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File No. 84-01.01-55

Via Electronic Mail

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

Dear Mr. Unger:

Comments on Tentative Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) Permit for the San Jose Creek Water Reclamation Plant (NPDES Permit No. CA0053911)

The Joint Outfall System¹ (Sanitation Districts) appreciates the opportunity to provide comments on the Tentative Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) Permit (Tentative Permit) for the San Jose Creek Water Reclamation Plant (WRP) dated December 19, 2014. The Sanitation Districts have a number of comments regarding the Tentative Permit, and request that the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) modify the Tentative Permit based on the requests herein. We would also like to take this opportunity to thank Regional Board staff for meeting with our staff on January 7, 2015 to discuss our concerns regarding the Tentative Permit. Our comments are detailed below, and divided into several sections. The first and second sections present general/legal and specific comments, respectively, relating to toxicity provisions in the Tentative Permit, while the third section contains other comments.

GENERAL/LEGAL COMMENTS ON TOXICITY-RELATED PROVISIONS

The general/legal comments prepared by the Sanitation Districts' special counsel are included as Attachment A as part of the Administrative Record.

SPECIFIC COMMENTS ON TOXICITY-RELATED PROVISIONS

Comment 1. Use of the two-concentration test design should not be a requirement of the permit.

- a) Use of the two-concentration test design is inconsistent with the promulgated method.

¹ Ownership and operation of the Joint Outfall System is proportionally shared among the signatory parties to the amended Joint Outfall Agreement effective July 1, 1995. These parties include County Sanitation Districts of Los Angeles County Nos. 1, 2, 3, 5, 8, 15, 16,17, 18, 19, 21, 22, 23, 28, 29, and 34, and South Bay Cities Sanitation District of Los Angeles County.

The first and last paragraphs in Section VII.J (page 26) of the Tentative Permit mandate the use of a two-concentration test design (control and Instream Waste Concentration or IWC) and prohibit application of a concentration-response² evaluation and other data review steps incorporated as part of the concentration-response evaluation. This restriction is inconsistent with mandatory requirements contained in 40 Code of Federal Regulations (CFR) Part 136 promulgated method, Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms, Fourth Edition, EPA-821-R-02-013, October 2002 (Promulgated Method). The Promulgated Method requires a minimum of a five-concentration test design for NPDES final effluent testing and evaluation of the concentration response relationship. Several quotes from this document are provided below.

“Use of pass/fail tests consisting of a single effluent concentration (e.g., the receiving water concentration or RWC) and a control is not recommended”³

“The tests recommended for use in determining discharge permit compliance in the NPDES program are multi-concentration, or definitive, tests which provide (1) a point estimate of effluent toxicity in terms of an IC25, IC50, or LC50, or (2) a no-observed-effect-concentration (NOEC) defined in terms of mortality, growth, reproduction, and/or teratogenicity and obtained by hypothesis testing”⁴

“The concentration-response relationship generated for each multi-concentration test must be reviewed to ensure that calculated test results are interpreted appropriately”⁵

Tables 1, 3, and 4 (labeled as 3) - SUMMARY OF TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA WITH EFFLUENTS AND RECEIVING WATERS (TEST METHODS 1000.0, 1002.0, AND 1003.0):

Test concentrations:	Effluents:	5 and a control (required minimum)
	Receiving Water:	100% receiving water (or minimum of 5) and a control (recommended) ⁶

b) The mandated use of the two-concentration test design is inconsistent with the provisions in USEPA’s TST Guidance Document.

In 2010, the United States Environmental Protection Agency (USEPA) released a guidance document, National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document, EPA-833-R-10-003 (TST Guidance Document) introducing the Test of Significant Toxicity (TST) protocol for analysis of chronic toxicity testing data. This guidance document make it clear in numerous places that the intent of the guidance was to introduce a new method of analyzing data collected during a valid whole effluent toxicity (WET) analysis. The TST Guidance Document clearly indicates that all toxicity tests are to be conducted following all specified requirements in the Promulgated Method, and even specifically points out that this includes use of a multiple concentration test design for final effluents. Some quotes from this document are presented below.

² For the purposes of this comment letter, the terms “concentration-response” and “dose-response” have equivalent meanings and can be used interchangeably.

³ Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms, Fourth Ed., EPA-821-R-02-013. October 2002. [Exhibit 1] Section 2.2.3.

⁴ Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms, Fourth Ed., EPA-821-R-02-013. October 2002. Section 8.10.1.

⁵ Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms, Fourth Ed., EPA-821-R-02-013. October 2002. Section 10.2.6.2.

⁶ Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms, Fourth Ed., EPA-821-R-02-013. October 2002. Tables 1, 3, and 4 (labeled as 3) on pages 76, 165, and 211.

“The TST approach does not result in changes to EPA’s WET test methods promulgated at Title 40 of the Code of Federal Regulations Part 136.”⁷

“Once the WET test has been conducted (*using multiple effluent concentrations and other requirements as specified in the WET test methods*), the TST approach can be used to analyze the WET test results to assess whether the effluent discharge is toxic at the critical concentration. Performing the EPA WET test where the *minimum five required test concentrations (pursuant to the EPA WET test methods)* can establish a concentration-response curve. The TST approach is designed to be use used for a two concentration data analysis of the IWC or a receiving water concentration (RWC) as compared to a control concentration.”⁸ [Emphasis added]

“This document presents TST as a useful alternative data analysis approach for valid WET test data that may be used in addition to the approaches currently recommended in EPA’s Technical Support Document (USEPA 1991) and EPA’s WET test method manuals.”⁹

“The TST approach is an alternative statistical approach for analyzing and interpreting valid WET data; it is not an alternative approach to developing NPDES permit WET limitations. Using the TST approach does not result in any changes to EPA’s WET test methods.”¹⁰

“Step 1: Conduct WET test following procedures in the appropriate EPA WET test method manual. This includes following all test requirements specified in the method (USEPA 1995 for chronic West Coast marine methods, USEPA 2002a for chronic freshwater WET methods, USEPA 2002b for chronic East Coast marine WET methods, and USEPA 2002c for acute freshwater and marine methods).”¹¹

- c) The mandated use of the two concentration test design is inconsistent with NPDES permits issued by USEPA Region IX that also utilize the TST.

The importance and need to conduct multiple concentration tests, including a concentration-response evaluation for chronic toxicity tests using the TST statistic, was confirmed by USEPA Region IX in one of its recently issued NPDES permits.¹¹ This USEPA-issued general permit for oil and gas exploration required the use of the TST statistical method to analyze *multi-concentration* WET test results, stating, “This permit is subject to a determination of Pass or Fail from a *multiple-effluent concentration chronic toxicity test* at the IWC (for statistical flowchart and procedures, see National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document, Appendix A, Figure A-1)”. [Emphasis added.]

In addition, USEPA Region IX specifically required the use of a multi-concentration test design with consideration of concentration-response before running the TST statistic, stating, “Following Paragraph 10.2.6.2 of the freshwater EPA WET test methods manual, *all chronic toxicity test results from the multi-concentration tests required by this permit shall be reviewed and reported according to*

⁷ U.S. EPA. National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document. EPA-833-R-10-003 (June, 2010) pg. ii on the Disclaimer. [Exhibit 2]

⁸ U.S. EPA. National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document. EPA-833-R-10-003 (June, 2010) pg. v.

⁹ U.S. EPA. National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document. EPA-833-R-10-003 (June, 2010) pg. 7.

¹⁰ U.S. EPA. National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document. EPA-833-R-10-003 (June, 2010) pg. 60.

¹¹ U.S. EPA. National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document. EPA-833-R-10-003 (June, 2010) Appendix B, pg. B-3.

EPA guidance on the evaluation of concentration-response relationships in Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136) (EPA/821/B-00-004, 2000)¹² [Emphasis added.]

The Sanitation Districts request that a similar provision be incorporated into the Tentative Permit to allow for the use of a five-concentration test design and the evaluation of the concentration-response relationship. Such a provision would allow the Districts to conduct chronic toxicity tests in a manner consistent with the toxicity testing provisions contained in recent NPDES permits issued by USEPA Region IX, the requirements contained in the promulgated method, and in a manner consistent with the conditions specified in USEPA's TST Guidance Document.

- d) Conditions in the Tentative Permit prohibiting the use of a multiple concentration test design and an evaluation of the concentration-response relationship will result in a less accurate estimate of toxicity.

Biological systems are inherently variable. WET tests measure how certain organisms respond to a particular water sample. As such, the measurements are impacted by a number of factors including organism health, ionic changes in water chemistry, presence/absence of trace elements in the water, seasonality, light levels, temperature, analyst handling, and many others. While variability in WET tests cannot be eliminated entirely, the Promulgated Method and various USEPA guidance document procedures were intentionally developed and incorporated to address this variability and quantify data and result reliability.

Conducting multiple concentration WET tests and evaluating the concentration-response relationship is one of the more critical and significant method-defined procedures for addressing this variability and validating data and is equally important when evaluating point estimate results such as the effect and inhibition concentration as it is when evaluating hypothesis test results using a t-test such as the NOEC or TST. In all instances, the concept of a dose-response/concentration-response relationship has been described by toxicologists as "the most fundamental and pervasive one in toxicology". This concept assumes that a causal relationship exists between the concentration of a pollutant in a sample and the measured organism response. In other words, it is assumed that increasing organism response or effect is due to increasing pollutant/toxicant concentrations. Evaluation of the concentration-response relationship provides the empirical evidence that supports this assumption. Therefore, evaluating concentration response information is critical to associating any observed response to "toxicity". If an effect is caused by "toxicity", higher concentrations should logically exhibit the same or greater effects and lower concentrations should exhibit the same or lower effects. The only way this can be evaluated is by conducting multiple concentrations. Anomalies in this expected or assumed concentration-response curve reduces confidence in the test's ability to accurately estimate "toxicity" or, more specifically, the test's ability to estimate effects associated with pollutants or toxicants.

In fact, as part of their 2002 method promulgation process, USEPA conducted an interlaboratory variability study¹³ (Variability Study) that, in part, assessed the false positive error rate associated with many USEPA toxicity test method endpoints using blank samples known to be non-toxic. The Variability Study showed a substantially higher single test false positive error rate (showing toxicity in a non-toxic laboratory blank sample) for certain endpoints including the freshwater test species used to determine

¹² General Permit No. CAG280000. Authorization to Discharge Under the National Pollutant Discharge Elimination System for FACILITIES Oil and Gas Exploration, Development, and Production Facilities. Signed December 20, 2013. [Exhibit 3] Page 15, Section II.B.2.d.2.

¹³ USEPA. Final Report: Interlaboratory Variability Study of EPA Short-term Chronic and Acute Whole Effluent Toxicity Test Methods, Vol. 1; EPA-821-B-01-004 (Sept., 2001). [Exhibit 4]

compliance in the Tentative Permit. For the *Ceriodaphnia dubia* chronic toxicity reproduction endpoint, four of the 27 non-toxic blank samples tested using the NOEC and/or EC/IC25 without consideration of concentration-response showed toxicity, resulting in a false positive error of 14.8%. However, after application of USEPA's concentration-response evaluation, three of the four samples originally reported as "toxic" were corrected and determined to be "non-toxic".¹⁴ Therefore, **application of the concentration-response evaluation in this study decreased the false positive error from 14.8% to 3.8%.** Similarly, in the same study, three out of 24 non-toxic blank samples tested using the fathead minnow chronic toxicity test without consideration of concentration-response were reported as "toxic", resulting in false positive error rate of 12.5%. However, after application of USEPA's concentration-response evaluation, two of the three samples originally reported as "toxic" were corrected and determined to be "non-toxic".¹⁵ Therefore, **application of the concentration-response evaluation in this study decreased the false positive error in the fathead minnow chronic test from 12.5% to 4.17%.**

Without multiple concentration testing and the subsequent concentration-response evaluation, an unacceptably high false positive error rate would have been observed for both the *Ceriodaphnia dubia* and fathead minnow chronic bioassay tests. In response to the findings of this study, USEPA amended their method protocols to specifically require multiple concentration testing and application of a concentration-response evaluation for all NPDES final effluent testing. These amended protocols were ultimately promulgated for nationwide use in 2002.

In a legal challenge to the 2002 promulgated methods, the court found that "[t]he ratified WET tests are not without their flaws" and cautioned that "[e]ven by EPA's calculations, WET tests will be

¹⁴"A total of 27 valid tests were conducted on blank samples by 22 participant laboratories (Table 9.7). No false positives were observed for the survival endpoint. The survival NOEC was 100% for all 27 blank samples, and the LC50 was >100% for all 27 blank samples. One false positive was observed for sublethal endpoints. The reproduction NOEC for sample 9450 was 25%, and the reproduction IC25 for this sample was 15.9%. The resulting false positive rate calculated in the WET Variability Study for the *Ceriodaphnia* chronic test method was 3.70% for the reproduction endpoint. The one false positive that was observed for this method originated from a laboratory that failed all other *Ceriodaphnia* chronic tests conducted. In addition to the false positive reported above, a participant laboratory reported a reproduction IC25 of less than 100% for sample 9332, indicating a false positive result. Based on EPA guidance for evaluating concentration-response relationships (USEPA, 2000a), this value was determined to be an anomalous result of the ICp (percentage inhibition concentration) smoothing procedure, and the IC25 was corrected to >100% (Table 8.4). A participant laboratory also reported a survival NOEC and reproduction NOEC of less than 100% for sample 9379, indicating a false positive result. This sample exhibited an interrupted concentration-response curve, and based on EPA guidance for evaluating concentration-response relationships, the survival NOEC and growth NOEC were recalculated and reported as 100% (Table 8.4). Sample 9341 also produced an interrupted concentration-response curve, but the reproduction NOEC was similarly recalculated and reported as 100% (Table 8.4)."

¹⁵ "A total of 24 blank samples were analyzed by 20 participant laboratories (Table 9.18). No false positives were observed for the survival endpoint. The survival NOEC was 100% for all 24 blank samples, and the LC50 was >100% for all 24 blank samples. One false positive was observed for sublethal endpoints. The growth NOEC for sample 9158 was 50%, and the growth IC25 for this sample was 93.6%. The resulting false positive rate calculated in the WET Variability Study for the fathead chronic test method was 4.35% for the growth NOEC and 4.17% for the growth IC25. The one false positive that was observed was due to poor survival in a single replicate of the 100% test concentration treatment. For this sample, the survival in the 100% test concentration was 90%, 100%, 90%, and 50% for the 4 replicates, respectively. Disregarding replicate 4, the survival for this treatment would be identical to the control survival (95%). In addition to the false positive reported above, participant laboratories reported a NOEC of less than 100% for two additional samples (9145 and 9209), indicating false positive results. These samples exhibited an interrupted concentration-response curve. Based on EPA guidance for evaluating concentration-response relationships, the growth and survival NOEC for sample 9145 was recalculated and reported as 100%, and the growth NOEC for sample 9209 was reported as inconclusive (Table 8.4)."

wrong some of the time.¹⁶ However, the court upheld those methods because USEPA had provided adequate safeguards within those methods to protect against the concerns raised by the plaintiffs. One of these safeguards was the requirement to use a multiple-concentration test that includes a concentration-response evaluation. “EPA also offered an additional safeguard by designing the tests to give permittees the benefit of the doubt, limiting false positive rates to at most 5%, while allowing false negative rates up to 20%.¹⁷” These safeguards have been removed from the method with use of the two-concentration test method, which merely compares an effluent sample at the IWC, which is set at 100% effluent where there is no dilution credit, to a control blank using the TST statistical test.

It has been suggested by USEPA and Tetra Tech that a more thorough review of USEPA’s blank study data revealed several previously undetected quality assurance and quality control issues that at least partially explains the presumed high false positive error rate associated with the TST.¹⁸ However, the restrictions being imposed by requiring use of the two-concentration TST method will also restrict the ability of toxicologists to identify and address similar issues when interpreting compliance test results.

Additionally, although more challenging to quantify, evaluation of the concentration-response relationship is also highly effective at identifying potential false negative results (incorrectly identifying a sample as non-toxic when it is toxic) as well. The example below contains the results from a recent toxicity test statistically determined to be “non-toxic” but was subsequently identified as inconclusive and repeated based on the evaluation of the concentration-response relationship.

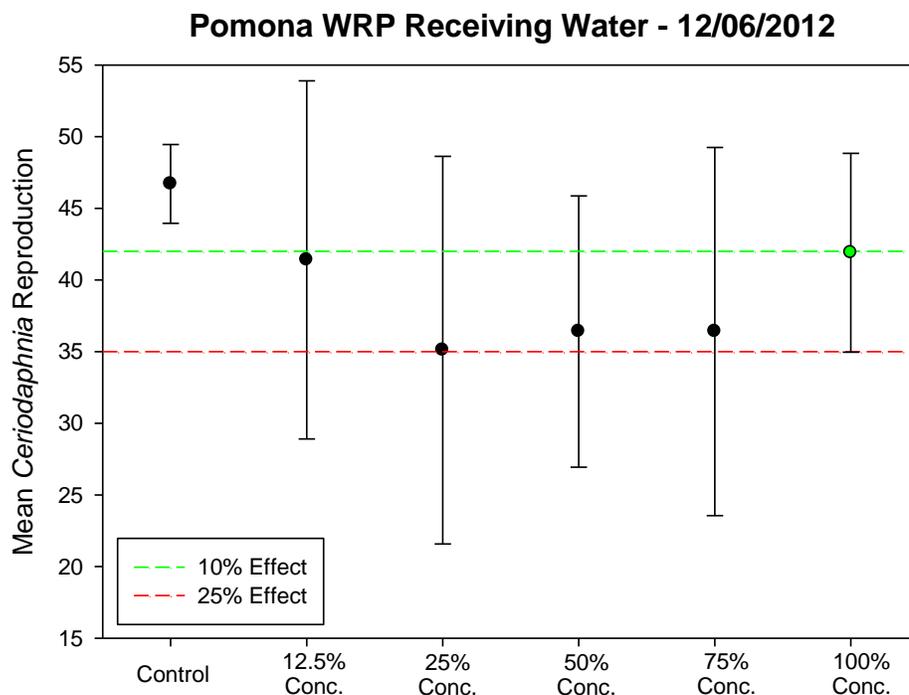


Figure 1. Dose-response pattern depicting a likely false negative error.

¹⁶ Edison Electric v. EPA, 391 F.3d 1267, 1272-1274 (D.C. Cir. 2004).

¹⁷ Edison Electric, 391 F. 3d at 1272.

¹⁸ Tetra Tech presentation at the August 22, 2011 State Board TST Workshop, slides 22 through 28, which can be found on the following website:

http://www.swrcb.ca.gov/water_issues/programs/state_implementation_policy/docs/testdrive_presentation.pdf.

[Exhibit 5]

In the absence of multi-concentration testing and a concentration-response evaluation, the results depicted above would have been identified as an unqualified “Pass” using the TST protocol. However, pending the findings of additional data evaluations, this test that otherwise would have been declared “non-toxic” or “Pass”, will likely be identified as “inconclusive” and repeated after conducting a dose-response relationship evaluation.

Regarding the technical merit of evaluating concentration-response when running the TST, in its Response to Comments on tentative NPDES permits for the Whittier Narrows and Pomona WRP, which contain chronic toxicity provisions essentially identical to those in this Tentative Permit, the Regional Board indicated that multiple concentration testing and concentration-response evaluations are only conducted to interpret the NOEC or a point estimate, stating, “the concentration-response relationship... is solely a test review step for when the statistical approach uses either a No Observable Effect Concentration (NOEC)/Lowest Observed Effect Concentration (LOEC) or a point estimate (EC25). This permit is not requiring either of these independent approaches.”¹⁹ Furthermore, during the adoption hearing for the Whittier Narrows and Pomona WRP NPDES permits, Regional Board and EPA Region IX staff indicated that multiple concentration testing and concentration-response evaluations are not appropriate to use for the TST, and such use would have no statistical or technical merit. However, at page 4-3 of USEPA’s own guidance on the WET testing methods²⁰ (Method Guidance), which addresses concentration-response evaluations, states that an “evaluation of the concentration-response relationship generated for each sample is an important part of the data review process that should not be overlooked.” The same page of this reference further concludes that “reviewing concentration-response relationships should be viewed as a component of a broader quality assurance and data review and reporting process.” This process includes data review, evaluation of test acceptability, evaluation of reference toxicant testing results, organism health evaluations, and test variability evaluation.

In addition, it is our understanding that California is the only state for which the two-concentration TST method has been approved as an Alternative Test Procedure (ATP) (although this approval has been legally challenged). This approval was issued in March 2014, although USEPA released the TST procedure in 2010. Therefore, in the other 49 states (and prior to March 2014 in California), a multi-concentration test design with consideration of concentration-response is a universal requirement when the TST is used. If use of a multi-concentration test design under these circumstances has no statistical or technical merit, then entities running the TST in these circumstances are wasting time and money running the multi-concentration tests. If this was the case, then USEPA should have gone through a formal method promulgation process to allow the two concentration TST method to be used nationwide, rather than introducing a new statistical procedure that requires steps to be performed with no statistical or technical merit.

