



## COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

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March 20, 2015  
File No. 26-02.01-55

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  
Saugus Water Reclamation Plant (NPDES Permit No. CA0054216)**

The Santa Clarita Valley Sanitation District<sup>1</sup> (Sanitation District) appreciates the opportunity to provide comments on the Tentative Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) Permit (Tentative Permit) for the Saugus Water Reclamation Plant (WRP) dated February 18, 2015. The Sanitation District has 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. Our comments are detailed below, and divided into several sections. The first section presents specific comments relating to the revision of the TMDL for chloride in the Upper Santa Clara River, the second and third sections present general/legal and specific comments, respectively, relating to toxicity provisions in the Tentative Permit, while the fourth section contains other comments.

**SPECIFIC COMMENTS ON REVISION OF THE TMDL FOR CHLORIDE IN THE UPPER  
SANTA CLARA RIVER**

Since the approval of the Chloride Compliance Facilities Plan and certification of the Environmental Impact Report (EIR) on October 28, 2013, the Sanitation District has made significant progress on several project components, such as UV Disinfection, MF/RO and the Deep Well Injection Test Well (Test Well) and remains committed to completing project facilities to comply with the applicable chloride limits by the July 1, 2019 deadline identified in Resolution R4-2014-010, Revision of the TMDL for Chloride in the Upper Santa Clara River. Applications for the Conditional Use Permit (CUP) and Underground Injection Control (UIC) Class I non-hazardous permit for the Test Well were submitted. However, during recent public hearing meetings for the Supplemental EIR for the alternate well site location, the local residents expressed strong concerns and objections to the proposed well site location. On March 11, 2015 the Sanitation District Board directed staff to withdraw the proposed site location from consideration and evaluate alternative site locations. As a result, Task 4a ii and Task 4a iii in Resolution R4-2014-010 as currently written, are no longer applicable as originally intended. The

<sup>1</sup> The Los Angeles County Sanitation Districts function on a regional scale and consist of 24 independent special districts serving about 5.5 million people in Los Angeles County. Seventeen of the Sanitation Districts in the metropolitan Los Angeles area are served by a regional, interconnected system of facilities known as the Joint Outfall System (JOS). The Santa Clarita Valley is served by the Santa Clarita Valley Sanitation District of Los Angeles County

Sanitation District respectfully requests that the descriptions of several milestones in Task 4 “Implementation of Compliance Measures by SCVSD” of the tentative Saugus WRP NPDES permit (shown in various locations in the tentative permit) be revised as follows:

- Task 4a Deep Well Injection Test Well or Alternate Brine Disposal Locations
- Task 4ai. ~~Complete design for deep well test well~~ Submit work plan and schedule to implement the work plan
- Task 4aii. ~~Award contract for deep well injection test well~~ Complete Alternatives Screening Analysis
- Task 4aiii. ~~Construction and testing of test well~~ Certify CEQA for Alternate Brine Disposal Locations
- Task 4d Final Deep Well Injection Production Wells or Alternate Brine Disposal Locations
- Task 4di. Complete design for the final deep well injection production wells or alternate
- Task 4diii. Start-up of the deep well injection production wells or alternate brine disposal

We believe that these minor revisions in the wording of the milestone descriptions do not impact any other milestones or the final compliance date. The Sanitation District is committed to and will continue to diligently work on project facilities required to achieve compliance by the July 1, 2019 deadline.

## **GENERAL/LEGAL COMMENTS ON TOXICITY-RELATED PROVISIONS**

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

## **SPECIFIC COMMENTS ON TOXICITY-RELATED PROVISIONS**

**Comment 1. Implementation of final effluent limits should not be based in whole, or in part, on non-peer reviewed documents.**

- a) Reference to the use of a USEPA Regional Training Tool to implement final effluent toxicity limits should be removed.

