



# COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY

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CALIFORNIA REGIONAL WATER  
QUALITY CONTROL BOARD  
LOS ANGELES REGION

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  
Pomona Water Reclamation Plant (NPDES Permit No. CA0053619, CI No. 0755)**

The Joint Outfall System<sup>1</sup> (Sanitation Districts) appreciates the opportunity to provide comments on in the Tentative Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) Permit (Tentative Permit) for the Pomona Water Reclamation Plant (WRP) dated September 10, 2014. The Sanitation Districts have a number of comments regarding the Tentative Permit, and request that the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) modify the Tentative Permit based on the requests herein. We would also like to take this opportunity to thank Regional Board staff for meeting with our staff on October 1, 2014 and October 6, 2014 to discuss our concerns regarding the Tentative Permit. Our comments are detailed below, and divided into several sections. The first and second sections present general/legal and specific comments, respectively, relating to toxicity provisions in the Tentative Permit, while the third section contains other comments.

## GENERAL/LEGAL COMMENTS ON TOXICITY-RELATED PROVISIONS

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

## SPECIFIC COMMENTS ON TOXICITY-RELATED PROVISIONS

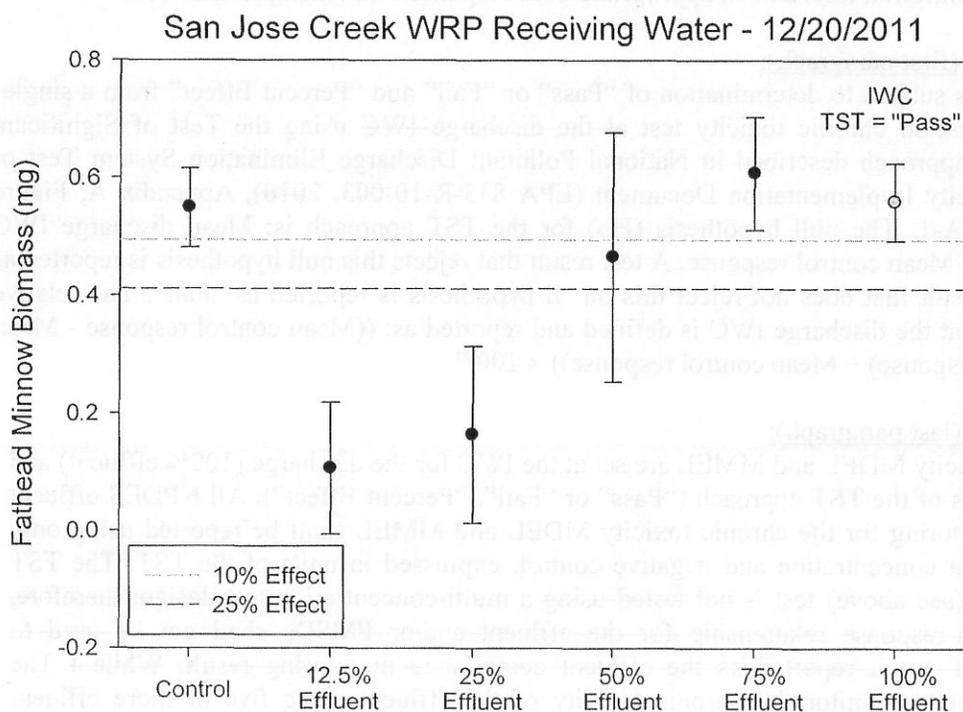
**Comment 1. Conditions of the permit must not limit or restrict 40 Code of Federal Regulations (CFR) Part 136 required and recommended data evaluation procedures. This includes a need to include language that will specifically allow the Permittee to conduct multi-concentration tests and conduct 40 CFR Part 136 required dose response relationship evaluations on bioassay data prior to application of the two concentration TST statistical hypothesis test.**

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



various United States Environmental Protection Agency (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 dose-response relationship is one of the more critical and significant method-defined procedures for addressing this variability and validating data. The concept of a dose-response/concentration-response relationship has been described by toxicologists as “the most fundamental and pervasive one in toxicology”<sup>2</sup>. 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 dose-response relationship provides the empirical evidence that supports this assumption. Therefore, evaluating dose 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 dose-response curve reduces confidence in the test’s ability to accurately estimate “toxicity” or, more specifically, the test’s ability to estimate effects associated with pollutants or toxicants. In fact, the USEPA determined that application of a relatively simple dose-response evaluation procedure reduced the false positive rate among non-toxic blank samples from over 14% to less than 5%<sup>3</sup>. Although more challenging to quantify, evaluation of the dose-response relationship is also expected to significantly reduce the false negative error rate as well (see example below).



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

In the absence of multi-concentration testing and a dose-response evaluation, the results depicted above would have been identified as an unqualified “Pass” using the USEPA Test of Significant Toxicity

<sup>2</sup> Casarett, L.J. and J. Doull. 1975. *Toxicology: the basic science of poisons*. Macmillan Publishing Co., New York. [Exhibit 1]

<sup>3</sup> 40 CFR Part 136. Guidelines Establishing Test Procedures for the Analysis of Pollutants; Whole Effluent Toxicity Test Methods; Final Rule. Federal Register / Vol. 67, No. 223 / Tuesday, November 19, 2002 / Rules and Regulations. Page 69963.

(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.

It is for these reasons that the 40 CFR Part 136 promulgated chronic toxicity testing protocols concluded that test review, including evaluation of the dose-response relationship, is necessary for ensuring that all test results are reported accurately<sup>4</sup>. In addition to being necessary for accurate result interpretation, the USEPA method manual (EPA 821-R-02-013) also directly requires that multiple concentration testing be conducted for all NPDES effluent compliance determination tests. It further requires that an evaluation of the dose-response relationship be conducted and strongly recommends against the use of two concentration (control and IWC) test designs for NPDES testing (see Attachment B for specific citations from the promulgated methods). Furthermore, the USEPA’s National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (USEPA TST Guidance) [Exhibit 3] 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 (see Attachment C for specific citations from the USEPA TST Guidance).

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 26, Section VII.J (first paragraph):

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

Page 26, 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 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.”

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<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. Section 10.2. [Exhibit 2] Page 49.

As indicated directly under the Section V.A.5 heading, the subsections under Section V.A.5 represent additional requirements and recommendations not found in the previously referenced method manuals. Minimum control response test acceptability criteria (TAC) are clearly and unambiguously highlighted in the referenced method manuals. Therefore, inclusion of the specific TAC condition here is unnecessary and could be misconstrued to indicate that only tests failing TAC should be repeated within 14 days or that failing TAC is the only appropriate means for invalidating or determining a WET test as “inconclusive”. Making the recommended changes will provide more clarity and ensure that all 40 CFR Part 136 protocol requirements can be applied as appropriate.

Page E-13, MRP Section V.A.5:

Replace Subsection V.A.5.c including Table E-4 with alternative language, as follows:

“c. Tests identified as “invalid” or “inconclusive” using procedures specified in the referenced method manual and supporting USEPA guidance must be resampled and retested within 14 days.

~~If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method, Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (U.S. EPA 2002, EPA 821-R-02-013) (see Table E-4, below), then the Permittee must re-sample and re-test within 14 days.”~~

Table E-4. USEPA Test Methods and Test Acceptability Criteria<sup>2</sup>

**Comment 2. Language in the Tentative Pomona Permit could be misinterpreted to indicate that receiving water toxicity monitoring is subjected to numeric chronic toxicity limits (MDEL and MMEL) or numeric receiving water triggers.**

The Tentative Permit clearly identifies that a narrative chronic toxicity water quality objective applies to receiving water monitoring (Section V.A.19, page 10). However, language in the MRP could be misinterpreted to mean that that chronic receiving water toxicity monitoring results are subject to the same maximum daily effluent limitation (MDEL) and monthly median effluent limitation (MMEL) numeric limits as are imposed on the final effluent. It would not be appropriate for the Permittee to be held responsible for receiving water toxicity not attributable to the Permittee’s discharge. Furthermore, numeric accelerated testing and TRE triggers should only be applicable to the immediately downstream receiving water location and should be waived if concurrent testing indicates that the source of the observed receiving water toxicity was not due to the Permittee’s discharge. Therefore, the quarterly receiving water toxicity testing should only be a monitoring requirement and we request that the following changes be made to the Tentative MRP:

Page E-12, MRP Section V.A.2

~~“The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. For the receiving water, sufficient sample volume shall also be collected for subsequent TIE studies, if necessary, at each sampling event. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.”~~

Page E-18, MRP Footnote 30

“The Permittee shall conduct Whole Effluent Toxicity monitoring on receiving water samples as outlined in section VIII.C. If the monthly median chronic toxicity result at the immediate downstream receiving water location is identified as “Fail” and concurrent upstream and/or outfall testing does not rule out the Permittee’s outfall as a source of the observed exceedance, the Permittee shall initiate accelerated and TRE Plan initiation testing as described in section V.A.7

~~and V.A.8. Please refer to section V.A.7 of this MRP for the accelerated monitoring schedule. The median monthly summary result shall be reported as "Pass" or "Fail". The maximum daily single result shall be reported as "Pass or Fail" with a "% Effect". Exactly three independent toxicity tests are required when one toxicity test results in "Fail".~~

Add a Section VIII.C. on page E-20 of the MRP:

### **"C. Receiving Water Chronic Toxicity Requirements**

#### **1. Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity**

The chronic toxicity IWC for this discharge is 100 percent receiving water.

#### **2. Sample Volume and Holding Time**

The total sample volume shall be determined by the specific toxicity test method used. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.

#### **3. Chronic Freshwater Species and Test Methods**

If the receiving waters salinity is <1 ppt, the Permittee shall conduct the following chronic toxicity tests with species and test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002; Table IA, 40 CFR part 136). In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

- a. A static renewal toxicity test with the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0).
- b. A static renewal toxicity test with the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0).
- c. A static toxicity test with the green alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0).

#### **4. Quality Assurance and Additional Requirements.**

Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below.

- a. The results of the receiving water tests are to be reported as "Pass" or "Fail" and "Percent Effect" 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: undiluted receiving water 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" in undiluted receiving water is defined and reported as:  $((\text{Mean control response} - \text{Mean undiluted receiving water response}) \div \text{Mean control response}) \times 100$ .
- b. Tests identified as "invalid" or "inconclusive" using procedures specified in the referenced method manual and supporting USEPA guidance must be resampled and retested within 14 days.
- c. Control and dilution water should be receiving water or laboratory water, as appropriate, and must be approved by the Regional Board before use. If the dilution water used is different from the culture water, a second control using culture water shall be used.

d. Monthly reference toxicant testing is sufficient. All reference toxicant test results should be reviewed and reported using the EC25.

e. Chlorine and ammonia shall not be removed from the receiving water sample prior to toxicity testing, unless explicitly authorized under this section of the Monitoring and Reporting Program and the rationale is explained in the Fact Sheet (Attachment F)."

**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.**

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, as part of our initial TRE Plan, the Sanitation Districts have been committed to conducting TIE toxicity testing immediately upon triggering the TRE in addition to the other recommended actions. Therefore, the Regional Board will continue to receive chronic toxicity testing data throughout the accelerated testing and TRE Plan initiation process.

However, requiring additional compliance testing to be conducted concurrently with the accelerated testing and TRE initiation will result in several confounding situations. First, accelerated chronic toxicity testing is indistinguishable from routine compliance chronic toxicity testing in terms of how these tests are conducted. Both tests require following the 40 CFR Part 136 promulgated method, and current permit requirements obligate the Permittee to report all of these test results for NPDES compliance determination purposes. Since it would be reasonable to expect that two or more accelerated tests would generally be conducted during a calendar month, a Permittee could end up conducting five or more reportable chronic toxicity tests during accelerated testing if concurrent compliance testing is also required. Since it appears to be the intent of the Regional Board to base the monthly median on no more than three tests, the accelerated tests and the compliance tests would have to be interchangeable and used for both compliance determination AND evaluation of the TRE trigger. Otherwise, an exclusion of any accelerated testing into the calculation of the MMEL would need to be specifically mandated.

Assuming such clarification was provided or that accelerated tests could be used to demonstrate compliance, a second and even more challenging issue would arise. 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 while during accelerated testing, a single TST exceedance is used as a TRE trigger. Under this approach, separate and independent chronic toxicity tests would be conducted for accelerated testing and compliance determination. It is quite likely that 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. Furthermore, a Permittee could also "Pass" all four accelerated testing bioassays while "Failing" the MMEL compliance monitoring tests. It is unclear if such an occurrence would result in the re-triggering of accelerated testing. Similarly, 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 would end TRE or continue TRE implementation.

Overall, it seems to be of very little use to require accelerated testing or initiation of a TRE while the Permittee is actually demonstrating compliance with MDEL and MMEL. By requiring continued and independent compliance monitoring during accelerated testing and TRE initiation, such scenarios are likely to be observed. The only reasonable solution to these issues, if the Regional Board were to refuse to remove the continued compliance monitoring requirement during accelerated testing and TRE implementation, would be to allow the Permittee to discontinue accelerated testing and/or TRE plan implementation if compliance with the MMEL and MDEL is demonstrated during a calendar month. Such a solution will require significant modifications to the tentative permits.

Additionally, State Water Resources Control Board (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 Water Board staff. As a result, State Water Board staff has made its intentions known that after the initial MMEL or MDEL WET 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.<sup>5,6</sup> An extension of the six-month exemption could be granted by the regulating authority on a case-by-case basis. This approach would allow for the Permittee to focus any and all available efforts on quickly confirming the persistence of toxicity during accelerated testing and/or more completely characterizing and identifying the toxicity-causing constituent(s) during the TRE instead of conducting additional independent testing that would not be useful in achieving the goal of controlling toxicity.