Finally, some have incorrectly contended that a 2011 State Water Resources Control Board (State Water Board) “Test Drive” analysis²¹ (Test Drive) definitively demonstrated that the accuracy of the two-concentration test design using the TST was the same or better than the five-concentration test design using the NOEC. It is critical to understand that the Test Drive did not in any way compare the two-concentration TST test design and the five-concentration TST test design. The Test Drive simply compared the TST and NOEC statistical procedures. TST results from final effluent toxicity tests conducted using a five-concentration test design were compared to NOEC results from the same five-

¹⁹ Regional Board, Response to Comments, Joint Outfall System, Whittier Narrows Water Reclamation Plant, Tentative NPDES Permit, October 24, 2014. [Exhibit 6] Page 1.

²⁰ USEPA. Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing. EPA-821-B-00-004. [Exhibit 7]

²¹ Effluent, Stormwater, and Ambient Toxicity Test Drive Analysis of the Test of Significant Toxicity (TST). California State Water Resources Control Board. December 2011. [Exhibit 8]

concentration final effluent tests. Toxicity tests that were deemed inconclusive and repeated using USEPA's concentration-response guidance procedures would not have been included in the evaluation. Likewise, the TST results from receiving water/ambient toxicity tests using a two-concentration test design were compared to the NOEC results from the same receiving water/ambient toxicity tests. In contrast, the USEPA did conduct an evaluation of the multiple concentration NOEC method with and without incorporation of a concentration-response evaluation and determined that incorporation of the concentration-response evaluation was responsible for reducing the false positive error rate from 14% to less than 5%.²² Therefore, a similar improvement in the expected error rate of the two concentration TST test design would be expected with incorporation of a multiple concentration test design that included a similar concentration-response evaluation.

It should also be noted that, although the Test Drive determined that frequency of identifying toxic and non-toxic samples as a whole across all species and endpoints were comparable between the NOEC and TST, an examination of species-specific results indicated that a significantly higher frequency of toxicity detection was observed in the freshwater chronic toxicity tests (specifically for the fathead minnow and *Ceriodaphnia*). Of particular concern were the Test Drive results for the fathead minnow chronic survival endpoint. The Test Drive reported 52 tests as being "toxic" for this endpoint using the NOEC as compared to 142 tests identified as "toxic" using the TST.²³ This means that almost three times as many chronic fathead minnow survival tests will be reported as being toxic using the TST than with the NOEC. Although less dramatic, the Test Drive results for the *Ceriodaphnia dubia* reproduction endpoint also showed significantly more "toxic" determination than did the NOEC. The Test Drive identified 216 tests as "toxic" using the NOEC and 233 tests as "toxic" using the TST²⁴. This represents a nearly 8% increase in the number of tests identified as "toxic" using the TST compared to the NOEC. Overall, the Test Drive actually demonstrated that use of the TST will significantly increase the frequency of identifying sample results as "toxic" for the freshwater species used in this Tentative Permit.

While some contend that the State Board Test Drive adequately demonstrated that the false positive error rate for the TST statistical test is comparable to the NOEC statistical test, such a conclusion is unfounded. The Test Drive was not able to estimate the false positive error rate of either the NOEC or the TST because the analysis was not conducted on known non-toxic blank samples. Tests used in the Test Drive evaluation were performed on effluents, receiving waters, and ambient waters whose actual or true "toxicity" was not known. Some of the tests that exhibited relatively high measured effects may have actually had low actual effects and been "non-toxic" while others that exhibited relatively small measured effects may have been truly "toxic." Additionally, as discussed above, this analysis failed to examine the impact of eliminating the concentration-response evaluation on false positive error rates as the five-concentration effluent test data all was subjected to concentration-response QA/QC evaluation. In the absence of any actual studies on the error rate of the two-concentration TST method, based on inference from the Variability Study referenced above, the single test false positive error rate for the two-concentration TST method, as it lack concentration-response analysis, is estimated to be approximately 14%. Assuming a similar 14% single test false positive error rate for the two-concentration TST method, a Permittee can expect to observe, on average, a monthly median exceedance (failing two out of three tests conducted in a calendar month) twice during the five-year permit cycled at each WRP even if the final effluent was completely non-toxic.

²² 67 Federal Register 69,964 (November 19, 2002).

²³ Effluent, Stormwater, and Ambient Toxicity Test Drive Analysis of the Test of Significant Toxicity (TST). California State Water Resources Control Board. December 2011. Page 28.

²⁴ Effluent, Stormwater, and Ambient Toxicity Test Drive Analysis of the Test of Significant Toxicity (TST). California State Water Resources Control Board. December 2011. Page 28.

It is for these reasons detailed above that the 40 CFR Part 136 promulgated chronic toxicity testing protocols concluded that test review, including evaluation of the concentration-response relationship, is necessary for ensuring that all test results are reported accurately²⁵. In addition to being necessary for accurate result interpretation, the Promulgated Method also directly requires that multiple concentration testing be conducted for all NPDES effluent compliance determination tests. It further requires that an evaluation of the concentration-response relationship be conducted and strongly recommends against the use of two-concentration (control and IWC) test designs for NPDES. Furthermore, the TST Guidance Document also recognizes that toxicity tests should be conducted following these same requirements and furthermore specifically references conducting multiple concentration testing before application of the two-concentration TST statistical procedure.

While the Districts agree that evaluation of toxicology can be complex and the evaluation of the concentration-response requires specialized expertise, the process and procedures that an Environmental Laboratory Accreditation Program (ELAP) certified laboratory follows to conduct such an evaluation are stringently evaluated every two years. This evaluation includes a site visit and comprehensive audit of all standard operating procedures, training, staff qualifications, documentation, and record keeping every two years by an ELAP auditor.

Therefore, we request that the following changes be made to the Tentative Permit to accurately reflect allowable and required 40 CFR Part 136 protocol evaluation procedures that include the ability conduct multiple concentration tests and an appropriate dose response relationship evaluation.

Page 29, Section VII.J (first paragraph):

~~“The discharge is subject to determination of “Pass” or “Fail” and “Percent Effect” from a single-effluent concentration chronic toxicity test at the discharge IWC using the Test of Significant Toxicity (TST) approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis (Ho) for the TST approach is: Mean discharge IWC response $\leq 0.75 \times$ Mean control response. A test result that rejects this null hypothesis is reported as “Pass”. A test result that does not reject this null hypothesis is reported as “Fail”. The relative “Percent Effect” at the discharge IWC is defined and reported as: ((Mean control response - Mean discharge IWC response) \div Mean control response) \times 100.”~~

Page 30, Section VII.J (last paragraph):

~~“The chronic toxicity MDEL and MMEL are set at the IWC for the discharge (100% effluent) and expressed in units of the TST approach (“Pass” or “Fail”, “Percent Effect”). All NPDES effluent compliance monitoring for the chronic toxicity MDEL and MMEL shall be reported using only the 100% effluent concentration and negative control, expressed in units of the TST. The TST hypothesis (Ho) (see above) test is not tested using a multi-concentration statistical test design; therefore, the concentration response relationship for the effluent and/or PMSDs shall not be used to interpret the TST result reported as the effluent compliance monitoring result. While t The Permittee can opt to monitor the chronic toxicity of the effluent using five or more effluent dilutions (including 100% effluent and negative control) and utilize all 40 CFR Part 136 specified procedures, including evaluation of the concentration response, to determine if results are reliable and should be reported, anomalous and should be explained, or that the test was inconclusive and should be repeated. Only results generated using the TST statistical procedure on bioassay data~~

²⁵ Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms, Fourth Ed., EPA-821-R-02-013. October 2002. Section 10.2. Page 49.

meeting 40 CFR Part 136 QA/QC requirements result will be considered for compliance purposes. The Board may consider results of any TIE/TRE studies in an enforcement action.”

Comment 2. The Permittee should not be required to conduct routine toxicity compliance monitoring and should not be liable for continued MMEL and MDEL WET violations after triggering accelerated testing and initiation of the TRE.

The 2009 NPDES permit for the San Jose Creek WRP required accelerated testing following an exceedance of its monthly median chronic toxicity trigger. The purpose of the accelerated testing was to confirm that toxicity was indeed present, not simply the result of false positive test results or an ephemeral toxicity event, and to ensure that any toxicity was persistent enough to identify the source of the toxicity. If accelerated testing confirmed the toxicity, the 2009 permit required a Toxicity Reduction Evaluation/Toxicity Identification Evaluation (TRE/TIE) to identify the specific cause or causes of the observed toxicity. The accelerated testing and TRE process represents essentially a confirmation and diagnosis process, as toxicity cannot be addressed until the cause of the toxicity is known.

The Tentative Permit does not allow time for this confirmation and diagnosis process to occur, but instead continues to require monthly chronic toxicity compliance determinations to be made during the accelerated testing and TIE/TRE process. This subjects the Sanitation Districts to additional liability for violations during this critical confirmation and diagnosis process, which is unnecessarily punitive. The Sanitation Districts will be penalized even when all appropriate steps are being timely and diligently taken to resolve the issue. The apparent justification for this requirement is to incentivize the Sanitation Districts to move quickly during this TIE/TRE process, but the Permits themselves contain tight timelines for required actions, so no need exists to impose additional violations during this process so long as the process is being diligently undertaken.

In addition to being unnecessarily punitive, assessing compliance during accelerated testing would be challenging because the regulatory threshold used during accelerated testing is different from the threshold for used routine compliance determination. For routine compliance determination, a monthly median TST is used to evaluate compliance. During accelerated testing, a single TST exceedance is used as a TRE trigger. Under this bifurcated approach, a Permittee could “Fail” one of the four accelerated tests while “Passing” the MMEL compliance tests. This would result in the triggering of a TRE on a Permittee that is actually demonstrating compliance. Additionally, if the MMEL compliance monitoring tests and the accelerated monitoring both resulted in “Fail”, it is unclear if additional accelerated testing would be conducted concurrently with the TRE in response to the new MMEL failure. Finally, during the TRE, a Permittee could demonstrate compliance with the MMEL while in the middle of the TRE analysis. In such a situation, it is unclear if the Permittee could end the TRE or would be forced to continue TRE implementation even while currently in compliance with the applicable effluent limit.

Overall, it seems to be of very little use to require accelerated testing or the initiation of a TRE while the Permittee is actually demonstrating compliance with the applicable limits. By requiring continued compliance monitoring during accelerated testing and TRE initiation, such confounding scenarios are likely to be observed. The only reasonable solution to these multiple conflicts, which are not addressed in any way in the Permits, is to discontinue compliance monitoring during the accelerated monitoring/TIE/TRE process. A less satisfactory, partial solution to some of the conflicts would be to allow the District to discontinue accelerated testing and/or TRE plan implementation if compliance with the applicable limits is demonstrated during a calendar month.

Additionally, State Water Board staff has been actively working on the development of a statewide policy/plan to address regulation of WET for several years now. A significant and meaningful

part of this process includes working with multiple stakeholders across the state and the issue discussed above has been a part of the discussions with State Board staff. As a result, State Board staff has made its intentions known that, after an initial WET limit violation, no further violations should be incurred during accelerated testing and for a period of six months after initiation of the TRE implementation plan provided that the Permittee conducts the required and appropriate actions to address the WET exceedance. Under staff's proposal, an extension of the six-month exemption could be granted by the regulating authority on a case-by-case basis. This approach would allow for the Permittee to focus any and all available efforts on quickly confirming the persistence of toxicity during accelerated testing and/or more completely characterizing and identifying the toxicity-causing constituent(s) during the TRE instead of conducting additional independent testing that would not be useful in achieving the goal of controlling toxicity. Because the State Water Board approach is an outgrowth of a wider stakeholder process, this suggested approach should have been applied in the Permits.

It is our understanding that the USEPA has approved this approach in other recent NPDES permits. This approach was included in the California Regional Water Quality Control Board, San Diego Region's (San Diego Regional Board's) NPDES permit for the San Diego Naval Complex on August 14, 2013, which stated that there would be an initial violation imposed for exceeding the applicable limit, but: "...Any exceedances occurring during a required accelerated monitoring period and, if appropriate, a TRE period shall not constitute additional violations provided that: (1) the Discharger proceeds with the accelerated monitoring and TRE (if required) in a timely manner; and (2) the accelerated monitoring and TRE are completed within one year of the initial exceedance. The San Diego Water Board has the discretion to impose additional violations and initiate an enforcement action for toxicity tests that result in a "fail" after one year from the initial violation. Additionally, a discharger's failure to initiate an accelerated monitoring schedule or conduct a TRE, as required by this Order will result in all exceedances being considered violations of the MDEL or MMEL and may result in the initiation of an enforcement action."²⁶ Prior to adoption of this permit, USEPA sent a comment letter on the Naval Complex permit and in that letter stated that, "EPA has worked closely with the State and Regional Water Boards to ensure effluent limitations and testing are conducted consistent with federal and state requirements."²⁷

Since "toxicity" is a characteristic of an effluent and not a constituent, all toxicity efforts conducted after an exceedance of an MDEL or MMEL WET limit should focus on quantifying the persistence of toxicity and identifying the pollutant cause of the exceedance. The accelerated testing following an MMEL or MDEL exceedance is conducted to confirm that toxicity is persistent enough to warrant the exceptional efforts and costs that are incorporated in the TRE process, including TIE testing, and the TRE is specifically intended to identify the specific cause or causes of the observed toxicity (and ultimately confirm that toxicity is no longer present). Since the accelerated bioassay tests are conducted following all requirements of the 40 CFR Part 136 methods, they must be and are reported concurrently with all other NPDES results in the monthly report. Additionally, in addition to various recommended investigatory actions included as part of our initial TRE Plan, the Sanitation Districts' TRE Plan contains provisions to conduct TIEs during the TRE implementation process. Therefore, the Regional Board will continue to receive chronic toxicity testing and other investigatory data throughout the accelerated testing and TRE Plan initiation process.

Because the State Water Board approach is an outgrowth of a wider stakeholder process, we believe that the "alternative compliance" approach that suspends use of the MDEL and MMEL in favor of

²⁶ San Diego Regional Board Order No. R9-2013-0064, NPDES No. CA0109169, Waste Discharge Requirements for the United States Department of the Navy, Naval Base San Diego Complex, San Diego County., MRP pg. 21, Para. F. [Exhibit 9]

²⁷ USEPA Region IX, Letter from David Smith, Manager of the NPDES Permits Office to David Barker, Supervising Water Resource Engineer, San Diego Water Board, July 8, 2013. [Exhibit 10]

an effort-based compliance approach contemplated and even proposed by the State Water Board should be applied to the tentative permit. Based on these comments, the following changes are requested:

Page E-25, MRP Section V.A.7. (last sentence of the last paragraph):

~~“During accelerated monitoring schedules, only TST results (“Pass” or “Fail”, “Percent Effect”) for chronic toxicity tests shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL and MMEL.”~~

Page E-25, MRP Section V.A.8:

~~“During the TRE Process, monthly effluent monitoring shall resume and TST results (“Pass” or “Fail”, “Percent Effect”) for chronic toxicity tests shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL and MMEL.”~~

Page E-26, MRP Section V.A.8.d:

~~“The Permittee shall continue to conduct routine effluent monitoring for compliance determination purposes while the TIE and/or TRE process is taking place. Additional accelerated monitoring and TRE work plans are not required once a TRE is begun.”~~

Comment 3. Chlorine removal prior to conducting final effluent toxicity testing must be allowed.

Dechlorination of final effluent prior to discharge is part of the treatment process used at each of the Sanitation Districts' water reclamation facilities including the San Jose Creek WRP. Dechlorinating agents are added to the water and mixed immediately prior to discharge into the receiving water through Discharge Point Nos. 002 and 003. Dechlorinating agents are also added to the flows directed toward Discharge Point Nos. 001, 001A, and 001B. However, certain flows routed directly to water recycling are not dechlorinated. As the demand for recycled water increases and influent flows decrease due to water conservation, less effluent is discharged to receiving waters, resulting in significant periods when no final effluent is discharged through various discharge points. The resulting lack of continuous discharge to the receiving water makes routine collection of a 24-hour composite final effluent sample after dechlorination infeasible and in some instances impossible. As water recycling and water conservation increases, the periods with no discharges to receiving water will increase. Furthermore, the Tentative Permit contains requirements to conduct monitoring for chlorine residual in discharges to surface waters, as well as numeric limits for chlorine residual, so any malfunction in the dechlorinating process will be identified and any limit exceedances reported.

The Sanitation Districts believe that the current sampling locations, after chlorination but prior to dechlorination, provide accurate representative samples. Included as Attachment E is the Sanitation Districts' standard protocol for Sample Collection Methods for Acute and Chronic Bioassay Testing, which includes sample dechlorination. This protocol follows the “Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms” (EPA-821-R-02-013) [Exhibit 2], which also contains a provision for sample dechlorination prior to the analysis for toxicity (Section 8.8.7).

This issue was discussed in detail with staff of the Regional Board at an April 6, 2004 meeting held in conjunction with 2004 renewals of the Pomona and San Jose Creek WRP NPDES permits. As a result of the April 2004 meeting, the Regional Board inserted language into these NPDES permits (Order Nos. R4-2004-0099 and R4-2004-0097) allowing the Sanitation Districts to collect chlorinated samples and simulate the dechlorination process in the laboratory before bioassay testing, provided the practice is documented in the laboratory report. Additionally, the Regional Board has also approved laboratory dechlorination of effluent from the Sanitation Districts' Joint Water Pollution Control Plant (JWPCP)

prior to toxicity testing (Order No. R4-2011-0151; NPDES No. CA0053813). Therefore, we request the following changes:

Page E-24, MRP Section V.A.5.f:

“The Permittee shall perform toxicity tests on final effluent samples. Chlorine in the final effluent sample may be removed prior to conducting toxicity tests in order to simulate the dechlorination process at the facility. However, ~~and~~ ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the Monitoring and Reporting Program and the rationale is explained in the Fact Sheet (Attachment F).”

Page E-27, MRP Section V.C

“~~Except with prior approval from the Executive Office of the Regional Water Board, chlorine shall not be removed from bioassay samples. However chlorine may be removed from the San Jose Creek WRP effluent bioassay samples in the laboratory because it is not practical to collect dechlorinated samples due to the plant configuration and due to high recycled water demand.~~”

SPECIFIC COMMENTS ON PROVISIONS NOT RELATED TO TOXICITY

Comment 4. The description of the location and associated limits for Discharge Point No. 001 are incorrect due to being assigned to San Gabriel River Reach 2 instead of San Gabriel River Reach 1.

In several places in the Tentative Permit (e.g., Factsheet II.B.), Discharge Point No. 001 is described as being in Reach 2 of the San Gabriel River. However, Discharge Point No. 001 has historically been regulated as being in Reach 1 of the San Gabriel River. The choice of reach is important because different beneficial uses, site-specific objectives, mineral objectives, nitrogen objectives, and Total Maximum Daily Load (TMDL) wasteload allocations (WLAs) apply in the two reaches. Therefore, water quality based effluent limitations will be different depending on the reach assignment for Discharge Point No. 001.

As background, the Los Angeles Basin Plan describes San Gabriel River Reach 1 as “San Gabriel River Estuary to Firestone Blvd.” and San Gabriel River Reach 2 as “Firestone Blvd. to Whittier Narrows Dam”. However, the San Gabriel River transitions from unlined to fully concrete lined at a location approximately 1000 feet upstream of Firestone Boulevard. Discharge Point No. 001 is located immediately downstream of the transition from the unlined portion of the river to the lined portion of the river, and therefore discharges into the lined portion of the river. The beneficial uses, site-specific objectives, mineral objectives, nutrient objectives, and WLAs for Reach 2 are commensurate with protection of unlined portions of the river, while these uses/objectives/WLAs for Reach 1 are commensurate with protection of the fully concrete lined portions of the river.

Although a strict literal read of the reach designations would call for interpreting the boundary between the two reaches as being in the middle of Firestone Boulevard, Regional Board staff have historically treated the reach boundary as being where the lined portion of the river begins. It has been our understanding that naming the reach boundary as “Firestone Blvd.” was a shorthand means of saying “Where the unlined portion of the river transitions to the lined portion of the river, in the vicinity of Firestone Blvd.” It would certainly make more sense for a reach break to be located where there is a major change in the characteristics of the river than at an arbitrary street crossing.