Footnote 10 on page 7 of the WDR references use of EPA Regions 8, 9 and 10 Toxicity Training Tool for implementing the final effluent toxicity limits. Page 6 of this Training Tool document clearly states that “this training tool does not impose legally binding requirements on EPA, States, or NPDES permittees” and that the Training Tool “does not substitute for the Clean Water Act, or EPA or State regulations applicable to NPDES permits or WET testing; nor is this document a regulation, itself”. However, for all practical purposes, incorporation of this document into an NPDES permit will result in the document essentially becoming a binding requirement and regulation. Therefore, we request the following change be made to footnote 9 on page 8 of the tentative Saugus WRP NPDES permit:

Page 7, Footnote 10 (last sentence):

“This final effluent limitation will be implemented using current USEPA guidance in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, June /2010) ~~and EPA Regions 8, 9 and 10 Toxicity Training Tool (January 2010),~~  
~~http://www2.epa.gov/region8/epa-regions-8-9-and-10-toxicity-training-tool-january-2010.”~~

**Comment 2. Use of the two-concentration test design should not be a requirement of the permit.**

- a) The two-concentration test design is not an allowable NPDES method for final effluent testing.

On February 11, 2015, USEPA Region IX withdrew its Alternative Test Procedure (ATP) approval originally issued on March 2014 allowing for regional use of a two-concentration test design<sup>2</sup>. As a result, any NPDES final effluent test conducted using such a test design would not meet the minimum requirements as specified in promulgated methods.

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

The first and last paragraphs in Section VII.J (page 28) 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-response<sup>3</sup> 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”<sup>4</sup>

“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”<sup>5</sup>

“The concentration-response relationship generated for each multi-concentration test must be reviewed to ensure that calculated test results are interpreted appropriately”<sup>6</sup>

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) <sup>7</sup>

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<sup>2</sup> USEPA Region IX, Letter from Eugenia McNaughton, Manager of the Quality Assurance Office to Renee Spears, QA Officer, State Water Resources Control Board, February 11, 2015. [Exhibit 1]

<sup>3</sup> For the purposes of this comment letter, the terms “concentration-response” and “dose-response” have equivalent meanings and can be used interchangeably.

<sup>4</sup> 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 2] Section 2.2.3.

<sup>5</sup> 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.

<sup>6</sup> 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.

<sup>7</sup> 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.

- c) 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.

"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."<sup>8</sup>

"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."<sup>9</sup> [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."<sup>10</sup>

"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."<sup>11</sup>

"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)."<sup>12</sup>

- d) 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

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<sup>8</sup> 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 3]

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

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

<sup>11</sup> U.S. EPA. National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document. EPA-833-R-10-003 (June, 2010) pg. 60.

<sup>12</sup> 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.

IX in one of its recently issued NPDES permits.<sup>11</sup> 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 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)”<sup>13</sup> [Emphasis added.]

The Sanitation District requests 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 Sanitation District 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.

- e) 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

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<sup>13</sup> 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 4] Page 15, Section II.B.2.d.2.

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 study<sup>14</sup> (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 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".<sup>15</sup> 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".<sup>16</sup> 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*

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<sup>14</sup> 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 5]

<sup>15</sup> "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)."

<sup>16</sup> "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)."

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 wrong some of the time.”<sup>17</sup> 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%.”<sup>18</sup> 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.<sup>19</sup> 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.

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<sup>17</sup> Edison Electric v. EPA, 391 F.3d 1267, 1272-1274 (D.C. Cir. 2004).

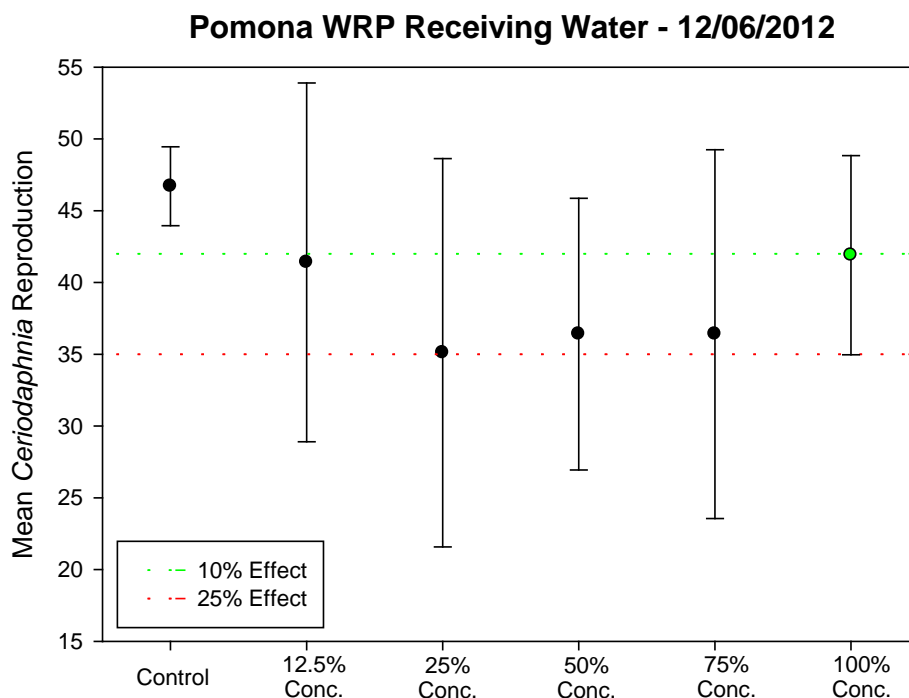
<sup>18</sup> Edison Electric, 391 F. 3d at 1272.

