent limitations calculated using the following formula based on an average daily  
flow of 2.3 MGD:  $(\text{lbs/day}) = 2.3 \text{ MGD} \times 8.34 \times \text{effluent limitation (mg/L)}$
- 3 The Temperature must not be greater than 86°F at any time. In addition, the maximum  
temperature of the discharge shall not exceed the natural receiving water temperature by more  
than 20°F.
- 4 The geometric mean density of total coliform organisms shall be less than 1,000 per 100 ml (10  
per ml): provided that not more than 20% of the samples, in any 30-day period, may exceed  
1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a  
repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml). Also, the total  
coliform density shall not exceed 1,000 per 100 ml if the ratio of fecal to total coliform exceeds  
0.1.
- 5 The geometric mean values should be calculated based on a statistically sufficient number of  
samples (generally not less than 5 samples equally spaced over a 30-day period). If any of the  
single sample limits are exceeded, the Regional Water Board may require repeat sampling on a  
daily basis until the sample falls below the single sample limit in order to determine the  
persistence of the exceedance. When repeat sampling is required because of an exceedance of  
any one single sample limit, values from all samples collected during that 30-day period shall be  
used to calculate the geometric mean.
- 6 ~~The fecal coliform density for any 30-day period, shall not exceed a geometric mean of 200 per  
100 ml (2 per ml) and provided that no single sample when verified by a repeat sample taken  
within 48 hours shall exceed 400 per 100 ml (4 per ml) nor shall more than 10% of the total  
samples during any 60-day period exceed 400 per 100 ml.~~
- 7 The geometric mean enterococcus density of the discharge shall not exceed 35 organisms per  
100 ml for a 30-day period, nor more than 12 organisms per 100 ml for a 6-month period. and  
provided that no single sample when verified by a repeat sample taken within 48 hours shall  
exceed 104 per ml.
- 8 The Time Schedule Order (Order No. R4-2010-0066) provides interim limitation of 60 mg/L for  
monthly average and 120 mg/L for daily maximum for TSS from May 10, 2010, through  
September 10, 2013. After September 13, 2010, if the influent water pollutant concentration  
(measured at influent to the lagoon) does not exceed the average monthly limitation then the  
limitations are applied as noted in the Table. If the influent water pollutant concentration exceeds  
the average monthly limitation but does not exceed the maximum daily limitation then compliance  
with the average monthly limitation will be determined based on intake water credits and  
compliance with the maximum daily limitation is applied as noted in the Table. If the influent  
water pollutant concentration exceeds the maximum daily limitation then compliance with both  
the average monthly and the maximum daily will be determined based on intake water credits.
- When determining compliance based on intake water credit, the pollutant effluent limitation is equal  
to the maximum pollutant concentration in the influent water. The equation is as follows:
- Pollutant Effluent Limitation with Intake Water Credit = Maximum Pollutant Influent Water  
Concentration
- If the concentration limitation is based on intake credits; the associated mass limitation must be  
calculated using the equation in footnote 2 above.
- b. Ammonia. Total un-ionized ammonia (NH<sub>3</sub>) water quality objectives of 0.035  
mg/L for the 4-day average and 0.233 mg/L for the 1-hour average. These  
values are to be translated utilizing the implementation procedure included in  
Resolution No. 2004-022 which revised the saltwater ammonia water quality  
objectives in the 1994 Basin Plan.

The implementation procedure requires:

(a). Determine the downstream applicable water quality objectives for ammonia for the receiving water immediately downstream of the discharge (utilize the Determination of Freshwater, Brackish Water, or Saltwater Conditions included in the Implementation section of Resolution No. 2004-022).

(b). Since there is no mixing zone established:

$$ECA = WQO$$

(c). To adjust the un-ionized saltwater ammonia objective to an ECA expressed as total ammonia, the following equation shall be used:

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

Where:  $P = 1 \text{ atm}$

$T$  = temperature ( $^{\circ}K$ )

$pK_a^s = 0.116 \cdot i + 9.245$ , 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

(Per USEPA Ambient Water Quality Criteria for Ammonia (Saltwater) – 1989)

c. 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 test 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 (Attachment E).

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

B. Land Discharge Specifications

Not Applicable

C. Reclamation Specifications

Not Applicable

**V. RECEIVING WATER LIMITATIONS**

A. Surface Water Limitation

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 King 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 0.2 units.
2. Surface water temperature to rise greater than 5°F above the natural temperature of the receiving waters at any time or place.
3. Water Contact Standards

a. State/Regional Water Board Water Contact Standards:

In marine water designated for water contact recreation (REC-1), the waste discharged shall not cause the following bacterial standards to be exceeded in the receiving water:

Geometric Mean Limits

- i. Total coliform density shall not exceed 1,000/100 ml.
- ii. Fecal coliform density shall not exceed 200/100 ml.
- iii. Enterococcus density shall not exceed 35/100 ml.

Single Sample Maximum (SSM) Limits

- i. Total coliform density shall not exceed 10,000/100 ml.
  - ii. Fecal coliform density shall not exceed 400/100 ml.
  - iii. Enterococcus density shall not exceed 104/100 ml.
  - iv. Total coliform density shall not exceed 1,000/100 ml, when the fecal coliform/total coliform ratio exceeds 0.1.
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.

B. Groundwater Limitations

Not Applicable

**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 limitation, median, geometric mean, instantaneous limitation, or receiving water limitation of this Order, the Discharger shall notify the Regional Water Board by telephone (213) 620-6375 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.

- t. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Wat. Code § 1211.)

#### B. Monitoring and Reporting Program (MRP) Requirements

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

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#### ~~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 on or before the end of 1<sup>st</sup> Quarter of 2013 (March 31, 2013), if the Special Study results necessitates changes to the permit.
- d. 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.
- 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.

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. Work Plan for Special Study

The City of Redondo Beach's Work Plan for the Seaside Lagoon must be submitted to the Regional Water Board by February 7, 2011, for Executive Officer approval. The objective of the Work Plan is to refine data collection related to sampling location, timing and other logistics in order to have the best data set for arsenic, cadmium, copper, nickel, selenium, silver, thallium, zinc and total suspended solids (TSS) to determine reasonable potential, intake credits, and other permit provisions. Elements of the Work Plan are to include:

- expanded monitoring program (weekly sampling at a minimum) for the metals listed above and TSS in the influent and effluent,
- expanded sampling methods to include grab and composite sampling,
- ~~expanded sampling locations to include influent and effluent,~~
- examination of sampling and laboratory protocols to insure adequate QA/QC;
- examination of variability of TSS as applied to intake credits.

## 3. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. Chronic Toxicity Trigger and Monitoring Requirements: The Order contains a chronic toxicity trigger defined as an exceedance of 1.0 TUc in a critical life stage test for 100% effluent. The Discharger shall monitor the effluent once per year for chronic toxicity. If the effluent chronic toxicity exceeds 1.0 TUc (defined in Section V.A of the Monitoring and Reporting Program, Attachment E), the Discharger shall immediately implement accelerated chronic toxicity testing, as required in Section V of the Monitoring and Reporting Program, Attachment E).
- b. Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan. The Discharger shall submit to the Regional Water Board an Initial Investigation Toxicity Reduction Evaluation (TRE) workplan (1-2 pages) within 90 days of the effective date of this permit. This plan shall describe the steps the permittee intends to follow in the event that toxicity is detected, and should include at a minimum:
  - i. A description of the investigation and evaluation techniques that will be used to identify potential causes/sources of toxicity, effluent variability, and treatment system efficiency;
  - ii. A description of the facility's method of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility;

iii. 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) (Section V of the MRP, Attachment E) provides references for the guidance manuals that should be used for performing TIEs).

4. Best Management Practices and Pollution Prevention

a. Best Management Practice Plan (BMPP)

Within 90 days of the effective date of this permit, the Discharger is required to submit a Best Management Practice Plan (BMPP) to the Regional Water Board. The BMPP should contain at least the following: statement of BMP policy, cleaning and maintenance procedures, schedules of activities, prohibited practices, treatment methods, and employee training. The Discharger shall report on the status and progress of the BMPP annually, in accordance with the specification discussed in section IX.A of the MRP, Attachment E.

~~5. 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.

6. Other Special Provisions

Not Applicable

7. Compliance Schedules

Not Applicable

**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. Mass-based Effluent Limitations.

In calculating mass emission rates from the monthly average concentrations, use one half of the method detection limit for "Not Detected" (ND) and the estimated concentration for "Detected, but Not Quantified" (DNQ) for the calculation of the monthly average concentration. To be consistent with Limitations and Discharge Requirements, Section VII.B, if all pollutants belonging to the same group are reported as ND or DNQ,

the sum of the individual pollutant concentrations should be considered as zero for the calculation of the monthly average concentration.

C. Multiple Sample Data.

When determining compliance with an 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 E 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.

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#### 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).

## ATTACHMENT A – DEFINITIONS

### **Arithmetic Mean ( $\mu$ )**

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:  $\Sigma x$  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 ( $\sigma$ )**

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;

$\mu$  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

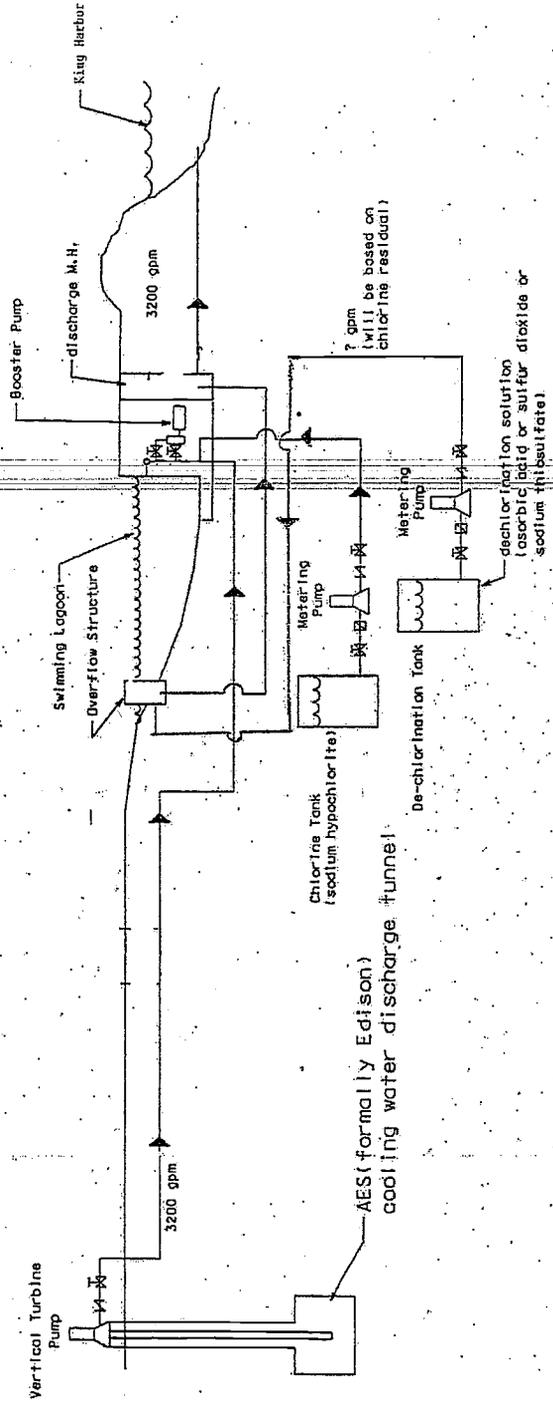
AMEL	Average Monthly Effluent Limitation
B	Background Concentration
BAT	Best Available Technology Economically Achievable
Basin Plan	<i>Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties</i>
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BMPPP	Best Management Practices Plan
BPJ	Best Professional Judgment
BOD	Biochemical Oxygen Demand 5-day @ 20 °C
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	City of Redondo Beach
DMR	Discharge Monitoring Report
DNQ	Detected But Not Quantified
ELAP	California Department of Health Services Environmental Laboratory Accreditation Program
ELG	Effluent Limitations, Guidelines and Standards
Facility	Seaside Lagoon
gpd	gallons per day
IC	Inhibition Coefficient
IC <sub>15</sub>	Concentration at which the organism is 15% inhibited
IC <sub>25</sub>	Concentration at which the organism is 25% inhibited
IC <sub>40</sub>	Concentration at which the organism is 40% inhibited
IC <sub>50</sub>	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	<i>Water Quality Control Plan for Ocean Waters of California</i>
Regional Water Board	California Regional Water Quality Control Board, Los Angeles Region
RPA	Reasonable Potential Analysis
SCP	Spill Contingency Plan
SIP	State Implementation Policy ( <i>Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California</i> )
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	<i>Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California</i>
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 <sub>c</sub>	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**

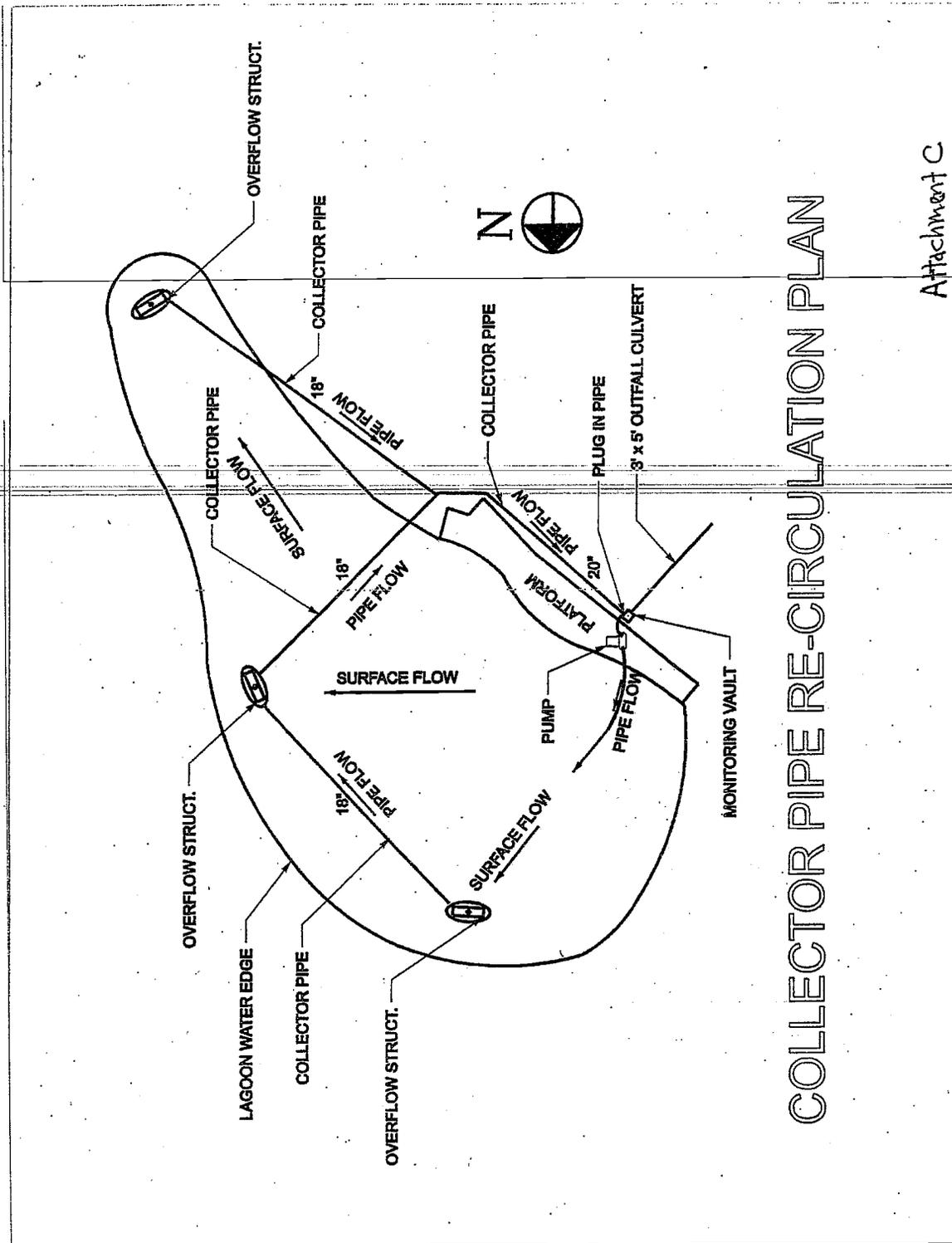


# ATTACHMENT C – FLOW SCHEMATIC



PUMPING SYSTEM SCHEMATIC DIAGRAM

Attachment B



COLLECTOR PIPE RE-CIRCULATION PLAN

Attachment C

## 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 Requirements

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 either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA) [section 122.22(a)(3)].
- ~~3. 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)].
4. 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)].
5. 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 not subject to effluent limitations in this Order [section 122.41(l)(1)(ii)].

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)].