Our understanding of the reach boundary being located at the lined/unlined transition, with Discharge Point No. 001 being in Reach 001, is supported in several Regional Board documents. Examples in the existing NPDES permit for San Jose Creek WRP (R4-2009-0078) include the section

where ammonia limits are derived (pages F-44 and F-49, “For San Gabriel River Reach 1 (Discharge Point 001)”) and the section on the San Gabriel River Metals TMDL WLAs (page F-73, “According to Table 2-9, Summary of dry-weather and wet-weather impairments, San Gabriel River Reach 1 has only dry-weather impairment for copper...Therefore, San Jose Creek WRP (via Discharge Points 001, 001A and 001B), which discharges into San Gabriel River Reach 1, will only have a dry-weather effluent limitation for copper.”) The San Gabriel Metals TMDL is also consistent with the reach boundary being at the lined/unlined transition point. This is important, because the reach boundaries and reach names for the San Gabriel River were changed as part of adoption of this TMDL. The TMDL at page 4 describes the environmental setting of Reach 1 as “Reach 1 and Estuary. The Lower Watershed. The lower part of the river flows through a concrete-lined channel in a heavily urbanized portion of the county. Reach 1 extends from Firestone Boulevard to the Estuary, just above the confluence with Coyote Creek”. In addition, TMDL Tables 2-5 and 2-6 include the downstream receiving water location for Discharge Point No. 001, RSW-005 (R-2), in Reach 1 and it is located only shortly below Discharge Point No. 001. Additionally, for the purposes of preparing the 303(d) listing of impaired waters, RSW-005 (R-2) has been treated as being located in Reach 1 of the San Gabriel River. Moving RSW-005 (R-2) will cause confusion and inconsistencies in preparation of future 303(d) lists.

Finally, it simply makes sense when setting water quality based effluent limits for Discharge Point No. 001 to make them commensurate with the level of protection needed for Reach 1. Discharge Point No. 001 will have no impact on beneficial uses associated with the unlined portions of Reach 2, since its discharge does not travel through any unlined portions of the river. Discharge Point No. 001 will have impacts on water quality in Reach 1, since it serves essentially as the headwaters for Reach 1 in all but rainy periods.

Note that the Sanitation Districts do agree with the placement of Discharge Point Nos. 001A and 001B in Reach 2 of the San Gabriel River, as indicated in the Tentative Permit. However, as part of Reach 2, these two outfalls need to be regulated for wet-weather lead in accordance with Table 2-9 in the San Gabriel River Metals TMDL.

Comment 5. The methodology used in the Reasonable Potential Analysis for benzo(k)fluoranthene at Discharge Point No. 003 is incorrect.

The Tentative Permit establishes limits for toxic pollutants at Discharge Point Nos. 002 and 003 based on a reasonable potential analysis (RPA) conducted in accordance with the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). The SIP RPA requires comparison of effluent and the ambient background receiving water quality to water quality criteria. The Tentative Permit RPA used the upstream station RSW-001 (C-1) to describe the ambient background concentration for Discharge Point No. 002, resulting in effluent limits for the constituents chrysene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, and benzo(k)fluoranthene. We agree with this RPA methodology for Discharge Point No. 002.

However, it appears that data from several different receiving water stations were used to establish the RPA background ambient receiving water quality for Discharge Point No. 003, including the upstream receiving water station on the San Gabriel River (RSW-003 or R-10), an upstream receiving water station on San Jose Creek (RSW-002 or C-2), and a downstream receiving water station on the San Gabriel River (RSW-004 or R-11). Typically the immediate upstream receiving water station is used to set the ambient background concentration, consistent with the SIP (Section 1.4.3.1 on page 18 of the SIP states, “If possible, preference should be given to ambient water column concentrations measured immediately upstream or near the discharge...”). In this case, since there is little data available for the immediate upstream location RSW-003 (R-10), it is appropriate to use data from an alternative upstream location, RSW-002 (C-2), on the tributary San Jose Creek, especially since San Jose Creek contributes the

majority of the flow to the San Gabriel River in the vicinity of Discharge Point No. 003. However, it is unclear why data from the downstream location RSW-004 (R-11) was used as well, since there was adequate data available to conduct the analysis using upstream data in accordance with the SIP. The Fact Sheet for the Tentative Permit, at page F-50, makes mention of using “an abundance of caution”, but the standard for an RPA is “reasonable” potential to cause or contribute to a water quality objective exceedance, not “an abundance of caution.”

When the ambient background receiving water station is appropriately considered to be RSW-002 (C-2) or RSW-003 (R-10), then there is only a reasonable potential to exceed the water-quality criteria for dibenzo(a,h)anthracene; there is no reasonable potential for benzo(k)fluoranthene. Therefore, the limit for this parameter should be removed from Discharge Point No. 003. For consistency, in the Fact Sheet in the table on F-59, the B (background concentration) for benzo(k)fluoranthene should be “0.027” instead of “0.63” and the reason should be marked as “B<C.” Likewise the B for dibenzo(a,h,)anthracene should be “0.1” instead of “0.12” but no edits to the reason are needed for this parameter. In addition, a clarifying footnote on the source of the limit for dibenzo(a,h)anthracene should be added (similar to Footnote 9 in the Fact Sheet) stating the source of the background concentration, B, is RSW-002 (C-2) .

Comment 6. Water quality based effluent limits for San Jose Creek WRP Discharge Point Nos. 001, 001A, and 001B should be set based on the quality of the receiving waters for these discharge points, not the most stringent limits from San Jose Creek WRP Discharge Point Nos. 002 and 003.

We disagree with the approach used in the Tentative Permit to determine the water quality based effluent limitations for Discharge Point Nos. 001, 001A, and 001B. The Fact Sheet for the Tentative Permit (pages F-51 and F-62) indicates the water quality based effluent limits were set as the most stringent limits from “either the East or West Facilities”. (Although not explained fully in the Fact Sheet, it appears that this meant the most stringent limits assigned to either Discharge Point No. 002 or Discharge Point No. 003). We believe this approach is highly inappropriate because it does not consider the specific water quality criteria for the receiving waters in the vicinity of Discharge Point Nos. 001, 001A, and 001B, which are located in different stream reaches than Discharge Point Nos. 002 and 003. Discharge Point No. 001 is near the border of San Gabriel River Reaches 1 and 2; Discharge Point Nos. 001A and 001B are in San Gabriel River Reach 3; Discharge Point No. 002 is in San Jose Creek Reach 1; and Discharge Point No. 003 is in San Gabriel River Reach 3. As such, the water quality objectives for the receiving waters are different. In particular, the San Gabriel Metals TMDL assigns different wasteload allocations (WLAs) depending on the receiving water segment; for example San Jose Creek Reach 1 has a selenium WLA while San Gabriel River Reaches 1 and 2 do not. Additionally, receiving water ammonia limitations are different in different receiving waters due to different site-specific objectives. Assigning water quality based effluent limitations set based on one receiving water segment to an outfall in a different segment will result in effluent limitations that could be either overprotective or underprotective, depending on the constituent. Furthermore, the SIP specifies how water quality based effluent limitations are to be set for priority pollutants, and it does not contain provisions to use approach employed in the Tentative Permit.

There more appropriate approach to setting water quality based effluent limitations for Discharge Point Nos. 001, 001A, and 001B is to use the procedures specified in the SIP: conduct an RPA to determine if limits are necessary, then set effluent limits as appropriate. There is adequate data available for the quality of water sent to Discharge Points 001 and 001A (and 001B, since it will receive the same water) to characterize the effluent concentrations. In addition there is data from RSW-004 (R-11), which can be used as the ambient background concentration for Discharge Point Nos. 001, 001A, and 001B, since it is upstream of all of these discharge points. The water quality criteria for the hardness-dependent metals should be determined using the downstream hardness from RSW-006 (R-12) for Discharge Point No. 001A and from RSW-004 (R-2) for Discharge Point No. 001.

The Sanitation Districts thank you in advance for your careful consideration of these comments. If you have any questions concerning this letter or need additional information, please contact Ann Heil at (562) 908-4288, extension 2803.

Very truly yours,
Grace Robinson Hyde

Philip L. Friess
Department Head
Technical Services

PF:ATH:PM:SRB:nm
Attachments

cc: Cris Morris, David Hung, Elizabeth Erickson, Regional Board

Attachment A

General/Legal Comments on Toxicity-Related Provisions on the San Jose Creek WRP Tentative Permit

Attachment A

General/Legal Comments on Toxicity-Related Provisions

The San Jose Creek Water Reclamation Plan (WRP) is currently regulated under National Pollutant Discharge Elimination System (NPDES) Order No. R4-2009-0078 [Exhibit 11], which contains the following language that was not objected to by the U.S. Environmental Protection Agency (USEPA) when adopted in 2009:

“IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

4. Other Effluent Limitations Applicable to Discharge Points 001, 001A, 001B, 002, and 003

h. Chronic Toxicity Trigger and Requirements:

- i. The chronic toxicity of the effluent shall be expressed and reported in toxic units, 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.

- ii. There shall be no chronic toxicity in the effluent discharge.
- iii. If the chronic toxicity of the effluent exceeds the monthly trigger median of 1.0 TUc, the Discharger shall immediately implement accelerated chronic toxicity testing according to Attachment E - MRP, Section V.B.3. If any three out of the initial test and the six accelerated tests results exceed 1.0 TUc, the Discharger shall initiate a TIE and implement the Initial Investigation TRE Workplan, as specified in Attachment E – MRP, Section V.D.
- iv. The Discharger shall conduct chronic toxicity monitoring as specified in Attachment E – MRP.”

The regulatory construct of the permit adopted in 2009 is consistent with the requirements of State Water Resources Control Board’s (State Water Board’s) precedential and binding Order Nos. WQO 2003-0012 and WQO 2003-0013, which revised the earlier NPDES permits for the Long Beach and Los Coyotes WRPs and the Whittier Narrows WRP, respectively, to remove and replace numeric chronic toxicity limits with: “There shall be no chronic toxicity in the effluent discharge.” Instead of numeric limits, the State Water Board mandated the use of a narrative limit and supplemental numeric toxicity triggers.

Notwithstanding the fact that USEPA had allowed NPDES permits to be written in California in this prescribed manner for eleven years without formal objection, on July 31, 2014, the USEPA Region 9 filed an initial objection letter [Exhibit 12] on pre-public notice drafts of two NPDES permits up for reissuance for the Sanitation Districts, for the Whittier Narrows and Pomona WRPs. The pre-public notice drafts of the Pomona WRP and Whittier Narrows WRP NPDES permits contained toxicity provisions similar to those for the 2009 San Jose Creek WRP NPDES permit, with a narrative effluent limit and supplemental toxicity triggers. The pre-public notice draft Pomona WRP NPDES permit differed from the pre-public notice draft Whittier Narrows WRP NPDES permit, however, in that it required use of a trigger based on a “Pass/Fail” approach using the Test of Significant Toxicity (TST) approach instead of numeric

chronic toxicity units (TUc) as the trigger. The initial objection letter was followed by a formal objection letter (Formal Objection Letter) on September 4, 2014. [Exhibit 13] Instead of following State Water Board mandates, the Regional Board modified the draft permits to include new numeric chronic toxicity limits, and the permits were adopted in November 2014.

These chronic toxicity limits included in the Pomona and Whittier Narrows WRP NPDES permits after issuance of the EPA formal objection letter are now contained in Section IV.A. (Table 4, p. 7), IV.B. (Table 5, p.9), and IV.C. (Table 6, p.11) of the proposed San Jose Creek WRP NPDES Permit (Tentative Permit) as “Pass” as a Median Monthly Effluent Limitation (MMEL) and “Pass or % Effect <50” as a Maximum Daily Effluent Limitation (MDEL). These terms are defined in Section VII.J (i.e., Compliance Determination, Chronic Toxicity) on pg. 29-30 of the Tentative Permit. The Sanitation Districts request that the numeric chronic toxicity limitations be removed and replaced by a narrative toxicity effluent limitation consistent with the State Board precedential orders, Order Nos. WQO 2003-0012 and WQO 2003-0013.

Additional details regarding this request and other general comments relating to the toxicity provisions in the Tentative Permit are provided below. Because the toxicity provisions in the Tentative Permit are essentially identical to those included in the Pomona and Whittier Narrows WRP NPDES permits after issuance of the USEPA Formal Objection Letter, comments relating to the Formal Objection Letter are included here for completeness.

Comment A-1. The chronic toxicity limits are premature until the State Water Board adopts its promised statewide toxicity policy.

On September 16, 2003, the State Water Board adopted two precedential orders, Order No. WQO 2003-0012, in response to petitions filed by the County Sanitation District No. 2 of Los Angeles County¹ and Santa Monica Baykeeper for the Los Coyotes and Long Beach WRP NPDES permits [SWRCB/OCC File Nos. A-1496 and A-1496(a)], and Order No. WQO 2003-0013, in response to a petition filed by the Sanitation Districts on the 2002 version of the Whittier Narrows WRP NPDES Permit, Order No. R4-2002-0142) [SWRCB/OCC File Nos. A-1509 and A-1509(a)]. In these 2003 precedential orders, the State Water Board found that the use of final numeric whole effluent toxicity (WET) limitations in permits for Publicly Owned Treatment Works (POTWs), particularly those that discharge to inland surface waters, is an issue of statewide importance that should be addressed in a statewide plan or policy. In addition, the State Water Board instructed regional boards to replace any numeric chronic toxicity effluent limitations with the prescribed narrative chronic toxicity limitation until a statewide toxicity policy is adopted. The Sanitation Districts’ 2004 and 2009 NPDES permits for the San Jose Creek WRP were issued with the toxicity trigger requirements of State Board Order Nos. WQO 2003-0012 and WQO 2003-0013.

Although the main issue on WET limits was decided by the State Board in WQO 2003-0012 and WQO 2003-0013 in 2003, this decision was later upheld and followed in other, subsequent precedential State Board Orders, including WQO 2008-08 (City of Davis) and WQO 2012-0001(City of Lodi). The 2012 Lodi order at page 22 recognized that “[t]he Board previously addressed this issue in a precedential decision” and has “concluded that a numeric effluent limitation for chronic toxicity was not appropriate in the permit under review, but that the permit had to include a narrative effluent limitation for chronic toxicity.” [Emphasis added.] In the Lodi case, the State Water Board determined that because the discharge had the reasonable potential to cause or contribute to an excursion above the Basin Plan’s narrative toxicity objective, on remand the Central Valley Water Board was ordered to “amend Order No.

¹ Per the terms of the 1995 Joint Outfall Agreement, County Sanitation District No. 2 of Los Angeles County serves as the appointed agent for the Joint Outfall System.

R5-2007-0113 to add an appropriate narrative chronic toxicity limitation.” See also State Water Board Order No. WQO 2008-0008 at pgs. 5-7 (concluding that a numeric effluent limitation for chronic toxicity is not appropriate at this time).

Thus, no less than four precedential State Water Board orders mandate a narrative chronic toxicity limit for inland dischargers, all of which are being violated by the language contained in the Tentative Permit. The Sanitation Districts merely ask the Regional Board to follow the State Water Board’s binding precedential orders and include a narrative effluent limitation, consistent with the Basin Plan’s narrative objective, along with a trigger for additional testing.

This approach would also be consistent with the Los Angeles (LA) Basin Plan, which states, in pertinent part, the following related to chronic toxicity:

“All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in, human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analysis of species diversity, population density, growth anomalies, bioassays of appropriate duration or other appropriate methods as specified by the State or Regional Board.” (LA Basin Plan at pg. 3-16 (emphasis added).)

Since the State Water Board has specified how compliance with chronic toxicity requirements for inland dischargers should be determined until such time that a new statewide policy is adopted, the Regional Board is bound by that determination, not only by Order Nos. WQO 2003-0012 and WQO 2003-0013², but also by the language of the Basin Plan.³

Because the State Water Board has not yet adopted its anticipated statewide policy for chronic toxicity, the inclusion of numeric chronic toxicity effluent limitations lacks adequate authority, violates State Water Board precedent, and represents an abuse of discretion. For these reasons, the Sanitation Districts respectfully request that the chronic toxicity limits as proposed be removed from the Permit and replaced with a narrative chronic toxicity limit and triggers as contained in the previous permit.

Comment A-2. The chronic toxicity requirements improperly require use of an unpromulgated test method.

a) The TST without inclusion of a concentration-response evaluation is not a promulgated Part 136 method.

The Tentative Permit makes it very clear that, for parameters where such methods exist, the monitoring must use only approved Part 136 methods, properly promulgated by EPA. (See proposed permit at pg. E-2 (“Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. Part 136....”); pg. E-7, n. 2; pg. E-8, n. 5; pg. E-12 at para. V.A.3; pg. E-16, n. 18; pg. E-22 at para. X.B.4.; pg. F-60, Section VI.B.2.; pg. H-2 at para. A.4.a.) The language in the Tentative Permit appears to mean

² The Tentative Permit does not even acknowledge the existence of Order No. WQO 2003-0013, and only discusses Order No. WQO 2003-0012. (See the Tentative Permit at pg. F-70.)

³ In fact, the State Water Board’s requirement in Order Nos. WQO 2003-0012 and WQO 2003-0013 to include an effluent limit requiring “no chronic toxicity in the effluent discharge” is actually more stringent than the Basin Plan’s Toxicity Objective, which only requires “no chronic toxicity in ambient waters outside mixing zones.” (LA Basin Plan at pg. 3-17.)

that use of a multi-concentration test design for chronic toxicity, with consideration of the resulting concentration-response pattern in assessing the validity of the test, is not allowed. (Tentative Permit page 27, Section VII.J, “the concentration-response relationship for the effluent and/or PMSDs shall not be used to interpret the TST result reported as the effluent compliance monitoring result.”) This is contrary to the promulgated method for freshwater chronic toxicity testing.

The 40 Code of Federal Regulations (CFR) Part 136 approved methods for freshwater chronic toxicity are listed in 40 CFR 136.3(a), Table 1A. These methods include Footnote 27, which mandates the use of *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, EPA-821-R-02-012, Third Edition, October 2002 (EPA 821-R-02-013 or 2002 Methods) [Exhibit 1]. The 2002 Methods make it very clear in several places that a multi-concentration test design with dose- response evaluation is required. Several examples are as follows:

“The tests recommended for use in determining discharge permit compliance in the NPDES program are multi-concentration, or definitive, tests which provide (1) a point estimate of effluent toxicity in terms of an IC25, IC50, or LC50, or (2) a no-observed-effect-concentration (NOEC) defined in terms of mortality, growth, reproduction, and/or teratogenicity and obtained by hypothesis testing” (Section 8.10.1)

“The concentration-response relationship generated for each multi-concentration test must be reviewed to ensure that calculated test results are interpreted appropriately” (Section 10.2.6.2)

“Tables 1, 3, and 4 (labeled as 3)⁴ - SUMMARY OF TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA WITH EFFLUENTS AND RECEIVING WATERS (TEST METHODS 1000.0, 1002.0, AND 1003.0):

Test concentrations:

Effluents: 5 and a control (required minimum)

Receiving Water: 100% receiving water (or minimum of 5) and a control (recommended)”

In 2010 the USEPA released a guidance document, *National Pollutant Discharge Elimination System Test of Significant Toxicity [TST]Implementation Document*, EPA 833-R-10-003, 2010 (TST Implementation Document) [Exhibit 2] introducing the TST protocol for analysis of chronic toxicity testing data. This guidance document made it clear in numerous places that its intent was to introduce a new method of analyzing data collected during a valid WET analysis, including a multiple concentration test design. Examples are provided below:

“The TST approach does not result in changes to EPA’s WET test methods promulgated at Title 40 of the Code of Federal Regulations Part 136.” (page ii on the Disclaimer)

“Once the WET test has been conducted (using multiple effluent concentrations and other requirements as specified in the WET test methods), the TST approach can be used to analyze valid WET test results to assess whether the effluent discharge is toxic.” [Emphasis added] (page xi)

“This document presents TST as a useful alternative data analysis approach for **valid** WET test data that may be used in addition to the approaches currently recommended in EPA’s Technical Support Document (USEPA 1991) and EPA’s WET test method manuals.” (page 7)

⁴ EPA-821-R-02-013. Tables 1, 3, and 4 (labeled as 3) on pages 76, 165, and 211.

“The TST approach is an alternative statistical approach for analyzing and interpreting valid WET data; it is not an alternative approach to developing NPDES permit WET limitations. Using the TST approach does not result in any changes to EPA’s WET test methods.” (page 60)

“Step 1: Conduct WET test following procedures in the appropriate EPA WET test method manual. This includes following all test requirements specified in the method (USEPA 1995 for chronic West Coast marine methods, USEPA 2002a for chronic freshwater WET methods, USEPA 2002b for chronic East Coast marine WET methods, and USEPA 2002c for acute freshwater and marine methods).” (Appendix B, page B-3).