<sup>19</sup> 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](http://www.swrcb.ca.gov/water_issues/programs/state_implementation_policy/docs/testdrive_presentation.pdf).

[Exhibit 6]





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

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.”<sup>20</sup> 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 methods<sup>21</sup> (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.

<sup>20</sup> Regional Board, Response to Comments, Joint Outfall System, Whittier Narrows Water Reclamation Plant, Tentative NPDES Permit, October 24, 2014. [Exhibit 7] Page 1.

<sup>21</sup> USEPA. Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing. EPA-821-B-00-004. [Exhibit 8]



Finally, some have incorrectly contended that a 2011 State Water Resources Control Board (State Water Board) “Test Drive” analysis<sup>22</sup> (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. This analysis ultimately determined that the TST identified a similar number of final effluent and receiving water toxicity tests as “toxic” as the NOEC (for most endpoints; this was not the case for the fathead minnow endpoints). However, this analysis did not compare or evaluate the impact of reducing the minimum number concentrations from five and a control to one and a control. All of the final effluent data used in the analysis were selected among valid WET tests submitted to the regulatory authorities for NPDES compliance determination. Therefore, all of the final effluent tests used to compare the NOEC and TST were obtained from tests using a minimum of five concentrations and a control that would have incorporated all protocol-required QA/QC and data validation procedures, including evaluation of the concentration-response relationship. Additionally, the “test drive” also included a sizeable number of ambient/receiving water toxicity test results. All of these ambient/receiving water toxicity tests were conducted using a single concentration and control test design, and the number of tests identified as “toxic” with the TST and NOEC were also found to be similar (again, with the exception of certain endpoints). However, this study did not and could not evaluate and compare results from final effluent tests conducted using a five concentration and control NOEC design to those on the same effluent samples obtained using a single concentration and control TST test design. The Test Drive simply compared the TST and NOEC statistical procedures.

Furthermore, the “test drive” mischaracterized these findings in claiming that the TST identified more “truly toxic” or “truly nontoxic” tests correctly than the NOEC. All of the tests were conducted on actual final effluent and receiving water/ambient samples. Therefore, the “true” or “actual” toxicity of any sample is unknown. The “test drive” erroneously inferred that if a sample exhibited a 25% effect or greater that it was “truly toxic” or if a sample exhibited an effect of 10% or less it was “truly nontoxic”. As the USEPA found in its 2001 inter-laboratory validation study using “true” nontoxic blank samples, effects as high as 80% can be observed by some laboratories when analyzing a sample that is completely nontoxic. The inter-laboratory validation study determined that laboratories finding completely nontoxic blank samples “toxic” was not a rare event; before consideration of concentration-response relationships 15% of *Ceriodaphnia* reproduction tests on blank samples were incorrectly determined to be toxic and 13% of fathead minnow growth tests on blank samples were incorrectly determined to be toxic. This well documented finding would refute any conclusion that a test that exhibited a 25% effect or greater was “truly toxic”. Likewise, although not empirically quantified, it can also be assumed that actual “toxic” samples will, on some occasions, exhibit effects less than 10%.

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.<sup>23</sup> 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

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<sup>22</sup> Effluent, Stormwater, and Ambient Toxicity Test Drive Analysis of the Test of Significant Toxicity (TST). California State Water Resources Control Board. December 2011. [Exhibit 9]

<sup>23</sup> 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.

identified 216 tests as “toxic” using the NOEC and 233 tests as “toxic” using the TST<sup>24</sup>. 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.