#### 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

Existing manufacturing, commercial, mining, and silvicultural 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 ( $\mu\text{g/L}$ ) [section 122.42(a)(1)(i)];
  - b. 200  $\mu\text{g/L}$  for acrolein and acrylonitrile; 500  $\mu\text{g/L}$  for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter ( $\text{mg/L}$ ) 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 ( $\mu\text{g}/\text{L}$ ) [section 122.42(a)(2)(i)];
  - b. 1 milligram per liter ( $\text{mg}/\text{L}$ ) 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. 8034)**

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## ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) NO. 8034

The Code of Federal Regulations (CFR) 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 No. 001 Latitude 33°50'38", Longitude 118°23'41") and shall be located where representative samples of that effluent can be obtained. The existing sample collection location, is tidally influenced. Sampling should be conducted when there is a discharge and during low tide conditions based on data provided by the National Oceanic and Atmospheric Administration's (NOAA), Station No. 9410840 (Santa Monica, CA). ~~(During high tide conditions, the sampling vault would be almost completely inundated with sea water and the effluent pipe would be completely submerged. Therefore, the grab samples during high tide may not be representative of the effluent.)~~
- B. Effluent samples shall be taken downstream of any addition to treatment works and prior to mixing with the receiving waters.
- 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 Resources Control Board (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) 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 United States Environmental Protection Agency (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; 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 G) 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 G 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 G;
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, 2007);
3. When the Discharger agrees to use an ML that is lower than that listed in Attachment G;
4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment G, 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 monitoring report required in Section X.D.3 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 report 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.~~

Q. Laboratories analyzing monitoring samples shall be certified by the Department of Public Health, in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports.

## 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 (include Latitude and Longitude when available)
--	INF-001	Shall be located at the entrance of the intake water to the lagoon.
Discharge Point No. 001	EFF-001	Discharge manhole before contact with King Harbor, prior to mixing with receiving water (latitude 33° 50' 38" N, longitude 118° 23' 41" W)
--	RSW-001	A location within 50 feet from the discharge point, outside the influence of the discharge, in King Harbor.

### III. INFLUENT MONITORING REQUIREMENTS

**Table E-2. Influent Monitoring – Regular Season (Memorial Day to Labor Day)**

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>1</sup>	Required Analytical Test Method
Total Suspended Solids (TSS)	mg/l	Grab	1/Week <sup>3</sup>	<sup>2</sup>
Antimony, Total Recoverable	µg/L	Grab	1/Month	<sup>2</sup>
Arsenic, Total Recoverable	µg/L	Grab	1/Month <sup>3</sup>	<sup>2</sup>
Cadmium, Total Recoverable	µg/L	Grab	1/Month <sup>3</sup>	<sup>2</sup>
Copper, Total Recoverable	µg/L	Grab	1/Month <sup>3</sup>	<sup>2</sup>
Nickel, Total Recoverable	µg/L	Grab	1/Month <sup>3</sup>	<sup>2</sup>
Selenium, Total Recoverable	µg/L	Grab	1/Month <sup>3</sup>	<sup>2</sup>
Silver, Total Recoverable	µg/L	Grab	1/Month <sup>3</sup>	<sup>2</sup>
Thallium, Total Recoverable	µg/L	Grab	1/Month <sup>3</sup>	<sup>2</sup>
Zinc, Total Recoverable	µg/L	Grab	1/Month <sup>3</sup>	<sup>2</sup>

1. Two influent samples shall be collected at the specified frequency and should be representative of the intake water for the period sampled. The first influent sample shall be collected two hours prior to the effluent sample. The second influent sample shall be collected at approximately the same time as the effluent sample.
2. 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 G.
3. Data collected as per the approved Special Study which complies with all data quality criteria for this NPDES permit, may be utilized to satisfy the requirements to collect influent data.

**Table E-3. Influent Monitoring – Off Season**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Suspended Solids (TSS)	mg/l	Grab	1/Discharge <sup>2</sup>	1
Antimony, Total Recoverable	µg/L	Grab	1/Discharge <sup>2</sup>	1
Arsenic, Total Recoverable	µg/L	Grab	1/Discharge <sup>2</sup>	1
Cadmium, Total Recoverable	µg/L	Grab	1/Discharge <sup>2</sup>	1
Copper, Total Recoverable	µg/L	Grab	1/Discharge <sup>2</sup>	1
<del>Nickel, Total Recoverable</del>	<del>µg/L</del>	<del>Grab</del>	<del>1/Discharge<sup>2</sup></del>	<del>1</del>
Selenium, Total Recoverable	µg/L	Grab	1/Discharge <sup>2</sup>	1
Silver, Total Recoverable	µg/L	Grab	1/Discharge <sup>2</sup>	1
Thallium, Total Recoverable	µg/L	Grab	1/Discharge <sup>2</sup>	1
Zinc, Total Recoverable	µg/L	Grab	1/Discharge <sup>2</sup>	1

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 G
2. Not more than one sample per week shall be collected.

**IV. EFFLUENT MONITORING REQUIREMENTS**

**A. Monitoring Location – Discharge Point No. 001**

1. The Discharger shall monitor dechlorinated wastewater at EFF-001 during discharge and low tide conditions 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-4. Effluent Monitoring – Regular Season (Memorial Day to Labor Day)**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Waste Flow	MGD	Estimated	1/Day	1
pH	s.u.	Grab	1/Year	1
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C) <sup>3</sup>	mg/L	Grab	1/Month	1
Total Suspended Solids (TSS) <sup>3</sup>	mg/l	Grab	1/Week <sup>8</sup>	1
Oil and Grease <sup>3</sup>	mg/L	Grab	1/Year	1
Turbidity	NTU	Grab	1/Month	1
Temperature	°F	Grab	1/Month	1
<del>Chlorine, Total Residual<sup>3</sup></del>	<del>µg/l</del>	<del>Grab</del>	<del>1/Week</del>	<del>1,2</del>
Ammonia <sup>3</sup>	mg/L	Grab	1/Month	1
Fecal Coliform	mpn/100 ml	Grab	1/Week <sup>4</sup>	1
Total Coliform	mpn/100 ml	Grab	1/Week <sup>4</sup>	1
Enterococcus	mpn/100 ml	Grab	1/Week <sup>4</sup>	1
Arsenic, Total Recoverable <sup>3</sup>	µg/L	Grab	1/Month <sup>8</sup>	1
Cadmium, Total Recoverable <sup>3</sup>	µg/L	Grab	1/Month <sup>8</sup>	1
Copper, Total Recoverable <sup>3</sup>	µg/L	Grab	1/Month <sup>8</sup>	1
Nickel, Total Recoverable <sup>3</sup>	µg/L	Grab	1/Month <sup>8</sup>	1
Selenium, Total Recoverable <sup>3</sup>	µg/L	Grab	1/Month <sup>8</sup>	1
Silver, Total Recoverable <sup>3</sup>	µg/L	Grab	1/Month <sup>8</sup>	1
Thallium, Total Recoverable <sup>3</sup>	µg/L	Grab	1/Month <sup>8</sup>	1
Zinc, Total Recoverable	µg/L	Grab	1/Month <sup>8</sup>	1
TCDD – Equivalent <sup>5</sup>	ng/L	Grab	1/Permit Term	1
Remaining Priority Pollutants <sup>6</sup>	µg/l	Grab	1/Year	1
Acute Toxicity	% survival	Grab	1/Year	7
Chronic Toxicity	T.U. <sub>c</sub>	Grab	1/Year	7

<sup>1</sup> 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 G. 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 If there is no analytical method with a detection level below the effluent limitation, then the most sensitive method must be used. If the sample result is non-detect, the Discharger shall report the results as less than the method detection level and provide the actual detection level achieved.
- 3 The mass emission (lbs/day) for the discharges EFF-001 shall be calculated and reported using the limitation concentration and the actual flow rate measured at the time of discharge, using the formula:

$$m = 0.00834 \times C_e \times Q$$

where: m = mass discharge for a pollutant, lb/day  
 C<sub>e</sub> = limitation concentration for a pollutant, µg/L  
 Q = actual discharge flow rate, mgd

- 4 The geometric mean values should be calculated based on a statistically sufficient number of samples (generally not less than 5 samples equally spaced over a 30-day period). If any of the single sample limits are exceeded, the Regional Water Board ~~may require repeat sampling on a daily basis until the sample falls below the single sample limit~~ in order to determine the persistence of the exceedance. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean.
- 5 The Discharger must monitor the effluent for the presence of the 17 congeners of 2,3,7,8-TCDD listed below, once over the term of the permit, as early as practical (i.e., discharge occurs) . To determining compliance with effluent limits or for conduction of Reasonable Potential Analysis, this Order requires the Discharger to calculate and report dioxin-toxicity equivalencies (TEQs) using the following formula, where the toxicity equivalency factors (TEFs) and bioaccumulation equivalency factor (BEF)BEFs are as listed in Table below:

$$\text{Dioxin-TEQ} = \sum(C_x \times \text{TEF}_x \times \text{BEF}_x)$$

**Table: Toxicity Equivalency Factors and Bioaccumulation Equivalency Factors**

Dioxin or Furan Congener	Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-tetra CDD	1.0	1.0
1,2,3,7,8-penta CDD	1.0	0.9
1,2,3,4,7,8-hexa CDD	0.1	0.3
1,2,3,6,7,8-hexa CDD	0.1	0.1
1,2,3,7,8,9-hexa CDD	0.1	0.1
1,2,3,4,6,7,8-hepta CDD	0.01	0.05
Octa CDD	0.0001	0.01
2,3,7,8-tetra CDF	0.1	0.8
1,2,3,7,8-penta CDF	0.05	0.2

Dioxin or Furan Congener	Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
1,2,3,4,7,8-hexa CDF	0.1	0.08
1,2,3,6,7,8-hexa CDF	0.1	0.2
1,2,3,7,8,9-hexa CDF	0.1	0.6
2,3,4,6,7,8-hexa CDF	0.1	0.7
1,2,3,4,6,7,8-hepta CDF	0.01	0.01
1,2,3,4,7,8,9-hepta CDF	0.01	0.4
Octa CDF	0.0001	0.02

where:

$C_x$  = concentration of dioxin or furan congener x

$TEF_x$  = TEF for congener x

$BEF_x$  = BEF for congener x

6. Priority Pollutants as defined by California Toxics Rule (CTR) and included as Attachment H.
7. Acute and Chronic Toxicity monitoring requirements are described in section V of this Monitoring and Reporting Program.
8. Data collected as per the approved Special Study which complies with all data quality criteria for this NPDES permit, may be utilized to satisfy the requirements to collect effluent data.

**Table E-5. Effluent Monitoring – Off-Season**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Waste Flow	MGD	Estimated	1/Day During Discharge	2
pH	S.U.	Grab	1/Discharge <sup>1</sup>	2
BOD (5-day @ 20 Deg. C) <sup>3</sup>	mg/L	Grab	1/Discharge <sup>1</sup>	2
TSS <sup>3</sup>	mg/l	Grab	1/Discharge <sup>1</sup>	2
Oil and Grease <sup>3</sup>	mg/L	Grab	1/Discharge <sup>1</sup>	2
Turbidity	NTU	Grab	1/Discharge <sup>1</sup>	2
Temperature	°F	Grab	1/Discharge <sup>1</sup>	2
Chlorine, Total Residual <sup>3,4</sup>	µg/l	Grab	1/Discharge <sup>1</sup>	2
Fecal Coliform	mpn/100 ml	Grab	1/Discharge <sup>1</sup>	2
Total Coliform	mpn/100 ml	Grab	1/Discharge <sup>1</sup>	2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Enterococcus	mpn/100 ml	Grab	1/Discharge <sup>1</sup>	<sup>2</sup>
Ammonia <sup>3</sup>	mg/L	Grab	1/Discharge <sup>1</sup>	<sup>2</sup>
Arsenic, Total Recoverable <sup>3</sup>	µg/L	Grab	1/Discharge <sup>1</sup>	<sup>2</sup>
Cadmium, Total Recoverable <sup>3</sup>	µg/L	Grab	1/Discharge <sup>1</sup>	<sup>2</sup>
Copper, Total Recoverable <sup>3</sup>	µg/L	Grab	1/Discharge <sup>1</sup>	<sup>2</sup>
Nickel, Total Recoverable <sup>3</sup>	µg/L	Grab	1/Discharge <sup>1</sup>	<sup>2</sup>
Selenium, Total Recoverable <sup>3</sup>	µg/L	Grab	1/Discharge <sup>1</sup>	<sup>2</sup>
Silver, Total Recoverable <sup>3</sup>	µg/L	Grab	1/Discharge <sup>1</sup>	<sup>2</sup>
Thallium, Total Recoverable <sup>3</sup>	µg/L	Grab	1/Discharge <sup>1</sup>	<sup>2</sup>
Zinc, Total Recoverable <sup>3</sup>	µg/L	Grab	1/Discharge <sup>1</sup>	<sup>2</sup>

<sup>1</sup> Not more than one sample per week shall be collected.

<sup>2</sup> 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 G. Where no methods are specified for a given pollutant, the methods must be approved by this Regional Water Board or the State Water Board.

<sup>3</sup> The mass emission (lbs/day) for the discharges EFF-001 shall be calculated and reported using the limitation concentration and the actual flow rate measured at the time of discharge, using the formula:

$$m = 0.00834 \times C_e \times Q$$

where: m = mass discharge for a pollutant, lb/day  
 C<sub>e</sub> = limitation concentration for a pollutant, µg/L  
 Q = actual discharge flow rate, mgd

<sup>4</sup> If there is no analytical method with a detection level below the effluent limitation, then the most sensitive method must be used. If the sample result is non-detect, the Discharger shall report the results as less than the method detection level and provide the actual detection level achieved

## V. Special Study – Monitoring Requirements

1. The City of Redondo Beach's Work Plan for the Seaside Lagoon must be submitted to the Regional Water Board by February 7, 2011, for Executive Officer approval. The objective of the Work Plan is to refine data collection related to sampling location, timing and other logistics in order to have the best data set for arsenic, cadmium, copper,

nickel, selenium, silver, thallium, zinc and TSS to determine reasonable potential, intake credits, and other permit provisions. Elements of the Work Plan are to include:

- expanded monitoring program (weekly sampling at a minimum) for the metals listed above and TSS in the influent and effluent,
- expanded sampling methods to include grab and composite sampling,
- expanded sampling locations to include influent and effluent,
- examination of sampling and laboratory protocols to insure adequate QA/QC;
- examination of variability of TSS as applied to intake credits.

2. The first phase of the study should occur during the 2011 operating season.
3. In the Fall of 2011, City of Redondo Beach staff shall schedule a meeting with Regional Water Board staff to review and analyze the data. If the Regional Water Board staff determines that the data set is adequate, it will be used to re-evaluate reasonable potential, intake credits, etc. If the data set is not adequate, then a second season of monitoring (Summer 2012) shall be planned and executed.
4. If the data indicates the inclusion of new limitations for the metals is warranted, this Order will be reopened to include the applicable limits.

This permit includes a reopener for 1<sup>st</sup> Quarter of 2013 (March 31, 2013) at the latest, to address the results of the Special Study Monitoring.

## VI. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

### A. Definition of Toxicity

#### 1. 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. 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 TUC, where TUC = 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.

- a. This Order includes a chronic testing toxicity trigger defined as an exceedance of 1.0 TU<sub>c</sub> in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed, 1 TU<sub>c</sub> in a critical life stage test.)
3. Accelerated Monitoring. If either of the above requirements is not met, the Discharger shall conduct six additional tests over a 6-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 3 business days of the receipt of the result. If the additional tests indicate compliance with the toxicity limitation, the Discharger may resume regular testing. However, if the results of any two of the six accelerated tests are less than the stipulated requirements, then the Discharger shall begin a Toxicity Identification Evaluation (TIE). 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.

If the initial test and any of the additional six acute toxicity bioassay tests result in less than 60% survival, including the initial test, the Discharger shall immediately begin a TIE.

#### B. Acute Toxicity Effluent Monitoring Program

1. 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.
2. 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 silverside, *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).
3. 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.

4. 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.

C. Chronic Toxicity Effluent Monitoring Program

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

2. Test Species and Methods:

- a. The Discharger shall conduct critical life stage chronic toxicity tests on grab ~~100 % effluent samples 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/21-R-02-013) or USEPA's *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.~~
- b. 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.
- c. Re-screening is required every 36 months. The Discharger shall re-screen 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.
- d. 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.

D. 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 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 or laboratory water, as appropriate, as described in the manual. If the dilution water used is different from the culture water, a second control using culture water shall be used.

E. Accelerated Monitoring and Initial Investigation TRE Trigger

1. If toxicity exceeds the limitations (as defined in section V.A.1, above), then the Discharger shall immediately implement accelerated testing, as specified in section V.A.2, above. The Discharger shall ensure that they receive results of a failing toxicity test within 24 hours of the completion of the test and the additional tests shall begin within 3 business days of receipt of the results or at the first opportunity of discharge. ~~If the accelerated testing shows consistent toxicity, the Discharger shall immediately implement the Initial Investigation of the TRE Workplan.~~
2. If implementation of the Initial Investigation TRE Workplan indicates the source of toxicity (e.g., temporary plant upset, etc.), then the Discharger may discontinue the TIE.
3. The first step in the Initial Investigation TRE Workplan for downstream receiving water toxicity can be a toxicity test protocol designed to determine if the effluent from Discharge Point No. 001 causes or contributes to the measured downstream acute toxicity. If this first step TRE testing shows that the Discharge Point No. 001 effluent does not cause or contribute to downstream acute toxicity, using 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) then a report on this testing shall be submitted to the Regional Water Board and the Initial Investigation TRE will be considered to be completed. Routine testing in accordance with the MRP shall be continued thereafter.