In addition, USEPA made changes to approved WET test methods as recently as 2012 in the *Promulgated Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act: Analysis and Sampling Procedures: Final Rule*, 77 Fed. Reg. 29758-29846 (May 18, 2012), but did not incorporate an option for a two concentration test design with no concentration-response evaluation. If a two concentration test design without a concentration-response evaluation was USEPA’s intent in 2010 when the guidance was released, such a change should have been made in 2012 (*See U.S. v. Riverside Bayview Homes*, 474 U.S. 121, 137 (U.S.S.C. 1985)(An action not to include modifications of which the entity was aware can be read as a presumption that the modifications were not intended to be included).)

b) USEPA’s March 17, 2014 Alternative Test Procedure approval was unlawful.

In March 2014, USEPA issued an Alternative Test Procedure (ATP) letter approving statewide use of a two-concentration toxicity test evaluated using the TST (Letter from Eugenia McNaughton, US EPA Region 9 Quality Assurance Office Manager to Renee Spears, State Water Board Quality Assurance Officer, untitled, dated March 17, 2014) (ATP Approval Letter) [Exhibit 14]. This letter ignores the previous USEPA’s requirements and recommendations described above. Even with the ATP approval, it would be difficult to see how USEPA could legally object to any permittee continuing to use the standard prescribed 2002 test methods (NOEC or IC25)⁵ if these standard methods and the ATP produce “acceptably equivalent” results as claimed in the ATP letter.

In its ATP Approval Letter, USEPA ostensibly granted the State a “Limited Use Alternative Test Procedure” under 40 CFR Part 136 (40 CFR 136.5(a)). However, it is not clear that a State can be the requestor since rules contemplate that the request must first be sent to the State. (*Id.* at subd. (b).) For this and other reasons, the validity of the ATP is currently being litigated in federal court (*see SCAP and CVCWA v. USEPA*, Case No. 2:14-cv-01513 MCE-DAD, U.S. District Court, Eastern District (hearing scheduled for March 5, 2015)). [Exhibit 15]

The legality of the ATP approval is suspect as this alternative was not submitted by a discharger or a laboratory, but by the State Water Board, after receiving the two-concentration method using the TST from USEPA. This self-dealing to avoid a full-blown regulatory process thwarts the law and notions of good public policy. The ATP process was designed to “encourage organizations external to EPA to develop and submit for approval new analytical methods.” *See Guide to Method Flexibility and Approval of EPA Water Methods*, EPA Office of Water (Dec. 1996) at pg. 77 (emphasis added) [Exhibit 16]. All but a single lab, single discharger ATP (i.e., Tier 1) must go through rulemaking. For Tier 2 and 3 new methods (multi-lab), “EPA will begin the rulemaking process.” *Id.* at pgs. 80-82. Furthermore, USEPA

⁵ See 67 Fed. Reg. 69955 (2002)(“these methods, including the modifications in today’s rule, are applicable for use in NPDES permits.”).

acknowledges that it currently has no approved protocols for reviewing or approving a WET ATP. *Id.* at 93 (“EPA is developing a protocol for approval of new and modified (alternate) WET methods...”; *see also* <http://water.epa.gov/scitech/methods/cwa/atp/questions.cfm> (last accessed 5/30/2014)(stating “Note: The EPA does not have a protocol for toxicity testing [ATP] under EPA’s Whole Effluent Toxicity (WET) program.”).

Finally, authorizing an ATP for WET is contrary to federal regulations. “Method Modifications” are explicitly *prohibited* for “Method-Defined Analytes” by 40 CFR 136.6(b)(3), which states (with emphasis added): “(3) Restrictions. An analyst may not modify an approved Clean Water Act analytical method for a method-defined analyte.” USEPA has previously declared that WET is a Method-Defined Analyte. *See* 67 Fed. Reg. 69965 (“toxicity is inherently defined by the measurement system (a ‘method-defined analyte’) and toxicity cannot be independently measured apart from a toxicity test.”); *see also* Brief of Respondents USEPA, *et al.*, in *Edison Electric Institute, et al., v. USEPA*, Case No. No. 96-1062 (D.C.Cir. 2004) at 44-45 and 78 *citing* Response to Comments at 219-20, J.A. XX; 67 Fed. Reg. 69,965. (“Because toxicity is defined and measured by its effect on living organisms, whole effluent toxicity is considered a method-defined analyte (i.e., it cannot be measured independently from a toxicity test). Thus, WET test results cannot be independently confirmed by comparing the results to a known concentration of toxicity.”). Therefore, WET methods cannot be modified without formally amending 40 CFR Part 136.

For these reasons, and the others provided herein, the Sanitation Districts respectfully request that the Tentative Permit be amended to explicitly and clearly specify use of a multi-concentration test design with concentration-response evaluation.

c) Use of an ATP Cannot Be Mandated over Promulgated Methods.

Even assuming *arguendo* that the USEPA’s ATP approval was proper, it is not clear that the Sanitation Districts can be *required* to use the ATP since the ATP Approval Letter states that the TST is an acceptable equivalent to the NOEC-LOEC. USEPA Region 9, in the ATP approval letter, attempted to *mandate* use of a two-concentration test design with the TST by stating that this ATP “will apply to all new or revised NPDES permits issued by the State Water Board and Regional Water Quality Control Boards and any EPA-issued California permits that include whole effluent toxicity provisions.” *See* ATP Approval Letter (emphasis added). However, neither USEPA nor the Regional Board has the authority to impose the TST *until* either the Sanitation Districts request to use the ATP, or that method has been formally promulgated by USEPA as an approved method under 40 CFR Part 136. Analytical results obtained by using a non-promulgated method cannot be used for NPDES compliance determination purposes until that method has been incorporated into 40 CFR Part 136. *See accord* Permit at pg. F-60, in reference to CECs (“Analysis under this section is for monitoring purposes only. Analytical results obtained for this study will not be used for compliance determination purposes, since the methods have not been incorporated into 40 CFR part 136.”) Similarly, the particular number of dilutions in a dilution series cannot be mandated. 67 Fed. Reg. 69956 (“no one particular dilution series is required.”) Thus, the two-concentration TST method should not be prescribed in the San Jose Creek WRP permit.

This attempt to impose a mandate would also contradict a June 18, 2010 USEPA Headquarters memo accompanying the TST Implementation Document, from James Hanlon, then Director of the EPA Office of Wastewater Management, which stated: “The TST approach does not preclude the use of existing recommendations for assessing WET data provided in EPA’s 1991 Water Quality-based Technical Support Document (TSD) which remain valid for use by EPA Regions and the States.” [Exhibit 17] Thus, all the TST can be used for is additional information, similar to the CEC monitoring (cited above) where samples are required using a non-promulgated method – however, the difference is - for

CECs, that extra data is not being used for compliance determination processes whereas the chronic toxicity data under the TST will be used for that purpose.

USEPA has since clarified its position, and expressly stated that its ATP Approval Letter does not constitute a mandate. In its opposition brief filed in the litigation challenging the ATP Approval Letter, the USEPA argued that “EPA’s March 2014 Letter was not a mandate and the State’s decision not to use the alternate test would not be a basis for objection, much less a ‘veto,’ by EPA.” In addition, USEPA’s brief stated that “EPA’s approval of a limited use alternate test does not impose any obligation on the California Water Boards that issue NPDES permits, or on permit holders. By approving the limited use of this alternate test, the EPA did not ‘mandate’ the exclusive use of the two-concentration test, and it cannot require the California Water Boards to include this alternate test in NPDES permits issued by the State. The EPA simply approved the use in California of the two-concentration test as an alternate test to the five-concentration test. Ultimately, it is up to the California Water Boards that issue NPDES permits to decide which test(s) to require permit holders to use in reporting, not the EPA. After the EPA’s March 2014 letter, the California Water Boards could still issue permits that require permit holders to use the five-concentration test, or that provide permit holders with a choice of which test to use.” *See* EPA’s Opposition to Plaintiffs’ Ex Parte Application for Temporary Restraining Order and Order to Show Cause Re: Motion for Preliminary Injunction in case of SCAP and CVCWA v. United States EPA, Federal District Court for the Eastern District of California, Case No. 2:14-cv-01513 MCE-DAD (filed June 30, 2014)(citations excluded).

Since USEPA has stated, as quoted above, that use of the ATP is not required, the Sanitation Districts request that the Tentative Permit be amended to make it clear that use of the ATP is optional.

d) EPA Guidance cannot Overrule Promulgated Regulations.

Page F-69 and F-70 of the Tentative Permit references two USEPA guidance documents to justify the inclusion of toxicity provisions based on the TST:

- *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010) (2010 TST guidance document), and
- *EPA Regions 8, 9 and 10 Toxicity Training Tool* (January 2010) (Training Tool), <http://cfpub.epa.gov/npdes/wqbasedpermitting/wet.cfm>.

These documents cannot be used to justify the Tentative Permit’s requirements because these guidance documents do not mandate use of the TST, particularly the use of a two-concentration TST test design, or require the inclusion of any numeric effluent limitation for toxicity. Appendix D of the 2010 TST guidance document includes example permit language for either a trigger *or* an effluent limitation. The Training Tool also discusses both permit triggers and effluent limitations for toxicity. In the Training Tool, as in the federal regulations, effluent limitations are only needed in cases where there is reasonable potential and even if there is reasonable potential, effluent limitations for toxicity are not needed if chemical specific effluent limitations are included for the pollutants identified as causing the toxicity (Section 2.5, page 31).⁶ As discussed elsewhere in this document, nowhere in the law are numeric effluent limitations for chronic toxicity required.

⁶ If State water quality standards contain only narrative water quality criteria for WET and the permit (i.e., fact sheet or statement of basis) documents that chemical specific water quality-based effluent limitations (WQBELs) are sufficient to attain and maintain the narrative water quality criteria, then WQBELs for WET are not necessary. 40 CFR §122.44(d)(1)(v). Arguably, under the terms of the Toxicity objective, effluent limits are only authorized

As a result, the Regional Board can point to nothing in either of the guidance documents cited that *mandates* the use of numeric effluent limitations for toxicity. Additionally, the TST Implementation Document is merely *guidance* that may be changed at any time as policies and directions change. Importantly, the disclaimer in that guidance document specifically notes that the document is not “a permit or a regulation itself.” The TST Implementation Document clearly states that:

“The document does not and cannot impose any legally binding requirements on EPA, states, NPDES permittees, or laboratories conducting or using WET testing for permittees (or for states in evaluating ambient water quality). EPA could revise this document without public notice to reflect changes in EPA policy and guidance.”⁷

The other document cited is merely part of a training tool that is not even published guidance.

Although USEPA often tries to regulate by guidance, federal courts have frowned upon this practice as aptly described in *Appalachian Power Co. v. EPA*, 208 F.3d 1015, 1020 (D.C. Cir. 2000). The district court in the *Appalachian Power* case found fault in USEPA’s regulating by setting aside the guidance in its entirety. (*Id.* at p. 1028.) “If an agency acts as if a document issued at headquarters is controlling in the field, if it treats the document in the same manner as it treats a legislative rule, if it bases enforcement actions on the policies or interpretations formulated in the document, if it leads private parties or State permitting authorities to believe that it will declare permits invalid unless they comply with the terms of the document, then the agency's document is for all practical purposes ‘binding.’” (*Id.* at p. 1021 [*citations omitted*].)

More recent cases have reached the same conclusion in other instances when USEPA tried to impose its will through interpretive rules, such as the TST Implementation Document. One case related to invalidating USEPA guidance setting forth air quality attainment alternatives. (*NRDC v. U.S. EPA*, 643 F.3d 311 (D.C. Cir. 2011).) Another related to “requirements” contained in letters related to water quality permitting prohibitions related to blending and mixing zones. In this case, the court found that USEPA not only lacked the statutory authority to impose the guidance regulations on blending, but also violated the Administrative Procedures Act (APA), 5 USC §500 et seq., by implementing the guidance on both issues without first proceeding through the notice and comment procedures for agency rulemaking. (*Iowa League of Cities v. U.S. EPA*, 711 F.3d 844, 878 (8th Cir. 2013).) The case law is clear

pursuant to the terms of the State Implementation Policy (SIP), or for the causative toxicant. *See accord* LA Basin Plan at pg. 3-17; *see also City of Los Angeles et al v. USEPA, et al*, Central District Court, Case No. CV 00-08919 R(RZx)(Dec. 18, 2001)(holding “EPA improperly failed to ensure that the LA-RWQCB adopted a translator procedure to translate its narrative criteria did not satisfy 33 U.S.C. §1313(c)(2)(B). In addition, in reviewing the LA-RWQCB’s narrative criteria relating to toxic pollutants, EPA improperly failed to ensure that the LA-RWQCB set forth sufficient “information identifying the method by which the State intends to regulate the point source discharges of toxic pollutants on water quality limited segments based on such narrative criteria.” 40 CFR §131.11(a)(2).) On February 15, 2002, on remand from the federal court, USEPA issued a new approval document related to the Basin Plan’s Toxicity objective finding that the adoption of the California Toxics Rule (CTR) made the need to use the Toxicity objective less necessary and, in instances where necessary, strongly relied upon the chronic toxicity control provisions in the SIP and the direction to the Regional Board to “establish effluent limitations for specific toxicants which have been identified with the TIE procedures.” Thus, in order to comply with the Basin Plan, the Regional Board must comply with the SIP and statewide orders interpreting those requirements, including Order Nos. WQO 2003-0012 and WQO 2003-0013. Just because the proposed permit on page F-24 states “Requirements of this Order implement the SIP” does not mean this statement is accurate.

⁷ USEPA, National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document. EPA 833-R-10-004, June 2010.

that USEPA must regulate through rules and not through informal guidance. Similar rules apply to the Regional Board, which also cannot regulate by guidance, particularly where that guidance is contrary to statewide precedential orders (e.g., State Water Board Order Nos. WQO 2003-0012 and WQO 2003-0013) and described in more detail above.

Comment A-3. A maximum daily effluent limit for chronic toxicity is impracticable, unlawful, and inappropriate.

Assuming, for the sake of argument, that any chronic toxicity limit beside that prescribed in Order Nos. WQO 2003-0012 and WQO 2003-0013 is justified, federal law only authorizes monthly and weekly average effluent limitations for POTWs without a demonstration that these effluent limitations are “impracticable.” (See 40 CFR Part 122.45(d)(2)(“For continuous discharges all permit effluent limitations, standards and prohibitions, including those necessary to achieve water quality standards, shall unless impracticable be stated as: (2) Average weekly and average monthly limitations for POTWs”).) As described above, the Tentative Permit includes a MDEL for chronic toxicity, which is more stringent than required by federal law and has not been adequately justified. Therefore, this limitation is contrary to law.⁸

USEPA’s analysis on this topic was inaccurate in its Formal Objection Letter. In this letter, USEPA stated, “...the permits do not include the necessary daily and monthly WQBELs for chronic WET. Therefore, the permits do not meet 40 CFR 122.45(d) or 40 CFR 122.44(d)(i).” The State Water Board has already determined that numeric limits are not feasible or appropriate (e.g., are impracticable) and, therefore, weekly and monthly limits are not required and that remains the rule until the State Water Board determines otherwise in a precedential order or formal rulemaking. The State Water Board requires a narrative effluent limitation to be imposed instead, stating that “there shall be no chronic toxicity in the effluent discharge.” Thus, this limit complies with 40 CFR 122.45(d) and, for the reasons provided above, 40 CFR 122.44(d).

In addition, a daily maximum limit for chronic toxicity is unnecessary to protect aquatic life because chronic toxicity, by definition, is neither “highly toxic” nor “short-term.”⁹ Chronic toxicity testing is meant to assess *long-term* impacts to biological communities of organisms in the ambient receiving waters, not the impact of a single day’s or week’s discharge.

⁸ California courts have already held that daily limits are not allowed unless demonstrated with adequate supporting evidence to be impracticable and these decisions are binding on the Water Boards since not appealed. (*See City of Burbank v. State Water Resources Control Board*, 35 Cal. 4th 613, 623, n.6 (2005) (The Supreme Court held: “Unchallenged on appeal and thus not affected by our decision are the trial court’s rulings that... (2) the administrative record failed to support the specific effluent limitations; (3) the permits improperly imposed daily maximum limits rather than weekly or monthly averages;...)(emphasis added).) Another recent decision upheld the need for weekly, as opposed to daily limits, because the guidance cited by the Regional Board (similar to that set forth in the proposed permit on page F-48 “As stated by USEPA in its long standing guidance”) cannot be used to overrule the express terms of the regulations. *See California Sportfishing Protection Alliance (CSPA) v. Cal. Regional Water Quality Control Board, Central Valley Region*, Sacramento Superior Court, Case No. 34-2013-80001358-CU-WM-GDS, Ruling on Submitted Matter: Petition for Peremptory Writ of Mandate (Aug. 18, 2014) (Holding “To the extent that the applicable law does not represent a reasonable approach to establishing effluent limitations, the law may need to be changed. Until it is changed, however, that law unequivocally requires the establishment of a weekly limitation. Respondent [Regional] Board was obligated to do what the law required...”) Thus, reliance on USEPA’s Technical Support Document guidance was overturned, and the permit was remanded.

⁹ While these terms may apply to acute toxicity, they do not describe chronic toxicity. The Tentative Permit has determined that no reasonable potential exists for acute toxicity and the acute toxicity limit was removed.

Furthermore, use of a daily maximum chronic toxicity limit to protect against a single discharge event capable of exceeding the objective makes no sense when a single chronic test itself typically consists of three or more discrete samples collected over an exposure period of up to nine days. (See 67 Fed. Reg. 69953 (2002 Final WET Rule) (“short term methods for estimating chronic toxicity [] use longer durations of exposure (*up to nine days*) to ascertain the adverse effects of an effluent or receiving water on survival, growth and/or reproduction of the organisms.” (Emphasis added).) Therefore, the use of a short term average or daily maximum limit for chronic WET is itself impracticable and a chronic toxicity limit (as is recognized for other long-term chronic objectives, such as to protect human health) should be expressed only in narrative form “There shall be no chronic toxicity in the effluent discharge,” interpreted as a monthly average, or a median monthly if the monthly average is demonstrated to be impracticable. (See *accord In the Matter of the Own Motion Review of City of Woodland*, Order WQO 2004-0010, 2004 WL 1444973, *10 (June 17, 2004) (“Implementing the limits as instantaneous maxima appears to be incorrect because the criteria guidance value, as previously stated, is intended to protect against chronic effects.” The limits were to be applied as monthly averages instead.); State Water Board Order No. 2003-0012 and EPA Letter to Los Angeles Regional Board on Long Beach/Los Coyotes Permits at pg.4 (May 31, 2007) (“At minimum, the permits need to specify the WQBEL: ‘There shall be no chronic toxicity in the effluent discharge.’”). [Exhibit 18])

Additionally, the preamble to the 2002 WET Rule says “EPA policy states that ‘EPA does not recommend that the initial response to a single exceedance of a WET limit, causing no known harm, be a formal enforcement action with a civil penalty.’” 67 Fed. Reg. 69968 *citing* EPA memo entitled *National Policy Regarding Whole Effluent Toxicity Enforcement* (1995a) (emphasis added). The appropriate response to a chronic toxicity test indicating the presence of toxicity is *not* to declare a violation, but to investigate the cause, starting with follow-up testing to confirm the initial result. (See *accord* 67 Fed. Reg. 69968 (USEPA policy suggests additional testing is an appropriate initial response to a single WET exceedance); Basin Plan at 3-17 (recommending TIE to identify cause of toxicity prior to imposing effluent limitation to implement the narrative Toxicity objective); *see accord* California Ocean Plan at pg. 45 (triggering TRE Process); SIP at pgs. 30-31 (requires TRE, and the failure to conduct required toxicity tests or a TRE results in establishment of chronic toxicity limits in the permit).) The San Jose Creek WRP permit appropriately included this investigation process in the last two permits and should be revised to mirror the requirements in the permit since 2004.

For all of these reasons, if the Regional Board decides to ignore State Water Board precedent and impose numeric chronic toxicity WET limitations, the Sanitation Districts at a minimum request the removal of the daily maximum effluent limitation for chronic toxicity because this limit is impracticable, unlawful, and inappropriate. Alternatively, the Regional Board could order that the daily limit for chronic toxicity be transformed into a weekly average limitation in order to comply with 40 CFR 122.45(d)(2) and the recent ruling in the 2014 *CSPA* case discussed above.

Comment A-4. USEPA’s objections were misplaced and should have been ignored.

a) The Whittier Narrows and Pomona WRP pre-public notice draft permits contained a valid and enforceable chronic toxicity effluent limitation.