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 accurately<sup>25</sup>. 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 Sanitation District agrees 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 28, Section VII.J (first paragraph):

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<sup>24</sup> 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.

<sup>25</sup> 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.

“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:  $((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100$ .”

Page 28, 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 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 3. 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 Saugus 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 District to additional liability for violations during this critical confirmation and diagnosis process, which is unnecessarily punitive. The Sanitation District 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 District 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 routine compliance monitoring during the accelerated monitoring/TIE/TRE process and alternatively assess compliance based on the Permittee’s response when conducting accelerated testing and/or TRE implementation. 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<sup>26</sup>. 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

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<sup>26</sup> State Water Board, Fact Sheet, Draft Toxicity Amendment to the Water Quality Control Plan for Enclosed Bays and Estuaries of California, Revision Summary, August 2013. [Exhibit 10]

action.”<sup>27</sup> 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.”<sup>28</sup> This same language is also include in the San Diego Regional Board’s NPDES permit for the San Diego Point Loma Naval Complex NPDES permit adopted on June 26, 2014<sup>29</sup>.

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 District’s 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 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-15, 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-15, 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-16, 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.”~~

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<sup>27</sup> 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 11]

<sup>28</sup> 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 12]

<sup>29</sup> San Diego Regional Board Order No. R9-2014-0037, NPDES No. CA0109363, Waste Discharge Requirements for the United States Department of the Navy, Point Loma San Diego Complex, San Diego County., MRP pg. 16, [Exhibit 13]

## **SPECIFIC COMMENTS ON PROVISIONS NOT RELATED TO TOXICITY**

**Comment 4. The Permittee should not be responsible for conducting or funding watershed-wide random bioassessment data collection without sufficient and cost equivalent reductions in existing monitoring requirements.**

The tentative NPDES permit for the Saugus WRP requires the Permittee to conduct instream bioassessment monitoring the random monitoring stations designated by the Santa Clara River Watershed Monitoring Program (Section IX.A.3. on page E-22). This represents a significant increase in existing monitoring efforts with these efforts being expended into reaches and areas of the Santa Clara River not influenced by the Permittee's discharge. For this reason, the following change is requested:

Page E-22, MRP Section IX.A.3. (last sentence of the last paragraph):

"In coordination with interested stakeholders in the Santa Clara River Watershed, the Discharger shall conduct instream bioassessment monitoring once a year, during the spring/summer period (unless an alternate sampling period is approved by the Executive Officer) and include an analysis of the community structure of the instream macroinvertebrate assemblages, the community structure of the instream algal assemblages (benthic diatoms and soft-bodied algae), chlorophyll a and biomass for instream algae, and physical habitat assessment at the random receiving monitoring stations designated in this permit by the Santa Clara River Watershed Monitoring Program. The Executive Officer of the Regional Water Board may reduce these and/or other monitoring requirements in this permit to provide resources to be used fulfill components of the watershed-wide monitoring program that includes collection of biological data at randomly selected locations within the watershed. Over time, bioassessment monitoring will provide a measure of the physical condition of the waterbody and the integrity of its biological communities."

**Comment 5. The Tentative Permit should allow downstream receiving water data to be used for reasonable potential determination when upstream receiving water data is inadequate.**

The Tentative Permit recognizes that receiving water flows upstream of the Saugus WRP outfall are consistently not present. This absence of flow has been documented to persist for multiple miles upstream of the Saugus WRP. Instead of attempting to locate a suitable tributary location miles removed from the outfall to obtain upstream data to be used in for determination of reasonable potential, we request that the downstream receiving water data be used for this purpose. Requested language is as follows:

Page E-20, MRP Section VIII.A.3:

"Since there is often no flow in the receiving water stations, the Permittee shall collect receiving water samples for all of the parameters listed in Table E-5a at the first instance in the year when there is water flowing in the stream and when conditions in MRP section VIII.A.2 have been met. If there is discharge from the outfall during the permit term, three samples are to be collected upstream of EFF-001 within the permit term. The results from these samples are necessary for background data in future RPA calculation. If an adequate number of samples cannot be collected from RSW-001U (R-A), data from the downstream receiving water station RSW-002D (RB) will be used for reasonable potential calculations. Permittee shall collect background information from another appropriate sampling location and identify this location in the subsequent annual report."