F. Toxicity Reduction Evaluation (TRE)/Toxicity Identification Evaluation (TIE) Trigger

1. If the accelerated testing shows consistent toxicity as defined below:
  - a. Acute Toxicity:
    - i. If the results of any two of the six accelerated tests are less than 90% survival, or
    - ii. If the initial test and any of the additional six acute toxicity bioassay tests result in less than 70% survival.

b. Chronic Toxicity

- i. If the results of two of the six accelerated tests exceed 1.0 TU<sub>c</sub>,

then, the Discharger shall immediately implement the TRE as described below.

G. Steps in TRE and TIE Procedures

1. Following a TRE trigger, the Discharger shall initiate a TRE in accordance with the facility's Initial Investigation TRE workplan. At a minimum, the Discharger shall use USEPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance. The Discharger shall expeditiously develop a more detailed TRE workplan for submittal to the Executive Officer within 30 days of the trigger, which will 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;~~
  - c. Standards the Discharger will apply to consider the TRE complete and to return to normal sampling frequency; and,
  - d. A schedule for these actions.
2. The following is a stepwise approach in conducting the TRE:
  - a. Step 1 - 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 the selection and use of in-plant process chemicals;
  - c. Step 3 - If Steps 1 and 2 are unsuccessful, Step 3 implements a Toxicity Identification Evaluation (TIE) by employing all reasonable efforts and using currently available TIE methodologies. The Discharger shall use the USEPA acute and chronic manuals, 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. The objective of the TIE is to identify the substance or combination of substances causing the observed toxicity;
  - d. Step 4 - 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 implementation of these control measures 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 is no longer toxicity (or six consecutive chronic toxicity test results are less than or equal to 1.0 TU<sub>c</sub> or six consecutive acute toxicity test results are greater than 90% survival).

3. If a TRE/TIE is initiated prior to completion of the accelerated testing schedule required by this permit, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer.
4. ~~Toxicity tests conducted as part of a TRE/TIE may also be used for compliance determination, if appropriate.~~
5. 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 Regional Water Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

#### H. 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.

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.

I. Reporting

1. 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.
2. 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.
  - a. The full report shall be submitted on or before the end of the month in which the SMR is submitted.
  - b. 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 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. NOEC value(s) in percent effluent;
  - f.  $IC_{15}$ ,  $IC_{25}$ ,  $IC_{40}$  and  $IC_{50}$  values in percent effluent;
  - g.  $TU_c$  values  $\left( TU_c = \frac{100}{NOEC} \right)$ ;
  - h. Mean percent mortality (+standard deviation) after 96 hours in 100% effluent (if applicable);

- i. NOEC and LOEC values for reference toxicant test(s);
  - j. IC25 value for reference toxicant test(s);
  - k. Any applicable charts; and
  - l. 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.

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.~~

#### **VII. LAND DISCHARGE MONITORING REQUIREMENTS**

Not Applicable

#### **VIII. RECLAMATION MONITORING REQUIREMENTS**

Not Applicable

#### **IX. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER**

##### **A. Monitoring Location – RSW-001**

1. The Discharger shall monitor King Harbor at RSW-001 as follows:

**Table E-7. Receiving Water Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency <sup>6</sup>	Required Analytical Test Method
pH	s.u.	Grab	1/Year	1,2
Hardness (as CaCO <sub>3</sub> )	mg/L	Grab	1/Year	1,2
Arsenic, Total Recoverable	µg/L	Grab	1/Month <sup>7</sup>	1
Cadmium, Total Recoverable	µg/L	Grab	1/Month <sup>7</sup>	1
Copper, Total Recoverable	µg/L	Grab	1/Month <sup>7</sup>	1
Nickel, Total Recoverable	µg/L	Grab	1/Month <sup>7</sup>	1
Selenium, Total Recoverable	µg/L	Grab	1/Month <sup>7</sup>	1
Silver, Total Recoverable	µg/L	Grab	1/Month <sup>7</sup>	1
Thallium, Total Recoverable	µg/L	Grab	1/Month <sup>7</sup>	1
Zinc, Total Recoverable	µg/L	Grab	1/Month <sup>7</sup>	1
Salinity	g/L	Grab	1/Year	1,2
TSS	mg/L	Grab	1/Week <sup>3,7</sup>	1
Turbidity	NTU	Grab	1/Month	1
Temperature	°F	Grab	1/Month	1,2
TCDD – Equivalents <sup>4</sup>	ng/L	Grab	1/Permit Term	1
Remaining Priority Pollutants <sup>5</sup>	µg/L	Grab	1/Year	1,2

<sup>1</sup> 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 G. Where no methods are specified for a given pollutant, the methods must be approved by this Regional Water Board or the State Water Board.

<sup>2</sup> Receiving water pH, salinity, and temperature must be analyzed at the same time the samples are collected for Priority Pollutants analysis and effluent temperature is measured.

<sup>3</sup> During off season discharge, TSS is to be monitored at a frequency of 1/discharge, with a maximum frequency of 1/week during the operating season.

<sup>4</sup> The Discharger must monitor the effluent and receiving water for the presence of the 17 congeners of 2,3,7,8-TCDD listed below, once over the term of the permit, as early as practical (i.e., discharge occurs) . To determining compliance with effluent limits or for

conduction of Reasonable Potential Analysis, this Order requires the Discharger to calculate and report dioxin-toxicity equivalencies (TEQs) using the following formula, where the toxicity equivalency factors (TEFs) and bioaccumulation equivalency factor (BEF) are as listed in Table below:

$$\text{Dioxin-TEQ} = \sum(C_x \times \text{TEF}_x \times \text{BEF}_x)$$

**Table: Toxicity Equivalency Factors and Bioaccumulation Equivalency Factors**

Dioxin or Furan Congener	Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-tetra CDD	1.0	1.0
1,2,3,7,8-penta CDD	1.0	0.9
1,2,3,4,7,8-hexa CDD	0.1	0.3
1,2,3,6,7,8-hexa CDD	0.1	0.1
1,2,3,7,8,9-hexa CDD	0.1	0.1
1,2,3,4,6,7,8-hepta CDD	0.01	0.05
Octa CDD	0.0001	0.01
2,3,7,8-tetra CDF	0.1	0.8
1,2,3,7,8-penta CDF	0.05	0.2
1,2,3,4,7,8-hexa CDF	0.1	0.08
1,2,3,6,7,8-hexa CDF	0.1	0.2
1,2,3,7,8,9-hexa CDF	0.1	0.6
2,3,4,6,7,8-hexa CDF	0.1	0.7
1,2,3,4,6,7,8-hepta CDF	0.01	0.01
1,2,3,4,7,8,9-hepta CDF	0.01	0.4
Octa CDF	0.0001	0.02

where:

$C_x$  = concentration of dioxin or furan congener x  
 $\text{TEF}_x$  = TEF for congener x  
 $\text{BEF}_x$  = BEF for congener x

- 5 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 H.
- 6 The receiving water sample shall be collected at approximately the same time as the effluent sample

7. Data collected as per the approved Special Study which complies with all data quality criteria for this NPDES permit, may be utilized to satisfy the requirements to collect receiving water data.

## **X. OTHER MONITORING REQUIREMENTS**

### **A. BMPP Status and Effectiveness Report**

1. As required under Special Provision VI.C.3 of this Order, the Discharger shall submit an updated BMPP 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 BMPP required under Special Provision VI.C.3 of this Order. The BMPP shall be reviewed at a minimum once per year and updated as needed to ensure all actual or potential sources of pollutants in wastewater discharged from the facility are addressed in the BMPP. All changes or revisions to the BMPP will be summarized in the annual report required under Attachment E, Monitoring and Reporting, section X.D.

## **XI. 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. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.
5. The Discharger shall report the results of acute and chronic toxicity testing, TRE and TIE as required in the Attachment E, Monitoring and Reporting, section V.H.

### **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 SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order according to the following schedule:

**Table E-8. Monitoring Periods and Reporting Schedule**

Reporting Period	Report Due
Start of Operation – June 30	August 1
July 1 – July 31	September 1
August 1 – End of Operation	October 1
Annual Summary Report	March 1 of each year

Monitoring reports for off-season discharges shall be submitted 45 days after sampling. 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. 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 RL, 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.
4. Compliance Determination. Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A 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).
  5. Multiple Sample Data. When determining compliance with an AMEL 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.
  6. 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. 4<sup>th</sup> 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:~~

<b>STANDARD MAIL</b>	<b>FEDEX/UPS/ OTHER PRIVATE CARRIERS</b>
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, 15 <sup>th</sup> Floor Sacramento, CA 95814

3. 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. The Discharger shall report the results of any toxicity testing, TRE/TIE, or BMPP, required by Special Provisions in Sections VI.C.2.a and b and VI.C.3.a of the Order. The Discharger shall submit reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date.
2. 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
  - b. Updated BMPP

3. By March 1 of each year, the Discharger shall submit an annual 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 (See section VI.A.2.q of the Order).~~
  - e. A report on the status of the implementation and the effectiveness of the BMPP.
4. As discussed in section VI.A.2.q of the Order, 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.
5. If the Discharger wishes to participate in a coordinated receiving water, biomonitoring, and sediment monitoring program with other dischargers to the King Harbor, then, the Discharger shall submit a report seeking approval of the Regional Water Board.

**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**

<b>WDID</b>	4B190143001
<b>Discharger</b>	City of Redondo Beach
<b>Name of Facility</b>	Seaside Lagoon
<b>Facility Address</b>	200 Portofino Way
	Redondo Beach, CA 90277
	Los Angeles County
<b>Facility Contact, Title and Phone</b>	Maggie Healy Acting Recreation & Community Services Director Tel.: (310)-318-0671
<b>Authorized Person to Sign and Submit Reports</b>	Director of Recreation & Community Service Department
<b>Mailing Address</b>	320 Knob Hill, Redondo Beach, CA 90277
<b>Billing Address</b>	SAME
<b>Type of Facility</b>	Swimming Lagoon
<b>Major or Minor Facility</b>	Minor
<b>Threat to Water Quality</b>	3
<b>Complexity</b>	C
<b>Pretreatment Program</b>	N
<b>Reclamation Requirements</b>	N/A
<b>Facility Permitted Flow</b>	N/A
<b>Facility Design Flow</b>	2.3 million gallons per day (MGD)/Annual average = 0.63 MGD
<b>Watershed</b>	Santa Monica Bay Watershed Management Area
<b>Receiving Water</b>	King Harbor
<b>Receiving Water Type</b>	Enclosed Bay

- A. The City of Redondo Beach (hereinafter Discharger) is the owner and operator of Seaside Lagoon (hereinafter Facility), a city park used for recreational activities.

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 to King Harbor, a water of the United States, and is currently regulated by Order R4-2005-0016 which was adopted on March 3, 2005, and expires on February 10, 2010. The terms and conditions of the current Order as per 40 CFR Part 122.6 remain in effect until new Waste Discharge Requirements (WDRs) and a National Pollutant Discharge Elimination System (NPDES) permit are adopted.
- C. The Discharger filed a report of waste discharge (ROWD) and submitted an application for renewal of its WDRs and NPDES Permit on August 13, 2009. Supplemental information was requested on October 21, 2009, and received on October 22, 2009.

## II. FACILITY DESCRIPTION

The Facility is a city park that includes a 1.4 million gallon, man-made, saltwater swimming lagoon. Other features include artificial beaches, play areas, and a snack bar (See Photos in Attachment J). Water for the Lagoon comes from the Redondo Beach Generating Station (RBGS or Power Plant) where the seawater is used to cool turbines. The Power Plant is located at 1100 Harbor Drive, Redondo Beach. RBGS currently operates four steam generating units (Units 5 – 8) in the city of Redondo Beach. The RBGS is owned and operated by AES Redondo Beach, LLC. Four other steam units (Units 1-4) have been retired but remain at the facility. The Power Plant is a "peak-demand" generation facility and as such operates intermittently. Cooling water for Units 5 and 6 is withdrawn through two submerged conduits extending into King Harbor and the Redondo Beach Marina. Cooling water for Units 7 and 8 is withdrawn through a submerged conduit that extends approximately 3000 feet from the facility and is located at the mouth of King Harbor.

When operated at design capacity, the AES Power Plant discharges up to 898 MGD of once-through non-contact cooling water through two discharge outfalls (one discharges to Pacific Ocean and the second one discharges to King Harbor). The discharges are regulated under separate WDRs contained in Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) Order No. 00-085. Approximately 3,200 gallons per minute (GPM) over a 12-hour operating day, which is equivalent to 2.3 MGD (approximately 0.26 % of total discharge from RBGS), of Power Plant once-through cooling water (that discharges to King Harbor) is directed to the Seaside Lagoon.

Seaside Lagoon is open to the public for swimming from Memorial Day through Labor Day. Discharges mainly occur during this period, however, the Discharger occasionally allows the use of the Facility for social functions outside of the normal operating period which would also result in discharges. The City reports approximately 150,000 visitors annually. Based on an estimated average admission price \$4.00 per visitor, Seaside Lagoon generates

approximately \$600,000 annually for the City of Redondo Beach. Costs for operation of the facility were not reported by the City in their comment letters.

The City also operates an ice rink at the Facility location, in a sandy area adjacent to the swimming lagoon. Following seasonal use, water from the ice rink is allowed to evaporate and percolate into the sand. The water from the ice rink is not discharged and it is not covered by this Order.

#### A. Description of Wastewater

The lagoon is constructed of a rock revetment, with underlying sand. A 140 feet by 30 feet concrete structure was constructed adjacent to the revetment to house the water distribution system and provide a platform for installing recreational equipment (slides) used to enter the lagoon. The revetment and sand surfaces are pervious and therefore a constant inflow of water is needed to maintain the designed water surface elevation.

The water supply system is equipped with both chlorination and dechlorination facilities. The chlorination system consists of one, 1,000-gallon storage tank, which holds 17% sodium hypochlorite; dual chemical feed pumps with manual controls; and related piping. The dechlorination system consists of one, 1,000-gallon storage tank which holds 38% bisulfite; dual chemical feed pumps with manual controls; and related piping. The dechlorination piping terminates at the overflow structures at which point the bisulfite solution is added to the effluent. Bisulfite is added at all three overflow structures.

#### B. Discharge Points and Receiving Waters

The Lagoon influent is the Power Plant once through non-contact cooling water outfall conduit that discharges to King Harbor when the Power plant is operating. When the Power Plant is not in operation, Lagoon influent is the tidal backwater from the discharge end of the Power Plant outfall. Thus the King Harbor seawater serves as the source water for the Lagoon influent and the receiving water for Lagoon effluent.

Up to 2.3 MGD of dechlorinated wastewater is discharged into the King Harbor, a water of the United States, through Discharge Point No. 001, located at latitude 33°50'38" North and longitude 118°23'41" West. The effluent leaves the lagoon through three overflow structures located along the northwest edge of the Facility. The water then flows by gravity to a discharge manhole, and finally through a 60 feet long conduit into Inner King Harbor at the edge of the revetment. Samples for compliance monitoring are taken from the discharge manhole.

The existing sample collection location, is tidally influenced and therefore samples collected in the manhole may not be representative of the discharge. Sampling should be conducted when there is a discharge and during low tide conditions based on data provided by the National Oceanic and Atmospheric Administration's (NOAA), Station No. 9410840 (Santa Monica, CA). During high tide conditions, the sampling vault would be almost completely inundated with sea water and the effluent pipe would be completely submerged. Therefore, the grab samples during high tide may not be representative of the effluent.

C. Three Time Schedule Orders (TSOs) (Order Nos.: R4-2007-0024, R4-2008-0002, and R4-2010-0066) were issued at the request of the City of Redondo Beach (City or Discharger) to provide time for the Facility to come into full compliance with final effluent limitations or to plan and implement an alternative use for the recreation area. The first TSO (Order R4-2007-0024) prescribed interim effluent limitations for Total Suspended Solids (TSS) and biological oxygen demand (BOD), required the Discharger to conduct a study to determine the cause of TSS exceedances, and find solutions to achieve compliance with the final TSS effluent limitations prescribed for Seaside Lagoon. The City conducted monitoring and submitted the Source Identification Report (SIR) as required by the TSO. As part of the SIR study, a Monitoring Plan was developed and implemented between May 28, 2007 and September 7, 2007. The Monitoring Plan examined not only the condition of the effluent but also the influent, interior lagoon, and harbor water quality. Samples were taken at a total of seven locations. The Executive Summary of the SIR states "The conclusion of this Source Identification Study is that the Lagoon influent is the source of the majority of the TSS in the Lagoon effluent". The SIR study data indicated that the Facility's contributions of TSS were minimal. The study also found that similar concentrations of TSS existed in the influent and in King Harbor (receiving water). Based on the SIR data obtained in 2007, the City requested and was granted interim effluent limitations for TSS in the second TSO (R4-2008-0002). The TSS interim limits were 60 mg/L for monthly average and 120 mg/L for daily maximum.