In its Formal Objection Letter on the Whittier Narrows and Pomona WRP pre-public notice draft permits, USEPA expressed concern on page 1 that “the proposed chronic toxicity effluent ‘limit’ in the pre-notice draft permits is a ‘trigger’ for further investigation rather than an actual WQBEL.” This concern is

unfounded because the trigger is not the effluent limit.¹⁰ The pre-public notice draft permits, as recognized in USEPA's letter, contained narrative effluent limitations for chronic toxicity, which state: "There shall be no chronic toxicity in the effluent discharge." Narrative limits meet the statutory requirements for being an "effluent limit" as it is a restriction on the discharge from a point source.¹¹

The Formal Objection Letter also states that the triggers and required additional actions in the NPDES permits do not meet the definition of "effluent limitation" under the Clean Water Act (CWA) because they do not establish a "restriction" on the "quantity, rate, or concentration" of pollutants in the effluent. In WQO 2003-0012 at p. 10, the State Water Board cited a letter from USEPA, dated June 25, 2003. This letter described the conditions under which EPA would consider a narrative effluent limit valid, described in WQO 2003-0012 as "US EPA has also stated that if a narrative effluent limitation is used, the permits must also contain (1) numeric benchmarks for triggering accelerated monitoring, (2) rigorous toxicity reduction evaluation (TRE)/toxicity investigation evaluation (TIE) conditions, and (3) a reopener to establish numeric effluent limitations for either chronic toxicity or the chemical(s) causing toxicity." Because all of these elements were present in the pre-notice draft permits, USEPA should have found the permits to be acceptable. Regarding the question as to whether TRE/TIE requirements are "rigorous" and establish a restriction on concentration, the pre-notice draft permits required preparation and approval of an initial TRE Workplan at the time of permit issuance. Furthermore, if the results of the implementation of this initial TRE workplan indicated a need to continue the TRE/TIE, the Sanitation Districts would have had 15 or 30 days to submit a detailed TRE workplan to the Regional Board including "a. Future actions to investigate and identify the cause of toxicity; b. Actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and c. A schedule for these actions."

Furthermore, the State Water Board has held that the "addition of an enforceable narrative effluent limitation for chronic toxicity, along with the existing TRE/TIE requirements and the reopener for a numeric effluent limitation for chronic toxicity, if necessary, will ensure that the requirements to perform a TRE/TIE and to implement it to eliminate toxicity are clear and enforceable. We also expect that where the TRE/TIE indicates a pollutant is causing the toxicity, the Regional Board will reopen the permit to include numeric effluent limitations for that constituent." WQO 2003-0012 at p. 10. This narrative limit is consistent with State Water Board precedent that has been in place for over 11 years without objection from EPA. Nothing has changed in the law to warrant an objection at this time.

Finally, USEPA itself blessed this approach for the Sanitation Districts' permits in 2007, stating:

"We are pleased that the proposed language, in part, contains the following elements to successful implementation of WET testing in NPDES permits: (1) effluent limits, if reasonable potential for WET is demonstrated; (2) protective numeric benchmarks for triggering immediate accelerated monitoring when elevated levels of toxicity are reported; and (3) toxicity reduction evaluation/toxicity identification conditions which direct the

¹⁰ In addition, USEPA guidance acknowledges the use of triggers for additional monitoring to confirm the presence of toxicity. "EPA recommends that regulatory authorities evaluate the merits of a step-wise approach to address toxicity. This approach can determine the magnitude and frequency of toxicity and appropriate follow-up actions for test results that indicate exceedances of a monitoring trigger or permit limit." *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications under the NPDES System*, EPA 833-R-00-003 at p. 7-4 (June 2000) [Exhibit 19]; 65 Fed. Reg. 44528-9 (July 18, 2000) ("EPA recommends that NPDES permitting authorities implement the statistical approach as described in the TSD to evaluate effluent and to derived WET limits or monitoring triggers.")

¹¹ 13 33 USC §1362(11). However, it is not clear whether this definition actually applies to toxicity, since it is not a constituent or pollutant, but instead an effect.

permittee to identify and correct the cause of toxicity when elevated levels of toxicity are repeatedly reported. This approach is consistent with regulations governing reasonable potential for toxicity objectives for WET at 40 C.F.R. 122.44(d)(1); Section 4 of the SIP; EPA's national guidance for water quality-based permitting in the TSD; and regional EPA guidance for implementing WET in *Regions 9 and 10 Guidance for Implementing Whole Effluent Toxicity Testing Programs* (Denton and Narvaez, 1996)."

(USEPA Region 9 Letter to Deborah Smith, Interim Executive Officer, Regional Board re: Long Beach WRP and Los Coyotes WRP (May 31, 2007) at pgs. 3-4. [Exhibit 18]) Why the narrative effluent limit/numeric monitoring trigger approach previously authorized and stated to be compliant with law, regulations, and guidance now no longer complies is unclear. No substantive changes have occurred in the law.

b) The proposed narrative effluent limits and supplemental numeric triggers in the pre-notice draft Pomona and Whittier Narrows WRP NPDES permits, as well as the 2009 San Jose Creek WRP NPDES permit, were consistent with binding State Water Board precedent.

As discussed above, the State Water Board has held that the use of final numeric effluent limitations in permits for POTWs that discharge to inland surface waters was an issue of statewide importance that should be addressed in the SIP. In addition, the State Board replaced the numeric chronic toxicity effluent limitations with narrative chronic toxicity limitations until the SIP is modified. Thus, the numeric limits were deleted and replaced with: "There shall be no chronic toxicity in the effluent discharge." This was consistent with the language in the Sanitation Districts' last two permits for San Jose Creek WRP, as well as the pre-public notice draft permits for the Whittier Narrows and Pomona WRPs, and has been in all POTW permits for inland dischargers statewide for over eleven years without objection by USEPA until now. As previously stated, since the federal rules have not changed to justify this objection, USEPA's initial objection to the pre-notice draft permits was not appropriate.

Moreover, because the SIP has not yet been modified, the 2003 precedential orders¹² are still in effect. As such, the inclusion of new numeric ("Pass/Fail") chronic toxicity effluent limitations without authority to do so would violate State Board precedent and represent an abuse of discretion. Most other recent permits referenced in the USEPA's Formal Objection Letter or discussed in the Fact Sheet have been appealed to the State Water Board for reasons similar to those raised here.¹³ These appeals will likely be successful because the State Water Board has already confirmed the continuing validity of the 2003 precedential orders in at least two other more recent cases. *See* State Water Board Order WQO 2012-0001 (City of Lodi); Order WQO 2008-0008 (City of Davis). Thus, there are at least four precedential State Water Board orders mandating a narrative chronic toxicity limit, all of which are being violated by the proposed change to numeric chronic toxicity limits.

One of the more recent orders, WQO 2008-0008 at pages 6-7, stated:

¹² State Water Board Order Nos. WQO 2003-0012 and WQO 2003-0013, in response to petitions filed by the Sanitation Districts for the Los Coyotes and Long Beach WRP NPDES permits [SWRCB/OCC File Nos. A-1496 and A-1496(a)] and the Whittier Narrows WRP NPDES permit [SWRCB/OCC File Nos. A-1509 and A-1509(a)].

¹³ USEPA also referenced permits issued in Arizona, which are not precedential for California as state rules and policies differ between the states. EPA further references permits for POTWs not governed by WQO 2003-0012 in which toxicity limits are expressed numerically. These permits are apparently those for POTWs with ocean outfalls, which are covered under the California Ocean Plan. The California Ocean Plan specifically requires numeric toxicity effluent limitations when there is reasonable potential. Due to the high dilution factors applied to ocean discharges, along with use of different species to conduct the toxicity testing, the issues relating to toxicity control are fundamentally different than for discharges to inland waters.

“In Order WQO 2003-012, we stated that, pending adoption of a policy, it was not appropriate to include final numeric effluent limitations for chronic toxicity in NPDES permits for publicly owned treatment works, but that permits must contain the following:

1. A narrative limit such as: “There shall be no chronic toxicity in the effluent discharge;”
2. Numeric benchmarks for triggering accelerated monitoring;
3. Rigorous toxicity reduction evaluation/toxicity investigation evaluation conditions; and
4. A reopener to establish numeric effluent limitations for either chronic toxicity or the chemical(s) causing toxicity.”

Since the Whittier Narrows and Pomona WRP pre-public notice draft permit contained these four items, USEPA had no valid basis to object since this has been the State’s policy and procedure for such limits since 2003. The Regional Board should correct the Tentative Permit to be consistent with the language originally proposed in the Whittier Narrows and Pomona pre-public notice draft permits and in the previous NPDES permit for the San Jose Creek WRP.

c) USEPA’s statements regarding the need for numeric limits are mistaken.

USEPA claims that “[e]ven if the requirements related to the aim of ‘no chronic toxicity’ in the effluent were expressed as a valid narrative WQBEL for WET, the Los Angeles Regional Water Quality Control Board (L.A. Regional Water Board) has failed to justify how such a narrative requirement would achieve water quality standards, as would be the case with a numeric limit.” (Formal Objection Letter at pg. 4, section B.) The toxicity objective for chronic toxicity, as stated above is: “[t]here shall be no chronic toxicity in ambient waters, outside mixing zones.” (Basin Plan at pg. 3-17 (emphasis added.) The narrative effluent limit stating “[t]here shall be no chronic toxicity in the effluent discharge” (emphasis added) is *more stringent* than the objective, because it applies to the discharge itself and, therefore, will be protective of the ambient water even within any mixing zone. Thus, USEPA’s allegations that the narrative limit will not meet the objective or “is not as stringent as necessary for the discharge” are incorrect.

Further, the inclusion of numeric limits does not necessarily mean that water quality standards will be achieved in the receiving waters given other inputs to those waters; numeric limits just generally make for an easier comparison to a numeric objective. In this case, where no chronic toxicity is allowed in the receiving waters or in the effluent discharge, that comparison is just as simple.

To the extent USEPA was stating in its objection that numeric limits are required, case law and other binding precedent hold exactly the opposite is true. Courts in California have resoundingly rejected any suggestion that effluent limitations are required to be numeric. The definition of “effluent limitation” in the Clean Water Act refers to “any restriction,” and may include a “schedule of compliance” (33 USC §1362(11); 40 CFR 122.2.) The term “schedule of compliance” means a “schedule of remedial measures,” including an enforceable sequence of interim requirements leading to compliance with an effluent limitation or standard (33 USC §1362(17); 40 CFR 122.2.). *See accord* Statement of Decision Granting Writ of Mandate, *City of Tracy v. SWRCB*, Sacramento Superior Court Case No. 34-2009-80000392 (2010) at p. 41 (case is binding on the Water Boards since not appealed). Thus, an effluent limitation could consist entirely of remedial measures, such as triggers to additional monitoring and a TIE/TRE and the addition of chemical-specific effluent limitations, as set forth in the current permit construct under WQO 2003-0012 and WQO 2008-0008.

In addition, in the *Communities for a Better Environment* case, the First Appellate District Court of Appeal specifically rejected the argument that the federal regulations mandate numeric WQBELs.

Instead, the Court found that Congress intended a “flexible approach” including alternative effluent control strategies. *Communities for a Better Environment (“CBE”) v State Water Resources Control Bd.* (2003) 109 Cal. App 4th 1089, 1105; *Communities for a Better Environment v State Water Resources Control Bd.* (2005) 132 Cal. App 4th 1313, 1318; *see also Divers’ Environmental Conservation Organization v SWRCB* (2006) 145 Cal.App.4th 246, 262 (following *Communities for a Better Environment*.) Thus, numeric effluent limitations are not necessary to meet the requirements of the federal Clean Water Act. *CBE, supra*, 109 Cal.App.4th at p. 1093. Indeed, federal regulations expressly permit non-numeric effluent limitations - such as narrative limitations, source control and other best management practices. 40 C.F.R. §122.44(d)(1)(i) and (v)(discussing “Limitations” and “effluent limits for whole effluent toxicity” without using the word “numeric”)¹⁴; 40 CFR §122.44(k)(3); *see also* State Board Order WQ 2006-0012, p. 16 (“programs of prohibitions, source control measures, and BMPs [Best Management Practices] constitute effluent limitations and can be written to achieve compliance with water quality standards.”)

These decisions overrule any justification made by USEPA or the Regional Board for numeric effluent limitations for WET. As these cases proclaim, numeric effluent limitations are not required by any law or regulation for any constituent. Moreover, numeric limits are particularly inappropriate for WET because of the inherent inaccuracies of biological testing and the likelihood of inaccurate test results that puts the permittee in compliance jeopardy for false failures, creating a violation when the effluent is not truly “toxic.”

d) Binding case law goes against USEPA’s interpretations.

The Formal Objection Letter at page 4 and 5 states that “WQO 2003-0012 misapplies 40 CFR 122.44(k)(3) – which provides that effluent limits may be other than numeric – because the WQO ignores the need to show the infeasibility of numeric WQBELs.... absent a demonstration that numeric WQBELs are infeasible to calculate, the narrative WQBELs in these permits are inconsistent with regulatory requirements at 40 CFR 122.44(k)(3).” Besides the fact that this statement appears to be a belated challenge to an eleven year old order, there are many other problems with this statement, as follows:

i) Section 122.44(k)(3) does not apply where the permit contains WQBELs.

USEPA regulations at 40 CFR 122.44(k)(3) relate to the use of BMPs *in lieu of numeric effluent limitations*. This section is not discussing or authorizing narrative effluent limitations; it is authorizing BMPs. In this case, as discussed above, the permits contain valid narrative effluent limitations for chronic toxicity so 40 CFR 122.44(k)(3) is not applicable.

ii). If Section 122.44(k) applies, there is no requirement that numeric effluent limitations be infeasible to calculate.

USEPA states in its Formal Objection Letter at page 5 that “For the Whittier Narrows and Pomona permits, the L.A. Regional Water Board has not provided any explanation as to why it would be infeasible to calculate numeric WET limits for chronic toxicity.” (emphasis added.) USEPA is using the language of 40 CFR 122.44(k)(3), which allows BMPs in lieu of effluent limitations when “numeric effluent limitations are infeasible.” However, the words “to calculate” are not included in this regulation. Nevertheless, USEPA apparently believes that feasibility turns on the ability and propriety of *calculating* or establishing numeric effluent limitations, rather than on the ability of a discharger to comply.

¹⁴ In fact, section 122.44(d) references “any requirements... necessary to (1) Achieve water quality standards...” and does not limit these requirements to “effluent limitations.”

USEPA's argument is unfounded and is not supported by case law or any other authority. "It will nearly always be possible to [calculate or] establish numeric effluent limitations, but there will be many instances in which it will not be feasible for dischargers to comply with such limitations. In those instances, states have the authority to adopt non-numeric effluent limitations." (emphasis added) See *City of Tracy* Statement of Decision at page 42. The *Communities for a Better Environment* case made clear that one factor a board may consider in determining whether a numerical effluent limitation is "feasible" is the "ability of the discharger to comply." See *CBE, supra*, 109 Cal.App 4th at 1100. The court expressly approved the regional board's consideration of this factor in upholding the determination that numeric effluent limits were not "appropriate" for the refinery at issue in that case. *Id.* at 1105 (approving determination that numeric WQBEL was not feasible "for the reasons discussed above," which included inability of discharger to comply).

In *Natural Res. Def. Council, Inc. v. Costle*, 568 F.2d 1369 (D.C.Cir.1977), the D.C. Circuit stressed that when numerical effluent limitations are infeasible to comply with, USEPA may issue permits with conditions designed to reduce the level of effluent discharges to acceptable levels. This may well mean opting for a gross reduction in pollutant discharge rather than the fine-tuning suggested by numerical limitations. *Id.* at 1380, and at n. 21 (noting the proposition that Congress did not regard numeric effluent limitations as the only permissible limitation was supported by section 302(a) of the Act, 33 USC §1312(a)).

Accordingly, Courts have rejected the argument that in determining the "feasibility" or "propriety" of numeric effluent limitations, the Regional Board may not consider the ability (or inability) of the discharger to comply with such limitations.¹⁵ The ability to comply is a critical factor in determining the "feasibility" or "propriety" of numerical limitations. The feasibility of calculating a limit is not.

Regarding the ability to comply with numeric effluent limitations, the inherent variability of biological testing and the likelihood of false positive test results needs to be carefully handled or compliance will not be feasible. False positive results put the permittee in compliance jeopardy when the effluent is not really "toxic." Any numeric effluent toxicity limitations must be carefully crafted, to recognize this inherent variability and potential for false positives. That is one reason the State Water Board has repeatedly, in four precedential orders with the most recent in 2012, indicated its preference for establishing the method of setting any numeric chronic toxicity effluent limits for inland dischargers through a statewide process. Without adequate consideration of false positives, it should be considered infeasible to set numeric limitations for toxicity.

iii) The State Water Board has held that numeric limits for chronic toxicity are not feasible or appropriate.

The State Water Board's order, WQO 2003-0012 held the following, which was referred to by USEPA:

¹⁵ The State Water Board recognized the following in the June 10, 2003 draft of Long Beach/Los Coyotes Order No. 2003-0012 at page 10 (emphasis added): "Because the influent can consist largely of domestic wastewater over which the District has little or no control, we find that a numeric effluent limitation should not have been used ... for chronic toxicity. It is not feasible, at least initially, to impose numeric effluent limitations since it will result in a permit violation whenever there is toxicity in the effluent, even if the cause were from the domestic influent, the District had no basis for knowing the cause, and the District was pursuing the cause and its elimination through vigorous compliance with stringent TRE requirements."

“While numeric effluent limitations are generally preferred, NPDES permits can legally contain “best management practices” in lieu of numeric limitations where the permitting authority determines that numeric effluent limitations are not “feasible.” “

Order No. WQO 2003-0012 at p. 9 and fn. 25, *citing* 40 CFR §122.44(k); *Communities for a Better Environment v. Tesoro* (2003) 109 Cal.App.4th 1089; *Natural Resources Defense Council v. Costle* (D.C. Cir. 1977) 568 F.2d 1369; Order No WQ 91-03 (*Citizens for a Better Environment*). Under state law, “infeasible” is defined as “not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.” Cal. Water Code §8307(c)(4); *see also* SIP at Appendix 1-3.

According to the State Water Board, when making its determination as to whether “numeric effluent limitations are infeasible,” the State Water Board stated: “The issue we will explore is whether the use of numeric effluent limitations for chronic toxicity is appropriate.” See WQO 2003-0012 at 9, fn 26, *citing* Tesoro, *supra*, slip opn., p. 18. The State Water Board has repeatedly found that the imposition of numeric limitations for chronic toxicity is not appropriate. *See* State Water Board Order Nos. WQO 2003-0012, WQO 2003-0013, WQ 2008-0008, and WQ 2012-0001. In WQ 2008-0008 (City of Davis), adopted on September 2, 2008, the Board concluded that a numeric effluent limitation for chronic toxicity was not appropriate in the permit under review, but that the permit had to include a *narrative* effluent limitation for chronic toxicity. The previous San Jose Creek WRP NPDES permit and the pre-public notice drafts of the Pomona and Whittier Narrows WRP NPDES permits were consistent with that binding precedent.

e) USEPA ignores the existence of 40 CFR 122.44(k)(4).

40 CFR 122.44(k)(3), regarding infeasibility of numeric limits, is not the only exemption available. Subdivision (k)(4) authorizes BMPs where “the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.” (40 CFR 122.44(k)(4)). Here, the trigger approach confirming toxicity and then, where toxicity is confirmed, performing a TIE and TRE, represents BMPs that are reasonably necessary to determine the underlying source of toxicity to remedy that issue. Having numeric limits that merely result in the imposition of penalties for a random and unconfirmed “violation” does not remedy any potential water quality issue, it just penalizes sampling results. Thus, the BMP trigger approach is authorized under 40 CFR 122.44(k)(4).

Comment A-5. Numeric effluent limitations for chronic toxicity remain inappropriate.

Numeric effluent limits for chronic toxicity are not appropriate because of the inherent inaccuracies of biological testing and the likelihood of false positive test results that puts the permittee in compliance jeopardy when the effluent is not really “toxic.”

The legal validity of numeric chronic toxicity limits is also questionable. USEPA recognizes that “the precision of freshwater chronic toxicity tests is discussed in the representative methods sections in the methods manual (EPA/600/4-91/002). NOEC ... is generally in the range of 30-60% [coefficient of variation].” *See* 60 Fed. Reg. 53533-4 (Oct. 16, 1995). This variation is similar to a range of non-detect to 2.2 TU_c for any particular clean (method blank) sample, or using a non-technical analogy, is similar to a radar detector registering a stopped car at any speed from zero to more than 60 miles per hour.