Because the State Water Board approach is an outgrowth of a wider stakeholder process, we believe that this approach 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 TRE and/or TRE process is taking place. Additional accelerated monitoring and TRE work plans are not required once a TRE is begun.”~~

**Comment 4. Initiating accelerated testing within 24 hours of being notified of an MMEL or MDEL WET violation is not practicable.**

There are several reasons why it is not possible to initiate accelerated testing within 24-hours after being notified of an MMEL or MDEL exceedance. The first reason relates to the time necessary to collect and deliver a 24-hour composite sample to an accredited laboratory. Upon receiving notification of an exceedance, Sanitation Districts staff will need to initiate sample collection to begin at approximately

<sup>5</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 4]

<sup>6</sup> State Water Board, Draft Policy for Toxicity Assessment and Control, June 2012. [Exhibit 5]

6:30 am the day following notification. This sample will be ready for collection 24 hours later (two days after notification). If this bioassay test is contracted out to a commercial laboratory, it will need to be delivered via over-night express by 10:00 am the day after it is collected (three days after notification). Depending on the age of brood cultures or the time organisms are received from the supplier, it will typically take a laboratory an additional four to eight hours to initiate the required test (over 72-hours after notification). Should notification of an MDEL or MMEL exceedance occur on a Wednesday, Thursday or Friday, it may not be possible to initiate the accelerated test until the following Tuesday depending on whether the test requires *Ceriodaphnia* or fathead minnow testing. Fathead minnow testing requires test initiation with organisms less than 24 hours old. This limits overnight shipping of organisms to Monday through Friday to meet the age requirement with delivery the following day. This would result in test initiation occurring six calendar days after notification. Furthermore, a recognized holiday falling during this time would result in an additional 24-hour delay in test initiation. Therefore, for tests contracted to a commercial laboratory, initiation of accelerated testing could be accomplished no later than seven calendar days after notification. However, if the accelerated testing is conducted by our San Jose Creek Water Quality Laboratory (SJC-WQL), initiation of accelerated testing could be accomplished within six calendar days since the samples would not need to be shipped.

The Sanitation Districts understand and support the Regional Board's intention to be responsive after observing any trigger exceedance. In most instances, test initiation will not be delayed due to the observance of a holiday and it is the Sanitation Districts' intent to utilize our SJC-WQL whenever possible to conduct all required testing, which would result in tests being initiated within five calendar days of notification. Additionally, if notification of an exceedance is received on a non-holiday Monday or Tuesday, initiation of accelerated testing can be accomplished within three calendar days. However, as described above, there will be instances where six or even seven days will be necessary before accelerated testing can be initiated depending on the aforementioned circumstances. We request that the permit be amended to allow the necessary time, as follows:

Page E-15, MRP Section V.A.7:

"The Permittee shall ensure that they receive results of a failing chronic toxicity test W within 24 hours of the completion of the test of the time the Permittee becomes aware of this result, the Permittee and shall implement an initiate the first of four accelerated monitoring tests schedule within seven calendar days for tests contracted to a commercial laboratory and within six calendar days for tests initiated at the San Jose Creek Water Quality Laboratory consisting of four, five-concentration toxicity tests (including the discharge IWC), conducted at approximately two week intervals, over an eight week period; in preparation for the TRE process and associated reporting, these results shall also be reported using the EC25. If each of the accelerated toxicity tests results in "Pass", the Permittee shall return to routine monitoring for the next monitoring period."

**Comment 5. Median Monthly Effluent Limit (MMEL) should be clearly and unambiguously defined as the median of no more than the three tests conducted over a calendar month.**

The first sentence of the third paragraph of Section VII.J of the Tentative Permit indicates that a monthly median of no more than three independent chronic toxicity tests conducted over a calendar month is used to evaluate compliance with the MMEL, as follows; "The Median Monthly Effluent Limitation (MMEL) for chronic toxicity is exceeded and a violation will be flagged when the median of no more than three independent chronic toxicity tests, conducted within the same calendar month and analyzed using the TST approach, results in "Fail". However, later in the same paragraph and in several other sections of the Tentative Permit there is language indicating that "exactly three independent toxicity tests are required when one toxicity test results in a Fail".

A requirement mandating that exactly three tests be conducted in response to a single "Fail" poses several problems. First, it can result in confusion regarding exactly when an MMEL exceedance is considered to have occurred. In cases where the first two compliance tests result in a TST "Fail", the

results of the third test would be inconsequential in terms of evaluating whether a monthly median was exceeded or not. In such cases, it is not clear as to whether accelerated testing would be initiated in response to the "Fail" result on the second test, or if it would be necessary to wait for the result of the third test to be obtained before initiating accelerated testing. By limiting MMEL calculations to no more than three tests, an observed "Fail" in any two tests will result in an MMEL exceedance regardless of the result a third test, and accelerated testing can begin immediately after the second test. Second, requiring that a third compliance test be conducted after the first two were determined to be a "Fail" would represent an unnecessary waste of resources. The results of the test would not change the monthly median in any way, so the Permittee would be forced to conduct a meaningless test. While conducting one test does not consume a large amount of effort, it still makes no sense to run the test. The efforts and resources of the Permittee would be much better applied to towards more quickly conducting accelerated testing. Therefore, we request that the following changes be made:

Page 7, Footnote 11:

"The median monthly effluent limitation (MMEL) shall be reported as "Pass" or "Fail". The maximum daily effluent limitation (MDEL) shall be reported as "Pass" or "Fail" and "% Effect." The MMEL for chronic toxicity shall only apply when there is a discharge more than one day in a calendar month period. During such calendar months, exactly no more than three independent toxicity tests will be used to evaluate the MMEL ~~are required~~ when one toxicity test results in "Fail"."

Page 26, Section VII.J (third paragraph):

"The Median Monthly Effluent Limitation (MMEL) for chronic toxicity is exceeded and a violation will be flagged when the median of no more than three independent chronic toxicity tests, conducted within the same calendar month and analyzed using the TST approach, results in "Fail". The MMEL for chronic toxicity shall only apply when there is a discharge more than one day in a calendar month period. During such calendar months, exactly no more than three independent toxicity tests will be used to evaluate the MMEL ~~are required~~ when one toxicity test results in "Fail"."

Page E-10, MRP Footnote 18:

"The Permittee shall conduct whole effluent toxicity monitoring as outlined in section V. Please refer to section V.A.7 of this MRP for the accelerated monitoring schedule. The median monthly summary result shall be reported as "Pass" or "Fail". The maximum daily single result shall be reported as "Pass" or "Fail" and "% Effect." When there is a discharge more than one day in a calendar month period, exactly no more than three independent toxicity tests will be used to evaluate the MMEL. ~~are required when one toxicity test results in "Fail"."~~

Page E-13, MRP Section V.A.5.b:

"The Median Monthly Effluent Limitation (MMEL) for chronic toxicity only applies when there is a discharge more than one day in a calendar month period. During such calendar months, exactly no more than three independent toxicity tests will be used to evaluate the MMEL. ~~are required when one toxicity test results in "Fail"."~~

Page E-18, MRP Footnote 30:

"The Permittee shall conduct Whole Effluent Toxicity monitoring as outlined in section V. Please refer to section V.A.7 of this MRP for the accelerated monitoring schedule. The median monthly summary result shall be reported as "Pass" or "Fail". The maximum daily single result shall be reported as "Pass or Fail" with a "% Effect". Exactly no more than three independent toxicity tests will be used to evaluate the MMEL. ~~are required when one toxicity test results in "Fail"."~~

**Comment 6. Section V.A.4 of the Tentative Pomona Permit concerning most sensitive species screening is confusing and requires clarification.**

First, the third sentence of Section V.A.4 of the Tentative MRP (page E-13) states that Permittee shall collect a single effluent sample to conduct the most sensitive species screening. It also contains a requirement to report the results of the most sensitive species screening as effluent compliance monitoring results. However, the fish and invertebrate chronic toxicity tests require that a minimum of three discrete samples be used to conduct the test if the results are to be reported for NPDES compliance purposes. These requirements conflict and need to be reconciled. If the Regional Board would like a compliance determination made during most sensitive species screening, then the requirement to use a single test to conduct the screening needs to be deleted.

Second, Section V.A.4 requires that, "This sample [the single sample on which most sensitive species screening is to be conducted] shall also be analyzed for the parameters required for the discharge." This language appears to require that the sample used for toxicity testing be run for every analyte for which effluent testing is required. This appears to be a typographical error, as it would cost many thousands of dollars to run this sample for every effluent testing parameter, as the Tentative Permit contains parameter monitoring of over 200 different constituents. This sentence needs to be deleted or additional clarification needs to be provided.

Finally, Section V.A.4 is ambiguous regarding the process used to select the most sensitive species. In the case where the result for all three species is "Pass", this section specifies that the species exhibiting the highest "Percent Effect" be considered the most sensitive species. However, it is silent on situations where the results for one or more species are "Fail". The permit should contain clear language to address these situations. We recommend that, in such cases, the species with the highest percent effect be chosen as the most sensitive species.

Suggested language to incorporate these comments is as follows:

Page E-13, MRP Section V.A.4

~~"Species sensitivity screening shall be conducted beginning the first month the permit is in effect. If there is no discharge present, the effluent samples for the 3-species screening shall be collected from the offsite storage ponds near the effluent sampling point. The Permittee shall collect a single effluent samples and concurrently conduct three toxicity tests using the fish, an invertebrate, and the alga species previously referenced. These samples shall also be analyzed for the parameters required for the discharge toxicity testing purposes. If the result of all three species is "Pass", then t~~The species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit cycle. "

**Comment 7. Chlorine removal prior to conducting final effluent toxicity testing must be allowed.**

Dechlorination of final effluent prior to discharge is part of the treatment process used at each of the Sanitation Districts' water reclamation facilities including the Pomona WRP. Dechlorinating agents are added to the water and mixed immediately prior to discharge into the receiving water. However, effluent utilized for water recycling is not dechlorinated and is delivered to users through a different outfall. As the demand for recycled water increases and effluent flows decrease due to water conservation, less effluent is discharged to the receiving water, resulting in significant periods when no final effluent is discharged to the receiving water. The resulting lack of continuous discharge to the receiving water makes routine collection of a 24-hour composite final effluent sample after dechlorination infeasible and in some instances impossible. As water recycling and water conservation increases, the periods with no discharges to receiving water will increase. Furthermore, the Tentative Permit contains a requirement to conduct continuous monitoring for chlorine residual in discharges to San Jose Creek, as

well as numeric limits for chlorine residual, so any malfunction in the dechlorinating process will be immediately identified and any limit exceedances reported.

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

This issue was discussed in detail with staff of the Regional Board at an April 6, 2004 meeting held in conjunction with 2004 renewals of the Pomona and San Jose Creek WRP NPDES permits. As a result of the April 2004 meeting, the Regional Board inserted language into these NPDES permits (Order Nos. R4-2004-0099 and R4-2004-0097) allowing the Sanitation Districts to collect chlorinated samples and simulate the dechlorination process in the laboratory before bioassay testing, provided the practice is documented in the laboratory report. Additionally, the Regional Board has also approved laboratory dechlorination of effluent from the Sanitation Districts Joint Water Pollution Control Plant (JWPCP) prior to toxicity testing (Order No. R4-2011-0151; NPDES No. CA0053813). Therefore, we request the following changes:

Page E-14, MRP Section V.A.5.f:

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

Page E-17, MRP Section V.C

~~"Except with prior approval from the Executive Office of the Regional Water Board, chlorine shall not be removed from bioassay samples. Chlorine may be removed from the Pomona WRP effluent bioassay samples in the laboratory when the recycled water demand is high and there is no effluent water available for sampling over the weir after the dechlorination process."~~

**Comment 8. A compulsory reopener provision needs to be included that will require the Order be reopened and modified to be consistent with the requirements and implementation provisions incorporated into the State Water Board Toxicity Plan.**

While Section VI.C.1.k of the tentative permit (page 15) includes reopener language related to State Water Board adoption of toxicity-related policies and plans, it only addresses changes to effluent limitations and allows some discretion and flexibility. However, the State Water Board has been actively working on a statewide toxicity plan for several years with the expressed intent and precedential mandate to standardize chronic toxicity regulation and implementation requirements for POTWs across all regions in the State. Incorporation of the numeric chronic toxicity limits as well as other toxicity-related implementation procedures by Regional Boards in advance of the State Water Board's adoption of their statewide toxicity plan could potentially result in conflicting and/or inconsistencies among permits and regions. Various implementation procedures incorporated into this tentative permit and addressed in detail in this comment letter would be deemed unacceptable to the regulated community if they were included or allowed by the statewide toxicity Plan. Therefore, no matter what decisions are ultimately made regarding our specific comments, it is imperative that this and any other permit adopted in advance of the statewide toxicity plan contain compulsory re-opener language that would incorporate all elements of any such plan. We therefore request the following changes:

“This Order ~~may~~ will be reopened and modified to revise any and all the chronic toxicity testing provisions and effluent limitations to incorporate all elements contained in the State Water Board adopted Toxicity Plan promptly after adoption of such Plan to be consistent with State Water Board precedential decisions, new policies, a new state-wide plan, new laws, or new regulations.”

## **SPECIFIC COMMENTS ON NON-TOXICITY RELATED PROVSIONS**

### **Comment 9. Storm water requirements regarding oil and oily materials should not be included in the NPDES permit to avoid conflict with the general industrial storm water permit.**

Section VI.A.2.m of the Tentative Permit states, “Oil or oily material, chemicals, refuse, or other polluting materials shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.”

This provision relates to requirements regarding the quality of storm water runoff from the facility. However, the discharge of storm water runoff from the Pomona WRP is currently regulated under Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001, Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities, where the Pomona WRP is enrolled under WDID. No. 4 19I007152 (General Industrial Permit). The General Industrial Permit already includes the storm water discharge requirements. Additionally, the Fact Sheet of the General Industrial Permit, in the Section titled “Types of Discharges Not Covered By This General Permit”, Item 2, states, “FACILITIES WHICH HAVE NPDES PERMITS CONTAINING STORM WATER PROVISIONS: Some storm water discharges may be regulated by other individual or general NPDES permits issued by the State Water Board or the Regional Water Boards. This General Permit shall not regulate these discharges.” If the oily waste provision in Section VI.A.2.m is retained in the Tentative Permit, it could have the unintended consequence of excluding the Pomona WRP from coverage under the General Industrial Permit. Therefore, Section VI.A.2.m should be deleted from the Tentative Permit.

### **Comment 10. Spill Reporting Requirements should be removed or clarified.**

Section VI.C.6.a.iii.(6) of the Tentative Permit requires the Permittee to provide to the Regional Board “a certification that the State Office of Emergency Services [Cal OES or OES, formerly Cal EMA] and the local health officer or directors of environmental health with jurisdiction over the affected water bodies have been notified of the discharge.”