On January 19, 2010, Redondo Beach City Council members and staff met with the Regional Board Executive Officer and staff and requested further TSS relief based on the SIR. A follow-up letter submitted by the City requested that the TSS limits be set at 60 mg/L for monthly average and 120 mg/L for daily maximum. A third TSO (R4-2010-0066) was issued at the request of the City and the interim limits included for TSS are same as those included in the previous TSO.

The table below is a summary of the three TSOs:

Time Schedule Orders					
TSO Order No.	Effective Date	Expiration Date	Interim Limits		
			TSS, mg/L		BOD, mg/L
			Monthly Average	Daily Maximum	Monthly Average/ Daily Maximum
R4-2007-0024 *	May 1, 2007	January 31, 2008	200	250	100/100
R4-2008-0002 *	February 1, 2008	February 28, 2010	60	120	---
R4-2010-0066 **	May 10, 2010	September 10, 2013	60	120	---

\* TSO has expired  
\*\* TSO currently in-effect.

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

Effluent limitations contained in the existing Order for discharges from Discharge Point No. 001. (Monitoring Location EFF-001) and representative monitoring data from the term of the previous Order are as follows:

**Table F-2. Historic Effluent Limitations and Monitoring Data**

Parameter	Units	Effluent Limitation		Monitoring Data (From May 30, 2005 to August 31, 2009)		
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Flow	MGD	--	2.3	--	--	2.3
pH	s.u.	6.5-8.5 <sup>1</sup>		5.95 min – 8.05 max		
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L	20	30	95	--	97.7
BOD Interim Limitations in TSO R4-2007-0024 <sup>2</sup>	mg/L	100 <sup>2</sup>	100 <sup>2</sup>	< 2 <sup>2</sup>	--	2 <sup>2</sup>
Total Suspended Solids (TSS)	mg/L	50	75	184	--	286
TSS Interim Limitations in TSO R4-2007-0024 <sup>2</sup>	mg/L	200 <sup>2</sup>	250 <sup>2</sup>	41 <sup>2</sup>	--	62 <sup>2</sup>
TSS Interim Limitations in TSO R4-2008-0002 <sup>3</sup>	mg/L	60 <sup>3</sup>	120 <sup>3</sup>	86 <sup>3</sup>	--	86 <sup>3</sup>
Antimony	mg/L	--	--	--	--	4.45
Arsenic	mg/L	--	--	--	--	0.73
Cadmium	mg/L	--	--	--	--	0.04
Copper	mg/L	--	--	--	--	0.088
Nickel	mg/L	--	--	--	--	0.1
Selenium	mg/L	--	--	--	--	3.21
Silver	mg/L	--	--	--	--	1.23
Thallium	mg/L	--	--	--	--	3.17
Zinc	mg/L	--	--	--	--	0.114
Oil and Grease	mg/L	10	15	162	--	318
Turbidity	NTU	50	75	7	--	7
Temperature	°F	--	86 <sup>4</sup>	--	--	80.4
Chlorine, Total Residual	µg/L	2	8	2.1	--	2.1

Parameter	Units	Effluent Limitation		Monitoring Data (From May 30, 2005 to August 31, 2009)		
		Average Monthly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Fecal Coliform	MPN/100 mL	200 <sup>5</sup>	400	180 <sup>6</sup>	--	464
Total Coliform	MPN/100 mL	1,000 <sup>7</sup>	10,000	2,789	--	6,867
Enterococcus	MPN/100 mL	35 <sup>8</sup>	104	16	--	457
Ammonia	mg/L	1.02 <sup>9</sup>	2.05 <sup>9</sup>	0.1	--	0.1
Acute Toxicity	% Survival	10		90% <sup>11</sup>		

<sup>1</sup> pH must be between 6.5 and 8.5 at all times.

<sup>2</sup> Interim limitations effective May 1, 2007 through January 31, 2008. Monitoring data reflects this time period.

<sup>3</sup> Interim limitations effective February 1, 2008 through February 28, 2010. Monitoring data reflects this time period.

<sup>4</sup> Temperature must not exceed 86 and the maximum temperature of the discharge must not exceed the natural receiving water temperature by more than 20 °F

<sup>5</sup> The fecal coliform density for any 30-day period, shall not exceed a geometric mean of 200 per 100 ml nor shall more than 10 percent of the total samples during any 60-day period exceed 400 per 100ml.

<sup>6</sup> Highest 30 day geometric mean.

<sup>7</sup> The geometric mean density of total coliform organisms shall be less than 1,000 per 100 ml (10 per ml): provided that not more than 20 percent of the samples, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml). Also, the total coliform density shall not exceed 1000 per 100 ml if the ratio of fecal to total coliform exceeds 0.1.

<sup>8</sup> The geometric mean enterococcus density of the discharge shall not exceed 35 organisms per 100 ml for a 30-day period or 12 organisms per 100 ml for a six-month period.

<sup>9</sup> The Discharger must comply with the ammonia water quality objectives in the Basin Plan Table 3-2 (for one hour average concentration limit) and Table 3-4 (for four day average concentration limit). This effluent limitation will stay in effect until the ammonia objectives revised on March 4, 2004, by the Regional Water Board with the adoption of Resolution No. 2004-022, *Amendment to the Water Quality Control 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 Beneficial Use Designations for Protection of Aquatic Life* are approved by the State Board, the Office of Administrative Law, and the United States Environmental Protection Agency (USEPA), to become effective.

<sup>10</sup> Average survival in effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test producing less than 70% survival.

<sup>11</sup> Lowest percent survival of annual monitoring 2005 through 2008.

### E. Compliance Summary

On February 13, 2007, the Regional Water Board and the Discharger met to discuss the problems the Facility was having meeting the TSS and BOD limitations and possible solutions. On April 3, 2007, the City Council held a workshop to review the issue with the Regional Water Board Executive Officer. Subsequently, the Regional Water Board issued a Time Schedule Order (TSO) No. R4-2007-0024, which temporarily modified the TSS and BOD limits and directed the City to conduct a source identification study and submit a Source Identification Report (SIR) to the Regional Water Board. The TSO expired January 31, 2008.

The SIR found that the Facility contributed approximately 6% of the TSS to the effluent concentration. On January 15, 2008, the Regional Water Board issued a second TSO (No. R4-2008-0002) that established interim TSS limitations at 60 mg/L (monthly average) and 120 mg/L (daily maximum) and required the Facility to submit a workplan to *"determine the source of the TSS, treat the discharge to meet the final effluent limits, divert the discharge, or eliminate the discharge from Seaside Lagoon"*. The TSO expired on February 28, 2010. In the workplan submitted to the Regional Water Board on July 31, 2008, the Facility indicated that it would pursue a closed water circulation and filtration system. However, in the ROWD, received August 17, 2009, the Facility indicated that it could not obtain funding for the proposed reconstruction.

The Discharger and Lagoon users requested TSS relief for an additional period in January 2010. On May 5, 2010, the Regional Water Board issued a third TSO (Order No. R4-2010-0066). The interim limitations in the third TSO for TSS are the same as the limits in the second expired TSO. The third TSO is scheduled to expire on September 10, 2013.

Data submitted to the Regional Water Board indicate that the Discharger has reported monitoring results at concentrations greater than existing permit limitations as outlined in the table below:

**Table F-3. Summary of Compliance History<sup>1</sup>**

Date	Monitoring Period	Violation Type	Pollutant	Reported Value	Permit Limitation	Units
8/15/2005	August 2005	Instant. Maximum	pH	6.13	6.5-8.5	s.u..
8/15/2005	August 2005	Daily Maximum	BOD	75	30	mg/l
8/31/2005	August 2005	Average Monthly	BOD	75	20	mg/l
9/26/2005	September 2005	Daily Maximum	TSS	80	75	mg/l
9/26/2005	September 2005	Daily Maximum	Fecal Coliform	464	400	mpn/100ml
10/3/2005	October 2005	Instant. Maximum	pH	5.95	6.5-8.5	S.U.
10/3/2005	October 2005	Daily Maximum	BOD	40	30	mg/l

Date	Monitoring Period	Violation Type	Pollutant	Reported Value	Permit Limitation	Units
10/5/2005 - 10/31/2005	October 2005	30-Day Geometric Mean	Total Coliform	1430-1741	1000	mpn/100ml
6/5/2006	June 2006	Daily Maximum	TSS	112	75	mg/l
6/30/2006	June 2006	Average Monthly	TSS	112	50	mg/l
7/3/2006	July 2006	Daily Maximum	Enterococcus	183	104	mpn/100ml
7/18/2006	July 2006	Daily Maximum	TSS	96	75	mg/l
7/24/2006	July 2006	Daily Maximum	TSS	81	75	mg/l
<del>8/7/2006</del>	<del>August 2006</del>	<del>Daily Maximum</del>	<del>TSS</del>	<del>286</del>	<del>75</del>	<del>mg/l</del>
8/28/2006	August 2006	Instant. Maximum	pH	6.25	6.5-8.5	S.U.
8/28/2006	August 2006	Daily Maximum	TSS	81	75	mg/l
8/28/2006	August 2006	Daily Maximum	BOD	75.5	30	mg/l
8/31/2006	August 2006	Average Monthly	TSS	184	50	mg/l
8/31/2006	August 2006	Average Monthly	BOD	76	20	mg/l
9/11/2006	September 2006	Daily Maximum	TSS	76	75	mg/l
9/11/2006	September 2006	Daily Maximum	BOD	71.9	30	mg/l
9/25/2006	September 2006	Daily Maximum	Total Residual Chlorine	1000	8	µg/l
9/25/2006	September 2006	Daily Maximum	TSS	76	75	mg/l
9/25/2006	September 2006	Daily Maximum	BOD	72.1	30	mg/l
9/30/2006	September 2006	Average Monthly	BOD	72	20	mg/l
10/2/2006	October 2006	Daily Maximum	TSS	86	75	mg/l
10/2/2006	October 2006	Daily Maximum	BOD	92.4	30	mg/l

Date	Monitoring Period	Violation Type	Pollutant	Reported Value	Permit Limitation	Units
10/9/2006	October 2006	Daily Maximum	TSS	146	75	mg/l
10/9/2006	October 2006	Daily Maximum	Oil & Grease	318	15	mg/l
10/9/2006	October 2006	Daily Maximum	BOD	97.7	30	mg/l
10/31/2006	October 2006	Average Monthly	TSS	116	50	mg/l
10/31/2006	October 2006	Average Monthly	BOD	95	20	mg/l
10/31/2006	October 2006	Average Monthly	Oil & Grease	162	10	mg/l
8/28/2007	August 2007	Daily Maximum	Total Residual Chlorine	1500	8	µg/l
9/24/2007	September 2007	Daily Maximum	Total Residual Chlorine	710	8	µg/l
9/24/2007	September 2007	Daily Maximum	Enterococcus	457	104	mpn/100ml
10/6/2007	October 2007	Daily Maximum	Total Residual Chlorine	2100	8	µg/l
10/31/2007	October 2007	Average Monthly	Total Residual Chlorine	2100	2	µg/l
7/28/2008	July 2008	Daily Maximum	Total Residual Chlorine	200	8	µg/l
5/31/2009	May 2009	Monthly Average	TSS	86	60	mg/L

<sup>1</sup> Compliance with TSS effluent limitations during the period of May 1, 2007 through February 28, 2010 is based on interim effluent limitations in TSOs R4-2007-0024 and R4-2008-0002. Compliance with BOD effluent limitations during the period of May 1, 2007 through January 31, 2008 is based on interim effluent limitations in TSO R4-2007-0024.

A Notice of Violation letter was faxed to the Discharger on February 17, 2010. The enforcement action case was heard by a Hearing Panel of the Regional Water Board and their recommendations were affirmed by the full Regional Water Board on September 2, 2010. A Directive for Administrative Civil Liability (ACL) for amended effluent violations was sent to the City on September 15, 2010.

F. Planned Changes

Not Applicable

**III. APPLICABLE PLANS, POLICIES, AND REGULATIONS**

The requirements contained in the proposed 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 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 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. King Harbor is a marine water with associated salinity, therefore the municipal or domestic water supply beneficial use does not apply. Beneficial uses applicable to King Harbor are as follows:

**Table F-4. Basin Plan Beneficial Uses**

Discharge Point No.	Receiving Water Name	Beneficial Use(s)
001	King Harbor	<u>Existing:</u> Industrial service supply (IND), navigation (NAV), water contact recreation (REC-1), non-contact water recreation (REC-2), commercial and sport fishing (COMM), , marine habitat (MAR), wildlife habitat (WILD), and rare, threatened, or endangered species (RARE)

Requirements of this Order implement the Basin Plan.

2. Thermal Plan. The State 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. 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 effluent temperature limit of 86°F is protective of aquatic organisms.
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 15, 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 proposed objectives are a 4-day average concentration of unionized ammonia of 0.035 mg/L, and a one-hour average concentration of unionized ammonia of 0.233 mg/L. The proposed objectives are fixed concentrations of unionized ammonia, independent of pH, temperature, or salinity. The proposed amendment includes an implementation procedure to convert un-ionized ammonia objectives to total ammonia effluent limits. The proposed 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 proposed amendment revises the implementation procedure for determining saltwater, brackish or freshwater conditions, to be consistent with the proposed objectives. The proposed objectives will 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. Enclosed Bays and Estuaries Policy. The Water Quality Control Policy for the Enclosed Bays and Estuaries of California (Enclosed Bay and Estuaries Policy), adopted by the State Water Board as Resolution No. 95-84 on November 16, 1995, states that:

*"It is the policy of the State Board that the discharge of municipal wastewaters and industrial process waters (exclusive of cooling water discharges) to enclosed bays and estuaries, other than the San Francisco Bay-Delta system, shall be phased out at the earliest practicable date. Exceptions to this provision may be granted by a Regional Board only when the Regional Board finds that the wastewater in question would consistently be treated and discharged in such a manner that it would enhance the quality of receiving waters above that which would occur in the absence of the discharge."*

While the Facility discharges into King Harbor, within the enclosed bay, the swimming lagoon effluent is comprised primarily of dechlorinated, non-contact cooling water, and therefore is exclusive of the policy. Nonetheless, this Order contains provisions necessary to protect all beneficial uses of the receiving water.

5. 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.
6. 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.

7. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 CFR § 131.21, 65 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.
8. 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.
9. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations<sup>1</sup> 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.

#### D. 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 total maximum daily loads (TMDLs) that will specify waste load allocations (WLAs) for point sources and load allocations (LAs) for non-point sources, as appropriate.

On June 28, 2007 USEPA gave final approval to California's 2006 section 303(d) List of Water Quality Limited Segments. 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.

King Harbor is not included on the 2006 303(d) List of Water Quality Limited Segments. No TMDLs are scheduled and no conditions in the proposed Order are based on TMDLs.

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<sup>1</sup> All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

E. Other Plans, Policies and Regulations  
Not Applicable

#### 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 list of pollutants of concern is based on constituents that are regulated in the Basin Plan or CTR and were detected in the effluent and/or were regulated in Order No. R4-2005-0016. Based on these criteria, the following are pollutants of concern TSS, turbidity, ammonia, pH, BOD, and oil and grease. Because the water is heated from the AES Power Plant, temperature is also a pollutant of concern. Furthermore, treatment at the facility consists of chlorination/dechlorination, thus total residual chlorine is a pollutant of concern.

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. However, 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 limitations on a case-by-case basis limitations based on mass are infeasible because the mass or pollutant cannot be related to a measure of production. Since these conditions do not apply, this Order includes new mass-based limitations.

##### A. Discharge Prohibitions

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

##### 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. The previous Order discussed rationale based on effluent limitations from a preceding Order and similar facilities and implementation of BPJ to include the equivalent of technology-based effluent limitations. In addition, as discussed in section VII.B.3, this Order includes a requirement to develop a Best Management Practices Plan (BMPP). Furthermore, effluent limitations for turbidity, BOD, oil and grease, TSS, and total residual chlorine have been carried over as technology-based effluent limitations from the existing Order (No. R4-2005-0016) as explained below:

- a. Turbidity. Order No. R4-2005-0016 contains effluent limitations for turbidity equal to 50 NTU (monthly average) and 75 NTU (daily maximum). Turbidity is a Basin

Plan constituent with a narrative objective. The objective has been interpreted as a numerical value in the current Order. The numerical criteria have been included in this Order as the constituent continues to be a contaminant of concern.

- b. BOD. Order No. R4-2005-0016 contains effluent limitations for BOD equal to 20 mg/L (monthly average) and 30 mg/L (daily maximum). The constituent continues to be a contaminant of concern. As a result, the BOD limitations from Order No. R4-2005-0016 are carried over to this Order.
- c. TSS.

The Basin Plan includes a narrative water quality objective for solids, suspended, or settleable materials. The objective states "Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses" This narrative objective was translated into a numerical effluent limit in the City's prior permit.