**Comment 6. General technical comments and miscellaneous corrections to the Saugus WRP Tentative NPDES permit are included in Attachment B.**

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

A handwritten signature in black ink, reading "Philip L. Friess". The signature is written in a cursive style with a large initial "P" and a stylized "F".

Philip L. Friess  
Department Head  
Technical Services

PLF:ATH:PM:RY:nm  
Attachments

cc: Cris Morris, David Hung, Veronica Cuevas-Alpuche, Regional Board



## **Attachment A**

### **General/Legal Comments on Toxicity-Related Provisions on the Saugus WRP Tentative Permit**

## Attachment A

### General/Legal Comments on Toxicity-Related Provisions

The Saugus Reclamation Plan (WRP) is currently regulated under National Pollutant Discharge Elimination System (NPDES) Order No. R4-2009-0075 [Exhibit 14], which contains the following language that was not objected to by the U.S. Environmental Protection Agency (USEPA) when adopted by the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) in 2009:

#### **“IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

##### **A. Effluent Limitations**

##### **1. Effluent Limitations - Discharge Points 001**

##### **i. 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 and VE.
- 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 15] 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 Saugus 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 16] 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.

The 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. 8) of the proposed Saugus 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. 28 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 Water 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 County<sup>1</sup> 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’ 2003 and 2009 NPDES permits for the Saugus 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 Water Board in WQO 2003-0012 and WQO 2003-0013 in 2003, this decision was later upheld and followed in other, subsequent precedential State Water 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. R5-2007-0113 to add an appropriate narrative chronic toxicity limitation.” See also State Water Board

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<sup>1</sup> 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.

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 2003-0013<sup>2</sup>, but also by the language of the Basin Plan.<sup>3</sup>

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. 4; pg. E-8, n. 9; pg. E-12 at para. V.A.3; pg. E-18, n. 30; pg. E-24 at para. X.B.4.; pg. H-2 at para. A.4.a.) The language in the Tentative Permit appears to mean that use of a multi-concentration test design for chronic toxicity, with consideration of the resulting concentration-response pattern in

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<sup>2</sup> 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.)

<sup>3</sup> 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.)

assessing the validity of the test, is not allowed. (Tentative Permit page 28, 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)<sup>4</sup> - 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)

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<sup>4</sup> 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 approval was withdrawn.

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 17]. This letter ignored the previous USEPA’s requirements and recommendations described above. However, on February 11, 2015, USEPA Region IX withdrew approval of this ATP making the “two-concentration test design” for final effluent chronic toxicity testing no longer an allowable 40 CFR part 136 method. Furthermore, 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)<sup>5</sup> if these standard methods and the ATP produce “acceptably equivalent” results as claimed in the ATP letter.

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 that the USEPA’s ATP approval was not withdrawn, 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. Such a requirement would 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

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

Water Quality-based Technical Support Document (TSD) which remain valid for use by EPA Regions and the States.” [Exhibit 18]

d) EPA Guidance cannot Overrule Promulgated Regulations.

Page F-46 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).<sup>6</sup> As discussed elsewhere in this document, nowhere in the law are numeric effluent limitations for chronic toxicity required.

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:

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<sup>6</sup> 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 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.



“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.”<sup>7</sup>

The other document cited is merely part of a training tool that is not even published guidance and also clearly indicates on page 6 that “this training tool does not impose legally binding requirements on EPA, States, or NPDES permittees” and that the Training Tool “does not substitute for the Clean Water Act, or EPA or State regulations applicable to NPDES permits or WET testing; nor is this document a regulation, itself”.

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 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

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

than required by federal law and has not been adequately justified. Therefore, this limitation is contrary to law.<sup>8</sup>

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."<sup>9</sup> 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.

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

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<sup>8</sup> 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.

<sup>9</sup> 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.

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 19])

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.<sup>10</sup> 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.<sup>11</sup>

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)

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<sup>10</sup> 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 20]; 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.”)

<sup>11</sup> 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.

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 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 19] ) 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 Saugus 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 Saugus 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 orders<sup>12</sup> 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 Water 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.<sup>13</sup> 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:

“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 Saugus WRP.

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<sup>12</sup> 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)].