The Sanitation Districts requests that this language be removed. First, this requirement was not included in current NPDES permit for the facility, and no justification has been provided for its inclusion in the Tentative Permit. It is not clear how the Regional Board would use this certification. A similar certification provision was added in the Amended Statewide General Waste Discharge Requirements for Sanitary Sewer Systems Order No. WQ 2008-0002-EXEC (SSS WDR), but was removed from the SSS WDR when it was updated and streamlined in 2013. Per Order No. WQ 2013-0058-EXEC, Finding 7, the notification provisions added in 2008 were removed because “When notified of an SSO [sanitary sewer overflow] that reaches a drainage channel or surface water of the state, Cal OES pursuant to Water Code section 13271(a)(3), forwards the SSO notification information to local government agencies and first responders including local public health officials and the applicable Regional Water Board. Receipt of notifications for a single SSO event from both the SSO reporter and Cal OES is duplicative. To address this, the SSO notification requirements added by the February 20, 2008 MRP revision are being removed in this MRP revision.”

Second, it is not clear under what circumstances such a certification would be required, and how much time the Permittee would have to make the certification. According to Section VI.C.6.a (pages 19-20), the Permittee is required to notify: 1) the local health officer or the director of environmental health for any spills, 2) OES for any spills more than 1,000 gallons, and 3) Regional Board if the first two agencies have not been notified. For spills less than 1,000 gallons, the Permittee would not be required to notify OES and would therefore not be able to send a certification of notification to the Regional Board. Finally, the timing of such certification is unclear. The SSS WDR required a certification within 24 hours, but no time frame is specified in the Tentative Permit.

#### **Comment 11. Effluent Monitoring Station Locations**

In Attachment E, page E-5, Table E-1, the description of Effluent Monitoring Station 001 reads, in part, "The effluent sampling station shall be located downstream of any inplant return flows and after the final dechlorination process, where representative samples of the effluent can be obtained after the complete treatment train. However, if the recycled water demand is high and there is no effluent water available for sampling after the dechlorination process, then the effluent sample may be collected after the chlorination process, but before the dechlorination step."

Collection of final effluent samples at a location consistent with this description presents several difficulties. First, at the Pomona WRP the effluent is dechlorinated at the effluent weir, downstream of reuse discharges. There is often only intermittent flow at the weir due to varying reuse rates. As a result, composite sample collection at the dechlorinated location would be greatly hindered by the highly variable water levels at the weir. Automatic samplers to collect 24-hour composite samples can be setup, but the varying effluent flow will result in inconsistent sample volumes. The only way to get around this problem would be to duplicate sampling by setting up two composite samplers, one each for the chlorinated and dechlorinated locations, to ensure an adequate sample volume for at least one of the locations. Second, for volatile organics analysis (EPA 624) the Sanitation Districts collect the chlorinated samples and then quantitatively dechlorinate the samples in the field and then preserve with hydrochloric acid. If samples are collected after dechlorination any excess dechlorinating agent will react with the hydrochloric acid and a large amount of sulfur dioxide will be produced. This will cause matrix interference that can prevent the quantitation of chloromethane, a priority pollutant. When this occurs, no result can be reported. Third, since the final effluent goes over a weir, the turbulence will result in aeration of the effluent and may reduce the concentration of volatiles in the sample resulting in erroneous values. Attempting to collect dechlorinated samples will increase costs and provide less accurate results, while providing no water quality benefit. This provision is inconsistent with the Water Board's charge to foster and encourage the use of recycled water.

The Sanitation Districts therefore request the following change to the description of Effluent Monitoring Station EFF-001, Table E-1, on page E-5 of the Tentative Permit, "~~The effluent sampling station shall be located downstream of any inplant return flows and after the final dechlorination process, where representative samples of the effluent can be obtained after the complete treatment train. However, if the recycled water demand is high and there is no effluent water available for sampling after the dechlorination process, then the effluent sample may be collected after the chlorination process, but before the dechlorination step.~~"

#### **Comment 12. The requirement for PCB congener analysis of influent, effluent, and receiving waters using method EPA 1668c should be deleted.**

Footnote 5 on page E-7 states, "Priority pollutants are those constituents referred to in 40 CFR part 401.15; a list of these pollutants is provided as Appendix A to 40 CFR part 423. PCB as arochlors shall be analyzed using method EPA 608 and PCB as congeners shall be analyzed using method EPA 1668c." Footnote 21 on page E-10 and Footnote 32 on page E-19 state, "PCBs is the sum of Arochlor 1016, Arochlor 1221, Arochlor 1232, Arochlor 1242, Arochlor 1248, Arochlor 1254, and Arochlor 1260

when monitoring using USEPA method 608.” Footnote 22 on page E-10 and 33 on page E-19 state: “PCBs mean the sum of 41 congeners when monitoring using USEPA proposed method 1668c. PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206 shall be individually quantified.”

The first footnote refers to the "remaining USEPA priority pollutants", but lists test methods to be used for both PCBs as arochlors and PCBs as congeners. The USEPA priority pollutant list includes seven specific PCB arochlors, but it does not include PCB congeners. PCB arochlors are specific chemical mixtures of various PCBs congeners. EPA priority pollutant monitoring in the past has always been based on arochlors, to be consistent with the promulgated priority pollutant list. Therefore, PCB congener monitoring should not be required as part of the priority pollutant monitoring.

Additionally, no justification has been provided for the increased monitoring costs that would be incurred by PCB congener monitoring. There are no PCB water quality impairments in the receiving waters downstream of the WRP. PCB levels have generally decreased since PCB production stopped in the United States in August 1977 and there is no indication that PCB levels in the receiving waters in the vicinity of the Pomona WRP may be increasing. No specific areas of probable high PCB concentrations have been identified and no PCB-related toxicity effects have been observed to require determination of cause and sources.

The cost for PCB congener sampling is \$875 per test; adding semiannual sampling for the influent, effluent, and three receiving water stations would impose an additional cost of \$8,750 per year for the Pomona WRP, with no water quality benefit. The congener analysis using EPA method 1668c as specified in the Tentative Permit is more difficult to perform than arochlor analysis, and there are technical limitations on the ability of laboratories to reliably resolve co-eluting congeners. Co-elution of various congeners is a major impediment in PCB congener-specific analyses during gas chromatography (GC) analysis, where non-resolved congener compounds elute from the GC column at the same time, resulting in interferences that are difficult to discern and can easily lead to an overestimation of PCB concentrations. Congener-specific analyses demand greater effort in terms of data evaluation, quality assurance, and processing. Another problematic area in congener analyses is comparability between laboratories due to differences in co-elution patterns between different laboratories that are likely to be further compounded by normal inter-laboratory result variation. Finally, the requirement to report a sum of PCB congeners is particularly troublesome. It is not possible to reliably calculate such a sum due to the co-elution issues described above.

The Sanitation Districts therefore request that all requirements to conduct PCB congener testing be removed from the Tentative Permit.

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

Very truly yours,

Grace Robinson Hyde



Philip L. Friess

Department Head

Technical Services

PF:ATH:PM:MC:nm  
Attachments

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



## ATTACHMENT A

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

The Pomona Water Reclamation Plant (WRP) is currently regulated under NPDES Order No. R4-2009-0076 [Exhibit 6], which contains the following language that was not objected to by the U.S. Environmental Protection Agency (USEPA) when adopted in 2009:

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

##### A. Effluent Limitations – Discharge Point 001

###### i. Chronic Toxicity Trigger and Requirements:

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

$$TU_c = 100/NOEC$$

The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

- 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 TU<sub>c</sub>, 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 TU<sub>c</sub>, the Discharger shall initiate a TIE and implement the Initial Investigation TRE Workplan, as specified in Attachment E – MRP, Section V.D.

- iv. The Discharger shall conduct chronic toxicity monitoring as specified in Attachment E – MRP.”

Using similar language, the July 14, 2014 pre-public notice draft of the new Pomona WRP permit [Exhibit 7] contained the following requirements relating to Chronic Toxicity:

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

##### A. Effluent Limitations - Discharge Point 001

###### 3. Other Effluent Limitations – Discharge Point 001

###### g. Chronic Toxicity Trigger and Requirements:

- i. The chronic toxicity of the effluent shall be expressed and reported as “Pass” or “fail”, as a Median Monthly Effluent Trigger (MMET). The MMET for chronic toxicity shall apply only when there is a discharge more than one day in a calendar month period. During such calendar months, exactly three independent toxicity tests are required when one toxicity test results in “Fail.”

- ii. There shall be no chronic toxicity in the effluent discharge.

- iii. If the chronic toxicity of the effluent exceeds yields “FAIL” result as the MMET, then the Discharger shall immediately implement accelerated chronic toxicity testing according to Attachment E - MRP, Section V.B.3. If any two of the six accelerated tests results yields a “FAIL,” then the Discharger shall initiate a TIE and implement the Initial

Investigation TRE Workplan, as specified in Attachment E – MRP, Sections V.D and V.e..

- iv. The Discharger shall conduct chronic toxicity monitoring as specified in Attachment E – MRP.”

The regulatory construct of the last permit and the pre-public notice draft permit 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. 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.

Notwithstanding the fact that USEPA had allowed NPDES permits to be written in California in the State Water Board’s prescribed manner for 11 years without formal objection, on July 31, 2014, the USEPA Region 9 filed an initial objection letter [Exhibit 8] on two NPDES permits up for reissuance for the Joint Outfall System<sup>1</sup> (Sanitation Districts), including for the Pomona WRP. This was followed by a formal objection letter on September 4, 2014. [Exhibit 9] Instead of following State Water Board mandates, the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) modified the permits to now include new numeric chronic toxicity limits. These limits are contained in Section IV.A.1.a., Table 4, on p. 7 of the proposed Pomona WRP 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. 27 of the Tentative Permit. The Sanitation Districts request that the numeric chronic toxicity limitations be removed and replaced by a narrative toxicity effluent limitation consistent with the State Board precedential orders, Order Nos. WQO 2003-0012 and WQO 2003-0013.

Additional details regarding this request, and other general comments relating to the toxicity provisions in the Tentative Permit are provided below.

***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>2</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 POTWs, particularly those that discharge to inland surface waters, is an issue of statewide

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

<sup>2</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.

importance that should be addressed in a statewide plan or policy. In addition, the State Water Board instructed regional boards to replace any numeric chronic toxicity effluent limitations with the prescribed narrative chronic toxicity limitation until a statewide toxicity policy is adopted. The Sanitation Districts' 2004 and 2009 NPDES permits for the Pomona WRP were issued with the toxicity trigger requirements of State Board Order Nos. WQO 2003-0012 and WQO 2003-0013.

Although the main issue on WET limits was decided by the State Board in WQO 2003-0012 and WQO 2003-0013 in 2003, this decision was later upheld and followed in other, subsequent precedential State Board Orders, including WQ 2008-08 (City of Davis) and WQ 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 Order No. WQ 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>3</sup> but also by the language of the Basin Plan.<sup>4</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 the Basin Plan’s toxicity objective, and represents an abuse of

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<sup>3</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-52.)

<sup>4</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.)

discretion. For these reasons, the Sanitation Districts respectfully request that the chronic toxicity limits as proposed should 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 Test of Significant Toxicity (TST) without inclusion of a concentration-response evaluation is not a promulgated Part 136 Method.

The proposed 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. 7; pg. E-11, n. 22; pg. E-12 at para. V.A.3; pg. E-17, n. 29; pg. E-19, n. 33; pg. E-23 at para. X.B.4.; pg. F-55, Section VI.B.2.a; pg. H-2 at para. A.4.a.) While the language currently in the Tentative Permit appears to intend to allow the use of a multi-concentration test design for chronic toxicity, with consideration of the resulting concentration-response pattern in assessing the validity of the test, the language is ambiguous and could be interpreted to mean that the concentration-response validation is not allowed. (Tentative Permit page 26, 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 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 EPA’s 2002 Methods) [Exhibit 2]. 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>5</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)”

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<sup>5</sup> EPA-821-R-02-013. Tables 1, 3, and 4 (labeled as 3) on pages 76, 165, and 211.

In 2010 the USEPA released a guidance document, *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document*, EPA 833-R-10-003, 2010 (TST Implementation Document) [Exhibit 3] 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)

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

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

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

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

In March 2014, USEPA issued an Alternative Test Procedure (ATP) letter approving statewide use of a two-concentration toxicity test evaluated using the TST (Letter from Eugenia McNaughton, US EPA Region 9 Quality Assurance Office Manager to Renee Spears, State Water Board Quality Assurance Officer, untitled, dated March 17, 2014) (ATP Approval Letter) [Exhibit 10]. This letter ignores the previous USEPA’s requirements and recommendations described above. Even with the ATP approval, it would be difficult to see how USEPA could legally object to any permittee continuing to use the standard

prescribed 2002 test methods (NOEC or IC25)<sup>6</sup> if these standard methods and the ATP produce “acceptably equivalent” results as claimed in the ATP letter.

In its ATP Approval Letter, USEPA ostensibly granted the State a “Limited Use Alternative Test Procedure” under Part 136 (40 CFR 136.5(a)). However, it is not clear that a State can be the requestor since rules contemplate that the request must first be sent to the State. (*Id.* at subd. (b).) For this and other reasons, the validity of the ATP is currently being litigated in federal court (*see SCAP and CVCWA v. USEPA*, Case No. 2:14-cv-01513 MCE-DAD, U.S. District Court, Eastern District (hearing scheduled for March 5, 2015)). [Exhibit 11]

The legality of the ATP approval is suspect as this alternative was not submitted by a discharger or a laboratory, but by the State Water Board, after receiving the two-concentration method using the TST *from USEPA*. This self-dealing to avoid a full-blown regulatory process thwarts the law and notions of good public policy. The ATP process was designed to “encourage organizations *external to EPA* to develop and submit for approval new analytical methods.” *See Guide to Method Flexibility and Approval of EPA Water Methods*, EPA Office of Water (Dec. 1996) at pg. 77 (emphasis added) [Exhibit 12]. All but a single lab, single discharger ATP (i.e., Tier 1) must go through rulemaking. For Tier 2 and 3 new methods (multi-lab), “EPA will begin the rulemaking process.” *Id.* at pgs. 80-82. Furthermore, USEPA acknowledges that it currently has no approved protocols for reviewing or approving a WET ATP. *Id.* at 93 (“EPA is developing a protocol for approval of new and modified (alternate) WET methods...”; *see also* <http://water.epa.gov/scitech/methods/cwa/atp/questions.cfm> (last accessed 5/30/2014)(stating “Note: The EPA does not have a protocol for toxicity testing [ATP] under EPA’s Whole Effluent Toxicity (WET) program.”).