In Order No. 99-057, the TSS limits were prescribed at 50 mg/L and 150 mg/L for monthly average and daily maximum, respectively. In early 2000, Regional Board staff reviewed the TSS limits in the City's permit. Since the Basin Plan does not contain a numeric objective for TSS, Regional Board staff looked to the U.S. Environmental Protection Agency's (USEPA) Quality Criteria for Water (known as the "Gold Book") as guidance. The Gold Book contains criteria for solids (suspended and settleable) and turbidity. In the Gold Book, USEPA notes that "In a study downstream from the discharge of a rock quarry where inert suspended solids were increased to 80 mg/L, the density of macroinvertebrates decreased by 60 percent...".

Since the Gold Book indicates that TSS at 80 mg/L causes impairment to aquatic life, staff utilized its best professional judgment to recommend 75 mg/L as the daily maximum limit for TSS. As they were renewed, several other individual industrial permits were also changed to reflect the new TSS limit of 75 mg/L. The 50 mg/L monthly average limit for TSS was retained in the City's permit.

Thus, the TSS limits in Order No. R4-2005-0016 were based on the TSS limits in the previous permit (Order No. 99-057) and best professional judgment (BPJ). In Order No. R4-2005-0016, the monthly average TSS limit of 50 mg/L was based on Order No. 99-057 and the daily maximum TSS limit of 75 mg/L was based on BPJ. In the Fact Sheet associated with Order No. R4-2005-0016, Regional Board staff inadvertently omitted the BPJ rationale for the TSS daily maximum limit of 75 mg/L.

Order No. R4-2005-0016 contains effluent limitations for TSS equal to 50 mg/L (monthly average) and 75 mg/L (daily maximum). As discussed in section II.D of this Fact Sheet, the Facility has requested relaxed effluent limitations for TSS, based on the presence of TSS in the influent, as documented in the SIR. The intake water and the receiving water for effluent discharge for Seaside Lagoon is the King Harbor water. Based on 40 CFR Part 122.45 (g) the Discharger qualifies for intake credit for TSS, therefore, intake credits is included in the current Order.

For the SIR study, the Facility measured TSS in samples collected from influent, lagoon water, effluent, and two locations within King Harbor. The average of TSS concentrations for each sample location is provided in Table F-5.

**Table F-5. Average TSS Concentrations (mg/L) Within Seaside Lagoon and King Harbor<sup>1</sup>**

Sample Location No.	Sample Location Description	Average TSS Concentration (mg/L)
1	Lagoon Influent Pump Discharge (Directly from Power Plant)	39.8
2A	Lagoon Overflow Pipe Structure A	41
2B	Lagoon Overflow Pipe Structure B	42
2C	Lagoon Overflow Pipe Structure C	43
3A	Lagoon Effluent Pipe	42.4
4	King Harbor Near Power Plant Outfall	45
5	Harbor Near Lagoon Outfall	48

<sup>1</sup> Source: *Seaside Lagoon TSO Source Identification Report*. Submitted to Los Angeles Regional Water Quality Control Board on October 1, 2007. Prepared by CDM

The results indicate that the average TSS concentration in the effluent sample (3A) was slightly higher (6 percent) than the average TSS concentration in the influent (1). The average effluent TSS concentration was slightly lower than averages for both King Harbor locations 4 and 5, by 6 percent and 12 percent, respectively.

Prior to the SIR study, the Facility collected samples for compliance monitoring at the effluent vault, where tidal action may have introduced additional solids to the effluent samples. As reported in the SIR, the historical average TSS from samples collected within the vault was 51 mg/L, compared to 42.4 mg/L when collected two to three feet upstream within the effluent pipe during the SIR study.

- d. Oil and Grease. Order No. R4-2005-0016 contains effluent limitations for oil and grease equal to 10 mg/L (monthly average) and 15 mg/L (daily maximum). Oil and grease has been detected in the effluent and remains a pollutant of concern. For this reason, oil and grease limitations from Order No. R4-2005-0016 are carried over to this Order.
- e. Total Residual Chlorine. Order No. R4-2005-0016 contains effluent limitations for total residual chlorine equal to 2 µg/L (monthly average) and 8 µg/L (daily maximum). The Facility treats lagoon water with sodium hypochlorite. As discussed in Section II.D of this Fact Sheet, total residual chlorine has been

detected in the effluent. The total residual chlorine limitations from Order No. R4-2005-0016 are carried over as technology based effluent limitations to this Order.

**Table F-6. Summary of Technology-based Effluent Limitations**

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Total Suspended Solids (TSS)	mg/L	50 <sup>2</sup>	75 <sup>2</sup>
	lbs/day <sup>1</sup>	1,150	1,440
Biochemical Oxygen Demand (BOD) (5-day @ 20 Deg. C)	mg/L	20	30
	lbs/day <sup>1</sup>	384	575
Oil and Grease	mg/L	10	15
	lbs/day <sup>1</sup>	192	288
Turbidity	NTU	50	75
Chlorine, Total Residual	µg/L	2	8
	lbs/day <sup>1</sup>	0.038	0.15

- 1 Mass based effluent limitations calculated using the following formula based on an average daily flow of 2.3 MGD: (lbs/day) = 2.3 MGD x 8.34 x effluent limitation (mg/L).
- 2 Compliance based on the numeric criteria or on the intake water credit, whichever is higher.

### 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 (WQS), 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 Seaside Lagoon, 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 King 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 King Harbor. The CTR contains both saltwater and freshwater criteria. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, the following apply, in accordance with section 131.38(c)(3), *“(1) freshwater criteria apply at salinities of 1 part per thousand (ppt) and below at locations where this occurs 95 percent or more of the time; (2) saltwater criteria apply at salinities of 10 parts per thousand and above at locations where this occurs 95% or more of the time; and (3) at salinities between 1 and 10 parts per thousand the more stringent of the two apply unless EPA approves the application of the freshwater or saltwater criteria based on an appropriate biological assessment.”* Based on the proximity of the discharge to the ocean and receiving water monitoring data, saltwater criteria are more appropriate for this discharge. As such, the CTR criteria for saltwater or human health for consumption of organisms, whichever is more stringent, are used to prescribe the effluent limitations in this Order to protect the beneficial uses of the King Harbor, a water of the United States in the vicinity of the discharge.

Table F-7 summarizes the applicable water quality criteria/objective for priority pollutants reported in detectable concentrations in the effluent or receiving water. These criteria were used in conducting the reasonable potential analysis (RPA) for this Order.

**Table F-7. Applicable Water Quality Criteria**

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	
Antimony, Total Recoverable	4300.00	N/A		--	--	--	4,300
Arsenic, Total Recoverable	36			69	36	--	--
Beryllium, Total Recoverable	No Criteria			--	--	--	Narrative

Constituent	Selected Criteria µg/L	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
Cadmium, Total Recoverable	9.4			42	9.4	--	Narrative
Chromium (VI)	50			1,108	50	--	Narrative
Copper, Total Recoverable	3.7			5.8	3.7	--	--
Lead, Total Recoverable	8.5			221	8.5	--	Narrative
Nickel, Total Recoverable	8.3			75	8.3	--	4,600
Selenium, Total Recoverable	71			291	71	--	Narrative
Silver, Total Recoverable	2.2			2.2	--	--	--
Thallium, Total Recoverable	6.3			--	--	--	6.3
Zinc, Total Recoverable	86			95	86	--	--
Bromoform	360			--	--	--	360
Chlorodibromomethane	34			--	--	--	34
Bis(2-Ethylhexyl)Phthalate	5.9			--	--	--	5.9
Di-n-Butyl Phthalate	12,000			--	--	--	12,000

"N/A" indicates the receiving water body is not characterized as freshwater.

### 3. Determining the Need for WQBELs

In accordance with Section 1.3 of the SIP, the Regional Water Board conducts a 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  $\geq$  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.

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The RPA was performed for the priority pollutants regulated in the CTR for which data are available. Five sets of discharge data are available from 2005 through 2009 for Discharge Point No. 001 as well as the receiving water. Based on the RPA, pollutants that demonstrate reasonable potential are arsenic, cadmium, copper, nickel, selenium, silver, thallium, and zinc for discharge through Discharge Point No. 001. For antimony, five monitoring samples were collected. Four were non-detects and one was an outlier value which was orders of magnitude higher than the non-detect values. The outlier effluent value result was 4,500  $\mu\text{g/L}$  and the receiving water result at the same time was 4,550  $\mu\text{g/L}$  (similar to effluent, the receiving water results on four other sampling events were non-detects). It could have been a sampling error. Also, relative to the criterion of 4,300  $\mu\text{g/L}$ , the MEC and background concentrations of 4,500  $\mu\text{g/L}$  and 4,550  $\mu\text{g/L}$ , respectively, the exceedances were relatively low (5 to 6 percent above the criterion) for outlier values. The four non-detect sampling results for both effluent and receiving waters indicate low potential for antimony to impair beneficial uses, thus the Regional Board has determined effluent limitations for antimony are not required based on one outlier value. Since the data sets for arsenic, cadmium, copper, nickel, selenium, silver, thallium, and zinc are small (five data points), and only one data point yielded concentrations above the criteria, additional data is required to evaluate reasonable potential. Refer to Attachment I for a summary of the RPA.

#### Work Plan – Special Study

The monitoring data collected for metals showed temporal variability in the collected influent and effluent sample results. The water samples collected from the same locations on different days displayed large differences in metal concentrations and effluent samples collected at different times during the same day also displayed considerable variability. This variability coupled with the limited number of samples available (five samples with only one sample with contaminant concentration that exceeded the applicable water quality criteria) make it difficult to utilize statistics to calculate appropriate interim effluent concentrations (95 or 99 percentile

concentration) or to determine reasonable potential. This permit includes a requirement to develop a Work Plan and conduct a Special Study. The objectives of the Work Plan are to design a study to:

- expanded monitoring program (weekly sampling at a minimum) for the metals list above and TSS in the influent and effluent,
- expanded sampling methods to include grab and composite sampling,
- expanded sampling locations to include influent and effluent,
- examination of sampling and laboratory protocols to insure adequate QA/QC;
- examination of variability of TSS as applied to intake credits.

In the Fall of 2011, City of Redondo Beach staff should schedule a meeting with the Regional Water Board staff to review and analyze the data. If Regional Water Board staff determines that the data set is adequate, it will be used to re-evaluate reasonable potential. ~~If the data set is not adequate, then a second season of monitoring (Summer 2012) will be planned and executed.~~

Table F-8. Summary Reasonable Potential Analysis

Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
	µg/L	µg/L	µg/L		
Antimony, Total Recoverable	4,300	4,450	4,500	No	1
Arsenic, Total Recoverable	36	730	680	No	More data required
Beryllium, Total Recoverable	No Criteria	30	29	No	No Criteria
Cadmium, Total Recoverable	9.4	40	40	No	More data required
Chromium (VI)	50	11	10	No	MEC<C & B is ND
Copper, Total Recoverable	3.7	88	97	No	More data required
Lead, Total Recoverable	8.5	0.40	0.29	No	MEC<C & B<=C
Nickel, Total Recoverable	8.3	100	100	No	More data required
Selenium, Total Recoverable	71	3,210	3,390	No	More data required
Silver, Total Recoverable	2.24	1,230	1,170	No	More data required
Thallium, Total Recoverable	6.3	3,170	3,250	No	More data required
Zinc, Total Recoverable	86	114	66	No	More data required
Bromoform	360	106	6.9	No	MEC<C & B<=C
Chlorodibromo-methane	34	4.3	--	No	MEC<C & B is ND
Bis(2-	5.9	1.2	0.97	No	MEC<C & B<=C

Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
	µg/L	µg/L	µg/L		
Ethylhexyl)Phthalate					
Di-n-Butyl Phthalate	12,000	1.07	1.8	No	MEC<C & B<=C

- 1 Antimony was detected in only one out of five monitoring events. The detected value was orders of magnitude higher than the four non-detect values. Moreover, the one detect in the effluent (outlier value) was slightly higher than the criteria and less than the receiving water concentration. Therefore the Regional Board has determined no reasonable potential exists for antimony.

#### 4. WQBEL Calculations

- 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 for arsenic, cadmium, chromium (VI), copper, nickel, selenium, silver, thallium, and zinc are based on monitoring results and following the procedure based on the steady-state model, available in Section 1.4 of the SIP.

- c. Since many of the streams in the Region have minimal upstream flows, mixing zones and dilution credits are usually not appropriate. Therefore, in this tentative Order, no dilution credit is being allowed. However, in accordance with the reopener provision in section VI.C.1.e in the tentative 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 nickel as an example, the following demonstrates how WQBELs were established for this Order. The tables in Attachment I 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 criteria determine the effluent concentration allowance (ECA) using the following steady state equation:

$$\begin{aligned} ECA &= C + D(C-B) \text{ when } C > B, \text{ and} \\ ECA &= C \text{ when } C \leq B, \end{aligned}$$

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

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

$$ECA = C$$

For nickel the applicable water quality criteria are (reference Table F-7):

$$\begin{aligned} ECA_{acute} &= 74.75 \mu\text{g/L} \\ ECA_{chronic} &= 8.28 \mu\text{g/L} \end{aligned}$$

**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.

$$LTA_{acute} = ECA_{acute} \times \text{Multiplier}_{acute}^{99}$$

$$LTA_{chronic} = ECA_{chronic} \times \text{Multiplier}_{chronic}^{99}$$

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% of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6.

For nickel, 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 <sub>acute 99</sub>	ECA Multiplier <sub>chronic 99</sub>
4	0.6	0.32	0.53

$$LTA_{acute} = 74.75 \mu\text{g/L} \times 0.32 = 23.92 \mu\text{g/L}$$

$$LTA_{chronic} = 8.28 \mu\text{g/L} \times 0.53 = 4.39 \mu\text{g/L}$$

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

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

For nickel, the most limiting LTA was the  $LTA_{chronic}$

$$LTA \ 4.39 \mu\text{g/L}$$

**Step 4:** Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as Average Monthly Effluent Limitations (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 coefficient of variation (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 95<sup>th</sup> percentile occurrence probability, and the MDEL multipliers are based on the 99<sup>th</sup> 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 nickel, 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 <sub>MDEL 99</sub>	Multiplier <sub>AMEL 95</sub>
4	0.6	3.11	1.55

$$AMEL_{\text{aquatic life}} = 4.39 \times 1.55 = 6.8 \text{ } \mu\text{g/L}$$

$$MDEL_{\text{aquatic life}} = 4.39 \times 3.11 = 13.6 \text{ } \mu\text{g/L}$$

*Calculation of human health AMEL and MDEL:*

**Step 5:** For the ECA based on human health, set the AMEL equal to the ECA<sub>human health</sub>

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

For nickel:

$$AMEL_{\text{human health}} = 4,600 \text{ } \mu\text{g/L}$$

**Step 6:**-Calculate the MDEL for human health by multiplying the AMEL by the ratio of the Multiplier<sub>MDEL</sub> to the Multiplier<sub>AMEL</sub>. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

$$MDEL_{\text{human health}} = AMEL_{\text{human health}} \times (\text{Multiplier}_{\text{MDEL}} / \text{Multiplier}_{\text{AMEL}})$$

For nickel, the following data were used to develop the MDEL<sub>human health</sub>:

No. of Samples Per Month	CV	Multiplier <sub>MDEL 99</sub>	Multiplier <sub>AMEL 95</sub>	Ratio
4	0.6	3.11	1.55	2.01

$$MDEL_{\text{human health}} = 4,600 \text{ } \mu\text{g/L} \times 2.01 = 9,246 \text{ } \mu\text{g/L}$$

**Step 7:** Select the lower of the AMEL and MDEL based on aquatic life and human health as the water-quality based effluent limit for the Order.

For nickel:

AMEL <sub>aquatic life</sub>	MDEL <sub>aquatic life</sub>	AMEL <sub>human health</sub>	MDEL <sub>human health</sub>
6.8	13.6	4,600 $\mu\text{g/L}$	9,246 $\mu\text{g/L}$

The lowest (most restrictive) effluent limits are based on aquatic toxicity. The data set for each of the metals is small; five data points. Four of the five samples were non detected with only one sample yielding a concentration that exceeds

applicable water quality criteria. Since the data set is so small with one data point demonstrated reasonable potential, this permit requires additional accelerated sampling.

e. Effluent Limitations for TSS Based on Intake Water Credits:

Section 1.4.4 of the SIP provides that, intake water credits for a pollutant may be established in an NPDES permit based on a Discharger's demonstration that the following conditions are met:

1. The observed maximum ambient background concentration, as determined in section 1.4.3.1 and the intake water concentration of the pollutant exceeds the most stringent applicable criterion/objective for that pollutant;
2. The intake water credits provided are consistent with any TMDL applicable to the discharge that has been approved by the Regional Water Board, State Water Board, and USEPA;
3. The intake water is from the same water body as the receiving water body. The discharger may demonstrate this condition by showing that;
  - a. the ambient background concentration of the pollutant in the receiving water, excluding any amount of the pollutant in the facility's discharge, is similar to that of the intake water;
  - b. there is a direct hydrological connection between the intake and discharge points;
  - c. the water quality characteristics are similar in the intake and receiving waters; and
  - d. the intake water pollutant would have reached the vicinity of the discharge point in the receiving water within a reasonable period of time and with the same effect had it not been diverted by the discharger.