In addition, chronic toxicity tests have been designed to have 5% false positive error rates (failing when there is no actual toxicity), further placing their regulatory usefulness in question and raising

constitutional due process issues in the context of strict liability for permit violations. However, actual confirmation of this assumed false positive error rate has only been evaluated using non-toxic blank samples for the NOEC. Confirmation of the false positive error rate associated with the TST (two-concentration or multiple concentration test designs) has not been conducted and the error rate associated with this statistical procedure may be significantly higher. Even USEPA itself has determined that “the accuracy of toxicity tests cannot be determined.” See *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*; EPA/600/4-91/002 at 139, 193, and 225 (July 1994) [Exhibit 20]. False indications of toxicity could cause violations of numeric limits even though there is no actual toxicity in the samples tested. These false indications of toxicity could be subject to citizen suit enforcement.¹⁶ No reason exists to put permittees in such compliance jeopardy unnecessarily when the existence of actual, lingering chronic toxicity is not confirmed.

Because of the unreliability and inaccuracy of these biological test methods, numeric effluent limits for chronic toxicity are inappropriate, infeasible to comply with, and should not be imposed.

Comment A-6. Numeric limits based on a two-concentration TST are highly problematic.

Reanalysis of actual WET test data, from a wide variety of real-world samples, demonstrates that the TST technique consistently “detects” the existence of toxicity more frequently than the NOEC method, especially for tests with relatively small effect levels. See State Board, *Effluent, Stormwater and Ambient Toxicity Test Drive Analysis of the Test of Significant Toxicity (TST)* (Dec., 2011) (see e.g., Chronic Freshwater results in Table E-1) [Exhibit 8]. However, one should not assume that greater statistical *sensitivity* equates with improved *accuracy* in WET testing.

Reanalysis of data from USEPA’s inter-laboratory WET variability study indicates that the TST technique also “detects” toxicity in clean blank samples at a rate up to three times higher than the NOEC. (USEPA. *Final Report: Interlaboratory Variability Study of EPA Short-term Chronic and Acute Whole Effluent Toxicity Test Methods*, Vol. 1; EPA-821-B-01-004 (Sept., 2001) [Exhibit 4]). Blank samples are comprised solely of laboratory dilution water that is known to be non-toxic before the test begins. Such inaccuracies demonstrate that the TST does not provide performance “acceptably equivalent” to that of the standard WET methods that were promulgated in Part 136 in 2002.

Because of the unreliability and inaccuracy of these biological test methods, strictly construed numeric (“Pass/Fail” or “% Effect”) effluent limits for toxicity are inappropriate, infeasible to comply with, and should not have been proposed.

In conclusion, for all the reasons cited in herein, the effluent limits for chronic toxicity in Table 4 of the Tentative Permit should be changed back to the narrative effluent limitation contained in the last permit and pre-public notice draft with a numeric trigger for additional investigations (e.g., TIE/TRE). No authority exists for mandating numeric chronic toxicity effluent limitations and particularly not limits of “Pass”, or “% effect <50” using a non-Part 136 promulgated method. Furthermore, as stated above, the inclusion of numeric chronic toxicity effluent limitations violates the current binding precedent from State Board Order Nos. WQO 2003-0012 and WQO 2003-0013, applicable to the San Jose Creek WRP. Finally, since the TST test with a two concentration test design is not an approved Part 136 methodology (or a valid ATP), this method should not be utilized for compliance purposes unless promulgated as a formal rule by EPA.

¹⁶ Such a violation could also be subject to discretionary enforcement, although it would not be subject to Mandatory Minimum Penalties (MMPs, Water Code section 13385(i)(1)(D)) if there are other toxic pollutant limits in the permit.

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Page No.	Section	Comment	Justification
6	IV.A. Table 4 (EFF-001)	Remove Selenium from EFF-001 limits	A selenium limit is not appropriate for San Gabriel Reach 2. There are no WLAs for selenium assigned to this reach in the SGR Metals TMDL, and there is no selenium impairment for this reach. The WLAs are for San Jose Creek Reach 1. Also, note that San Jose Creek Reach 1 is no longer listed as impaired for selenium, as of the 2010 303(d) list.
6	IV.A. Table 4 (EFF-001)	Add EFF-001 to Ammonia Nitrogen Limits (or remove reference to just EFF-001A and EFF-001B)	No ammonia limits are listed for EFF-001.
6	IV.A. Table 4 (EFF-001)	Change "Total Nitrogen" to "Nitrate Plus Nitrite as Nitrogen" and a limit of 10 mg/L for EFF-001 as it is considered to be at Firestone.	Total Nitrogen should be Nitrate + Nitrite (total inorganic nitrogen) limit of 10 mg/L. Justification for this limit is the Basin Plan objective (per F-36), and the objective is for nitrate plus nitrite as nitrogen (see Page 3-32, Table 3-10 footnote d of the 2014 amendments to the Basin Plan for San Gabriel River from Firestone to Estuary.)
6	IV.A. Table 4 (EFF-001A and 001B)	Change "Total Nitrogen" to "Nitrate Plus Nitrite as Nitrogen" and a limit of 8 mg/L for EFF-001A and EFF-001B as they are considered to in the San Gabriel River Reach 2.	Total Nitrogen should be Nitrate + Nitrite (total inorganic nitrogen) limit of 8 mg/L. Justification for this limit is the Basin Plan objective (per F-36), and the objective is for nitrate plus nitrite as nitrogen (see Page 3-32, Table 3-10 footnote d of the 2014 amendments to the Basin Plan for San Gabriel River from Valley to Firestone.)
8	IV.b. Table 5 (EFF-002)	Remove Total Trihalomethanes limits	Our calculations indicate that there is no reasonable potential for total trihalomethanes at EFF-002.
9	IV.B. Table 5, Footnote 11, last sentence	Change "are required" to "may be conducted"	This will make Footnote 11 consistent with Footnote 5 (page 7) and Footnote 16 (page 11). If we are not able to obtain three tests for some reason, without this language we will not be in violation for simply not collecting the samples.
10	IV.C. Table 6 (EFF-003)	Change "Total Nitrogen" to "Nitrate Plus Nitrite as Nitrogen" for EFF-003	Total Nitrogen should be Nitrate + Nitrite (total inorganic nitrogen) limit of 8. Justification for this limit is the Basin Plan objective (per F-36), and the objective is for nitrate plus nitrite as nitrogen (see Page 3-32, footnote d of the 2014 amendments to the Basin Plan for San Gabriel River from Valley to Firestone).
10	IV.C. Table 6 (EFF-003)	Remove Benzo(k)fluoranthene and Dibenz(a,h,)anthracene limits for EFF-003	There is no footnote explaining where these limits came from for EFF-003 like there is for EFF-002 (Footnote 9). There was detections in background at RSW-003 but they were not over the criteria, so there was no RP. See comments on F-59.
11	VI.	Add a table or tables for effluent limits for EFF-004 and EFF-005	Effluent limits to protect surface water have to be established in an NPDES permit.
12	V.A.1.	Add "or above 70°F if the ambient temperature is less than 60°F"	This language was used in the previous permit, and no explanation was provided to why the language was dropped.
13	V.A.18.b	Delete "on the same day" so that it reads, "Receiving water and effluent toxicity testing shall be performed on the same day as close to concurrently as possible."	Effluent samples are 24-hour composites and receiving water samples are grab samples. Therefore, little information regarding whether or not effluent toxicity is contributing to an ephemeral instance of receiving water toxicity (or lack of toxicity) can be ascertained through the routine effluent toxicity data. Furthermore, additional tests conducted to meet the effluent MMEL may or may not include concurrent testing of the receiving water.
E-2	I.A.	After "Annual analyses shall be performed during the month of August add "(except for bioassessment monitoring, which will be conducted in the spring/summer)"	Bioassessments are done annually, but are not done in August.
E-4	Table E-1 Monitoring Location Name	For INF-001 and INF-002, remove "(East)" and "(West)" from Monitoring Location Name	East and West are identified in the Discharge Point Source column.

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Page No.	Section	Comment	Justification
E-4	Table E-1 Monitoring Location Description for INF-001 and INF-002	Add "/or" so that this reads, "Sampling stations shall be established at each point of inflow to the sewage treatment plant and shall be located upstream of any in-plant return flows and/or where representative samples of the influent can be obtained."	Currently under typical operation no in-plant flows return upstream of the influent sampling locations. However, piping is available to route certain flows (secondary skimmings) on the East side to a location upstream of the influent sampling location if needed due to limitations in downstream sewers or other unusual conditions.
E-6	Table E-1 Receiving Water Stations	For RSW-003, change to "upstream of Discharge Point..."	Typo.
E-6	Table E-1 Receiving Water Stations	For RSW-010, change to "34.131833 N, 117.970722 W..."	Typo.
E-7	Table E-1 Receiving Water Stations	Add to table "Downstream San Gabriel River (unlined above Santa Fe Dam)", "RSW-011", "34.131417 N, 117.950476 W, no further than 100 ft. downstream of Discharge Point No. 005. This location is also used for San Gabriel River ammonia receiving water point of compliance."	New downstream station for Discharge Point No. 005.
E-8	Table E-3 INF-002	For the parameter Flow, add Footnote 2 to the sampling frequency of "continuous"	Clarification.
E-8 and E-9	Table E-2 and E-3 PCBs	Divide into PCBs as arochlors and PCBs as congeners rows like the effluent is done for clarity.	Clarification.
E-9	IV.A. footnote 10	Modify to read "Concentration = [(East Concentration x metered East Flow to outfall pipeline) + (West concentration x metered West Flow to outfall pipeline)] / (East Flow to outfall pipeline + West Flow to outfall pipeline)"	Since the concentrations are the same, we use the metered flow directly from the East and West plants to do the flow-weighting calculations for all the discharges and reuse off the outfall pipeline, including 001, 001A, 001B, and outfall reuse (Rio Hondo System and PERG). Cannot use flow to 001 as it is sometimes zero.
E-10	Table E-4 (EFF-001/A/B)	Change Turbidity sample type to "calculated" and frequency to "continuous".	All samples that are continuous, 24-hr composite, and grab except pH, temperature, and total residual chlorine are calculated from East and West. This includes turbidity. If a grab sample was taken to prove compliance with the 10 NTU limit, then it would still be collected from East and West and flow-weighted (not an outfall EFF-001/A/B grab sample).
E-10	Table E-4 (EFF-001/A/B), Footnote 11	Delete "peak daily", so that it reads "Total waste flow - Total Daily and monthly average flow (24-hour basis);"	It is not possible at this time to measure the peak flow for these outfalls. EFF-001A is a meter read daily by Department of Public Works and daily flows are calculated for EFF-001.
E-10	Table E-4, Footnote 15	Add "Total residual chlorine cannot be monitored using a continuous recorder at Discharge Nos. 001, 001A, and 001B and is only monitoring by a grab sample at these outfalls. These outfalls are at a remote location in a streambed several miles downstream of the plant. Equipment cannot be maintained there due to vandalism and storm flooding." Delete "Furthermore, additional monitoring requirements specified in Order section IV.A. shall be followed."	This footnote is missing language about not being able to continuously monitor chlorine residual at EFF-001, EFF-001A, and EFF-001B. The sentence about additional monitoring requirements specified in Order section IV. A. should be removed as it applies to continuous monitoring as a trigger for additional grab samples.

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Page No.	Section	Comment	Justification
E-10, E-14, and E-61	Footnotes 17, 39, and 61 about Fecal Coliform	At the end of the footnotes add, "If the total coliform analysis results in no detection, a result of < the reporting limit for total coliform will be reported for both fecal coliform and <i>E.coli</i> ."	As written, the footnotes don't specify what should be reported in CIWQS for fecal coliform and <i>E.coli</i> if they are not required to be conducted.
E-11, E-15, and E-19	Footnotes 21, 43, and 65 about MBAS.	Remove everything after the first sentence so that it reads "MBAS is Methylene blue active substances and CTAS is cobalt thiocyanate active substances."	Justification for monitoring should be provided in the Fact Sheet, not in the MRP. Also, there is no MCL for CTAS, so the GWR use can not be used as a justification for monitoring for CTAS.
E-14	Table E-5 (EFF-002) Footnote 33	Change Footnote 37 on turbidity continuous frequency to Footnote 33.	Similar to EFF-001 and EFF-003.
E-14	Table E-5 (EFF-002) Footnote 33	Add "A grab sample can be used to determine compliance with the 10NTU limit. A flow-weighted 24-hour composite sample may be collected for turbidity at EFF-002 in place of the recorder to determine the flow-proportioned average daily value."	Same language as Footnotes 11 and 14 from EFF-001/A/B.
E-16	Table E-5 (EFF-002)	fn 47 Add "PCBs <u>as</u> arochlors"	Typo.
E-17	Table E-5 (EFF-002)	Change Perchlorate, 1,4-Dioxane, 1,2,3-Trichloropropane, and MTBE to 24-hour composite	These are not grab samples.
E-18	Table E-6 (EFF-003) Footnote 59	Change "EFF-0013" to "EFF-003"	Typo.
E-19	Table E-6, Footnote 66	Delete the the last two sentences, starting with "If the chronic toxicity median monthly threshold at the immediate downstream receiving water location is not met..."	Table E-8 is a listing of effluent requirements. Language on receiving water requirements is not appropriate in this table but should instead be included in Table E-8.
E-20	Table E-6 (EFF-003), Footnote 70	Change "PCBs mean the sum ..." to "PCBs <u>as congeners</u> means the sum ..."	Clarification.
E-21	Table E-6 (EFF-003)	Change Perchlorate, 1,4-Dioxane, 1,2,3-Trichloropropane, and MTBE to 24-hour composite	These are not grab samples.
E-21	Table E-6 (EFF-003)	Remove NDMA and Footnote 75	NDMA is already required semiannually for EFF-001/A/B and EFF-002 because it is a priority pollutant. On Footnote 75, it would be duplicative and waste of efforts to run NMDA using a drinking water method for an NPDES permit.
E-21	Add Table E-7 and E-8	Tables of monitoring parameters need to be added for EFF-004 and EFF-005.	Monitoring requirements to protect surface waters have to be included in NPDES permits.
E-21	IV.D	Delete the sentences stating, "The Permittee shall monitor the discharge of tertiary-treated effluent at EFF-004 and EFF-005 as directed in the Water Recycling Requirements (WRR) for the IRRP Facility. The effluent limitations for EFF-004 and EFF-005 will be established in a WRR for that groundwater replenishment project."	Effluent limits and monitoring requirements to protect surface waters have to be established in an NPDES permit.

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E-22	V.A.2	Delete the sentence stating, "For the receiving water, sufficient sample volume shall also be collected for subsequent TIE studies, if necessary, at each sampling event."	TIE testing would only be conducted after exceeding the MMEL or MDEL and after failing one or more accelerated tests. The way the language is currently written, it might be misinterpreted to mean that a TIE should be conducted immediately after failing the MMEL or MDEL.
E-23	V.A.4 Species sensitivity screening	Change the sentence to read, "This sample shall also be analyzed for the parameters required on a monthly frequency for the discharge during that given month."	The sampling requirements for the NPDES permit can vary by month, since in some months it is necessary to collect samples for parameters that need to be monitored quarterly, semi-annually, or annually. Therefore, as written the language would require different parameters to be analyzed depending on which month the most sensitive screening analysis is run. During months in which quarterly, semi-annual, or annual sampling is required it could be difficult to collect enough sample volume to run all the necessary parameters. A more reasonable requirement would be to require the sample used for the most sensitive species screening to be analyzed for the parameters required on a monthly basis. Language is proposed to provide this change.
E-23	V.A.4 Species sensitivity screening	Remove "If the result of all three species is "Pass", then the species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit cycle. Likewise, if two or more species result in "Fail," then the species that exhibits the highest "Percent Effect" at the discharge IWC during the suite of species sensitivity screening shall be used for routine monitoring during the permit cycle. " Replace with something that covers all the alternative results such as "The species that exhibits the highest "Percent Effect" at the discharge IWC during the suite of species sensitivity screening shall be used for routine monitoring during the permit cycle. "	A third possible combination of 2 "Pass" and 1 "Fail" is not described. It is best to just describe the conditions that would apply for any combination of "Pass" and "Fail" results. You would not set a most sensitive species to be one that had a lower percent effect at the IWC than another species.

Attachment B
General Technical Comments on the San Jose Creek WRP Tentative NPDES Permit

Page No.	Section	Comment	Justification
E-24	V.A.5.f	Remove the second sentence of this requirement, relating to disallowing removal of ammonia and chlorine. Ammonia removal requirements are addressed on page E-27, Section V.B. For chlorine, change the language to read "Except with prior approval from the Executive Officer of the Regional Water Board, chlorine shall not be removed from bioassay samples. However, chlorine may be removed from the San Jose Creek WRP effluent bioassay samples in the laboratory because often the recycled water demand is high and there is no effluent water available for sampling over the weir after the dechlorination process."	The Regional Board recently granted an exemption from collecting dechlorinated effluent at the Pomona WRP due to difficulties in sample collection caused by high demand for recycled water. A similar exemption is needed for San Jose Creek WRP. Chlorine residual limits will readily identify and address any malfunctions in the dechlorinating systems. Specific reasons why an exemption is needed are: 1) There is only intermittent flow at each of the outfalls for both SJC East and West. SJC WRP sends FE to receiving waters at three potential locations (EFF-001, EFF-002, and EFF-003) and also sends a significant percentage of flow to individual recycled water users. Discharge at the three receiving water locations is intermittent based on recycled water needs and management decisions as to where the flow will be diverted. This completely prohibits 24-hour composite sample collection at any one of the individual outfall locations. To overcome this problem, the Laboratory collects the 24-hour composite samples in the plant, immediately after chlorination, at locations where the presence of effluent flow is guaranteed 24 hours a day. Attempting to move the composite sampling location to a site where de-chlorinated effluent could be collected would mean placing sampling equipment and infrastructure in a location where effluent flow could not be guaranteed 24 hours a day. 2) Installation of sampling equipment and infrastructure for collection of 24-hour composite samples would be unreasonably difficult. There are currently no sampling locations for collection of de-chlorinated effluent within SJC WRP. Installation of appropriate infrastructure and sampling equipment would be extremely difficult given that many of the discharge pipes carrying the de-chlorinated effluent are underground and are inaccessible or are too close to receiving waters to adequately engineer safe and secure sampling infrastructure. In addition, it is not feasible to create sampling locations at the outfalls themselves due to inevitable vandalism and/or environmental damage to sampling equipment. The outfalls themselves are accessible to the public and previous experience has shown us that sampling equipment setup in such situations cannot be adequately maintained.
E-27	V.A.9.e.	Change to read, "Any additional QA/QC documentation or any additional chronic toxicity-related information, <u>will be made available for inspection</u> upon request of Regional Water Board staff."	All records and documents associated with test results for submitted for NPDES purposes are always available for inspection upon request. Furthermore, the Districts' laboratory and contracted laboratories are committed to complying with all required reporting provisions and make every effort to do so. However, this provision would obligate us to provide any and all information related to toxicity requested by any member of Regional Water Board staff, regardless of whether the request is reasonable in accordance with the Water Code. This request could also cause confusion in potential instances where a request that is made verbally is inadvertently misinterpreted. If this provision is retained, justification needs to be provided as to why this request is reasonable.
E-27	V.C.	Remove this requirement, which relates to chlorine removal.	See comment above on this issue.
E-28	Table E-8 header and Footnote 78	Add "RSW-008, 009, 010, and 011"	These are the upstream/downstream stations for 004 and 005.

**Attachment B
General Technical Comments on the San Jose Creek WRP Tentative NPDES Permit**

Page No.	Section	Comment	Justification
E-28	VIII.A.1	Change to read, "The Permittee shall monitor receiving water at RSW-001 (C-1), RSW-002 (C-2), RSW-003 (R-10), RSW-004 (R-11), RSW-005 (R-2), RSW-006 (R-12), RSW-007 (R-13), RSW-008, RSW-009, RSW-010, and RSW-011 as follows. RSW-008, RSW-009, RSW-010, and RSW-011 are not required to be sampled until such time as there is discharge from Discharge Point Nos. 004 or 005. Monitoring requirements at RSW-006 (R-12) and RSW-007 (R-13) are applicable when reclaimed water is discharged through Discharge Point Nos. 001A or 001B. "	Add the upstream/downstream stations for 004 and 005 and qualify when to start sampling. Also the existing statement about 001A and 001B is confusing.
E-29	Table E-8, Footnote 81	Add "For example" at the start of the last sentence, so it reads, "For example, if the chronic toxicity median monthly threshold of the receiving water at both upstream and downstream monitoring stations is not met..."	Addition of this language will clarify that the scenario described in the last sentence is not the only situation in which toxicity may be attributed to upstream sources.
E-30	Footnote 85	"Dioxin concentration in effluent = Σ " should be replaced with "Dioxin concentration = Σ "	This footnote relates to receiving water.
F-7	II.B. Discharge Point 001	Change the sentence "It is located in Reach 2 of the San Gabriel River" to "It is located in Reach 1 of the San Gabriel River."	Discharge Point No. 001 has always been regulated as being in Reach 1. The reason for changing the way it is regulated at this point is unclear.
F-8	II.B. Discharge Point 003	Remove "at the Reach 2 boundary" from the last sentence of the first paragraph so it reads, "It is located in Reach 3 of the San Gabriel River."	Discharge Point No. 003 is not near the boundary of Reach 2.
F-8	II.B. Discharge Point 004	Change Reach 3 to Reach 4 so it reads, "Discharge to the unlined Reach 4 of the San Gabriel River."	Change needed to be consistent with the Basin Plan.
F-8	II.B. Discharge Point 005	Change Reach 3 to Reach 5 so it reads, "Discharge to the unlined Reach 5 of the San Gabriel River."	Change needed to be consistent with the Basin Plan.
F-8	II.B. Discharge Point no. 005, fourth paragraph	Change the first sentence to read, "The San Gabriel River and San Jose Creek are unlined near the the points of discharge, except Discharge Point No. 001."	001 discharges to the lined portion of the San Gabriel River.
F-9	2.C.1. 2nd paragraph	Change the second sentence to read, "The copper limit was applied in dry weather in Reach 1 and the Estuary of the San Gabriel River."	There were no copper limits applied for discharges to Reach 2.
F-20	Table F-4	Remove 11/10/09 data from Table F-4	This sample was taken during a three species screening. During such screenings, under the old permit only the compliance species was reportable for compliance purposes. Ceriodaphnia was not the compliance species and thus results were not reportable for compliance purposes.
F-20	II.E.	Change to read, "Up to 10,000 acre-feet per year (8.93 mgd)..."	10,000 acre-feet is 8.93 mgd, not 13.4 mgd.