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

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

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

Even assuming *arguendo* that the USEPA’s ATP approval was proper, it is not clear that the Sanitation Districts can be *required* to use the ATP since the ATP Approval Letter states that the TST is an acceptable equivalent to the NOEC-LOEC. USEPA Region 9, in the ATP approval letter, attempted to *mandate* use of a two-concentration test design with the TST by stating that this ATP “will apply to all

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<sup>6</sup> *See* 67 Fed. Reg. 69955 (2002)(“these methods, including the modifications in today’s rule, are applicable for use in NPDES permits.”).

new or revised NPDES permits issued by the State Water Board and Regional Water Quality Control Boards and any EPA-issued California permits that include whole effluent toxicity provisions.” See ATP Approval Letter (emphasis added). However, neither USEPA nor the Regional Board has the authority to impose the TST *until* either the Sanitation Districts request to use the ATP, or that method has been formally promulgated by USEPA as an approved method under 40 CFR Part 136. Analytical results obtained by using a non-promulgated method cannot be used for NPDES compliance determination purposes until that method has been incorporated into 40 CFR Part 136. See *accord* Permit at pg. F-55, in reference to CECs (“Analysis under this section is for monitoring purposes only. Analytical results obtained for this study will not be used for compliance determination purposes, since the methods have not been incorporated into 40 CFR part 136.”) Similarly, the particular number of dilutions in a dilution series cannot be mandated. 67 Fed. Reg. 69956 (“no one particular dilution series is required.”) Thus, the two-concentration TST method should not be prescribed in the Pomona WRP permit.

This attempt to impose a mandate would also contradict a June 18, 2010 USEPA Headquarters memo accompanying the TST Implementation Document, from James Hanlon, the Director of the EPA Office of Wastewater Management, which stated: “The TST approach does not preclude the use of existing recommendations for assessing WET data provided in EPA’s 1991 Water Quality-based Technical Support Document (TSD) which remain valid for use by EPA Regions and the States.” [Exhibit 13] Thus, all the TST can be used for is additional information, similar to the CEC monitoring (cited above) where samples are required using a non-promulgated method – however, the difference is - for CECs, that extra data is not being used for compliance determination processes whereas the chronic toxicity data under the TST will be used for that purpose.

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

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

d) EPA Guidance cannot Overrule Promulgated Regulations.

Page 7, Footnote 10 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>7</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 2010 TST guidance 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 guidance document clearly states that:

"The document does not and cannot impose any legally binding requirements on EPA, states, NPDES permittees, or laboratories conducting or using WET testing for permittees (or for states in evaluating ambient water quality). EPA could revise this document without public notice to reflect changes in EPA policy and guidance."<sup>8</sup>

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

Although USEPA often tries to regulate by guidance, federal courts have frowned upon this practice as aptly described in *Appalachian Power Co. v. EPA*, 208 F.3d. 1015, 1020 (D.C. Cir. 2000).

<sup>7</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 C.F.R. §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* Los Angeles 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 [Regional Board] 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 C.F.R. §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 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 No. WQO 2003-0013. Just because the proposed permit on page F-15 states "Requirements of this Order implement the SIP" does not mean this statement is accurate.

<sup>8</sup> USEPA, National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document. EPA 833-R-10-004, June 2010.

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 2010 TST guidance. One case related to invalidating EPA 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 EPA not only lacked the statutory authority to impose the guidance regulations on blending, but also violated the Administrative Procedures Act (APA), 5 U.S.C. § 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 publicly owned treatment works (POTWs) without a demonstration that these effluent limitations are "impracticable." (See 40 CFR Part 122.45(d)(2) ("For continuous discharges all permit effluent limitations, standards and prohibitions, including those necessary to achieve water quality standards, shall unless impracticable be stated as: (2) Average weekly and average monthly limitations for POTWs").) As described above, the Tentative Permit includes a MDEL for chronic toxicity, which is more stringent than required by federal law and has not been adequately justified. Therefore, this limitation is contrary to law.<sup>9</sup>

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<sup>9</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.

USEPA's analysis on this topic was inaccurate in its Formal Objection Letter (Letter from Jan Diamond, Director, USEPA Region 9 Water Division to Samuel Unger, Executive Office, Regional Board, dated September 4, 2014, titled, "Re: Formal objection letter for pre-notice draft NPDES permits for the Joint Outfall System's Whittier Narrows Water Reclamation Plant (NPDES No. CA0053716) and Pomona Water Reclamation Plant (NPDES No. CA0053619)). In this letter, USEPA stated, "...the permits do not include the necessary daily and monthly WQBELs [water quality-based effluent limits] 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>10</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. (See proposed permit at pg. F-47 "chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth." (emphasis added); see also pg. F-59, para. C.)

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.); SWRCB Order No. 2003-0012 and EPA Letter to Los Angeles Regional Board on Long Beach/Los Coyotes Permits at pg.4 (May 31, 2007)("At minimum, the permits need to specify the WQBEL: 'There shall be no chronic toxicity in the effluent discharge.'").[Exhibit 14])

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

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<sup>10</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. (See Tentative Permit at pg. F-12 and F-47 ("Eighteen acute toxicity testing results from the same period did not exceed any acute toxicity requirements."))

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 Pomona 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 previous Pomona WRP NPDES permits and the pre-public notice draft permit contained a valid and enforceable chronic toxicity effluent limitation.

In its Formal Objection Letter, 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>11</sup> The permits, as recognized in USEPA’s letter, contain 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>12</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) because they do not establish a “restriction” on the “quantity, rate, or concentration” of pollutants in the effluent. In WQO 2003-0012 at page 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 Pomona WRP pre-notice draft permit required preparation and approval of an initial TRE Workplan at the time of permit issuance. Furthermore, once the TRE was initiated, the Sanitation Districts would have had 30 days to submit a detailed TRE

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<sup>11</sup> In addition, EPA 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 15]; 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>12</sup> 33 U.S.C. §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.

workplan to the Regional Board including “i. Future actions by the Permittee to investigate, identify, and correct the cause of toxicity; ii. Actions the Permittee will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; iii. A schedule for these actions, progress reports, and the final report.”

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 14] 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 are 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 NPDES permits for the Pomona WRP, as well as the pre-public notice draft permit for the Pomona WRP, and has been in all non-ocean discharging POTW permits 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 this draft permit was not appropriate.

Moreover, because the SIP has not yet been modified, the 2003 precedential orders<sup>13</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 Board precedent and represent an abuse of discretion. Most all other recent permits referenced in the USEPA’s Final Objection Letter or discussed in the Fact Sheet have all been appealed to the State Water Board for reasons similar to those raised here.<sup>14</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 No. WQ 2012-0001 (City of Lodi); Order No. WQ 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.

The Sanitation Districts believe one approach to making the permits more clear in this respect would be to move the language stating that “There shall be no chronic toxicity in the effluent discharge” from the section on “Chronic Toxicity Trigger and Requirements,” to the “Effluent Limitations” section. Then the trigger language could be made a part of the “Compliance Determination” steps needed to confirm compliance with the narrative effluent limitation. This would be consistent with State Water Board WQ 2008-0008 at pages 6-7, which 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 Sanitation Districts’ 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 permit to bring it back to the originally proposed language.

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.” (USEPA 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”

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<sup>13</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>14</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.

(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 U.S.C. § 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 U.S.C. § 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 WQ 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>15</sup>; 40 C.F.R. §122.44(k)(3); *see also* State Board Order WQ 2006-0012, p. 16 ("programs of prohibitions, source control measures, and BMPs [Best Management Practices] constitute effluent limitations and can be written to achieve compliance with water quality standards.")

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

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

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<sup>15</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."

USEPA's Final 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 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 Final 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 U.S.C. § 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>16</sup> The ability to comply is a critical factor in

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<sup>16</sup> The State Board recognized the following in the June 10, 2003 draft of Long Beach/Los Coyotes Order No. 2003-0012 at page 10 (emphasis added):

determining the “feasibility” or “propriety” of numerical limitations. *City of Tracy v. SWRCB*, Statement of Decision at pg. 42. 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 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 C.F.R. § 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 Board Order Nos. WQO 2003-0012, WQO 2003-0013, WQ 2008-0008, and WQ 2012-0001. In the State Water Board Order No. 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 two previous Pomona WRP NPDES permits and the pre-public notice draft of the Pomona WRP permit were consistent with that binding precedent.

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

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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.

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% failures and have been shown to have up to 40% false failures (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. 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 16]. Even if there is only a 5% false failure level (as was statistically set for the TST but never verified through an actual study of known non-toxic samples), this suggests the likelihood of at least one numeric effluent limit “violation” in the five year permit term where monthly sampling is required, even though there is no actual toxicity for those incidents. This could constitute a violation that is subject to citizen suit enforcement.<sup>17</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.

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

Reanalysis of actual WET test data, from a wide variety of real-world samples, demonstrates that the TST technique consistently “detects” the existence of toxicity more frequently than the NOEC method, especially for tests with relatively small effect levels. See State Board, *Effluent, Stormwater and Ambient Toxicity Test Drive Analysis of the Test of Significant Toxicity (TST)* (Dec., 2011) (see e.g., Chronic Freshwater results in Table E-1) [Exhibit 17]. However, one should not assume that greater statistical *sensitivity* equates with improved *accuracy* in WET testing.

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<sup>17</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.

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 18] ) 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 permits with a numeric trigger for additional investigations (e.g., TIE/TRE). No authority exists for mandating numeric chronic toxicity effluent limitations and particularly not limits of "Pass", or "% effect <50" using a non-Part 136 promulgated method. Furthermore, as stated above, the inclusion of numeric chronic toxicity effluent limitations violates the current binding precedent from State Board Order Nos. WQO 2003-0012 and WQO 2003-0013, applicable to the Pomona WRP. Finally, since the TST test with a two concentration test design is not an approved Part 136 methodology (or a valid ATP), this method should not be utilized for compliance purposes unless promulgated as a formal rule by EPA.

## Attachment B

### Specific Citations from USEPA's Promulgated Freshwater Chronic Method Manual (EPA-821-R-02-013)

"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>7</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>8</sup>

"The concentration-response relationship generated for each multi-concentration test must be reviewed to ensure that calculated test results are interpreted appropriately"<sup>9</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>10</sup>

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<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. Section 2.2.3.

<sup>8</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>9</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>10</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.



## Attachment C

### Specific Citations from USEPA's TST Guidance Document (EPA-833-R-10-004)

"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>11</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 valid WET test results to assess whether the effluent discharge is toxic."<sup>12</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>13</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>14</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>15</sup>

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<sup>11</sup> U.S. EPA. National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document. EPA-833-R-10-004 (June, 2010) pg. ii on the Disclaimer.

<sup>12</sup> U.S. EPA. National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document. EPA-833-R-10-004 (June, 2010) pg. xi.

<sup>13</sup> U.S. EPA. National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document. EPA-833-R-10-004 (June, 2010) pg. 7.

<sup>14</sup> U.S. EPA. National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document. EPA-833-R-10-004 (June, 2010) pg. 60.

<sup>15</sup> U.S. EPA. National Pollutant Discharge Elimination System Test of Significant Toxicity Technical Document. EPA-833-R-10-004 (June, 2010) Appendix B, pg. B-3.



**Attachment D**

**General Technical Comments on the Pomona Tentative NPDES Permit**



Attachment D  
General Technical Comments on the Pomona WRP Tentative NPDES Permit

Page No.	Section	Draft Statement	Comment
1	Administrative Information	Order effective on "January 1, 2015"	Typo. Insert space so it reads "January 1, 2015"
5 - 7	IV.A.1.a	Table 4	In Table 4, Final Effluent Limitations, in the units column, the lbs/day footnote should be "2". Some lbs/day have a "1" footnote and some are blank.
7	IV.A.3.b	"The temperature of wastes discharged shall not exceed 86°F except when the ambient temperature of the receiving water is higher than 86°F, in which case the temperature of the waste discharged shall not exceed the ambient temperature of the receiving waters."	Change to "The temperature of wastes discharged shall not exceed 86°F except as a result of external ambient temperature." Language was mistakenly changed; should be changed to match page F-37 of the Fact Sheet. This is also consistent with the settlement agreement between the LA Regional Water Board and the City of Los Angeles and the City of Burbank regarding the permits for Tilman, LA-Glendale, and Burbank WRPs. This language was also added to the 2007 Long Beach and Los Coyotes WRPs' permits based on comments at a Public Hearing on September 6, 2007.
10	V.B	"The discharge shall not cause the underlying groundwater to be degraded, exceed WQOs, unreasonable affect beneficial uses, or cause a condition of pollution or nuisance."	State laws do not prevent any degradation of groundwater but rather only prevent degradation that is inconsistent with State Board Resolution No. 68-16. The language needs to be changed to reflect this. The suggested change is, "The discharge shall not cause the underlying groundwater to be degraded except as consistent with State Board Resolution No. 68-18, exceed WQOs, ....."
11	VI.A.2.1	"Oil or oily material...."	Delete this sub-section in its entirety because this requirement is already covered by the general permit for storm water discharges associated with industrial activities, where the Pomona WRP is enrolled under WDID No. 4191007152.
15	VI.C.1	Reopener provisions	The Pomona WRP discharges to receiving waters that have a GWR beneficial use, to protect the quality of underlying groundwater. The tentative permit contains Title 22-based effluent limitations as a result of the GWR use. These Title 22-based limits are applied as end-of-pipe limits, with no consideration of dilution or attenuation. State Board precedential order WQO 2003-0009 addressed this issue, stating that "Since groundwater recharge and use are long-term activities, the Regional Board could reasonably consider dilution and attenuation .... in developing effluent limits to protect the GWR use." Because we are currently in compliance with Title 22-based effluent limits, we have not developed detailed studies to request credit for dilution or attenuation. However, we would like to ensure that this option is appropriately preserved for the future. To that end, a reopener addressing dilution and attenuation was added to the Pomona WRP NPDES permit when it was reissued in 2009. The language in this reopener was carefully crafted with input from Regional Board members at the adoption hearing. However, it appears to have been inadvertently deleted from the current tentative permit. We request that this important reopener be reinstated. The language is as follows: <u>"Upon the request of the Discharger, the Regional Water Board will evaluate future studies conducted to evaluate the appropriateness of utilizing dilution credits and/or attenuation factors demonstrated to be appropriate and protective of the GWR beneficial use, on a pollutant-by-pollutant basis. Following this evaluation, this Order may be reopened to modify final effluent limitations, if at the conclusion of necessary studies conducted by the Discharger, the Regional Water Board determines that dilution credits, attenuation factors, or metal translators are warranted."</u>
20-21	Section VI.C.6.a.ii, Section VI.C.6.a.iii, and Section VI.C.6.c.i	References to California Emergency Management Agency (Cal EMA)	On July 1, 2013, Cal EMA changed its name to the California Office of Emergency Services (OES). References to Cal EMA should be changed to references to OES.