The Regional Water Board may also consider other factors when determining whether the intake water is from the same water body as the receiving water body;
4. The facility does not alter the intake water pollutant chemically or physically in a manner that adversely affects water quality and beneficial uses; and
5. The timing and location of the discharge does not cause adverse effects on water quality and beneficial uses that would not occur if the intake water pollutant had been left in the receiving water body.

Based on the monitoring data submitted as part of Source Identification Study

in 2007 and additional information, the Discharger satisfies the conditions specified in Section 1.4.4 of the SIP. There are no TMDLs for King Harbor nor is King Harbor listed on the 2006 CWA 303(d) list of water quality limited segments. The intake water is from the same water body as the receiving water.

According to Section 1.4.4 of the SIP, the Regional Water Board may establish effluent limitations allowing the facility to discharge a mass and concentration of the intake water pollutant that is no greater than the mass and concentration found in the facility's intake water. The Regional Water Board may also determine compliance by simultaneously monitoring the pollutant concentrations in the intake water and in the effluent.

The monthly average intake concentration of pollutant is calculated by adding all analytical monitoring results in a calendar month divided by the number of monitoring events for that month. If only a single sample is taken during the calendar month then the analytical result for that sample will be considered as the monthly average value or result.

If the influent water pollutant concentration does not exceed the average monthly limitation then the limitations are applied as noted in Table F-10 Summary of Final Effluent Limitations Discharge Point 001. If the influent water pollutant concentration exceeds the average monthly limitation but does not exceed the maximum daily limitation then compliance with the average monthly limitation will be determined based on intake water credits and compliance with the maximum daily limitation is applied as noted in Table F-10. If the influent water pollutant concentration exceeds the maximum daily limitation then compliance with both the average monthly and the maximum daily will be determined based on intake water credits.

When applying intake water credit, the pollutant effluent limitation is equal to the maximum pollutant concentration in the influent water, which is the same as the intake water. The equation is as follows:

Pollutant effluent limitation with intake water credit = maximum pollutant influent water concentration

Two influent samples shall be collected to address the variability of the influent water. The first influent sample shall be collected two hours prior to the effluent sample. The second influent sample shall be collected at approximately the same time as the effluent sample. When evaluating compliance with the pollutant effluent limitations based on intake water credit, compare the pollutant effluent concentration to the maximum copper influent water concentration as follows:

If pollutant effluent concentration > maximum pollutant influent water concentration then violation.

If pollutant effluent concentration  $\leq$  maximum pollutant influent water concentration then in compliance.

If pollutant monthly average effluent concentration  $\leq$  monthly average pollutant influent concentration then in compliance.

(If only one effluent sample is taken per month, then the monitoring result has to comply with the monthly average limitation based on intake credits).

#### 5. WQBELS based on Basin Plan Objectives

The Basin Plan states that the pH of bays or estuaries "*shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharge and that ambient pH levels shall not be changed more than 0.2 units from natural conditions as a result of waste discharge.*" Based on the requirements of the Basin Plan an instantaneous minimum limitation of 6.5 and an instantaneous maximum limitation of 8.5 for pH are included in the proposed permit.

~~The Basin Plan lists temperature requirements for the receiving waters and references~~ the Thermal Plan. Based on the requirements of 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*, a maximum effluent temperature limitation of 86°F is included in the proposed permit. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel.

Unionized ammonia has been detected in the effluent during the previous permit term at a concentration of 0.1 mg/L. For inland surface waters not characteristic of freshwater (including enclosed bays, estuaries, and wetlands), the proposed objectives are a 4-day average concentration of unionized ammonia of 0.035 mg/L, and a one-hour average concentration of unionized ammonia of 0.233 mg/L. These objectives, as well as implementation procedures from the Basin Plan amendment are included in this Order as effluent limitations.

#### 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. The existing Order contains acute toxicity limitations and monitoring requirements in accordance with the Basin Plan, in which 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. Annual acute toxicity data for the years 2005 through 2008 submitted by the Discharger showed 90-100% percent survival rates. Consistent with Basin Plan requirements, this Order carries over the acute toxicity limitations and monitoring requirements from the previous Order.

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. No chronic toxicity data was available to determine reasonable potential. Therefore, this Order includes a requirement to conduct monitoring for chronic toxicity at a frequency of once per year.

Final WQBELs

Summary of Water Quality-based Effluent Limitations for Discharge Point 001

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

Parameter	Units	Effluent Limitations	
		Average Monthly	Maximum Daily
Ammonia <sup>2</sup>	mg/L	1.02 <sup>1</sup>	2.05 <sup>1</sup>
Acute Toxicity	% survival	---	3

1. Translation of un-ionized ammonia (NH<sub>3</sub>) water quality objectives to total ammonia water quality objectives:  
Total un-ionized ammonia (NH<sub>3</sub>) 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<sub>4</sub> +NH<sub>3</sub>) 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:

$$[\text{NH}_4^+] + [\text{NH}_3] = [\text{NH}_3] + [\text{NH}_4^+] \cdot 10^{-(\text{pK}_a^s + 0.0324(298 - T) + 0.0415 \text{ P/T} - \text{pH})}$$

Where: P = 1 atm

T = temperature (°K)

$\text{pK}_a^s = 0.116 \cdot i + 9.245$ , the stoichiometric acid hydrolysis constant of ammonium ions in saltwater based on i

$i = 19.9273 \text{ S} (1000 - 1.005109 \text{ S})^{-1}$ , 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 (for calculating current limits the following values were used: pH = 8, temperature = 295°K, and salinity = 33 (ppt)).

- <sup>2</sup> Mass based effluent limitations calculated using the following formula based on an average daily flow of 2.3 MGD:  $(\text{lbs/day}) = 2.3 \text{ MGD} \times 8.34 \times \text{effluent limitation (mg/L)}$
- <sup>3</sup> Average survival in effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with 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 Orders based on the submitted sampling data. Effluent limitations for pH, temperature, TSS, BOD, oil and grease, turbidity, total coliform, fecal coliform, enterococcus, and total residual chlorine at Discharge Point No. 001 are being carried over from the previous Order (Order No. R4-2005-0016). The Regional Water Board has determined that these numeric effluent limitations continue to be applicable to the Facility.

~~In the ROWD, the Facility requested that the May sample be included in the monthly average results for June. Since the Facility discharges from Memorial Day through Labor day, the Facility has at maximum 6 days during which samples can be collected. Considering that the most frequent sample frequencies in the MRP is weekly, the monthly average for May becomes impractical. As a result, the effluent limitations in IV.A of this Order are modified so that the May results may be included in the monthly average value reported for June.~~

##### 1. Satisfaction of Anti-Backsliding Requirements

All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

##### 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 and the final limitations in this Order are in compliance with antidegradation requirements and meet the requirements of the SIP. The 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 the permitted design flow or a reduction in the level of treatment. Further, compliance with the requirements included in the permit will result in the use of best practicable treatment or control of the discharge.

### 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 for turbidity, BOD, oil and grease, total suspended solids, and total residual chlorine. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

**Table F-10. Summary of Final Effluent Limitations**

Parameter	Units	Average Monthly	Maximum Daily	Instantaneous		Basis <sup>1</sup>
				Minimum	Maximum	
pH	s.u.	--	--	6.5	8.5	E, BP
BOD (5-day @ 20 Deg. C)	mg/L	20	30	--	--	E, BPJ
	lbs/day <sup>2</sup>	384	575	--	--	
TSS	mg/L	50 <sup>8</sup>	75 <sup>8</sup>	--	--	E, BPJ
	lbs/day <sup>2</sup>	959	1,439	--	--	
Oil and Grease	mg/L	10	15	--	--	E, BPJ
	lbs/day <sup>2</sup>	192	288	--	--	
Turbidity	NTU	50	75	--	--	E, BPJ
Temperature	°F	--	--	--	86	E, TP
Chlorine, Total Residual	µg/L	2	8	--	--	E, BPJ
	lbs/day <sup>2</sup>	0.038	0.15	--	--	
Total Coliform	mpn/100ml	1,000 <sup>3</sup>	10,000	--	--	E, BP
Fecal Coliform	mpn/100ml	200 <sup>4</sup>	400	--	--	E, BP
Enterococcus	mpn/100ml	35 <sup>5</sup>	104	--	--	E, BPJ
Ammonia	mg/L	1.02 <sup>6</sup>	2.05 <sup>6</sup>	--	--	BP
Acute Toxicity	% survival	--	7	--	--	E, BP

<sup>1</sup> BP = Basin Plan, E = Existing Permit, TP = Thermal Plan, BPJ = Best Professional Judgment, CTR = California Toxics Rule.

<sup>2</sup> Mass based effluent limitations calculated using the following formula based on an average daily flow of 2.3 MGD: (lbs/day) = 2.3 MGD x 8.34 x effluent limitation (mg/L)

<sup>3</sup> The geometric mean density of total coliform organisms shall be less than 1,000 per 100 ml (10 per ml): provided that not more than 20% of the samples, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml). Also, the total coliform density shall not exceed 1,000 per 100 ml if the ratio of fecal to total coliform exceeds 0.1.

<sup>4</sup> The fecal coliform density for any 30-day period, shall not exceed a geometric mean of 200 per 100 ml nor shall more than 10% of the total samples during any 60-day period exceed 400 per 100ml.

<sup>5</sup> The geometric mean enterococcus density of the discharge shall not exceed 35 organisms per 100 ml or 12 organisms per 100 ml within a six-month period.

<sup>6</sup> Translation of un-ionized ammonia (NH<sub>3</sub>) water quality objectives to total ammonia water quality objectives: Total un-ionized ammonia (NH<sub>3</sub>) 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<sub>4</sub> + NH<sub>3</sub>) 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:

$$[\text{NH}_4^+] + [\text{NH}_3] = [\text{NH}_3] + \text{NH}_3 \cdot 10^{(\text{pK}_a^s + 0.0324 (298 - T) + 0.0415 P/T - \text{pH})}$$

Where:  $P = 1 \text{ atm}$

$T = \text{temperature } (^{\circ}\text{K})$

$\text{pK}_a^s = 0.116 \cdot i + 9.245$ , 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  $S$

$S = \text{salinity}$

In order to calculate total ammonia objectives, receiving water pH, temperature, and salinity data are required (for calculating current limits the following values were used: pH = 8, temperature = 295°K, and salinity = 33 (ppt)).

7 Average survival in effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test producing less than 70% survival.

8 If the influent water pollutant concentration (measured at influent to the lagoon) does not exceed the average monthly limitation then the limitations are applied as noted in the Table. If the influent water pollutant concentration exceeds the average monthly limitation but does not exceed the maximum daily limitation then compliance with the average monthly limitation will be determined based on intake water credits and compliance with the maximum daily limitation is applied as noted in the Table. If the influent water pollutant concentration exceeds the maximum daily limitation then compliance with both the average monthly and the maximum daily will be determined based on intake water credits. When determining compliance based on intake water credit, the pollutant effluent limitation is equal to the maximum pollutant concentration in the influent water. The equation is as follows:

Maximum Pollutant Effluent Limitation with Intake Water Credit = Maximum Pollutant Influent Water Concentration

Monthly Pollutant Effluent Limitation with Intake Water Credit = Monthly Pollutant Influent Water Concentration

#### 4. Mass-based Effluent Limitations

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

$$\text{Mass (lbs/day)} = \text{flow rate (MGD)} \times 8.34 \times \text{effluent limitation (mg/L)}$$

where: Mass = mass limitation for a pollutant (lbs/day)

Effluent limitation = concentration limit for a pollutant (mg/L)

Flow rate = discharge flow rate (MGD)

#### E. Interim Effluent Limitations

Not Applicable

#### F. Land Discharge Specifications

Not Applicable

#### G. Reclamation Specifications

Not Applicable

## 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.

### B. Groundwater

Not Applicable

## 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

Influent monitoring is required to collect data on the characteristics of the intake water and to assess compliance with the effluent limitations for TSS and metals.

According to section 1.4.4 of the SIP, the Regional Water Board may consider priority pollutants in intake water on a pollutant-by-pollutant basis when establishing WQBELs, provided the Discharger has demonstrated certain conditions specified in section 1.4.4 of the SIP. 40 CFR Part 122.45 provides a similar direction for TSS. The Discharger has demonstrated that intake water credit is appropriate for the discharge of TSS and metals. Therefore, the Discharger is required to monitor the intake water for TSS and metals at the specified frequency to provide data for the Regional Water Board to consider intake water credits.

### B. Effluent Monitoring

Monitoring for those pollutants expected to be present in the Monitoring Location EFF-001 at Discharge Point No. 001 will be required as shown on the proposed MRP.

The sample collection location is tidally influenced. During high tide conditions, the sampling vault would be almost completely inundated with sea water and the effluent pipe would be completely submerged. Therefore, the grab samples collected during high tide may not be representative of the effluent. Sampling should be conducted when there is a

discharge and during low tide conditions based on data provided by the National Oceanic and Atmospheric Administration's (NOAA), Station No. 9410840 (Santa Monica, CA).

To determine compliance with effluent limitations, the proposed monitoring plan carries over monitoring requirements from the MRP associated with Order No. R4-2005-0016, with some exceptions as follows.

1. TSS. The Facility was subject to three Time Schedule Orders (TSO). First one was for TSS and BOD and the last two were for TSS, as discussed in section II.D of this Fact Sheet. In order to more accurately assess the potential to exceed effluent limitations, the monitoring frequency of TSS is increased from once per month, in Order No. R4-2005-0016, to once per week in this Order. The Discharger has demonstrated that intake water credit is appropriate for the discharge of TSS. Therefore, influent monitoring is required to collect data of the intake water and to assess compliance with the effluent limitations for TSS.
2. BOD. ~~The monitoring frequency for BOD in effluent from Discharge Point No. 001 has been increased from once per year in Order No. R4-2005-0016 to once per month in~~ this Order. BOD is a pollutant of concern because data collected from May 30, 2005, through August 31, 2009, resulted in four instances where the monthly average effluent concentration was greater than the monthly average limitation and seven instances where the effluent concentration was greater than the daily maximum limitation.
3. Temperature. Temperature is of concern in the discharge because the discharge consists of once through cooling water. To more accurately determine compliance with effluent limitations, the monitoring frequency for temperature is increased from once per year to once per month.

The Facility operates during the off-season for private events, which results in short-term discharges of one to two days. Order No. R4-2005-0016 established separate monitoring frequencies, during the off-season, of 1 per discharge for all parameters to account for the different discharge schedule. This monitoring frequency is capped at a maximum of 1 per week in the event that the facility operates longer than a week during the off-season.

According to the SIP, the Discharger is required to monitor the effluent for the CTR priority pollutants, to determine reasonable potential. Accordingly, the Regional Water Board is requiring that the Discharger conduct effluent monitoring of the CTR priority pollutants.

#### 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. 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. This Order includes limitations for acute toxicity, and therefore, monitoring requirements are included in the MRP.

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. Since no chronic toxicity monitoring data of the discharge exists to determine reasonable potential, this Order does not include chronic toxicity limitations. In order to collect data for future RPAs, monitoring for chronic toxicity is required in the MRP of this Order.

#### 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. Monitoring for temperature, pH, and dissolved oxygen in the receiving water, within 50 feet of the discharge, outside of the influence of the discharge, is included in the proposed permit. The facility is also required to perform general observations of the receiving water when discharges occur and report the observations in the monitoring report. Attention shall be given to the presence or absence of: floating or suspended matter, discoloration, aquatic life, visible film, sheen or coating, and fungi, slime, or objectionable growths.

This Order includes temperature limitations in section IV.A that specify "*The maximum temperature of the discharge shall not exceed the natural receiving water temperature by more than 20° F*". In order to monitor compliance with this limitation, a monitoring requirement for temperature at RSW-001 is included in this Order.

According to the SIP, the Discharger is required to monitor the upstream receiving water for the CTR priority pollutants and TCDD congeners, to determine reasonable potential. Accordingly, the Regional Water Board is requiring that the Discharger conduct upstream receiving water monitoring of the CTR priority pollutants and TCDD congeners at Monitoring Location RSW-001. The Discharger must analyze temperature, pH, and hardness of the upstream receiving water at the same time the samples are collected for priority pollutants analysis.

2. Groundwater

Not Applicable

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, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan.

This Order may be reopened on or before the end of 1<sup>st</sup> Quarter of 2013 (March 31, 2013), if the Special Study results necessitates changes to the permit.