<sup>13</sup> 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.

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”)<sup>14</sup>; 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.”)

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<sup>14</sup> 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.”

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.

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.<sup>15</sup> 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:

“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

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<sup>15</sup> 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.”

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<sub>c</sub> 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 21]. 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.<sup>16</sup> 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.

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<sup>16</sup> 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.

***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 Water 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 Water Board Order Nos. WQO 2003-0012 and WQO 2003-0013, applicable to the Saugus WRP. Finally, since the TST test with a two concentration test design is not an approved Part 136 methodology (or an approved ATP), this method should not be utilized for compliance purposes unless promulgated as a formal rule by EPA.

## **Attachment B**

### **General Technical Comments on the Saugus WRP Tentative Permit**

## Attachment B

### General Technical Comments on the Saugus WRP Tentative NPDES Permit

Item	Page No.	Section	Tentative Permit Statement	LACSD Comment
1	7	Footnote 10	This final effluent limitation will be implemented using current USEPA guidance in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, June /2010) and EPA Regions 8, 9 and 10 Toxicity Training Tool (January 2010), <a href="http://www2.epa.gov/region8/epa-regions-8-9-and-10-toxicity-training-tool-january-2010">http://www2.epa.gov/region8/epa-regions-8-9-and-10-toxicity-training-tool-january-2010</a> .	Delete the reference to the EPA Toxicity Training Tool. This is just a training tool, not a guidance document. It is not clear why a discharger is being required to follow a training tool. A training tool used be used for the purpose of training, and any information in it needed to implement the final effluent limitation should be directly put into the NPDES permit by the permit writer. Inclusion of a requirement obligating the Permittee to implement this document means that the Permittee must read the full document and change SOPs to reflect the training tool. To our knowledge, this tool has not been peer reviewed and we have not had a chance to review it and provide any comments.
2	24	VI.C.6.f	WQ Order No. 2006-0003-DWQ; SSO WDR	The SSO WDR was amended in August 2013 (Order No. WQ 2013-0058).
3	E-7	Table E-2.	Influent monitoring frequency for Total Trihalomethanes - monthly	It is not clear why the sampling frequency for total trihalomethanes was increased from semiannual to monthly. Consider keeping the previous permit frequency or some justification should be provided.
4	E-9	Footnote 14	"... with fecal coliformtesting."	Typo. Should read "coliform testing".
5	E-11	Table E-3	Perchlorate and 1,4-Dioxane	The sample type should be changed from from "grab" to "24-hour composite".
6	E-15	V.A.7	The summary result shall be used when there is discharge more than one day in a calendar month. The single result shall be used when there is discharge of only one day in a calendar month.	To make the intent of this statement clearer, the following changes are requested, " <del>The summary result shall be used when there is discharge more than one day in a calendar month, a monthly median summary result of "Fail" requires implementation of accelerated monitoring. The single result shall be used when there is discharge of on only one day in a calendar month, a maximum daily single result of "Fail" and "% Effect ≥ 50" requires implementation of accelerated monitoring.</del> "
7	E-17	V.C	C. Chlorine Removal Except with prior approval from the Executive Office of the Regional Water Board, chlorine shall not be removed from bioassay samples.	There is no reliable and representative sampling location for dechlorinated effluent for the bioassay sample after the final dechlorination process point . The only location available would be a drop structure downstream of the effluent weir. Effluent flow over the existing weir and into the drop structure prevents sample collection with a composite sampler because flow is highly turbulent and flow levels can fluctuate during filter backwash cycles. In addition, the sodium bisulfite dosing location is right before the weir, and the limited mixing in the drop structure prior to the conveyance pipe precludes thorough dechlorination and collection of a representative dechlorinated effluent sample. The final chlorine residual meter is located a distance away from the weir drop structure and assures proper verification of effluent dechlorination effluent prior to discharge, but the meter is located within the closed portion of the pipe. Because there is no guarantee that a representative dechlorinated effluent sample can be collected by the 24-hour composite sampler at the weir drop structure, please change the language to allow laboratory dechlorination of toxicity samples. Proposed language is as follows, "C. Chlorine Removal 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 Saugus WRP effluent bioassay samples in the laboratory due to sampling restrictions at the weir drop structure that precludes collection of a representative dechlorinated effluent sample."
8	E-18	Table E-5a	Minimum Frequency for total hardness	To be consistent with the previous permit, the total hardness frequency should be changed to quarterly. Quarterly sampling will yield 20 samples over the course of the permit cycle, which is more than adequate to characterize the receiving water.
9	E-20	Footnote 35	1,4-dioxane by EPA 8260M	The correct method for 1,4-dioxane is EPA 8270M, not 8260M.