Attachment B
General Technical Comments on the San Jose Creek WRP Tentative NPDES Permit

Page No.	Section	Comment	Justification
F-21	II.E	Remove the statement. "Therefore, the effluent limitations for 004 and 005 will be established in a Water Recycling Requirement for that spreading facility."	Limits for 004 and 005 that are related to protection of surface waters must be established in an NPDES permit, not WRRs. WRRs contain requirements to protect public health.
F-21	II.E second paragraph	Replace "to achieve a higher level of virus deactivation as required for reuse." with "to reduce health and safety risk to the public."	The reason for replacing the gaseous chlorine is to reduce the health and safety risk to the public.
F-30	IV.A.	"This order authorized the discharge of tertiary-treated wastewater from Discharge Point Nos. 001, 001A, 001B, 002, 003, 004, and 005."	This sentence needs to reflect the new 004 and 005 discharge points.
F-36	IV.C.2.b.ix	Change "Effluent limits for total nitrogen of 8 mg/L are based" to "Effluent limits for nitrate plus nitrate as nitrogen of 8 mg/L are based..."	The Basin Plan objective is for nitrate plus nitrite as nitrogen. See Page 3-32, footnote c of the Basin Plan.
F-50	IV.C.3	Explain the statement, "As a result and in an abundance of caution, if the constituent was present at only one of the receiving water stations immediately above and below the outfall, that value was used as the background concentration for the RPA."	It is not clear which data was used for the reasonable potential analysis for the various discharge points. The data is not shown and there is a only footnote in the WDR indicating that RSW-001 was used for 002, with no corresponding footnotes for 003. Overall, RPAs must be conducted in accordance with the SIP, which indicates a strong preference or locations upstream or near the discharge. Additionally, the standard for determining whether there is a potential to cause or contribute to a water quality exceedance is "reasonable" potential, not "in an abundance of caution."
F-51	IV.C.3, third paragraph starting with "The CTR and SIP..."	Remove 003 from the statement, "Based on upstream or downstream conditions, the RPA indicated that limites are needed for Discharge Point Nos. 001/001A/001B and 002 for Chrysene..."	It is not clear which background value B was used for 003. See comment on table F-14.
F-51	IV.C.3, fourth paragraph starting with "Total trihalomethanes data showed..."	Remove 002 from the statement, "Total trihalomethanes are limited at Discharge Point Nos. 001/001A/001B, 002 and 003."	There is no reasonable potential for total trihalomethanes at 002.
F-51	IV.C.3, fifth paragraph starting with "The maximum..."	Change the last sentence to read, "...because the TMDL implementation does require a limit at Discharge Point No. 002 in San Jose Creek Reach 1."	Discharge Point No. 002 is in San Jose Creek Reach 1, not San Jose Creek Reach 2.
F-51	IV.C.3., fifth paragraph starting with "The maximum..."	Add a new sentence to the end of the paragraph stating, "RPA was not present for lead, but a limit was required for all the discharge points because they are either in or tributary to San Gabriel River Reach 2."	No explanation is given for the lead limits.
F-52 and F-57	Tables F-13 and F-14, CTR #16 both EFF-002 and EFF-003.	The Reason for TCDD should be "Not Detected" not "MEC>C"	Typo.

Attachment B
General Technical Comments on the San Jose Creek WRP Tentative NPDES Permit

Page No.	Section	Comment	Justification
F-59	Table F-14, CTR #64 Benzo(k)fluoranthene and #74 Dibenzo(a,h,)anthracene	The B values for these should be "<0.02" and "0.024", respectively and the Reason should be MEC<C and B<C.	No RP for these for 003. Likewise there is no RP for 004 and 005.
F-62	IV.C.4.b. Shared Effluent Pipeline	Replace header and text with " Multiple Discharge Points Separate effluent limits were established for Discharge Point Nos. 001, 001A and 001B, Discharge Point No. 002, Discharge Point 003, Discharge Point No. 004, and Discharge Point No. 005. Each of these discharge points go to different waterbodies (San Gabriel River Reach 2, San Jose Creek Reach 1, San Gabriel Reach 3, San Gabriel River Reach 4, and San Gabriel River Reach 5, respectively) where different TMDL-based waste load allocations apply. "	It is not appropriate to set water quality based effluent limits on a proportion of water from a facility. Water quality based effluent limits need to be set based on a water quality objectives at each specific discharge location.
F-62	IV.C.4.c. second paragraph	After "(Tier 3) for Reach 2." add, "This WLA applies in San Gabriel River Reach 2 and all upstream reaches and tributaries." Then change the next sentence to read, "Therefore, an effluent limitation has been prescribed for lead at all of the discharge points."	To explain lead limits further.
F-63	IV.C.4.c., after the paragraph ending in "... USGS station 11087020 will be used."	Add a paragraph stating, "Similarly, San Jose Creek Reach 1 has TMDL wasteload allocations for selenium in dry weather impairment. Therefore, limits were set for selenium in Discharge Serial No. 002, which discharges to San Jose Creek Reach 1."	To explain selenium limits.
F-63	IV.C.4.d	Change bolded "Sample calculation for Lead for the East Plant:" to "Sample calculation for Discharge Point No. 002:"	In NPDES permits, water quality based effluent limits are assigned to discharge points, not "plants". Water quality based effluent limits need to be based on the specific water quality considerations at each discharge location, regardless of where the water was produced.
F-64	IV.C.4.d. Paragraph after Step 7	Change to the first two sentences of this paragraph to read, "The San Gabriel Metals and Selenium TMDL includes a concentration limit for lead, which applies to the Reach 2 of the San Gabriel River and all upstream reaches and tributaries. The TMDL also states ..."	See page 37 of TMDL
F-66 and F-74	Tables F-15 (001/001A/001B) and F-18	Change Total Nitrogen limits for EFF-001/001A/001B to limits for Nitrate Plus Nitrite as Nitrogen	To be consistent with the Basin Pan water quality objective, which is for total inorganic nitrogen.

Attachment B
General Technical Comments on the San Jose Creek WRP Tentative NPDES Permit

Page No.	Section	Comment	Justification
F-66 and F-75	Tables F-15 (001/001A/001B) and F-18	Remove Selenium limit from 001, 001A, and 001B.	The SGR Metals TMDL did not assign a WLA for selenium in SGR Reach 2, and there is no impairment in this reach. Therefore, there is no justification for a water quality based effluent limit.
F-66 and F-75	Tables F-15 (001/001A/001B) and F-18	Remove Chrysene limit from 001, 001A, and 001B.	There was no chrysene RP in the analysis that was submitted for 001 and 001A.
F-67 and F-77	Tables F-16 (EFF-002) and F-19	Remove Total Trihalomethanes limit from 002	There is no RP for total trihalomethanes at 002.
F-68 and F-78	Tables F-17 (EFF-003) and F-20	Change Total Nitrogen limit for EFF-003 to a limit for Nitrate Plus Nitrite as Nitrogen	To be consistent with the Basin Plan water quality objective, which is for total inorganic nitrogen.
F-68 and F-78	Tables F-17 (EFF-003) and F-20	Remove limits for Benzo(k)fluoranthene and Dibenz(a,h,) anthracene	No RP for these for 003. Likewise there is no RP for 004 and 005.
F-80	VI.B.2.a	Remove requirement to conduct the special study "Disinfection Byproducts Continued Monitoring."	There is no study entitled, "Montebello Forebay Groundwater Recharge Project Study" so it will not be possible to provide a summary. Also, no justification has been provided as to why a new monitoring plan for disinfection byproducts should be proposed. The tentative NPDES permit already contains requirements for disinfection byproduct monitoring to protect receiving waters. Any additional studies needed regarding the Montebello Forebay recharge product should be issued as part of the WRRs for that project.
F-81	VI.B.2.c.	Remove the requirement to submit an "Antidegradation Analysis and Engineering Report for Proposed Plant Expansion."	There is no plant expansion proposed, so this is not requirement is not applicable.
F-86	VIII.C.	Delete the last sentence, starting with "Additional information on the CCW is available at..."	CCW refers to the Calleguas Creek Watershed. This sentence is not applicable to this permit.
F-86	VIII.D.	Change CCW to "SGR watershed"	The CCW is not applicable to this permit.



CALIFORNIA ASSOCIATION of SANITATION AGENCIES

1225 8th Street, Suite 595 • Sacramento, CA 95814 • TEL: (916) 446-0388 • www.casaweb.org

January 16, 2014

Sent via Electronic Mail eerickson@waterboards.ca.gov

Elizabeth Erickson
Los Angeles Regional Water Quality Control Board
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Subject: **California Association of Sanitation Agencies (CASA) Comments on Tentative Permit for San Jose Creek Water Reclamation Plant**

Dear Ms. Erickson,

The California Association of Sanitation Agencies (CASA) appreciates the opportunity to provide comment on the tentative permit for the San Jose Creek Water Reclamation Plant (hereafter “tentative permit”). CASA is a statewide association representing more than 100 municipalities, special districts, and joint powers agencies that provide wastewater collection, treatment, clean energy and water recycling services to millions of Californians. Our association does not routinely comment on matters within individual regions, except in circumstances such as this, where the proposed regional action could have significant statewide implications. To the extent that the terms being incorporated into this individual NPDES permit could affect how other regions approach toxicity, and could impact the promulgation of a forthcoming statewide plan or policy governing toxicity, all of CASA’s members statewide have a significant interest in the development and implementation of this permit. CASA believes that the terms incorporated into the San Jose Creek permit are substantially similar to those in the Pomona and Whittier Narrows permits that were also the subject of recent CASA comments and testimony. CASA has three primary concerns within this permit, as outlined in greater detail below.

1. The Permit Contains Numeric Effluent Limits for Toxicity

Adoption of a permit that contains numeric effluent limits for toxicity, and specifically prescribes use of the Test of Significant Toxicity (TST) approach,¹ in advance of the promulgation of a statewide policy on this issue is inappropriate and premature. The State Water Board has been working with stakeholders, U.S. EPA and regional water boards to develop revised toxicity provisions for inclusion in a statewide water quality control plan through a public process, and release of a revised draft is expected soon for public comment. An appropriate statewide plan will replace the current patchwork of regional water board practices with a consistent and standardized approach to toxicity. Adoption of numeric effluent limits for toxicity in an individual Regional Board permit is thus premature and interferes with a significant amount of work being done at the state level. CASA requests that the chronic toxicity limits contained in the tentative permit be removed and replaced with a narrative chronic toxicity

¹ See Tentative Permit at pp. 7, 11, 29.

limit and triggers, at least until such time as there is a comprehensive statewide toxicity plan to govern those terms.

2. *The Permit Contains Provisions Inappropriately Restricting How the TST Is Utilized*

Several conditions within the permits improperly limit or restrict the permittee's ability to conduct recommended data evaluation procedures. For example, the tentative permit states that "...The TST hypothesis (Ho) (see above) is not tested using a multi-concentration test design; therefore, the concentration response relationship for the effluent and/or PMSDs shall not be used to interpret the TST result reported as the effluent compliance monitoring result. While the Permittee can opt to monitor the chronic toxicity of the effluent using five or more effluent dilutions (including 100% effluent and negative control) *only the TST result will be considered for compliance purposes.*"² (Emphasis added.) Limiting the ability of a permittee to utilize the appropriate promulgated chronic toxicity testing protocols, including the availability of a multi-concentration test, will significantly increase the false positive rate when using the TST. Moreover, prohibiting such activities is entirely inconsistent with what is expected to be contained in the statewide toxicity plan.

3. *The Permit Contains Provisions Requiring Continued Monitoring for Compliance Purposes During Accelerated Testing and TIE/TRE Implementation*

Requiring that TST results be reported as effluent compliance monitoring during these accelerated monitoring schedules and initiation of the TIE/TRE is inappropriate, counterproductive, and should not be included in the tentative permit. Specifically, the tentative permit states that "...TST results ("Pass" or "Fail", "Percent Effect") for chronic toxicity tests shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL and MMEL."³ This provision could place the discharger in immediate jeopardy of compliance violations, and is entirely inconsistent with what is expected to be contained in the statewide toxicity plan. CASA has been working with State Water Board staff and numerous stakeholders in developing the statewide toxicity plan, and it is our understanding that after an initial toxicity violation, accelerated testing and/or TIE/TRE implementation will occur. During that time no further violations should be incurred provided that the permittee conducts the required and appropriate actions to address the exceedance. Toxicity efforts conducted after an identified exceedance should focus on identifying the cause of the exceedance and addressing it. Continued routine monitoring during accelerated testing and/or TRE plan implementation will not assist in achieving those goals, and will only serve to increase reported violations that could subject the discharger to liability without contributing anything toward actually identifying and controlling toxicity. Dischargers should not be liable for continued toxicity violations after triggering accelerated testing and initiation of the TRE.

² Tentative Permit at p. 30.

³ Tentative Permit at p. E-25.

We appreciate the opportunity to provide comments on the tentative permit, and feel free to contact me at alink@casaweb.org or (916) 446-0388 if you have any additional questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read "Adam D. Link". The signature is fluid and cursive, with the first name "Adam" being the most prominent.

Adam D. Link
CASA Director of Government Affairs

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January 16, 2015

Cris Morris

Los Angeles Regional Water Quality Control Board

320 West 4th Street, Suite 200

Los Angeles, CA 90013

Sent via Electronic Mail to: losangeles@waterboards.ca.gov

Subject: National Association of Clean Water Agencies (NACWA) Comments on Tentative Permit for San Jose Creek Water Reclamation Plant

Dear Ms. Morris,

The National Association of Clean Water Agencies (NACWA) appreciates the opportunity to provide comments on the tentative permit for the San Jose Creek Water Reclamation Plant. NACWA is a national trade association representing 30 public wastewater utilities in California and nearly 300 utilities nationwide. NACWA has been working for nearly two decades to ensure whole effluent toxicity (WET) testing is appropriately used in Clean Water Act (CWA) programs and that any WET requirements imposed on public wastewater utilities adequately account for the variability inherent in the testing of biological organisms.

Our Association does not routinely comment on matters impacting individual treatment plants, but the tentative permit in question includes provisions that could have significant statewide and national impacts. To the extent that the terms related to toxicity being incorporated into this permit could be emulated by other regional boards, all of NACWA's members in California – and utilities beyond NACWA's membership – have a significant interest in the development and implementation of these permits. Based on the information it has, NACWA believes the toxicity provisions in the tentative permit, and the recently adopted permits for the Pomona and Whittier Narrows Water Reclamation Plants, are without precedent in any CWA permit in the country. Therefore, the decision to include these requirements could also have national implications. NACWA's three primary concerns with the draft permit are detailed below:

1. Mandating use of the Test of Significant Toxicity (TST), an approach that EPA has not approved or officially sought comment on, in a CWA permit is highly problematic. In 2010, NACWA reviewed and commented on a guidance document from the U.S. Environmental Protection Agency (EPA)

detailing the TST. Although EPA had not officially released the guidance for public review and comment, NACWA and several other stakeholders wrote to EPA to raise significant concerns with the use of the TST approach in CWA programs. Since that time, EPA has provided no additional information on the TST for public review and has done nothing to address the significant concerns raised by stakeholders in 2010. NACWA's comments from 2010 are attached for your reference. Compounding the issues with the TST in the case of the tentative permit for the San Jose Creek Water Reclamation Plant, are the restrictions the permit places on the use of the TST, mainly the prohibition on conducting multi-concentration tests and dose-response evaluations, discussed below.

2. Conditions imposed by the tentative permit improperly limit or restrict the use of data evaluation procedures either *required* or recommended by EPA in 40 Code of Federal Regulations (CFR) Part 136. Numeric limits based on a single effluent concentration chronic toxicity test using the TST, as prescribed in the tentative permit, are highly problematic and will inevitably lead to a substantially higher rate of false conclusions regarding the measurement of toxicity. Allowing a discharger to conduct multiple concentration tests and evaluate the dose-response relationship is one of the more critical and significant method-defined approaches to address variability within a test and validate data that have been acknowledged to be inherently variable. Interpretation of the 40 CFR Part 136 methods specifically calls for evaluation of the dose-response relationship to ensure that test results are interpreted and reported accurately. This cannot be done without multiple dilution testing.

The Board must also recognize that **the accuracy of whole effluent toxicity tests is unknown, and “cannot be determined in a meaningful way” according to EPA¹**. That is, it is unknown as to whether a laboratory conducted WET test will reflect what is observed instream at the effluent-receiving water interface. Additionally, the quality of WET tests and their respective results cannot be evaluated using tests of effluent samples of known toxicity like a test for a chemical parameter can be evaluated by testing samples of known concentration. The whole effluent testing paradigm, as established by EPA, simply does not make available the quality control tools commonly available in chemical parameter measurements (e.g., matrix spiking, matrix spike duplicates, calibration blanks, standards, laboratory control sample, limit of quantitation, limit of detection, internal standards, surrogate spikes, and initial precision and recovery requirements). This emphasizes the need for a permittee to collect as much data as possible for each sample analyzed when using WET tests to represent the quality of effluent samples.

Without multiple dilutions, permittees are left only with blanks (controls) and replication (for controls and one dilution) to evaluate the reliability of a WET test result. Even given these two quality control tools, there is no requirement that the variability of the controls or the single dilution tested meet a quality control maximum. EPA developed and implemented the Minimum Significant Difference (MSD) concept to address variability in WET tests, but these MSD requirements were developed based on a database of multi-dilution tests. MSD requirements for single dilution tests do not exist and have not been provided to allow proper qualification of test results for this permit. While reference toxicity

¹ EPA Memorandum, “Certification of ‘Accuracy’ of Information Submissions of Test Results Measuring Whole Effluent Toxicity”; From: Charles Sutfin, Office of Wastewater Management; Sheila Frace, Office of Science and Technology; Brian Maas, Office of Regulatory Enforcement; To: Regional Water Management Division Directors, Regional Enforcement Division Directors, Regions I-X, March, 3, 2000 (Attached).

test information is available, unlike other quality control tools where a failure results in effluent data being invalidated, a reference toxicity test that does not fall within quality control limits does not invalidate the associated effluent test.

This explains why EPA has routinely supported multiple concentration testing for all CWA WET compliance determination tests. If the Regional Board believes use of the TST is appropriate, the permit must be modified to include language that will specifically allow the permittee to assess the reliability of toxicity tests of the effluent using five or more effluent dilutions as well as utilize all 40 CFR Part 136 specified procedures. These are vital quality assurance/quality control procedures that must be available to permittees.

Further, the Board needs to implement multi-dilution WET tests in this permit so that the Board can be sure that conclusions regarding WET measurements associated with the discharge are reliable. Limiting the ability of a permittee to utilize the appropriate promulgated chronic toxicity testing protocols is inappropriate and NACWA is not aware of any other state that is limiting permittees in this manner. Contrary to the proposed permit action, the collection of more data (more dilutions, more replicates) in each test should be encouraged by the Board. This approach is in the best interests of the permittee, the Board, and the aquatic life of the receiving water.