2. Work Plan for Special Study

- a. The City of Redondo Beach's Work Plan for the Seaside Lagoon must be submitted to the Regional Water Board by February 7, 2011, for Executive Officer approval. The objective of the Work Plan is to refine data collection related to sampling location, timing and other logistics in order to have the best data set for arsenic, cadmium, copper, nickel, selenium, silver, thallium, zinc and TSS to

determine reasonable potential, intake credits, and other permit provisions. Elements of the Work Plan are to include:

- expanded monitoring program (weekly sampling at a minimum) for the metals listed above and TSS in the influent and effluent,
  - expanded sampling methods to include grab and composite sampling,
  - expanded sampling locations to include influent and effluent,
  - examination of sampling and laboratory protocols to insure adequate QA/QC;
  - examination of variability of TSS as applied to intake credits.
- b. The first phase of the study should occur during the 2011 operating season.
- c. In the Fall of 2011, City of Redondo Beach staff must schedule a meeting with Regional Water Board staff to review and analyze the data. If Regional Water Board staff determines that the data set is adequate, it will be used to re-evaluate reasonable potential. ~~If the data set is not adequate then a second season of monitoring (Summer 2012) will be planned and executed.~~
- d. If the data indicates the inclusion of new limitations for the metals is warranted, this Order will be reopened to include the applicable limits.

This permit includes a reopener for 1<sup>st</sup> Quarter of 2013 (March 31, 2013) at the latest, to address the results of the Special Study Monitoring with regards to both metals and TSS.

### 3. Special Studies and Additional Monitoring Requirements

- a. Chronic Toxicity Trigger. This provision is based on Section 4 of the SIP, Toxicity Control Provisions.
- b. Initial Investigation Toxicity Reduction Evaluation Workplan. This provision is based on section 4 of the SIP, Toxicity Control Provisions.

### 4. Best Management Practices and Pollution Prevention

In addition to providing a swimming lagoon, the Facility conducts other recreational activities that may introduce pollutants of concern. Therefore, this Order requires the Discharger to develop and implement a BMPP which should include measures to prevent pollutants from entering the lagoon. To ensure the Discharger considers and implements appropriate and effective BMPs, the Discharger is required to consider implementing BMPs contained in the USEPA *Guidance Manual for Developing Best Management Practices (BMPs)* (EPA 833-B-93-004) or equivalent alternatives when updating its BMPP. This provision is based on 40 CFR 122.44(k).

### 5. Construction, Operation, and Maintenance Specifications

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

6. Other Special Provisions

Not Applicable

7. Compliance Schedules

Not Applicable

**VIII. PUBLIC PARTICIPATION**

The Regional Water Board is considering the issuance of waste discharge requirements WDRs that will serve as a NPDES permit for the Facility. 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.~~

Notification of Interested Parties Written Comments

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 August 31, 2010.

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: October 7, 2010  
Time: 9:00 A.M.  
Location: City of Simi Valley  
2929 Tapo Canyon Road  
Simi Valley, CA

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 Water 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 August 31, 2010. 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 Mazhar Ali at (213) 576-6652.

**ATTACHMENT G – STATE WATER BOARDS 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

Table 2d - PESTICIDES - PCBs*	GC
PCB 1221	0.5
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 H – LIST OF PRIORITY POLLUTANTS**

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

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

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

1. Pollutants shall be analyzed using the methods described in 40 CFR Part 136

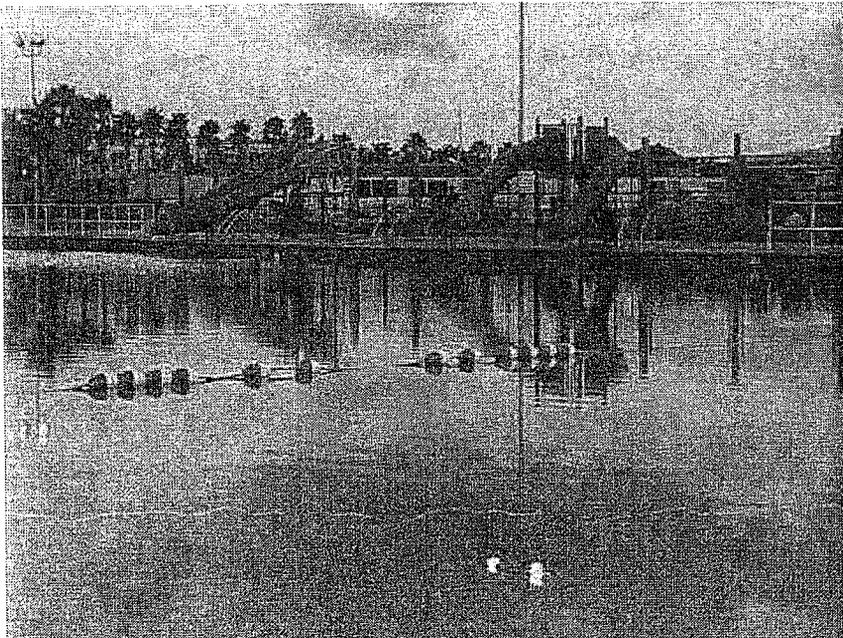
**ATTACHMENT I – RPA ANALYSIS**

## ATTACHMENT J – PHOTOS OF FACILITY

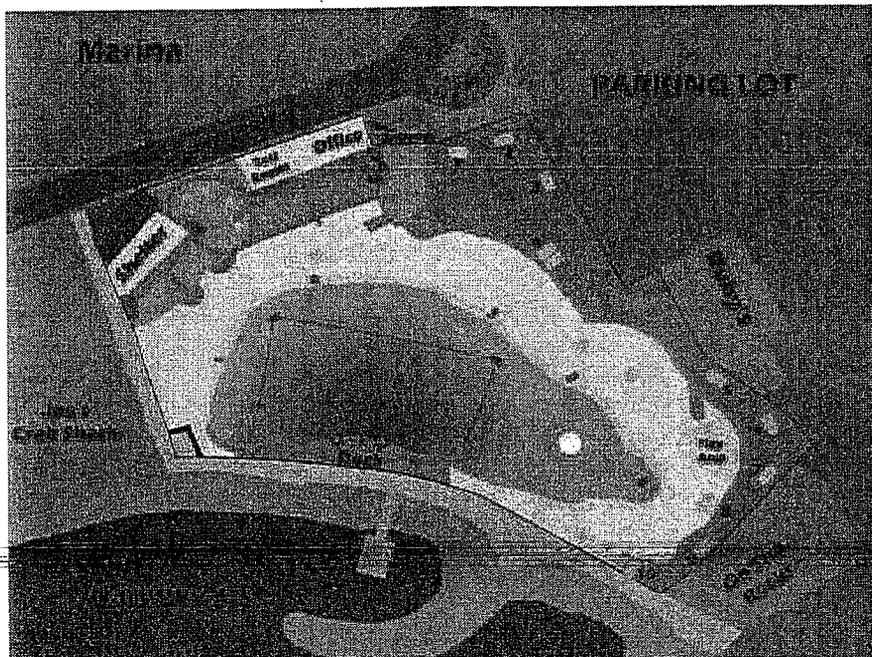
Source: City of Redondo Beach Recreation and Community Services Department.  
[http://www.redondo.org/depts/recreation/facilities/seaside\\_lagoon/photos.asp](http://www.redondo.org/depts/recreation/facilities/seaside_lagoon/photos.asp)



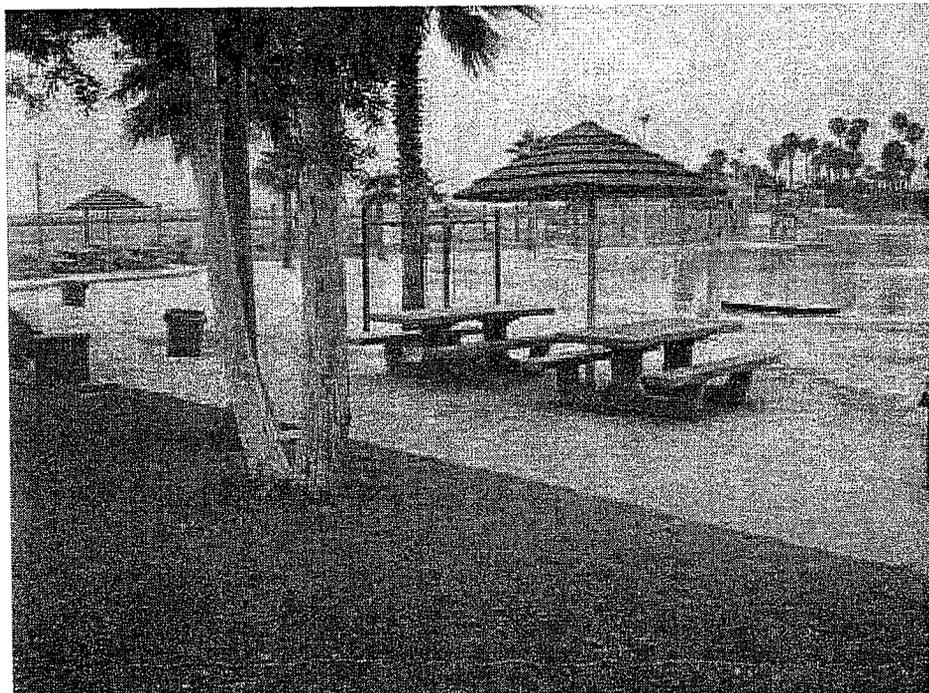
View from Southwest



Slides on Platform on South Side



Layout of Seaside Lagoon



View from Southwest, King Harbor in Distance

Fact Sheet Attachment I  
Draft Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)

Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)		Organisms Human Health for	Reasonable Potential Analysis (RPA)		Tier 1 - Need Limit?	B Available (Y/N)?	Are all B data points non-detects (Y/N)?	Enter the points ND min detection limit (MDL)	Enter the pollutant B 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?	Reason
				C acute = CMC tot	C chronic = CCC tot		Lowest C	MEC >=										
Antimony	ug/L	0.6	4450	36.00	4300.00	4300.00	Yes	Y	Y	N	4500	4500	Y	Limit required, B-C & pollutant		No	More data required	
Arsenic	ug/L	0.6	730	69.00	36.00	36.00	Yes	Y	Y	N	6800	6800	Y	Limit required, B-C & pollutant		No	More data required	
Beryllium	ug/L	0.6	No Criteria	Narrative	No Criteria	No Criteria	No	Y	Y	N	29	29	Y	Limit required, B-C & pollutant		Uc	No Criteria	
Cadmium	ug/L	0.6	40	42.25	9.36	9.36	Yes	Y	Y	N	40	40	Y	Limit required, B-C & pollutant		Uc	More data required	
Chromium (III)	ug/L	0.6	No Criteria	Narrative	No Criteria	No Criteria	No	Y	Y	N	97	97	Y	Limit required, B-C & pollutant		Uc	No Criteria	
Chromium (VI)	ug/L	0.6	88	5.78	50.35	50.35	Yes	Y	Y	N	10	10	Y	Limit required, B-C & pollutant		No	More data required	
Copper	ug/L	0.6	0.4	220.82	8.52	8.52	No	Y	Y	N	0.5	0.5	Y	B < C, Step 7		No	MEC-C & B is ND	
Lead	ug/L	0.6	100	Reserved	0.051	0.051	Yes	Y	Y	N	100	100	Y	Limit required, B-C & pollutant		No	MEC-C & B < C	
Mercury	ug/L	0.6	3210	74.75	4600.00	4600.00	Yes	Y	Y	N	3390	3390	Y	Limit required, B-C & pollutant		No	More data required	
Nickel	ug/L	0.6	1230	2.24	71.14	71.14	Yes	Y	Y	N	1170	1170	Y	Limit required, B-C & pollutant		No	More data required	
Selenium	ug/L	0.6	3170	6.30	6.30	6.30	Yes	Y	Y	N	3250	3250	Y	Limit required, B-C & pollutant		No	More data required	
Silver	ug/L	0.6	114	95.14	85.62	85.62	Yes	Y	Y	N	66	66	Y	B < C, Step 7		No	More data required	
Thallium	ug/L	0.6	0.005	1.00	1.00	220000.00	No	Y	Y	N	0.005	0.005	Y	No detected value of B, Step 7		Uc	MEC-C & B is ND	
Cyanide	Fibers/L		No Criteria	1.00	1.00	1.00	No	Y	Y	N	0.2	0.2	Y	No Criteria		Uc	No Criteria	
Asbestos	Fibers/L		0	1.40E-08	1.40E-08	1.40E-08	No	Y	Y	N	0	0	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
2,3,7,8 TCDD	ug/L	0	0	1.40E-08	1.40E-08	1.40E-08	No	Y	Y	N	0	0	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
TCDD Equivalents	ug/L	0	0	780	780	780	No	Y	Y	N	0.54	0.54	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Acrolein	ug/L	0.54	0.34	0.66	0.66	0.66	No	Y	Y	N	0.34	0.34	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Acrylonitrile	ug/L	0.34	0.39	71.0	71.0	71.0	No	Y	Y	N	0.39	0.39	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Benzene	ug/L	0.39	143	360	360	360	No	Y	Y	N	6.9	6.9	Y	B < C, Step 7		No	MEC-C & B < C	
Bromolam	ug/L	0.3	4.4	4.4	4.4	4.4	No	Y	Y	N	0.3	0.3	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Carbon Tetrachloride	ug/L	0.2	21000	21000	21000	21000	No	Y	Y	N	0.2	0.2	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Chlorobenzene	ug/L	4.3	34	34	34	34	No	Y	Y	N	0.29	0.29	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Chlorobromomethane	ug/L	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No	Y	Y	N	0.4	0.4	Y	No Criteria		Uc	No Criteria	
Chloroethane	ug/L	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No	Y	Y	N	0.34	0.34	Y	No Criteria		Uc	No Criteria	
2-Chloroethylvinyl ether	ug/L	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No	Y	Y	N	0.33	0.33	Y	No detected value of B, Step 7		Uc	MEC-C & B is ND	
Chloroform	ug/L	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No	Y	Y	N	0.33	0.33	Y	No detected value of B, Step 7		Uc	MEC-C & B is ND	
Chloromethane	ug/L	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No	Y	Y	N	0.33	0.33	Y	No detected value of B, Step 7		Uc	MEC-C & B is ND	
Dichlorobromomethane	ug/L	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No	Y	Y	N	0.33	0.33	Y	No detected value of B, Step 7		Uc	MEC-C & B is ND	
1,1-Dichloroethane	ug/L	0.33	99	99	99	99	No	Y	Y	N	0.33	0.33	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
1,2-Dichloroethane	ug/L	0.43	3.20	3.20	3.20	3.20	No	Y	Y	N	0.43	0.43	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
1,1-Dichloroethylene	ug/L	0.29	39	39	39	39	No	Y	Y	N	0.29	0.29	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
1,2-Dichloropropane	ug/L	0.34	1700	1700	1700	1700	No	Y	Y	N	0.34	0.34	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Ethylbenzene	ug/L	0.24	29000	29000	29000	29000	No	Y	Y	N	0.24	0.24	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Methyl Bromide	ug/L	0.46	4000	4000	4000	4000	No	Y	Y	N	0.46	0.46	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Methyl Chloride	ug/L	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No	Y	Y	N	0.33	0.33	Y	No Criteria		Uc	No Criteria	
Methylene Chloride	ug/L	0.91	1600	1600	1600	1600	No	Y	Y	N	0.91	0.91	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
1,1,2,2-Tetrachloroethane	ug/L	0.22	11	11	11	11	No	Y	Y	N	0.22	0.22	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Tetrachloroethylene	ug/L	0.24	8.65	8.65	8.65	8.65	No	Y	Y	N	0.25	0.25	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Toluene	ug/L	0.32	200000	200000	200000	200000	No	Y	Y	N	0.24	0.24	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
1,2-Trans-Dichloroethylene	ug/L	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No	Y	Y	N	0.32	0.32	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
1,1,1-Trichloroethane	ug/L	0.38	42	42	42	42	No	Y	Y	N	0.29	0.29	Y	No Criteria		Uc	No Criteria	
1,1,2-Trichloroethane	ug/L	0.46	81	81	81	81	No	Y	Y	N	0.38	0.38	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Trichloroethylene	ug/L	0.46	525	525	525	525	No	Y	Y	N	0.46	0.46	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Vinyl Chloride	ug/L	0.32	400	400	400	400	No	Y	Y	N	0.32	0.32	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
2-Chlorophenol	ug/L	0.93	790	790	790	790	No	Y	Y	N	0.93	0.93	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
2,4-Dichlorophenol	ug/L	0.63	2300	2300	2300	2300	No	Y	Y	N	0.63	0.63	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
4,6-Dinitro-o-resol (aka 2-methyl-4,6-Dinitrophenol)	ug/L	2.8	765	765	765	765	No	Y	Y	N	2.8	2.8	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
2,4-Dinitrophenol	ug/L	3.1	14000	14000	14000	14000	No	Y	Y	N	3.1	3.1	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
4-Nitrophenol	ug/L	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No	Y	Y	N	0.95	0.95	Y	No Criteria		Uc	No Criteria	
3-Methyl-4-Chlorophenol (aka p-chloro-m-resol)	ug/L	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No	Y	Y	N	1.7	1.7	Y	No Criteria		Uc	No Criteria	
Phenol	ug/L	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No	Y	Y	N	1.2	1.2	Y	No Criteria		Uc	No Criteria	
2,4,6-Trichlorophenol	ug/L	2.2	8.2	8.2	8.2	8.2	No	Y	Y	N	2.2	2.2	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Acenaphthene	ug/L	1	4600000	4600000	4600000	4600000	No	Y	Y	N	1	1	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Acenaphthylene	ug/L	0.55	2700	2700	2700	2700	No	Y	Y	N	0.49	0.49	Y	No detected value of B, Step 7		No	MEC-C & B is ND	
Anthracene	ug/L	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No	Y	Y	N	0.65	0.65	Y	No Criteria		Uc	No Criteria	
Benzo(a)Anthracene	ug/L	0.64	110000	110000	110000	110000	No	Y	Y	N	0.64	0.64	Y	No detected value of B, Step 7		Uc	No effluent data & no B	
Benzo(b)Fluoranthene	ug/L	0.0054	0.0054	0.0054	0.0054	0.0054	No	Y	Y	N	0.53	0.53	Y	No detected value of B, Step 7		Uc	UD, effluent ND, MDL < C, and	
Benzo(k)Fluoranthene	ug/L	0.049	0.049	0.049	0.049	0.049	No	Y	Y	N	0.56	0.56	Y	No detected value of B, Step 7		No	UD, effluent ND, MDL < C, and	
Benzofluoranthene	ug/L	0.049	0.049	0.049	0.049	0.049	No	Y	Y	N	2.7	2.7	Y	No detected value of B, Step 7		No	UD, effluent ND, MDL < C, and	
Bis(2-Chloroethoxy)Methane	ug/L	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No	Y	Y	N	0.77	0.77	Y	No Criteria		Uc	No Criteria	
	ug/L	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No	Y	Y	N	0.75	0.75	Y	No detected value of B, Step 7		Uc	UD, effluent ND, MDL < C, and	
	ug/L	No Criteria	No Criteria	No Criteria	No Criteria	No Criteria	No	Y	Y	N	0.82	0.82	Y	No Criteria		Uc	No Criteria	