## Attachment B

### General Technical Comments on the Saugus WRP Tentative NPDES Permit

Item	Page No.	Section	Tentative Permit Statement	LACSD Comment
10	E-20	VIII.A.3	Since there is often no flow in the receiving water stations, the Permittee shall collect receiving water samples for all of the parameters listed in Table E-5a at the first instance in the year when there is water flowing in the stream and when conditions in MRP section VIII.A.2 have been met. Three samples are to be collected upstream of EFF-001 within the permit term, if there is discharge from the outfall during the permit term, for background data in future RPA calculation. If sampling cannot take place at RSW-001U (R-A), the Permittee shall collect background information from another appropriate sampling location and identify this location in the subsequent annual report.	The purpose of this provision is to ensure that adequate receiving water data is collected to run a reasonable potential analysis for future NPDES permits. However, the proposed language isn't practical because of a lack of other upstream sampling locations with adequate flow. We therefore request that the downstream receiving water data be used in lieu of the upstream data in future reasonable potential analysis. Suggested language changes are as follows, " <del>Since there is often no flow in the receiving water stations, the Permittee shall collect receiving water samples for all of the parameters listed in Table E-5a at the first instance in the year when there is water flowing in the stream and when conditions in MRP section VIII.A.2 have been met. If there is discharge from the outfall during the permit term, three samples are to be collected upstream of EFF-001 within the permit term. The results from these samples are necessary for background data in future RPA calculation.</del> If an adequate number of samples cannot be collected from RSW-001U (R-A), data from the <u>downstream receiving water station RSW-002D (RB) will be used for reasonable potential calculations. Permittee shall collect background information from another appropriate sampling location and identify this location in the subsequent annual report.</u> "
11	E-21	Table E-5b	"Required Analytical Test Method" column for MTBE, Perchlorate, 1,4-Dioxane, and 1,2,3-Trichloropropane	Change Footnote "34" to "35" for these parameters.
12	E-21	Table E-5b	Total Organic Carbon	It is not clear why total organic carbon was added to the 2015 groundwater monitoring requirements. It should be removed or some justification should be provided.
13	F-10	II.D.1	Although chronic toxicity testing showed that thirteen single chronic toxicity effluent tests exhibited results greater than 1.0 TUc (with thirteen results greater than 1.0 TUC for the reproduction endpoint and two results greater than the survival endpoint), the 1.0 TUc monthly median trigger was exceeded twice, as follows:	The number of tests and endpoints were not correctly captured in this sentence. Corrections should be made as follows, "Although chronic toxicity testing showed that <del>thirteen</del> <u>twelve</u> single chronic toxicity effluent tests exhibited results greater than 1.0 TUc (with <del>thirteen</del> <u>twelve</u> results greater than 1.0 TUc for the reproduction endpoint and <del>two</del> <u>three</u> results greater than <u>1.0 TUc</u> for the survival endpoint), the 1.0 TUc monthly median trigger was exceeded twice, as follows:
14	F-12	D.1	Following the individual test exceedances in Jun 2010 and June 2011, the Permittee conducted additional testing during the month and was able to meet the monthly median trigger of 1.0 TUc.	Typo. Change "Jun" to "June".
15	F-18 to F-19	III.D	Hydrologic unit and Calwater Watershed	The reference to the hydrological unit codes (HUCs) should be "Watershed Boundary Dataset HUC" not "Calwater Watershed" and the HUCs are incorrect; they should be 18070102 not 18070103.
16	F-32	IV.C.2.b.ix.(c ) and IV.C.2.b.x	Since the TMDL does not specify any mass-based WLA for nitrate plus nitrite as nitrogen, mass based limits are not included for NO2-N + NO3-N.	This language should be moved from Section IV.C.b.x to Section IV.C.b.ix.(c ), under the heading "(c ). Mass-based limit".
17	F-40	Table F-8	Benzo(a)anthracene	MEC>C should be included in the "Reason" column.