**Attachment D  
General Technical Comments on the Pomona WRP Tentative NPDES Permit**

Page No.	Section	Draft Statement	Comment
20	VI.C.6.a.iii(6)	"A certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over the affected water bodies have been notified of the discharge."	This language requiring a certification statement should be removed. Such a certification was required within 24 hours under the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (SSS WDR) amendments Order No. WQ 2008-002-EXEC, but was removed from the SSS WDR when it was updated and streamlined in 2013 per Order No. WQ 2013-0058-EXEC. No justification has been provided for inclusion of the certification requirement, and it is not clear how the Regional Board would use the information. Additionally, it is not clear under which circumstances such a certification would be required, since OES is not required to be notified of certain smaller spills, and since Regional Board notification is not required when the health department and OES have been notified. It is also not clear when the certification would have to be submitted. The SSS WDR required the notification within 24 hours, but no time frame is specified in the permit. Unnecessary notification requirements complicate spill response and should not be included in the permit.
21	VI.C.6.b.i	"The Permittee shall analyze the samples for total coliform, fecal coliform, E. coli (if fecal coliform is positive), enterococcus, and relevant pollutants of concern, upstream and downstream of the point of entry of the spill (if feasible, accessible, and safe)."	Analyses are shown as being required for total coliform, fecal coliform, AND E.coli (if fecal coliform is positive), enterococcus and relevant pollutants of concern. The current permit language says fecal coliform OR E.coli. Because fecal coliform is typically present in all receiving waters at detectable concentrations, this change would require us to run E. coli on all spills. Running both fecal coliform and E. coli tests would be redundant and would not provide any additional information. We therefore request that the Regional Board change the language back to the language in the previous permit, allowing analysis for fecal coliform OR E. coli.
E-2	I.A	"Quarterly effluent analyses shall be performed .....	Correct the 2nd, 3rd, and 4th sentences in this paragraph to be consistent with the previous permit. The corrected language should read: "Quarterly effluent analyses shall be performed during the months of February, <del>May</del> June, August, and December. Semiannual analyses shall be performed during the months of <del>February</del> June and <del>August</del> December. Annual analyses shall be performed during the month of <del>August</del> June (except for bioassessment monitoring, which will be conducted in the spring/summer)"
E-5 and 17	Table E-1	Monitoring Location Description for EFF-001: "The effluent sampling station shall be located downstream of any in plant return flows and after the final dechlorination process, where representative samples of the effluent can be obtained after the complete treatment train".	Collection of final effluent samples at a location consistent with this description presents several difficulties: (1) A Pomona WRP the effluent is dechlorinated at the weir so that the resulting turbulence aids in mixing and dechlorinating the water. The primary problem is that there is often only intermittent flow at the weir due to varying reuse rates. As a result, composite sample collection will be greatly hindered by the highly variable water levels at the weir. ISCO samplers can be setup but there is no guarantee that consistent volumes will be collected due to the effluent levels varying over a short period of time. The only way to get around this problem would be to duplicate sampling by setting up two ISCO samplers for both chlorinated and dechlorinated locations to ensure an adequate sample volume for at least one of the locations. (2) For volatile organics analysis (EPA 624) we collect the chlorinated samples and then quantitatively dechlorinate the samples in the field and then preserve with hydrochloric acid. If samples are collected after dechlorination the excess dechlorinating agent will react with the hydrochloric acid and a large amount of sulfur dioxide will be produced. This will cause matrix interference that can prevent the quantitation of chloromethane, a priority pollutant. When this occurs, no result can be reported. (3) In addition, since the final effluent goes over a weir, the turbulence will result in aeration of the effluent and may reduce the concentration of volatiles in the sample resulting in erroneous values. Attempting to collect dechlorinated samples will increase costs and provide less accurate results, while providing no water quality benefit. This provision is inconsistent with the Water Board's charge to foster and encourage the use of recycled water.
E-5	Table E-1	Effluent Monitoring Station Longitude EFF-001	Correct typo for the effluent monitoring station (EFF-001) longitude. It should be 117° 47' 44", not 117° 17' 44".

**Attachment D  
General Technical Comments on the Pomona WRP Tentative NPDES Permit**

Page No.	Section	Draft Statement	Comment
E-5	Table E-1	TMDL Dry- and Wet- Weather Flow Monitoring Station description	We request that a statement be added to the RSW-004D description saying, "RSW-004D gauging station is operated and maintained by the USGS." The purpose of this statement is to clarify that the Sanitation Districts are not responsible for the operation or maintenance of this station.
E-7	Table E-2 Influent Monitoring	Remaining EPA priority pollutants	The Remaining EPA priority pollutants excluding asbestos sample types should read "24-hour composite/grab for VOCs <sub>5</sub> and cyanide <del>Chromium VI</del> <del>Chromium III</del> ". Chromium VI and chromium III are not USEPA priority pollutants. The USEPA priority pollutant list only includes "Chromium", which refers to total chromium.
E-7	Footnote 5	"...and PCB as congeners shall be analyzed using method EPA 1668c."	This footnote refers to the "remaining USEPA priority pollutants", but lists test methods to be used for both PCBs as arachlors and PCBs as congeners. The USEPA priority pollutant list includes seven specific PCB arachlors, but it does not include PCB congeners. PCB arachlors are specific chemical mixtures of various PCBs congeners. EPA priority pollutant monitoring in the past has always been based on arachlors, to be consistent with the promulgated priority pollutant list. Therefore, PCB congener monitoring should not be required as part of the priority pollutant monitoring. Additionally, no justification has been provided for the increased monitoring costs that would be incurred by PCB congener monitoring. There are no PCB water quality impairments in the receiving waters downstream of the WRP. The cost for PCB congener sampling is \$875 per test; adding semiannual sampling for the influent, effluent, and three receiving water stations would impose an additional cost of \$8,750 per year for the Pomona WRP, with no water quality benefit. Reference to testing PCBs as congeners should be deleted from these footnotes.
E-8	Table E-3, in row "Total waste flow" and in footnote 6	"Total waste flow"	Please change as follows: "Total waste effluent flow"
E-8	Table E-3 Effluent Monitoring	Second and third turbidity rows in table (grab and 24-hour composite samples). Footnotes 9, 10, and 6.	The second and third turbidity rows (requirements to conduct daily grab and 24-hour composite turbidity samples) should be removed from the table. Footnotes 9 and 10 should then be added to the end of Footnote 6. The 24-hour composite and grab samples are not required under the current permit and should not be added. The turbidity 24-hour composite sample is collected voluntarily in lieu of flow-weighting turbidity recorder data. The option to not collect the sample but flow weight the data should be preserved, for the rare occasions when a composite sample cannot be collected. Grabs samples of turbidity are only collected on extremely rare occasions there is a plant upset causing high turbidity.
E-8	Table E-3, Footnote 12	Delete "during peak flow"	This requirement is not present in the current permit nor in other NPDES permits. It is impractical given inconsistent effluent flows, varying peak times, and limited staffing hours.
E-9	Table E-3 Effluent Monitoring	Total and fecal coliform Minimum sampling Frequency footnote	Footnote 13 is not applicable to total coliform or fecal coliform and thus should be deleted.
E-9	Table E-3, Effluent Monitoring	Total Coliforms MPN/100mL or CFU/100mL grab weekly Fecal Coliforms MPN/100mL or CFU/100mL grab weekly E. coli MPN/100mL or CFU/100mL grab weekly	We request that we be allowed to only analyze for fecal coliforms if total coliform testing is positive. A non-detect for total coliforms would result in a less than the reporting limit for fecal coliforms.
E-9	Table E-3 Effluent Monitoring	Total kjeldahl nitrogen (TKN) Parameter.	A footnote "15" should be added to the total kjeldahl nitrogen (TKN) Parameter.

Attachment D  
General Technical Comments on the Pomona WRP Tentative NPDES Permit

Page No.	Section	Draft Statement	Comment
E-9	Table E-3, Effluent Monitoring, Footnote 16	"If the result of the weekly BOD analysis yields a value greater than the 30-day average limit, the frequency of analysis shall be increased to daily within one week of knowledge of the test result for at least 30 days and until compliance with the 7-day and 30-day average BOD limits is demonstrated; after which the frequency shall revert to weekly."	This footnote needs to be updated as BOD limits are AMEL and AWEL now instead of 30-day and 7-day limits. The recommended language change is: "If the result of the weekly BOD analysis yields a value greater than the 30-day average limit, the frequency of analysis shall be increased to daily within one week of knowledge of the test result for at least 30 days and until compliance with the 7-day and 30-day average BOD limits is demonstrated; after which the frequency shall revert to weekly."
E-10	Table E-3, Effluent Monitoring	Surfactants footnote	A footnote "17" should be added to the Surfactants (CTAS) Parameter.
E-10	Table E-3, Effluent Monitoring	Cyanide sample type	The cyanide sample type should be changed to "grab".
E-10	Table E-3, Effluent Monitoring	Total trihalomethanes sample type	The total trihalomethanes sample type should be changed to "grab/calculated sum".
E-10	Table E-3, Effluent Monitoring	Dichlorobromomethane sample type	Sample type should be grab for dichlorobromomethane.
E-10	Table E-3; also page E-19 Table E-5a.	New monitoring requirement for PCBs as congeners, including a requirement to report the sum of the PCB congeners	Monitoring for PCBs in the past has been done semi-annually for the seven arachlors that are EPA priority pollutants. No justification has been provided for the increased monitoring costs that would be incurred by PCB congener monitoring. There are no PCB water quality impairments in the receiving waters downstream of the WRP. The cost for PCB congener sampling is \$875 per test; adding semiannual sampling for the influent, effluent, and three receiving water stations would impose an additional cost of \$8,750 per year for the Pomona WRP, with no water quality benefit. The requirement to monitor PCBs as congeners should be removed. If the requirement for PCB congener analysis is not deleted, we request that the requirement to report a sum of the congener concentrations be deleted, with reporting only required for the individual congeners. The sum of the PCB congeners cannot be reliably calculated and reported because of co-elution issues during gas chromatography (GC) analysis, where non-resolved congener compounds elute from the GC column at the same time.
E-11	Table E-3, Effluent Monitoring	Required Analytical Test Method footnote for 1,4-dioxane, 1,2,3-trichloropropane, and methyl tert-butyl-ether (MTBE)	The Required Analytical Test Method footnote for 1,4-dioxane, 1,2,3-trichloropropane, and methyl tert-butyl-ether (MTBE) should be changed from "24" to "26".
E-11	Table E-3, Effluent Monitoring, Footnote 25	"Chlorpyrifos and Diazinon may be analyzed using USEPA method 8141A."	We would like to request the option of analyzing for chlorpyrifos and diazinon by either EPA 8141A or EPA 525.2. We currently send the sample to APPL for EPA 8141A, but if we had to send it to another lab, they would have to use EPA 525.2 in order to report a comparable RL.
E-13	V.A.4	"If there is no discharge present, the effluent samples for the 3-species screening shall be collected from the offsite storage ponds near the effluent sampling point."	In the second sentence delete "from the offsite storage ponds" as this is not applicable to the Pomona WRP.

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Page No.	Section	Draft Statement	Comment
E-17	Table E-5a Receiving Water Monitoring Requirements	Total flow parameter	To be consistent with the previous permit, a footnote needs to be added to the Total Flow Parameter. It should read, "When conditions at receiving water stations RSW-001, RSW-002, and RSW-003 prevent accurate measurement of flow, the flow may be qualitatively estimated and reported." This will prevent us from receiving undue reporting violations when conditions beyond our control, such as too much flow to safely enter the channel, do not allow us to measure flow.
E-18	Table E-5a, and Footnote 31	Algal biomass parameter	Algal biomass monitoring is part of the Watershed-Wide Monitoring Program and has been eliminated from the Pomona WRP MRP in a letter from the Regional Board, dated September 25, 2006. Therefore, the Algal biomass row in its entirety should be removed from the table, and Footnote 31 deleted.
E-19-20	Table E-5a Receiving Water Monitoring Requirements	The Required Analytical Test Method footnotes for perchlorate, 1,2,3- trichloropropane, and methyl tert-butyl-ether (MTBE) should be changed from "33" to "35".	The Required Analytical Test Method footnotes for perchlorate, 1,2,3- trichloropropane, and methyl tert-butyl-ether (MTBE) should be changed from "33" to "35".
E-20	VIII.B.1	"The Discharger shall report the maximum daily flow at the San Gabriel River at USGS station 1108500 (RSW-004D)."	In the first sentence the gauging station number should be corrected from "1108500" to "11087020". This is a correction is consistent with table E-1 of the MRP and current monitoring requirements.
E-21	IX.A.3.a	"a. The bioassessment program shall include an analysis of the community structure of the instream macroinvertebrate and algal assemblages and physical habitat assessment at monitoring stations RSW-001D, RSW-002D, and RSW-003D."	Algal assemblages should not be analyzed as part of this monitoring program. There are no validated methods available for interpretation of algal taxonomy results. The Southern California Algal IBI is a water quality index and does not effectively correspond to biotic integrity at this time. In addition, the Southern California reference sites are primarily based on mountain streams. An index using such a reference site would be expected to greatly underestimate the biotic integrity in lower elevation streams (which are the types of streams within the Sanitation Districts' bioassessment program). Moreover, there are site-specific issues such as the frequent scraping of concrete lined channels, non-wadable stream reaches, lack of access to stream length, and lack of sampling sites bracketing Sanitation Districts' discharge outfalls. These site specific concerns all lead to an inadequate characterization of the biomass and algal assemblages for each specific site. Furthermore, there are only three algal taxonomy laboratories in the nation that are proficient in following SWAMP Quality Assurance and Quality Control standards. The labor costs are equal to \$170/sample and the identification cost for each sample is \$1094 making the total cost per sample \$1264. This would increase the cost of the Districts' bioassessment program for the Pomona WRP by an additional \$3,791 annually. This represents a cost increase with no apparent benefit. Algal identification is a tool which is better suited for regional monitoring programs in which random locations are sampled. The Sanitation Districts are currently contributing approximately \$430,000 per year to a regional monitoring program for the SGR; this program includes receiving water algal sampling. Note that when the regional monitoring program was established, one of the key changes was to move algal monitoring from the NPDES permits to the regional program. The following change is requested: "a. The bioassessment program shall include an analysis of the community structure of the instream macroinvertebrate <del>and</del> algal assemblages and physical habitat assessment at monitoring stations RSW-001D, RSW-002D, and RSW-003D."
E-23	Table E-6	Quarterly Monitoring Period Begins On...	Typo. Correct to "Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date"
E-23	Table E-6	Semiannual Monitoring Period Begins On...	Typo. Correct to Semiannual Monitoring Period Begins On "Closest of January 1, or July 1 following (or on) permit effective date"