Fact Sheet Attachment I  
Draft Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)

Parameters	Units	CV	MEC	CIR Water Quality Criteria (ug/L)		Human Health for	REASONABLE POTENTIAL ANALYSIS (RPA)				Tier 3 - other info.?	RPA Result - Need Limit?	Reason	
				Saltwater	Human Health for		Are all B data points non-detects (Y/N)?	B Available (Y/N)?	MEC >= Lowest C	Tier 1 - Need limit?				Enter the pollutant B max conc (ug/L)
Bis(2-Chloroethyl) Ether	ug/L		0.45	C acute = 1.4	Organisms only	1.4	1.400	No	Y	0.45	N	No detected value of B, Step 7	No	MEC-C & B is ND
Bis(2-Chloroisopropyl) Ether	ug/L		1.5	C chronic = 170000	Human Health for	170000	170000	No	Y	1.5	N	No detected value of B, Step 7	No	MEC-C & B is ND
Bis(2-Ethylhexyl) Phthalate	ug/L		1.42	5.9		5.9	5.9	No	Y	0.97	N	B <= C, Step 7	No	MEC-C & B <= C
4-Bromophenyl Phenyl Ether	ug/L		No Criteria	5200		5200	No Criteria	No	Y	0.62	N	No detected value of B, Step 7	Uc	No Criteria
Bisphenol A	ug/L		0.62	4300		4300	No Criteria	No	Y	0.71	N	No detected value of B, Step 7	Uc	No Criteria
2-Chloronaphthalene	ug/L		0.71	No Criteria		No Criteria	No Criteria	No	Y	0.69	N	No detected value of B, Step 7	Uc	No Criteria
4-Chlorophenyl Phenyl Ether	ug/L		No Criteria	0.049		0.049	No Criteria	No	Y	0.47	Y	No detected value of B, Step 7	Uc	UD; effluent ND, MDL > C, and
Chrysene	ug/L		0.049	0.049		0.049	0.049	No	Y	1.6	Y	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
Dibenz(a,h)Anthracene	ug/L		0.049	0.049		0.049	0.049	No	Y	0.17	Y	No detected value of B, Step 7	No	MEC-C & B is ND
1,2-Dichlorobenzene	ug/L		0.17	17000		17000	17000	No	Y	0.21	N	No detected value of B, Step 7	No	MEC-C & B is ND
1,3-Dichlorobenzene	ug/L		0.21	2600		2600	2600	No	Y	0.44	N	No detected value of B, Step 7	No	MEC-C & B is ND
1,4-Dichlorobenzene	ug/L		0.21	2600		2600	2600	No	Y	1.7	Y	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
3,3-Dichlorobenzidine	ug/L		0.077	0.077		0.077	0.077	No	Y	0.63	Y	No detected value of B, Step 7	No	MEC-C & B is ND
Dibutyl Phthalate	ug/L		0.63	120000		120000	120000	No	Y	0.57	N	No detected value of B, Step 7	No	MEC-C & B is ND
Dimethyl Phthalate	ug/L		0.57	2900000		2900000	2900000	No	Y	1.82	N	B <= C, Step 7	No	MEC-C & B <= C
Di-n-butyl Phthalate	ug/L		1.07	12000		12000	12000	No	Y	0.55	N	No detected value of B, Step 7	Uc	MEC-C & B is ND
2,4-Dinitrofluorene	ug/L		0.55	9.10		9.10	9.10	No	Y	0.44	N	No detected value of B, Step 7	Uc	No Criteria
2,6-Dinitrofluorene	ug/L		No Criteria	No Criteria		No Criteria	No Criteria	No	Y	0.59	N	No detected value of B, Step 7	Uc	No Criteria
Di-n-Octyl Phthalate	ug/L		No Criteria	No Criteria		No Criteria	No Criteria	No	Y	1.2	N	No detected value of B, Step 7	Uc	UD; effluent ND, MDL > C, and
1,2-Diphenylhydrazine	ug/L		0.47	0.54		0.54	0.54	No	Y	0.47	Y	No detected value of B, Step 7	No	MEC-C & B is ND
Fluoranthene	ug/L		0.47	370		370	370	No	Y	0.32	N	No detected value of B, Step 7	No	MEC-C & B is ND
Fluorene	ug/L		0.32	14000		14000	14000	No	Y	0.61	Y	No detected value of B, Step 7	No	MEC-C & B is ND
Hexachlorobenzene	ug/L		0.96	0.0077		0.0077	0.0077	No	Y	0.96	N	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
Hexachlorobutadiene	ug/L		2.9	50		50	50	No	Y	2.5	N	No detected value of B, Step 7	No	MEC-C & B is ND
Hexachlorocyclopentadiene	ug/L		0.93	17000		17000	17000	No	Y	0.93	Y	No detected value of B, Step 7	No	MEC-C & B is ND
Hexachloroethane	ug/L		0.93	8.9		8.9	8.9	No	Y	0.71	Y	No detected value of B, Step 7	No	MEC-C & B is ND
Indeno(1,2,3-cd)Pyrene	ug/L		0.78	0.049		0.049	0.049	No	Y	0.78	Y	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
Isophorone	ug/L		No Criteria	600		600	600	No	Y	0.83	N	No detected value of B, Step 7	No	MEC-C & B is ND
Naphthalene	ug/L		No Criteria	1900		1900	1900	No	Y	1.2	N	No detected value of B, Step 7	Uc	No Criteria
Nitrobenzene	ug/L		1.2	8.10		8.10	8.10	No	Y	1.7	N	No detected value of B, Step 7	No	MEC-C & B is ND
N-Nitrosodimethylamine	ug/L		0.74	1.40		1.40	1.40	No	Y	0.74	N	No detected value of B, Step 7	No	MEC-C & B is ND
N-Nitrosodi-n-Propylamine	ug/L		0.76	16		16	16	No	Y	0.61	N	No detected value of B, Step 7	Uc	No Criteria
N-Nitrosodiphenylamine	ug/L		No Criteria	11000		11000	11000	No	Y	0.45	N	No detected value of B, Step 7	No	MEC-C & B is ND
Phenanthrene	ug/L		0.61	No Criteria		No Criteria	No Criteria	No	Y	0.45	N	No detected value of B, Step 7	Uc	No Criteria
Pyrene	ug/L		No Criteria	0.00014		0.00014	0.00014	No	Y	0.006	N	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
1,2,4-Trichlorobenzene	ug/L		0.003	0.013		0.013	0.013	No	Y	0.006	N	No detected value of B, Step 7	No	MEC-C & B is ND
Aldrin	ug/L		0.006	0.046		0.046	0.046	No	Y	0.004	N	No detected value of B, Step 7	No	MEC-C & B is ND
alpha-BHC	ug/L		0.004	0.063		0.063	0.063	No	Y	0.009	N	No detected value of B, Step 7	Uc	No Criteria
beta-BHC	ug/L		No Criteria	No Criteria		No Criteria	No Criteria	No	Y	0.014	Y	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
gamma-BHC	ug/L		No Criteria	0.00059		0.00059	0.00059	No	Y	0.012	N	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
delta-BHC	ug/L		No Criteria	0.00059		0.00059	0.00059	No	Y	0.004	Y	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
Chlordane	ug/L		No Criteria	0.00084		0.00084	0.00084	No	Y	0.11	Y	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
4,4'-DDT	ug/L		0.014	0.00014		0.00014	0.00014	No	Y	0.02	Y	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
4,4'-DDE (linked to DDT)	ug/L		0.014	240		240	240	No	Y	0.014	N	No detected value of B, Step 7	No	MEC-C & B is ND
4,4'-DDD	ug/L		0.014	240		240	240	No	Y	0.004	N	No detected value of B, Step 7	No	MEC-C & B is ND
Dieldrin	ug/L		0.014	240		240	240	No	Y	0.066	N	No detected value of B, Step 7	No	MEC-C & B is ND
alpha-Endosulfan	ug/L		0.004	240		240	240	No	Y	0.006	N	No detected value of B, Step 7	No	MEC-C & B is ND
beta-Endosulfan	ug/L		0.006	0.81		0.81	0.81	No	Y	0.003	N	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
Endosulfan Sulfate	ug/L		0.006	0.0021		0.0021	0.0021	No	Y	0.083	Y	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
Endrin	ug/L		0.006	0.0011		0.0011	0.0011	No	Y	0.005	Y	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
Endrin Aldehyde	ug/L		0.023	0.0017		0.0017	0.0017	No	Y	0.024	Y	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
Heptachlor	ug/L		0.023	0.00075		0.00075	0.00075	No	Y	0.002	Y	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
Heptachlor Epoxide	ug/L		0.00075	0.00075		0.00075	0.00075	No	Y	0.002	Y	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
PCBs sum (2)	ug/L		0.00075	0.00075		0.00075	0.00075	No	Y	0.002	Y	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and
Toxaphene	ug/L		0.00075	0.00075		0.00075	0.00075	No	Y	0.002	Y	No detected value of B, Step 7	No	UD; effluent ND, MDL > C, and

Parameters	HUMAN HEALTH CALCULATIONS				AQUATIC LIFE CALCULATIONS						LIMITS				
	Organisms only				Saltwater / Freshwater / Basin Plan		Saltwater / Freshwater / Basin Plan		Lowest AMEL	Lowest MDEL	Recommendation				
	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	AMEL multiplier 95	MDEL multiplier 99	MDEL aq life	MDEL aq life	Lowest AMEL	Lowest MDEL	Recommendation
Anionomy	4300	2.01	8626.61	0.32	22.15	0.53	18.99	18.99	1.55	29.48	3.11	59.14	4300.00	8626.61	No Limit
Arsenic		2.01		0.32	13.57	0.53	4.93	4.93	1.55	7.66	3.11	19.37			No Limit. More data required
Beryllium		2.01		0.32	1.86	0.53	1.97	1.86	1.55	2.88	3.11	5.78			No Limit
Cadmium		2.01		0.32	24.00	0.53	4.37	4.37	1.55	6.78	3.11	13.61			No Limit
Chromium (III)	4600	2.01	9228.47	0.32	93.30	0.53	37.52	37.52	1.55	58.23	3.11	116.86			No Limit. More data required
Chromium (VI)		2.01		0.32	0.72	0.53	0.72	0.72	1.55	1.11	3.11	2.24			No Limit. More data required
Copper	6.3	2.01	12.64	0.32	30.55	0.53	45.16	30.55	1.55	47.42	3.11	95.14			No Limit. More data required
Lead		2.01													No Limit
Mercury															No Limit
Nickel															No Limit
Selenium															No Limit
Silver															No Limit
Thallium															No Limit
Zinc															No Limit
Cyanide															No Limit
Asbestos															No Limit
2,3,7,8 TCDD															No Limit
TCDD Equivalents															No Limit
Acrolein															No Limit
Acrylonitrile															No Limit
Benzene															No Limit
Bromofom															No Limit
Carbon Tetrachloride															No Limit
Chlorobenzene															No Limit
Chlorobromomethane															No Limit
Chloroethane															No Limit
2-Chloroethylvinyl ether															No Limit
Chloroform															No Limit
Dichlorobromomethane															No Limit
1,1-Dichloroethane															No Limit
1,2-Dichloroethane															No Limit
1,1-Dichloroethylene															No Limit
1,2-Dichloropropane															No Limit
1,3-Dichloropropylene															No Limit
Ethylbenzene															No Limit
Methyl Bromide															No Limit
Methyl Chloride															No Limit
Methylene Chloride															No Limit
1,1,2,2-Tetrachloroethane															No Limit
Tetrachloroethylene															No Limit
Toluene															No Limit
1,2-Trans-Dichloroethylene															No Limit
1,1,1-Trichloroethane															No Limit
1,1,2-Trichloroethane															No Limit
Trichloroethylene															No Limit
Vinyl Chloride															No Limit
2-Chlorophenol															No Limit
2,4-Dichlorophenol															No Limit
2,4-Dimethylphenol															No Limit
4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)															No Limit
2,4-Dinitrophenol															No Limit
4-Nitrophenol															No Limit
3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)															No Limit
Pentachlorophenol															No Limit
Phenol															No Limit
2,4,6-Trichlorophenol															No Limit
Acenaphthene															No Limit
Acenaphthylene															No Limit
Anthracene															No Limit
Benzidine															No Limit
Benzof(a)Anthracene															No Limit
Benzof(b)Pyrone															No Limit
Benzof(k)Fluoranthene															No Limit
Benzof(l)Fluoranthene															No Limit
Bis(2-Chloroethoxy)Methan															No Limit

Fact Sheet Attachment I  
 Draft Reasonable Potential Analysis (Per Sections 1.3 and 1.4 of SIP)

Parameters	HUMAN HEALTH CALCULATIONS					AQUATIC LIFE CALCULATIONS					LIMITS		
	Organisms only					Saltwater / Freshwater / Basin Plan					Lowest MDEL	Recommendation	
	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	AMEL multiplier 95	AMEL multiplier life			MDEL multiplier 99
Bis(2-Chloroethyl)Ether													No Limit
Bis(2-Chloroisopropyl)Ether													No Limit
Bis(2-Ethylhexyl)Phthalate													No Limit
4-Bromophenyl Phenyl Ether													No Limit
Butylbenzyl Phthalate													No Limit
2-Chloronaphthalene													No Limit
4-Chlorophenyl Phenyl Ether													No Limit
Chrysene													No Limit
Dibenz(a,h)Anthracene													No Limit
1,2-Dichlorobenzene													No Limit
1,3-Dichlorobenzene													No Limit
1,4-Dichlorobenzene													No Limit
3,3-Dichlorobenzidine													No Limit
Diethyl Phthalate													No Limit
Dimethyl Phthalate													No Limit
Di-n-Butyl Phthalate													No Limit
2,4-Dinitrotoluene													No Limit
2,6-Dinitrotoluene													No Limit
Di-n-Octyl Phthalate													No Limit
1,2-Diphenylhydrazine													No Limit
Fluoranthene													No Limit
Fluorene													No Limit
Hexachlorobenzene													No Limit
Hexachlorobutadiene													No Limit
Hexachlorocyclopentadiene													No Limit
Hexachloroethane													No Limit
Indeno(1,2,3-cd)Pyrene													No Limit
Isophorone													No Limit
Naphthalene													No Limit
Nitrobenzene													No Limit
N-Nitrosodimethylamine													No Limit
N-Nitrosodi-n-Propylamine													No Limit
N-Nitrosodiphenylamine													No Limit
Phenanthrene													No Limit
Pyrene													No Limit
1,2,4-Trichlorobenzene													No Limit
ADBn													No Limit
alpha-BHC													No Limit
beta-BHC													No Limit
gamma-BHC													No Limit
delta-BHC													No Limit
Chlordane													No Limit
4,4'-DDT													No Limit
4,4'-DDE (linked to DDT)													No Limit
4,4'-DDD													No Limit
4,4'-DDD													No Limit
Dieldrin													No Limit
alpha-Endosulfan													No Limit
beta-Endosulfan													No Limit
Endosulfan Sulfate													No Limit
Endrin													No Limit
Endrin Aldehyde													No Limit
Heptachlor													No Limit
Heptachlor Epoxide													No Limit
pCBS sum (2)													No Limit
Toxaphene													No Limit