## Attachment B

### General Technical Comments on the Saugus WRP Tentative NPDES Permit

Item	Page No.	Section	Tentative Permit Statement	LACSD Comment
18	F-50	Table F-10	Chloride maximum daily effluent limitation based on the Chloride TMDL Conditional WLA	A reference to Footnote 15 should be added to the 230 mg/L daily maximum effluent chloride limitation based on the Chloride TMDL conditional WLA.
19	F-50	Table F-10	Chloride maximum daily effluent limitation based on the Revised Chloride TMDL WLA to supersede previous WLA	A reference to Footnote 17 should be added to the 230 mg/L daily maximum effluent chloride limitation based on the revised Chloride TMDL WLA to supersede the previous WLA.
20	F-50	Footnote 17	The following three-month rolling average effluent limitation is derived....	The footnote applies to both the 150 mg/L three-month rolling average effluent limitation and the 230 mg/L daily maximum effluent limitation. Please change the language as follows, "The <del>following 150</del> <u>mg/L three-monthly rolling average and the 230 mg/L daily maximum</u> effluent limitation is derived..."
21	F-55	VI.B.5.c	WQ Order No. 2006-0003-DWQ; SSO WDR	The SSO WDR was amended in August 2013 (Order No. WQ 2013-0058).
22	F-59	Table F-12	Barium 2015 monitoring frequency	Change frequency from "annual" to "semiannual".



## **LIST OF EXHIBITS**

### **Tentative Permit for the Saugus Water Reclamation Plant**

- Exhibit 1. USEPA Region IX, Letter from Eugenia McNaughton, Manager of the Quality Assurance Office to Renee Spears, QA Officer, State Water Resources Control Board, February 11, 2015.
- Exhibit 2. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, October 2002
- Exhibit 3. National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document, EPA 833-R-10-003, June 2010.
- Exhibit 4. 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 5. 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.
- Exhibit 6. Tetra Tech presentation at the August 22, 2011 State Water Board TST Workshop.
- Exhibit 7. Regional Board, Response to Comments, Joint Outfall System, Whittier Narrows Water Reclamation Plant, Tentative NPDES Permit, October 24, 2014.
- Exhibit 8. Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136). EPA 821-B-00-004. July 2000.
- Exhibit 9. Effluent, Stormwater, and Ambient Toxicity Test Drive Analysis of the Test of Significant Toxicity (TST). California State Water Resources Control Board. December, 2011.
- Exhibit 10. State Water Board, Fact Sheet, Draft Toxicity Amendment to the Water Quality Control Plan for Enclosed Bays and Estuaries of California, Revision Summary, August 2013.
- Exhibit 11. 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.

## **LIST OF EXHIBITS (continued)**

### **Tentative Permit for the Saugus Water Reclamation Plant**

- Exhibit 12. 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 13. San Diego Regional Board Order No. R9-2014-0037, NPDES No. CA0109363, Waste Discharge Requirements for the United States Department of the Navy, Point Loma San Diego Complex, San Diego County.
- Exhibit 14. Los Angeles Regional Board Order No. R4-2009-0075, NPDES No. CA0054313, Waste Discharge Requirements for the Santa Clarita Valley Sanitation District of Los Angeles County, Saugus Water Reclamation Plant Discharge to the Santa Clara River.
- Exhibit 15. EPA Initial Objection Letter – NPDES Permits for the Joint Outfall System’s Whittier Narrows Water Reclamation Plant and Pomona Water Reclamation Plant. July 31, 2014.
- Exhibit 16. EPA Formal Objection Letter – NPDES Permits for the Joint Outfall System’s Whittier Narrows Water Reclamation Plant and Pomona Water Reclamation Plant. September 4, 2014.
- Exhibit 17. 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.
- Exhibit 18. Technical Support Document for Water Quality-Based Toxics Control EPA/505/2-90-001. March 1991.
- Exhibit 19. Long Beach Water Reclamation Plant and Los Coyotes Water Reclamation Plant Letter from USEPA Region IX to the California Regional Water Quality Control Board. May 31, 2007.
- Exhibit 20. Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the National Pollutant Discharge Elimination System Program. June 30, 2000.
- Exhibit 21. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Third Edition. EPA/600/4-91/002. July 1994.