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Page No.	Section	Draft Statement	Comment
E-25	Discharge Monitoring Reports (DMRs) X.C.1 to X.C.3.	Requirements relating to submittal of hard copy DMRs	Electronic submittal of DMRs took effect October 1, 2014. Therefore, hard copy DMRs will no longer be submitted.
E-25	Other Reports X.D.1	... "acute and chronic toxicity testing,"	Typo. Remove "acute and", as there is no acute toxicity testing requirements in the permit.
F-4	Facility Description, II.A.1.	Local Limits Evaluation Requirement: "However, a re-evaluation will be required following this NPDES permit renewal."	Page 19 of the tentative order Section VI.C.5.b.vi states that the local limits evaluation is to be submitted "based upon the schedule specified in the NPDES Permit issued to the JWPCP." Such report was submitted on 8/22/2012, and it included an analysis of whether local limits associated with the Pomona WRP needed to be changed. Due to the interconnectedness of the JOS, it is not practical to evaluate the need to revise local limits for individual treatment plants, rather such an evaluation is only appropriate on a system wide basis. We therefore request that the language relating to local limits be amended as follows: "However, a re-evaluation will be required following this NPDES permit renewal at the renewal of the NPDES permit issued to the Joint Water Pollution Control Plant (JWPCP)."
F-5	Facility Description, II.A.2.	"Treatment at the Pomona WRP consists of comminution, primary sedimentation, flow equalization, activated sludge treatment, secondary clarification, filtration, chlorination and dechlorination."	The Pomona WRP does not have comminution or flow equalization. It does include nitrification and denitrification. The first sentence should therefore be corrected as follows: "Treatment at the Pomona WRP consists of comminution, primary sedimentation, flow equalization, activated sludge treatment with nitrification and denitrification, secondary clarification, filtration, chlorination and dechlorination."
F-5	Facility Description, II.A.3.	"Sodium hypochlorite is used as a disinfectant in the Pomona WRP. The disinfecting agent is added to the treated effluent prior to the filters to destroy bacteria, pathogens and viruses, and to minimize algal growth in the filters. Additional disinfectant may be dosed prior to the serpentine chlorine contact chamber. Prior to discharge, sodium bisulfite is added to the treated effluent to remove residual chlorine."	This description is not fully accurate. More precise language would be: "Sodium hypochlorite is added to nitrified filtered secondary effluent to form chloramines by reacting with ammonia that is either already present or added to the effluent. The chloramines inactivate bacteria, pathogens, and viruses, and minimize THM formation. Prior to discharge, sodium bisulfite is added to the treated effluent to remove residual chlorine."
F-10	II.D.1	"Although chronic toxicity testing showed that the effluent exceeded the 1.0 TUc trigger in eight single tests, the monthly median trigger was only exceeded twice."	The 1.0 TUc trigger is a monthly median and therefore it is not appropriate to apply it to single toxicity tests. As such, it is incorrect to refer to a value above 1.0 TUc as an "exceedance" of the this trigger. Any reference to a single test trigger needs to be removed. Furthermore, the 1.0 TUc monthly median TUc trigger was only exceeded once during the previous permit cycle for the Pomona WRP, not twice, as is accurately indicated in the table on Fact Sheet Pages F-10 to F-11. Please change the wording as follows: "Although chronic toxicity testing showed that the effluent exceeded the 1.0 TUc trigger in eight single tests exhibited results greater than 1.0 TUc, the 1.0 TUc monthly median trigger was only exceeded once twice, as follows: ..."

Attachment D  
General Technical Comments on the Pomona WRP Tentative NPDES Permit

Page No.	Section	Draft Statement	Comment
F-10	II.D.1	"During 2009 and 2011, the Discharger was conducting the most sensitive species screening test..." and "On September 12, 2013, the Monthly median of 1.0 TUc was exceeded..."	These two paragraphs do not accurately portray the Sanitation Districts' compliance with toxicity provisions during the last NPDES permit cycle for the Pomona WRP. For example, during accelerated testing, toxicity in the final effluent was characterized as "persistent". However, only one of the first six accelerated toxicity tests exhibited a TUc of greater than one with only two out of ten accelerated tests overall exhibiting a TUc of greater than 1.0. The Sanitation Districts do not feel it is accurate to characterize the final effluent as consistently toxic when 80% of the accelerated tests were identified as "non-toxic". Furthermore, although a TRE was eventually triggered during the TRE, the TRE was similarly non-persistent resulting in no identification of a causative agent and eventual return to routine testing frequencies in the absence of observed toxicity. Therefore, to more accurately characterize the chronic toxicity results observed during the previous permit cycle, including results of the TRE analyses, we request that the following changes be incorporated into the Fact Sheet: "During 2009 and 2011, the Discharger was conducting the most sensitive species screening test, rather than the standard compliance determination testing. Therefore, those exceedances were not considered violations by the Discharger. During the single <del>the</del> monthly median trigger exceedance (September 12, 2013) instances in 2012, the Discharger conducted accelerated testing, and was able to get the monthly median to be 1.0 TUc. Therefore, a follow-up TRE did not need to be conducted. Also, because the monthly median was met, the single test exceedances were not considered violations. There was no observable pattern to the individual trigger exceedances. On September 12, 2013, the Monthly median of 1.0 TUc was exceeded. Therefore, the Permittee initiated six accelerated tests. This testing consisted of ten accelerated tests and continued until two of six accelerated tests exhibited a TUc of greater than 1.0 (occurring on January 14, 2014). Since toxicity was persistent in the effluent, during the accelerated testing the Permittee had to investigate what caused the 1 TUc trigger to be exceeded. The Permittee implemented the Toxicity Reduction Evaluation (TRE) Work Plan beginning in January 2014 and submitted the final TRE report to the Regional Water Board on July 23, 2014. However, the results of the TRE were inconclusive and toxicity was no longer observed in the final effluent the cause of toxicity could not be determined."
F-12	II.D.3 Spills	"The plant was temporarily shut down on 8/28/2013, 9/12/2013, 1/15/2014, 2/11/2014, and 4/10/2014 for maintenance purposes."	This sentence on plant shutdowns does not belong under spills and should be moved to a new section on plant shut downs or deleted.
F-14	Table F-3	San Jose Creek Reach 1, San Gabriel River Reach 3, San Gabriel River Reach 2, and San Gabriel River Reach 1 Beneficial Uses.	Add the footnote reference "2" after "MUN" (in 4 places)
F-19	III.E.6	"The accompanying Order fosters the implementation of this approach by protecting beneficial uses in the watershed and requiring the Discharger to participate with the Los Angeles and San Gabriel River Watershed Council, and other stakeholders, in the development and implementation of a watershed-wide monitoring program. The Monitoring and Reporting Program (Attachment E) requires the Discharger to undertake the responsibilities delineated under an approved watershed-wide monitoring plan in the implementation of the Watershed-wide Monitoring Program for the San Gabriel River, which was approved by the Regional Water Board on September 25, 2006."	The Los Angeles & San Gabriel Rivers Watershed Council is no longer conducting the watershed-wide monitoring program. Therefore, this language needs to be updated, as follows: "The accompanying Order fosters the implementation of this approach by protecting beneficial uses in the watershed and requiring the Discharger to participate with the Los Angeles and San Gabriel River Watershed Council, and other stakeholders, in the development and implementation of a watershed-wide monitoring program."

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Page No.	Section	Draft Statement	Comment
F-19	III.E.6	"The Los Angeles & San Gabriel Rivers Watershed Council is a nonprofit organization which is tracking activities throughout the Los Angeles and San Gabriel River watersheds. Its goal is to help facilitate a process to preserve, restore, and enhance all aspects of both watersheds."	The Los Angeles & San Gabriel Rivers Watershed Council is no longer conducting the watershed-wide monitoring program. Therefore, this language needs to be deleted.
F-21	Table F-5	TSS/ units, "lbs/day"	Typo. The footnote reference after the TSS lbs/day should be "4".
F-35	IV.C.2.b.xi.(1)	"The 7-day median number of total coliform bacteria at some point at the end of the UV channel..."	Revise as follows, since the Pomona WRP does not have a UV system: "The 7-day median number of total coliform bacteria at some point in the treatment process at the end of the UV channel, during normal operation of the UV channel, and at the end of the chlorine contact chamber, when backup method is used, must not exceed a Most Probable Number (MPN) or Colony Forming Unit (CFU) of 2.2 per 100 milliliters."
F-36	IV.C.2.b.xi.(1)	"No sample shall exceed an MPN of CFU of 240 total coliform bacteria per 100 milliliters."	Typo. Revise the third bullet as follows, "No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters."
F-38	IV.C.2.b.xiv.	"Chapter 4.4 of the CWC contains a similar prohibition under section 13375, which reads as follows:..."	Typo. Revise the fourth sentence as follows, "Chapter 5.4-4 of the CWC contains a similar prohibition under section 13375, which reads as follows:..."
F-43-44	IV.C.4.b	In the last sentence of the first and second paragraphs the gauging station numbers should be corrected from "1108500" to "11087020".	This is a correction is consistent with table E-1 of the MRP and current monitoring requirements.
F-51-52	Table F-10	Mass emission units, "lb/day"	Typo. The footnote associated with "lbs/day" should be Footnote 16 for all entries in the table.
F-51	Table F-10, Footnote 16	"The mass emission rates..."	Add the following sentence to the end of the footnote, "During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations." This is standard language, typical of this footnote in other sections of the permit, which appears to have been inadvertently left out here.
F-52	Table F-10	The boron average monthly mass emission effluent limit	Typo. Should be changed from "23,000" to "125".
F-57-59	Table F-11	Units for Ammonia Nitrogen (ELS Absent)	Inadvertently left blank; should be "mg/L" and "lbs/day".
F-58	Table F-11	"Monitoring Frequency (2003 Permit)"	Typo. Should be compared to the 2009 permit not the 2003 permit. The information provided in the comparison column most closely correlates with the 2009 permit.
F-59	Table F-11	Oil and grease monitoring frequency for the 2009 permit	Should be "quarterly" instead of "monthly".
F-59	Table F-11	The monitoring frequencies listed under the 2014 permit for parameters 4,4'- DDE, 4,4'- DDD, Aldrin, Dieldrin, Endrin, Heptachlor epoxide, PCBs and all species of the Arochlors of "quarterly" or "semiannually"	Should be "no change".
F-59	Table F-11	The chlorpyrifos and diazinon monitoring frequencies for the 2009 and 2014 permit, "not monitored" and "quarterly", respectively	Should be "semiannually" for the 2009 permit and "annually" for the 2014 permit.

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General Technical Comments on the Pomona WRP Tentative NPDES Permit

Page No.	Section	Draft Statement	Comment
H-3	Section B	<p>"B. LOCAL LIMITS EVALUATION</p> <p>I. In accordance with 40 CFR part 122.44(j)(2)(ii), the POTW shall provide a written technical evaluation of the need to revise local limits under 40 CFR part 403.5(c)(1) within 180 days of issuance or reissuance of the NPDES permit."</p>	<p>Page 19 of the tentative order Section VI.C.5.b.vi states that the local limits evaluation is to be submitted "based upon the schedule specified in the NPDES Permit issued to the JWPCP." Such report was submitted on 8/22/2012, and it included an analysis of whether local limits associated with the Pomona WRP needed to be changed. Due to the interconnectedness of the JOS, it is not practical to evaluate the need to revise local limits for individual treatment plants, rather such an evaluation is only appropriate on a system wide basis. We therefore request that the Local Limits Evaluation section in Attachment H be amended as follows: "In accordance with 40 CFR part 122.44(j)(2)(ii), the POTW shall provide a written technical evaluation of the need to revise local limits under 40 CFR part 403.5(c)(1) within 180 days of issuance or reissuance of the JWPCP NPDES permit."</p>



**Attachment E**

**Sanitation Districts' Standard Protocol for Sample Collection Methods for Acute and Chronic  
Bioassay Testing**



# SJC WATER QUALITY LABORATORY

## METHOD APPROVAL FORM

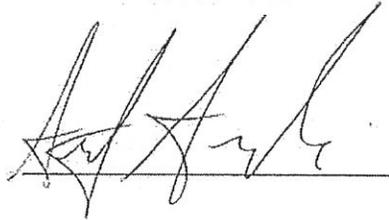
*Method Number* N/A  
*Method Name* Sample Collection Methods for Acute and Chronic Bioassay Testing  
*Version* 14.1.0  
*Date* February 20, 2014  
*Reasons for Method Revision* Annual Review

### SIGNATURE

### DATE

*Revisions by:*

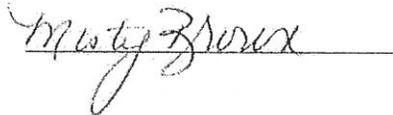
Stefan Szalkowski  
Laboratory Technician I  
SJCWQL-Biology



05/05/14

*Written by:*

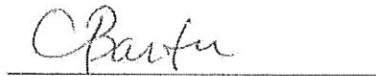
Misty Brown  
Senior Biologist  
SJCWQL Biology



5/05/14

*Approved by:*

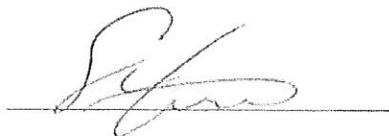
Carlita Barton  
Supervising Biologist  
SJCWQL Biology



5/14/14

*Final Approval:*

Shawn Thompson  
Laboratory Supervisor  
Biological Sciences  
SJCWQL



5/14/14

## INTRODUCTION

The Biology Department of the San Jose Creek Laboratory is responsible for collecting effluent samples from the San Jose Creek, Pomona, Whittier Narrows, Los Coyotes, Long Beach, Saugus, Valencia, Lancaster and JWPCP Water Reclamation Plants, as well as from receiving waters at monitoring stations along the San Gabriel River, Coyote Creek, San Jose Creek, Rio Hondo River, Santa Clara River, and Lancaster holding ponds for use in bioassay testing. At the time of sample collection, physical and chemical analyses are also conducted. Samples collected for bioassays are transported back to the laboratory in an appropriate manner to accurately represent the integrity of the effluent and receiving water. The sample is meant to represent the effluent or receiving water as a whole.