3. Toxicity is not a pollutant, but an effect which indicates that additional investigation is needed to determine what is causing the effect. NACWA strongly believes that the toxicity identification evaluation/toxicity reduction evaluation (TIE/TRE) process is the best approach for a discharger to investigate and ultimately identify the underlying issue. Requiring TST results to be reported as effluent compliance monitoring during the accelerated monitoring that follows a toxicity event and initiation of the TIE/TRE is inappropriate, counterproductive, and should not be included in the tentative permit. NACWA understands that State Water Board staff and numerous stakeholders are working to develop a statewide toxicity plan that would mandate accelerated testing and/or TIE/TRE implementation after an initial toxicity violation. This is an approach that NACWA has advocated for on the national level as well, and commends the state for considering this approach. During this time of accelerated monitoring and investigation, however, further violations should not be incurred provided that the permittee is conducting all of the required and appropriate actions to address the exceedance.

A permittee cannot identify the causes of toxicity – the purpose of the TIE/TRE – without toxicity being present and measured. It is counterproductive to penalize a permittee for reporting toxicity when the permittee has not been provided the opportunity to identify the cause of the toxicity and remove it. The approach taken in the permit is not constructive and will result in resources being redirected to dealing with the violation rather than solving the toxicity problem. Efforts conducted after an identified exceedance should focus on identifying the cause of the exceedance and addressing it. Continued routine monitoring during accelerated testing and/or TIE/TRE plan implementation will only serve to increase reported violations that could subject the discharger to liability without contributing anything toward actually identifying and controlling toxicity.

NACWA Comments on Tentative San Jose Creek WRP Permit

January 16, 2015

Page 4 of 4

NACWA appreciates the opportunity to comment on the tentative permit. The precedent these problematic provisions could set will undermine much of the progress the clean water community has made over the past 20 years in addressing the variability of WET tests. NACWA has worked with EPA to develop tools to address the uncertainty in WET testing, but these tools will not work without data for multiple dilutions.

Please contact me at 202/833-9106 or chornback@nacwa.org should you have any questions or wish to discuss our comments further.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Hornback". The signature is fluid and cursive, with a large initial "C" and "H".

Chris Hornback
Senior Director, Regulatory Affairs

ATTACHMENTS

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January 11, 2010

Linda Boornazian

Director

Water Permits Division

Office of Wastewater Management

U.S. Environmental Protection Agency

1200 Pennsylvania Avenue, NW, MC 4203M

Washington, DC 20460

Via Electronic Mail

Dear Linda,

As you know, for more than a decade, NACWA has been working to ensure the use of whole effluent toxicity (WET) testing in Clean Water Act programs accounts for the inherent uncertainties in the test methods. While many of NACWA's concerns apply to the entire suite of WET methods and endpoints, the Association's primary focus continues to be on the use of chronic, sub-lethal endpoints, where permit compliance or "reasonable potential" may be more a function of the method itself, instead of effluent quality. In particular, NACWA has commented on the procedures for evaluating WET test results (i.e., hypothesis testing and point estimates) as a way of moderating some of the acknowledged uncertainties in the methods. Recently, NACWA was provided a draft guidance document detailing the test of significant toxicity (TST) for evaluating WET tests. Based on our initial review, the TST approach seems to address some of the issues with hypothesis testing, but it leaves many questions unanswered.

NACWA is continuing to evaluate the TST approach and understands that California is already pursuing its incorporation into the state's WET program, but we are primarily concerned that the TST approach only addresses hypothesis testing while most states, dischargers and even EPA have recognized that point estimates (EC/IC25 calculations) provide a superior approach. NACWA believes that EPA's resources would be better utilized improving point estimate approaches given the Agency's stated preference for them over hypothesis testing. There are limitations to using hypothesis tests in the reasonable potential (RP) calculations advocated by EPA that the TST approach or any other concept to refine hypothesis tests cannot adequately address. Point estimates are more appropriate for the EPA RP approach.



NACWA believes that a more pressing need exists for EPA to develop comprehensive guidance on the implementation of WET testing requirements in the National Pollutant Discharge Elimination System (NPDES) program. Major issues remain in dealing with discharges with little or no dilution, unnecessary conservatism in the Technical Support Document for Water Quality-based Toxics Control (TSD) reasonable potential procedures, and in implementing chronic WET requirements in permits. While NACWA will formally comment on the guidance when EPA releases it for public review, NACWA's members have provided some initial reaction to the approach.

Initial Concerns with TST Approach

EPA is proposing a third analytical approach for evaluating WET test data called the "test of significant toxicity" (TST). The analytical procedures of this approach are nearly identical to previously published methods more commonly known as "bioequivalency" or "alternative null hypothesis testing".

The TST approach attempts to directly address the false negative error rate (calling a "toxic" sample "non-toxic") while also controlling the false positive error rate (calling a "non-toxic" sample "toxic"). In the draft TST document, EPA defined no toxicity as a 10% or lower effect. To control the probability of identifying a "non-toxic" sample as "toxic", EPA adjusted the alpha error up (not to exceed 0.25) or down until 5% (or less) of the tests with a 10% or lower effect were identified as "toxic". In more simple terms, chronic toxicity with the TST is defined as a 25% or greater effect and no toxicity with the TST is defined as an effect equal to or less than 10%. EPA would like the TST to identify at least 75% percent of the "toxic" tests as "toxic" and identify no more than 5% of the "non-toxic" tests as "toxic".

Due to the mathematics involved and the nature of the table or critical t-values, every sample exhibiting a 25% effect or more will be identified as "toxic" using the TST approach regardless of variability, number of replicates, or alpha selected. Therefore, the actual rate of identifying a "toxic" test as defined in the document (effects of 25% or larger) as "non-toxic" is zero (0). The probability of identifying a "non-toxic" test (a test with an effect of 10% or less) was adjusted to be no more than 5%. The frequency of identifying tests with effects between 10% and 25% as "toxic" or "non-toxic" will vary depending on replication, variability, and magnitude of effect. The greater the variability, the closer the effect is to 25%, and/or the fewer number of replicates conducted will result in more tests with effects between 10% and 25% being identified as "toxic". The lower the variability, the lower the effect, and/or the higher number of replicates conducted will result in more tests with effects between 10% and 25% being identified as "non-toxic". In reality, all (100%) of the tests with effects of 25% or greater will be identified as "toxic" and up to 5% of the tests with effects of 10% or less will be identified as "toxic".

The TST approach does appear to reduce the false negative error rate for WET tests. This was one of EPA's stated intentions for pursuing the TST approach. Unfortunately, the TST approach does not reduce the existing false positive rate of 5 percent. In fact, by arbitrarily defining no toxicity as an effect equal to or less than 10 percent, the TST approach actually results in more "non-toxic" samples being identified as toxic than the current NOEC approach.

An unacceptable false positive error rate is troublesome for a number of reasons. For regulators, false positives divert enforcement resources away from "real" water quality violations. False positives in receiving waters lead to inappropriate impairment listings that ultimately consume regulatory resources through the development of

unnecessary total maximum daily loads (TMDLs). For dischargers, false positives can represent effluent violations and are subject to enforcement action and citizen lawsuits. Dischargers are also put in the untenable position of being required to solve a problem that does not exist or attempt to unsuccessfully identify sources of toxicity in response to false positive results.

The draft EPA TST Implementation Document does not adequately address how the TST approach will fit into WET testing protocols. While stating that WET testing is to be conducted exactly as the current protocols require, there is no discussion of the issues discussed in EPA's July 2000 *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)*. Most pertinent are the discussions of nominal error rates, concentration-response relationships, dilution series, and acceptable dilution waters. Thus, assuming that the TST approach is implemented, it is not clear whether dischargers will have to first apply traditional statistical methods of evaluating the results of toxicity testing (including dose response), before applying the TST statistical tool. It is apparent that the TST approach can only be applied to tests that are "clean" and do not contain anomalous results, outliers, or non-uniform dose responses.

The EPA TST approach does not discuss the importance, if any, of testing effluent concentrations other than that of the In-stream Waste Concentration or IWC. The TST appears to assume that toxicity tests will result in monotonically increasing dose responses every time all of the time. This is rarely the case and it could make application of the TST problematic.

Other Specific Comments

NACWA also offers the following additional specific comments on the proposed TST approach based on its initial review of the document:

- Current Dunnett's approach uses all variability across the test to determine differences with the control (ANOVA). The TST does not. If the variability in the control and/or the IWC test concentration is not representative of the variability of the population that it represents the TST will result in erroneous conclusions.
- Dunnett's test must also be preceded by checks on normality of data and homogeneity of variances. The manuals have text addressing single concentration tests and they require statistical tests for these parameters before choosing a final statistical approach. NACWA did not see these types of checks in the TST guidance.
- This approach does not use all of the information available in a test like the IC25 or LC50. Even the Dunnett's test, although flawed in its own right, attempts to use information from the entire test.
- Like other hypothesis testing approaches, the TST requires transformation of percentage data (i.e. survival endpoints). However, no attempt is made to transform or appropriately adjust the "b" factor of 0.75 for chronic tests and 0.8 for acute tests. This results in a transformed effect and variance that is generally over-estimated compared to the observed effect and variance in tests with effects between zero (0) and 25%. This ultimately results in increasing the likelihood of identifying such tests as "toxic" using the TST.
- Unlike the other data analysis procedures, the TST is not promulgated. Changing the method of data

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January 11, 2010

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analysis means you are changing the endpoint and since WET is a method-dependent parameter a change in data analysis essentially changes the water quality criteria. Given the implications of using a different analysis procedure, the review and comment associated with the promulgation of the new procedure is warranted.

- NACWA remains concerned that EPA continues to advocate an approach where one failed test equals reasonable potential. The impact of this is amplified by the fact that even if all tests pass by TST you still must have less than 10% effect at the IWC to avoid RP. So example #2 on page A-7 and example #3 on page A-8 with extra reps would both still be considered failed tests even though it passed by TST because the difference between the control and treatment is 20 percent.

Again, NACWA is offering this input based on its initial review of the document. Many of NACWA's members are also evaluating the TST approach by applying it to existing WET data. We hope to be able to share some of this information with the Agency when it formally seeks comments on the TST document.

Please contact me at chornback@nacwa.org or 202-833-9106 if you have any questions about these comments or would like to discuss any of these issues further.

Sincerely,



Chris Hornback
Senior Director, Regulatory Affairs



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR - 3 2000

MEMORANDUM

SUBJECT: Certification of "Accuracy" of Information Submissions of Test Results
Measuring Whole Effluent Toxicity

FROM: Charles S. Sutfin, Director
Water Permits Division (4203)
Office of Wastewater Management
Office of Water

Sheila E. Frace, Director
Engineering and Analysis Division (4303)
Office of Science and Technology
Office of Water

Brian J. Maas, Director
Water Enforcement Division (2243A)
Office of Regulatory Enforcement
Office of Enforcement and Compliance Assurance

TO: Regional Water Management Division Directors, Regions I-X
Regional Enforcement Division Directors, Regions I-X

In litigation challenging EPA rulemaking to standardize analytic testing procedures for whole effluent toxicity, questions arose regarding the significance of certification requirements for information submissions when the person signing the information submission certifies to the "accuracy" of that information. Confusion has arisen over use of the term "accuracy," which is a term of art to describe a performance characteristic of a measurement system. The purpose of this memorandum is to clarify that the Agency's intent is that a certification of "accuracy" in information submissions is a certification that the information provided is "accurate" as the layperson uses the term, rather than "accurate" as that term is used to describe the quantifiable performance of a measurement system.

Regulations implementing the National Pollutant Discharge Elimination System ("NPDES") permitting program require that, for various information submissions required by the regulations (e.g., permit applications, discharge monitoring reports, etc.), the person submitting the information sign a certification statement to accompany the information submission. The person signing a document must make the following certification:

I certify under penalty of law that this document and all attachments were prepared under my 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 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 40 C.F.R. 122.22(d) (emphasis added).

The purpose of the certification requirement is primarily to ensure that the person submitting the information certifies the veracity of statements made in the forms and acknowledges liability for false statements. 43 Fed. Reg. 37078, 37079 (Aug. 21, 1978)

In EPA documents associated with testing procedures for measuring whole effluent toxicity, the Agency stated that the "accuracy" of toxicity tests cannot be determined in a meaningful way. "Accuracy" in that context is a specialized, scientific term (a term of art) used to describe a performance characteristic of a measurement system. Recognizing that accuracy as a performance characteristic to describe whole effluent toxicity testing cannot be quantified, however, does not diminish the value of a document certifying to the accuracy of information submissions pursuant to 40 C.F.R. 122.22(d). When a person certifies the accuracy of an information submittal as described above, that person does not certify the accuracy of the measurement system. When a person certifies that the submission of WET testing information is "accurate" to the best of their knowledge and belief, the person certifies that the results obtained using the WET testing procedures are faithfully and truthfully transcribed on the information submission, and that the results were, in fact, results that were obtained using the specified testing procedures.

cc: Laura Phillips
Marion Thompson
Alan Morrissey
John Fox
Stephen Sweeney



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January 20, 2015

Mr. Samuel Unger, Executive Officer
Los Angeles Regional Water Quality Control Board
320 West Fourth Street, Suite 200
Los Angeles, CA 90013
Via email: Samuel.Unger@waterboards.ca.gov; Cris.Morris@waterboards.ca.gov;
Elizabeth.Erickson@waterboards.ca.gov

Re: Comments on Tentative Waste Discharge Requirements for the Joint Outfall System, San Jose Creek Water Reclamation Plant (NPDES No. CA0053911)

Dear Mr. Unger:

On behalf of Heal the Bay, I submit the following comments to the Los Angeles Regional Water Quality Control Board (“Regional Board”) on the tentative renewal of waste discharge requirements for the Joint Outfall System, San Jose Creek Water Reclamation Plant (NPDES No. CA0053911) (“Permit”). Heal the Bay is an environmental organization with over 15,000 members dedicated to making Southern California coastal waters and watersheds safe, healthy, and clean for people and aquatic life.

I. Numeric Chronic Toxicity Effluent Limits Must be Included

Heal the Bay has long-advocated for the development and implementation of the State Water Resources Control Board toxicity policy. There is no clear indication from the State Water Board as to when, if ever, the policy will be released for public comment. Meanwhile, our state’s waters continue to suffer from toxicity impairments. As such, the Regional Boards cannot wait any longer to implement numeric toxicity effluent limits. Although the statewide toxicity policy has yet to be adopted, the Regional Board’s inclusion of numeric water quality based effluent limits for chronic toxicity in the Permit is a necessary step to protect coastal waters. We support the Regional Board’s inclusion of numeric chronic toxicity effluent limits in the Permit as it is critical for NPDES permittees to ensure that their discharge does not have toxic impacts. Furthermore, we support the inclusion of the Test of Significant Toxicity (“TST”) approach in the Permit.

Over the last 12 months, numerous NPDES permits in Region Four have been adopted that included numeric chronic toxicity effluent limits.¹ It is critical that this Permit follow suit and include numeric chronic toxicity limits. Over ten years have passed since the State Water Resources Control Board began modifying the toxicity statewide implementation plan. It is inappropriate to wait any further for the revised draft statewide implementation plan to be released to incorporate numeric chronic toxicity effluent limits into NPDES permits. The language in the Permit complies with narrative water quality standards for toxicity in the basin plan. Excluding numeric chronic toxicity limits from the Permit would also be inconsistent with recent NPDES permits adopted by this board. Toxicity testing is the “safety net” to identify toxic impacts to aquatic life - it is important that all future NPDES permits include numeric chronic toxicity limits.

¹ See Honeywell International, Inc., Gardena Groundwater Remediation system Facility (NPDES No. CA0062162); Camarillo Water Reclamation Plant (NPDES No. CA0053597); Simi Valley Water Quality Control Plant (NPDES No. CA0055221); Hill Canyon Wastewater Treatment Plant (NPDES No. CA0056294); Pomona Water Reclamation Plant and Whittier Narrows Water Reclamation Plant (NPDES No. CA0053716).



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II. Effluent Monitoring Frequency Reduction Lacks Justification

Effluent monitoring frequencies for a number of constituents in the Permit has changed from daily to weekly when compared to current monitoring provisions (temperature, pH, settleable solids, total suspended solids, fecal coliform, E.coli). The Permit gives specific justification for monthly, quarterly, and semiannual monitoring frequencies, however, in no way is it identified when a constituent should be monitored weekly. What is the justification for the change in effluent monitoring frequency for these constituents? Decreasing monitoring frequency weakens the ability of monitoring programs to account for variability and ensure that water quality standards are maintained. Most notably, monitoring frequency for total suspended solids has been reduced; total suspended solids monitoring is key to assess plant's daily performance. At a minimum, total suspended solids monitoring frequency should remain daily to be consistent with current monitoring provisions.

Thank you for this opportunity to provide comments at this time. If you have any questions please contact Peter Shellenbarger at (310) 451-1500 ext. 189.

Sincerely,

Peter Shellenbarger, MESM
Science and Policy Analyst, Water Quality
Heal the Bay



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

January 15, 2015

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

Re: U.S. EPA comments on draft NPDES permit for the Joint Outfall System's San Jose Creek Water Reclamation Plant (NPDES No. CA0053911)

Dear Mr. Hung:

Thank you for the opportunity to review and comment on the public notice draft NPDES permit for discharges from the San Jose Creek Water Reclamation Plant. We support prompt adoption and the permit as currently proposed.

EPA is pleased that the subject draft permit clearly requires effluent limits on chronic whole effluent toxicity (WET), where there is reasonable potential. EPA agrees with the Regional Water Board's decision to use numeric chronic WET WQBELs for this POTW permit, which are feasible to calculate for this discharge. As a result, the permit meets the requirements of CWA sections 301(b)(1)(C) and 502(11) and 40 CFR 122.44(d)(1)(i) and (v). Moreover, EPA supports the inclusion of both monthly and daily WQBELs for chronic toxicity in the permit, as the Regional Water Board has determined such limits are necessary to protect against highly toxic short-term peaks of acute toxicity or chronic toxicity that exceed the applicable toxicity water quality standard. The draft permit is consistent with the six POTW permits the Regional Water Board adopted last year, which express both monthly and daily chronic toxicity WQBELs numerically.

We want to underscore the fact that the draft permit plainly identifies the WET statistical approach chosen by the Regional Water Board to measure chronic toxicity for compliance reporting. The permit clearly connects this choice to the expression of both the chronic WET WQBELs and the required effluent compliance monitoring for those WQBELs, as well as the applicable narrative chronic toxicity water quality standard ("no chronic toxicity") in the Los Angeles Region Basin Plan. Consequently, this NPDES permit contains transparent, clearly expressed, enforceable requirements for chronic WET.

As we did last November, EPA continues to support the reporting condition in the final paragraph of Order section VII.J that specifies compliance evaluation and reporting

requirements. In effect, this provision prohibits the practice of evaluating toxicity testing results through analysis of effluent multi-concentration response curve information prior to evaluating compliance through use of the t-test based statistical approach in which the permit's WQBELs are expressed. This provision effectively addresses a concern about the improper application of toxicity testing statistical approaches that arose during the joint EPA-State review of toxicity testing procedures used by the permittee's toxicity laboratory (see also Los Angeles Regional Water Board's June 6 and December 1, 2014 Notice of Violation correspondence for the Joint Outfall System). This review found that the laboratory had misreported toxicity testing results through its evaluation and misinterpretation of effluent multi-concentration response curve information. A pertinent example can be found in the discharger's May 2013 report for a chronic toxicity test t-test result for the Saugus Water Reclamation Plant permit which states, "Although the 100% percent concentration was statistically different from the control for the reproduction endpoint, it shall not be considered toxic (i.e., statistically different from the control) since the relative difference from the control and the test pMSD are less than the lower pMSD bounds . located in table 6 of the EPA 821-R-02-013."

The two-concentration t-test approach used by the San Jose Creek permit does not contemplate evaluating an effluent multi-concentration response curve in any way because the two statistical approaches (NOEC/LOEC and t-test) are separate and distinct. Using an unrelated statistical approach prior to evaluating and reporting compliance—rather than using the statistical approach through which the permit's chronic toxicity WQBELs are expressed—compromises the transparency and enforceability of the permit limits. Using the unrelated multi-concentration statistical approach can result in censoring toxicity results prior to evaluating permit compliance based on the two-concentration statistical approach in which the chronic toxicity WQBELs are expressed. Thus, we continue to support the inclusion of permit language that ensures this practice is no longer used.

Good quality assurance and quality control (QA/QC) are key for controlling within-laboratory variability and producing quality toxicity data for regulatory decisions. The permit requires use of EPA's WET methods, where QA/QC performance is demonstrated through evaluation and tracking of: (1) control performance for each toxicity test, and (2) ongoing reference toxicity testing for each WET method to track both organism and laboratory performance.

If you have questions regarding these comments, please call me at (415) 972-3464, or Robyn Stuber at (415) 972-3524.

Sincerely,



David W. Smith, Manager
NPDES Permits Office (WTR-2-3)

cc: Tom Howard, Executive Officer – California State Water Resources Control Board

Grace Robinson Hyde, Chief Engineer and General Manager – County Sanitation
Districts of Los Angeles County