## 1 Scope and Application

- 1.1 Effluent, receiving water, and dilution water samples are collected for use in chronic, acute, and toxicity reduction/identification evaluation (TRE/TIE) bioassays and organism culturing.
- 1.2 Collection of receiving water samples also includes various physical observations and chemical analyses to be taken at the time of sampling.

## 2 Summary of Procedure

- 2.1 Obtain sampling equipment based on sampling needs (refer to Sections 5 & 6).
- 2.2 Obtain appropriate sample containers from the Sample Receiving Section of SJCWQL or storage shed.
- 2.3 Samples are collected at water reclamation plants or receiving water sites. Some samples may require chemical preservation (refer to section 7.6).
- 2.4 Samples must be checked for residual chlorine after collection. If chlorine is present, samples must be quantified immediately following collection. Total residual chlorine concentration and time of analysis will be documented on the chain of custody (COC).
- 2.5 Samples are preserved on ice and transported back to the laboratory for analysis.

## 3 Handling & Preservation

- 3.1 Latex gloves must be worn when working with acids. Some samples require chemical preservation. Samples are acidified at a ratio of 5 ml of acid per liter of sample (i.e. ammonia samples are preserved with 1.25 ml  $H_2SO_4$  for a 250 ml sample and hardness samples are preserved with 1.25 ml  $HNO_3$  for a 250 ml sample).
- 3.2 All samples and subsamples are placed in coolers containing ice slurry. Upon returning to SJCWQL, temperatures should not exceed 6.0°C for all samples stored longer than one hour.
- 3.3 Upon return to the SJCWQL, samples are stored in a 4.0°C cooler until they are ready for use.

## 4 Interferences

- 4.1 Unsafe conditions may result in the cancellation of sample collection.
- 4.2 Receiving water samples are not collected until 48 hours after a rain event, which is intended to minimize influence from runoff sources. If storm runoff is present, sampling is not conducted.
- 4.3 Used or tampered containers may result in contamination of a sample.

## 5 Apparatus & Equipment

5.1 Obtain the following equipment and supplies as necessary for the receiving water location or WRP to be sampled (refer to Appendix 2 in the *River Monitoring Methods and Procedures* SOP for the sampling checklist):

- 5.1.1 Fultz pump and hose reel (pump head, batteries, connector hose)
- 5.1.2 Stainless steel bucket
- 5.1.3 Safety Vest
- 5.1.4 Hard hat
- 5.1.5 Rope
- 5.1.6 60- $\mu$ m filter funnel (For marine dilution water sampling)
- 5.1.7 Digital thermometer
- 5.1.8 Phone
- 5.1.9 Coolers with ice/water slurry
- 5.1.10 Safety glasses
- 5.1.11 Waders (Refer to SOP on *Treatment Methods to Prevent the Spread of Aquatic Invasive Species*)
- 5.1.12 Compass
- 5.1.13 Boat, oars, flotation vest, safety line, and anchor (Refer to SOP on *Safety/Maintenance Manual for Field Sampling Boat*)
- 5.1.14 Boat pump
- 5.1.15 Funnel
- 5.1.16 Gate keys
- 5.1.17 Newhall Permit
- 5.1.18 Digital camera
- 5.1.19 Cell phone
- 5.1.20 SIGMA sampler (for WRP diazinon samples)
- 5.1.21 GPS
- 5.1.22 Remote gate opener (for Saugus WRP gate)
- 5.1.23 Safety cones

## 6 Reagents & Consumable Materials

### 6.1 Sample containers

#### 6.1.1 Receiving water samples

- 6.1.1.1 250 ml plastic container for AOK-Nitrogen
- 6.1.1.2 500 ml plastic container for Wet Chem
- 6.1.1.3 250 ml plastic container for Hardness
- 6.1.1.4 4 L cubitainers for sample collection (refer to monthly sampling schedule to determine sample volume)
- 6.1.1.5 1 L glass amber bottle for diazinon/chlorpyrifos

- 6.1.2 Effluent samples
  - 6.1.2.1 500 ml plastic container for Wet Chem
  - 6.1.2.2 250 ml plastic container for Hardness
  - 6.1.2.3 250 ml plastic container for AOK-Nitrogen (only collected for Lancaster and JWPCP – acute and chronic samples)
- 6.2 Data sheets (refer to Appendix 2)
  - 6.2.1 Chain of Custody (COC)
  - 6.2.2 Sample Log-in form (for receiving water locations & SJ-C/E/W WRP bioassay samples)
  - 6.2.3 Ambient Observation sheet for receiving water locations
- 6.3 Labels
- 6.4 1:1 Sulfuric acid vials
- 6.5 1:1 Nitric acid vials
- 6.6 Chlorine residual kit (sodium acetate pH 4 buffer, starch, potassium iodide)
- 6.7 Pens/Markers (waterproof)
- 6.8 Disposable latex gloves

## 7 Sampling Procedure

7.1 Label all containers, with a minimum of sample location, date and time of collection, sample type (grab or composite), initials of the sampler(s), sample preservation method (if applicable), and put LIMS labels on the bottles. Print out LIMS paperwork to accompany samples for login.

### 7.1.1 Printing labels

7.1.1.1 Labels are generated using LIMS for all receiving waters. To generate labels, log into LIMS and select *Samples*→*Labels*. Close “Advanced Find” and “Labels” windows and then click “Auto Create” on the right hand side of the menu button bar.

7.1.1.2 Select **Pre-Login** and enter your Biology profile number (Refer to “Biology Group LIMS Profiles” form in Appendix 3). Enter in your scheduled collect date in the “Sch Collected Date From” and “To” fields. Make sure “Labels for Each Container” is selected and that the printer number is referenced to Biology’s label maker (230). Press “OK.”

7.1.1.3 Click “Print” to print the labels.

### 7.1.2 Printing paperwork

- 7.1.2.1 To print out required paperwork for receiving water locations and river runs from LIMS: select **Systems**; select **Run Reports**; enter "Login Form (Condensed)" (or use "list of values" button) into the field and click "OK"; enter the collect date and Biology profile number (Refer to "Biology Group LIMS Profiles" form in Appendix 3) into the Parameters tab of the new window. Set "Group by Collect Time" to "True" and click submit. Download and print the required login forms. Refer to section 7.7.4 for details. Refer to Appendix 2 for examples of WRP and receiving water login sheets.
- 7.1.2.2 The TPL staff will create the LIMS COC/login forms and print the labels (for the sample bottles and cubitainers) for all plant effluent bioassay samples. The LIMS labels for the plant samples should be zip tied to the top of the cubitainers. Biology will provide the bottles for the water chemistry samples.
- 7.1.2.2.1 SJCWRP is an exception in regards to paperwork. Biology staff will print the login/COC form for SJC-East and SJC-West WRP effluent samples. This should be done prior to the day of sample collection. The SJC TPL staff **ONLY** prints out LIMS labels for sample bottles and cubitainers. Refer to Appendix 2 for an example.
- 7.2 Use clean, non-contaminated waders for each sample event to eliminate the possibility of transferring the non-native, invasive New Zealand mud snail. Only one pair of waders can be exposed to a river system. For example, waders used in San Jose Creek cannot be worn again to sample in the San Gabriel River. After each outing, rinse debris off of the waders and place in the -25°C freezer that is located to the left of the bottle barn or leave out for 48 hours before re-use. Refer to the *Treatment Methods to Prevent the Spread of Aquatic Invasive Species SOP*.
- 7.3 Collect the sample using the appropriate sampling method.
- 7.3.1 Grab: Receiving water samples are collected using one of the following grab techniques. Note: Grab sampling time should not exceed 20 minutes from start to finish.
- 7.3.1.1 Immersion grab: Facing upstream, immerse suitable container in receiving water and lift out when filled.
- 7.3.1.2 Field submersible sampling pump: Completely submerge pump head into sample water and purge sampler tubing for approximately one minute or until the sampler has been sufficiently purged of the previous sample prior to sample collection.

7.3.1.3 Stainless steel bucket: Rinse bucket at least three times prior to filling bucket with sample. Face upstream and partially immerse the bucket in the stream and lift out when filled. Pour sample in container.

7.3.2 Composite (TPL): All effluent chronic toxicity test samples are flow proportioned, composite samples. Three samples are usually collected during a testing period. Samples are pulled by Treatment Plant Laboratory (TPL) personnel.

7.3.2.1 Once composite samples are collected, residual chlorine is measured immediately after collection, laboratory personnel dechlorinate the samples, and then they are stored in a lab refrigerator or cooler with ice. A qualitative chlorine residual test is conducted in the biology lab prior to being used in a bioassay to verify that the samples were dechlorinated (refer to Section 7.7.2.1).

7.3.2.2 JWPCP composite samples are collected by the JWPCP Process Control Laboratory. Residual chlorine is measured immediately after collection, but JWPCP laboratory personnel do not dechlorinate the samples. Samples are dechlorinated upon return to the SJC biology laboratory prior to being used in a bioassay (refer to Section 7.7.2.2 for dechlorination procedures).

7.3.2.2.1 If samples are being collected for West Basin, the samples must be dechlorinated at JWPCP by biology personnel prior to relinquishing the samples to West Basin staff.

7.3.2.2.1.1 The following list includes equipment and reagents samplers should take for dechlorination of West Basin samples at JWPCP.

7.3.2.2.1.1.1 Stir-plate

7.3.2.2.1.1.2 Stir-bars

7.3.2.2.1.1.3 250 ml glass beaker

7.3.2.2.1.1.4 Chlorine kit (includes sodium acetate pH 4 buffer, potassium iodide, and starch indicator solution)

7.3.2.2.1.1.5 1 ml class A graduated volumetric pipette

7.3.2.2.1.1.6 10 ml plastic pipette

7.3.2.2.1.1.7 Bulb

7.3.2.2.1.1.8 10 ml plastic graduated cylinder

7.3.2.2.1.1.9 Sodium sulfite reagent

7.3.2.2.1.1.10 100 ml polypropylene graduated beakers

7.3.2.2.1.1.11 Calculator

7.3.3 Composite (Biology): Sigma samplers are used to collect diazinon and chlorpyrifos samples at Pomona WRP (refer to Section 6.3 of the Hach Sigma Sample SD900 Operation and Maintenance SOP).

7.4 Collect the appropriate sample volume based on test type and species.

7.4.1 Acute Bioassay Testing (test code, test description, and total volume)

7.4.1.1 B02 - 1985 Fathead Acute % Survival

7.4.1.1.1 20 L sample

7.4.1.2 B18 - 2002 Fathead Minnow Acute

7.4.1.2.1 4 L sample

7.4.1.3 B19 - 2002 *Menidia* Acute

7.4.1.3.1 4 L sample

7.4.1.4 B22 - Topsmelt Acute

7.4.1.4.1 4 L sample

7.4.2 Chronic Bioassay Testing (test code, test description, and sample volume)

7.4.2.1 B04 - B05: *Pimephales* Chronic Survival & Growth

7.4.2.1.1 NPDES compliance bioassays

7.4.2.1.1.1 27 L in three samples (8 L, 8 L, 11 L)

7.4.2.1.2 NPDES non-compliance bioassays

7.4.2.1.2.1 12 L in three samples (4L, 4L, 4L)

7.4.2.2 B06 - B07: *Ceriodaphnia* Chronic Survival & Reproduction

7.4.2.2.1 NPDES compliance bioassays

7.4.2.2.1.1 18 L in 3 samples (5 L, 5 L, 8 L)

7.4.2.2.2 NPDES non-compliance bioassays

7.4.2.2.2.1 12 L in 3 samples (4L, 4L, 4L)

7.4.2.3 B08 - *Psuedokirchneriella* Chronic Growth

7.4.2.3.1 4 L sample

7.4.2.4 B09 - B10: Kelp Chronic Germination & Growth

7.4.2.4.1 4 L sample

7.4.2.5 B11 - *Americamysis* Chronic Survival & Growth

7.4.2.5.1 32 L in three samples (9L, 14L, 9L)

7.4.2.6 B14 - *Menidia* Chronic Survival & Growth

7.4.2.6.1 53 L in three samples (15L, 23L, 15L)

7.4.2.7 B20 - Topsmelt Chronic Survival & Growth

7.4.2.7.1 16 L sample in three samples (4L, 4L, 4L)

7.4.2.8 B23 - Purple Urchin Fertilization

7.4.2.8.1 1 L sample

7.4.3 Marine Dilution Water

7.4.3.1 Collect the required sample volume at the pier of Scripps Institute of Oceanography in San Diego, CA. Refer to section 2.4.1 in Appendix 1.

7.4.3.1.1 Filter seawater using 60- $\mu$ m filter funnel before collecting in carboys.

7.5 Make on-site observations and readings as necessary.

7.5.1 Take the temperature of the sample and fill out the top portion of the chain of custody (COC, see Appendix 2).

7.5.2 Effluent and receiving water grab samples must be tested qualitatively for residual chlorine immediately upon collection.

7.5.2.1 A chlorine residual is performed on a 100 ml subsample of receiving water. In an Erlenmeyer flask containing the 100 ml subsample, add approximately 4 ml of sodium acetate pH 4 buffer to flask. Next, add approximately 1 g of potassium iodide crystals and mix. Add approximately 1 ml of starch. If the sample turns a blue color, chlorine is present. Be sure to collect the receiving water sample in a stainless steel bucket so that if chlorine is present, the remaining volume (in the bucket) can be submitted for quantification.

7.5.2.2 If chlorine is present, the residual chlorine of the sample should be quantified immediately. Pour a sub-sample (250 ml minimum) from the sampling bucket and take it to the nearest treatment plant laboratory (TPL) for quantification. Quantification of chlorine should be done according to Test 302 in the Laboratory Procedures Manual and ideally performed within 20 minutes of the chlorine detection.

7.5.2.3 Call Misty Brown (x3035) or Carlita Barton (x3093) before leaving the sampling location to inform them of the situation. Notify the Supervisor of Treatment Plant Operations for the appropriate plant. Upon returning to SJCWQL, an e-mail memo of the violation must be written which should include the time, date, and location of the violation, any significant observations, and residual chlorine values determined at the TPL, along with any other chlorine data taken from other location(s). The memo must be addressed to Misty Brown and Carlita Barton.

7.5.3 Record field observations for all receiving water samples using the "Ambient Station Observation Sheet" (refer to Appendix 2). Each form may be used for up to three sampling events for the same test.

7.6 Collect sub-samples for chemical analysis.

7.6.1 Collect a 500-ml "Wet Chem" sample in a plastic bottle for WRP

composites and freshwater receiving water stations. Do not submit a "Wet Chem" sample for JWPCP (acute and chronic) or for marine receiving water samples. Samples are submitted for conductivity and alkalinity analyses. This sample does not require preservation.

- 7.6.2 Collect a 250 ml "Hardness" sample in a plastic bottle for WRP composites and freshwater receiving water stations. Do not submit a "Hardness" sample for JWPCP (acute and chronic) or marine receiving water samples. This sample is preserved by adding approximately 1.25 ml (1/4 of a vial) of nitric acid to 250 ml of sample.
- 7.6.3 Collect a 250 ml ammonia sample in a plastic bottle for JWPCP (acute and chronic), Lancaster (receiving water and effluent), and for the 100-foot ammonia compliance locations under the LB, LC, WN, and SJC permits (acute and chronic). Preserve sample by adding 1.25 ml of sulfuric acid (1/4 of a vial).

7.6.3.1 The ammonia samples that are collected at the 100-foot ammonia compliance locations (i.e. LB-RA1B, LC-R31B, SJC-R2, SJC-C2, SJC-R11, SJC-R12, WN-RAB, WN-RBB, and WN-RDB) are not logged in. Use the generic ammonia label or write the sample information on the bottle. pH and temperature are also taken at these locations. Record the data in the blue folder located in each vehicle. Do not obtain LIMS ID numbers for these analyses.

7.6.3.2 These samples are only logged in if toxicity is present. A biologist will inform staff if these samples need to be logged in after test termination.

- 7.6.4 Diazinon/chlorpyrifos must be sampled concurrently with bioassay samples. Collect a 1 L sample in an amber glass bottle as scheduled. The sample must be collected using a sterile sampling technique. Collect the sample directly from the water source (do not use a bucket or secondary container). Refer to Appendix 3 for details.

## 7.7 Sample processing upon arrival to SJCWQL.

7.7.1 Remove samples from the cooler, measure the temperature of the sample, and record it, along with the received time, on the chain of custody (COC) sheet in the "Received By" section.

7.7.2 For all WRP samples (or any samples that were not previously checked by biology staff for the presence of chlorine), check for the presence of chlorine.

7.7.2.1 When checking for chlorine, each sample container (i.e. each cubitaner, bottle, drum, etc.) should be checked separately.

- 7.7.2.1.1 In a 100 ml polypropylene graduated beaker, pour off a subsample of 100 ml from the sample, and using a water bath, adjust the temperature to 20±2°C.
- 7.7.2.1.2 Place a stir-bar into the beaker, and add approximately 4 ml of sodium acetate pH 4 buffer to the subsample.
- 7.7.2.1.3 Place the beaker on a stir-plate, and while the subsample is mixing, add approximately 1 g of potassium iodide crystals; an initial indication of chlorine will be shown by an immediate color change to a bright yellow hue.
- 7.7.2.1.4 Next, add approximately 1 ml of starch indicator solution. If the subsample presents a color change to a blue hue, chlorine is present (refer to Section 7.7.2.2 for dechlorination procedures). If chlorine is not present, enter or circle "<0.05 mg/L chlorine" in the provided space on the COC. Label the sample container "<0.05 mg/L Cl<sub>2</sub>" and include tester's initials.

#### 7.7.2.2 Dechlorination

- 7.7.2.2.1 Using a 250 ml glass beaker, make a sodium sulfite solution by mixing approximately 200 ml of DI water with approximately 1 g of sodium sulfite (record preparation information in the Reagent Preparation binder).
- 7.7.2.2.2 After the sodium sulfite has completely dissolved, using a 1.0 ml class A graduated volumetric pipette, slowly titrate the sodium sulfite solution into the chlorinated subsample until the blue hue of the subsample has disappeared; record the volume that was titrated into the subsample.
- 7.7.2.2.3 To calculate the amount of sodium sulfite solution needed to dechlorinate a sample, add an additional 10% of sodium sulfite (100% of sodium sulfite solution needed to dechlorinate + 10% additional amount=1.1):

$$\text{Sodium sulfite solution needed in ml} = \frac{(\text{Titrated volume in ml})(\text{Sample Volume in ml})(1.1)}{\text{Volume of subsample in ml}}$$

- 7.7.2.2.4 Add the calculated amount of sodium sulfite solution to the sample and mix. Repeat Section 7.7.2.1 to make sure the sample has been dechlorinated.
- 7.7.2.2.5 In the "Notes" section of the COC, indicate that the sample was dechlorinated by SJC Biology staff, and include the date and time of dechlorination, as well as the tester's initials.

#### 7.7.3 Receive the WRP samples in LIMS the same day as collection.

- 7.7.3.1 Log into LIMS and select *Batching* → *New Batch* from the menu bar.
  - 7.7.3.2 Use the queue "RECI" (lower-case "L") to receive the cubitainers. Type this in the "queue" field in the Advanced Find window.
  - 7.7.3.3 Click Ok, then double-click on the "RECI" that will show up on the New Batch window.
  - 7.7.3.4 Un-check any samples you don't wish to receive and click "Build Batch."
  - 7.7.3.5 Save your batch, then select *Operations* → *Posting* → *By Batch* from the menu bar.
  - 7.7.3.6 In the "Run Date" field, type in the same date/time that you entered on the Time of Receipt part of the Bioassay COC.
  - 7.7.3.7 Save your changes and then close all windows. The samples are received.
- 7.7.4 Submit the completed log-in sheet and any chemical samples to Sample Receiving where a LIMS ID number will be assigned for receiving water samples. The samples are "received" by Sample Receiving. The plant samples will also be submitted to Sample Receiving but a LIMS ID number is not obtained; the sample should already have a LIMS ID obtained by the TPL. For SJC-West and SJC-East WRP samples, the LIMS ID numbers must be handwritten on the sample log-in sheets prior to submission. The LIMS ID numbers are located on the labels provided by SJCWRP laboratory staff. Note: for the initial sample, the LIMS ID number for the water chemistry will be different from the LIMS ID number for the bioassay sample.
- 7.7.4.1 If it is not possible to collect a sample at a receiving water station indicate why a sample was not collected in the notes section of the sample log-in sheet. If the site is dry, for example, enter "No water present; Dry" on the observation sheet and the LIMS paperwork. There are five notes with codes that are used in the case that a sample is not collected at a receiving water station. These notes with codes will be reflected on the LIMS paperwork. These are the five notes with codes: "No discharge present (NSC)", "No water present; dry (NSD)", "No upstream flow (NSU)", "Insufficient flow; water level: <3 inches (NSF)", "Site inaccessible (NSI)", and rain (NSR). Notify Misty immediately of sites that are not sampled so that she can cancel the record.
  - 7.7.4.2 Place the log-in form in the "To be checked" folder which will then be put with the corresponding bioassay paperwork.
- 7.7.5 Complete the "Chain of Custody" (COC) form.

### 7.7.5.1 Samples for in-house testing

- 7.7.5.1.1 On the in-house COC, fill out test requirement, sample collection site, corresponding NPDES permit, and laboratory responsible for sampling.
- 7.7.5.1.2 Check or write the appropriate bioassay(s) being performed with the sample.
- 7.7.5.1.3 Record the sample container information. Descriptions should read exactly how the sample container is labeled.
- 7.7.5.1.4 Document sampler's name and obtain signature of sampler, date and time sample was received, chlorine residual value and temperature of sample.
- 7.7.5.1.5 Fill out the "RECEIVED BY" section upon arrival at the laboratory.
- 7.7.5.1.6 Circle the appropriate destination of the sample.
- 7.7.5.1.7 Record any notes regarding the sample, including if SJC Biology dechlorinated the sample.
- 7.7.5.1.8 Place the COC in the "To be Checked" folder so that they can be reviewed. Once reviewed they are photocopied and the copies are placed in a storage box. The copies of COCs are held for approximately three months or until pertinent bioassay reports have been completed and we can be certain the original COC has not been misplaced.
- 7.7.5.1.9 The original COC can be placed with the corresponding bioassay paperwork.
- 7.7.5.1.10 If any information is missing on the COC for a plant sample, a report can be run in LIMS.
  - 7.7.5.1.10.1 Log-in to LIMS and select "Systems" → "Run Reports"
    - 7.7.5.1.10.1.1 Type in or select "Bioassay Sample Report" from the drop down menu.
    - 7.7.5.1.10.1.2 Enter in the valid Lab ID number and press "Select".

### 7.7.5.2 Samples being shipped to a contract laboratory

- 7.7.5.2.1 Complete the COC as you normally would but rather than filling out the "received by" section you must fill out the "relinquished by" section. If the sample is to be picked up or shipped out to a contract laboratory, the representative must fill out the "received by" section. A copy of the COC is held at the SJC Biology Laboratory.

7.7.5.2.1.1 For a sample being shipped out, a “shipping batch” needs to be built for SJC-E WRP, SJC-W WRP, and receiving water bioassay samples. All other WRP samples do not require the steps listed below; signing the COC is the only record of transfer to SJC Biology staff.

7.7.5.2.1.1.1 Select **Batching**→**New Batch** from the menu bar.

7.7.5.2.1.1.2 Type in the queue as “SHPa” and click “OK.”

7.7.5.2.1.1.3 Double-click on the appropriate shipping description (ex. “Ship to Aquatic Testing Laboratory”, etc.). Select the samples to be transferred and click “Build Batch.”

7.7.5.2.1.1.4 “Save” your batch and click “Yes” in the next window to take custody of the containers.

7.7.5.2.1.1.5 The “Transfer Containers” window will open. In the “reason” field use the “List of Values” to select the appropriate shipping reason (ex. “Ship to Subcon Aquatic Testing Lab”)

7.7.5.2.1.1.6 Save the transfer and close the pop-up report and “Output Containers” window.

7.7.5.2.1.1.7 Select **Operations**→**Posting**→**By Batch**.

7.7.5.2.1.1.7.1 In the Run Date field, type in the current time and date. Save your changes and close all windows. Samples are now shipped.

7.7.6 Deliver sample to proper location.

7.7.6.1 All samples to be used for in-house testing are stored in a 4°C cooler until they are needed for test initiation or renewal.

7.7.6.2 All samples that are to be shipped to a contract laboratory are shipped via FedEx or Golden State Overnight (GSO).

7.7.6.2.1 Line cooler with two plastic bags, add ice to the inner bag, and place samples into ice.

7.7.6.2.2 Knot and zip tie both bags, separately, to reduce water leakage.

- 7.7.6.2.3 After making a photocopy for our records, place the COC and LIMS COC in the plastic envelope on the inside lid of the cooler.
- 7.7.6.2.4 Tape ice chest shut with duct tape.
- 7.7.6.2.5 Prepare a shipping label from the Internet. Make sure the sample is set up for Priority Overnight shipping. Refer to FedEx or GSO shipping instructions for details.
- 7.7.6.2.6 Place the cooler(s) in the area designated for pick-up located at the stockroom's loading dock.

## 8 Quality Control

- 8.1 All effluent and receiving water samples collected require a chain of custody to track the samples used during each test. Receiving water samples also require an observation sheet, "Ambient Station Observation Sheet" (refer to Appendix 2), to document the current conditions at the time of sample collection.
- 8.2 All samples are checked when they are relinquished to ensure that they meet the temperature requirements and are in the same condition as they were upon sample collection.

## 9 Method Performance

- 9.1 The sampling equipment (e.g. bucket, pump, etc.) must be thoroughly rinsed with receiving water before the sample is collected to avoid contamination between receiving water samples.
- 9.2 Sample containers must be new and clean to avoid contamination.
- 9.3 All samples collected from TPLs must have an initial receiving temperature of  $<6.0$  °C, inform the TPL staff if temperature is above 6.0 °C and call Misty Brown or Carlita Barton to determine if the sample should be collected.
- 9.4 All samples must be transported to the SJCWQL in an ice slurry, and upon arrival, samples should be  $<6.0$ °C unless they have been on ice for a short period of time (i.e. less than one hour).
- 9.5 Sample containers that are leaking or damaged will not be submitted for chemical analysis.

## 10 References

- 10.1 *River Monitoring Methods and Procedures SOP*



## LIST OF EXHIBITS

### Tentative Permit for the Pomona Water Reclamation Plant

- Exhibit 1. Casarett and Doull's Toxicology The Basic Science of Poisons, Sixth Edition
- 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. Draft Toxicity Amendment to the Water Quality Control Plan for Enclosed Bays and Estuaries of California, State Water Resources Control Board, Fact Sheet.
- Exhibit 5. Policy for Toxicity Assessment and Control – State Water Resources Control Board Public Review Draft. June 2012
- Exhibit 6. Waste Discharge Requirements for the Joint Outfall System, Pomona Water Reclamation Plant. Order No. R4-2009-0076. NPDES No. CA0053619
- Exhibit 7. Pre-Notice Draft of the Waste Discharge Requirements for the Joint Outfall System, Pomona Water Reclamation Plant. ORDER R4-2014-XXXX. NPDES NO. CA0053619
- Exhibit 8. 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 9. 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 10. USEPA Region IX Alternative Test Procedure Approval Memo. March 17, 2014.
- Exhibit 11. Southern California Alliance of Publicly Owned Treatment Works and Central Valley Clean Water Association Complaint. Case No. 2:14-00815.
- Exhibit 12. EPA Guide to Method Flexibility and Approval of EPA Water Methods. December 1996
- Exhibit 13. Final National Pollutant Discharge Test of Significant Toxicity( TST) Memo. James Hanlon, USEPA Office of Wastewater Management. June 18, 2010

## LIST OF EXHIBITS (continued)

### Tentative Permit for the Pomona Water Reclamation Plant

- Exhibit 14. 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 15. Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications Under the National Pollutant Discharge Elimination System Program. June 30, 2000.
- Exhibit 16. 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.
- Exhibit 17. Whole Effluent Toxicity Test Drive Analysis of the Test of Significant Toxicity (TST). USEPA. July 2011.
- Exhibit 18. Final Report: Interlaboratory Variability Study of EPA Short-term Chronic and Acute Whole Effluent Toxicity Test Methods. EPA 821-B-01-004. September 2001