Attachment C: WRD's Comments on Chronic Toxicity Requirements

These comments relate to the following sections of the Groundwater Reliability Improvement Project-Advanced Water Treatment Facility (GRIP-AWTF) Tentative National Pollutant Discharge Elimination System (NPDES)/Waste Discharge Requirements (WDRs) Permit (Order R4-2017-XXX; NPDES NO. CA0064645) (herein referred to as the "tentative Order"):

IV. A. 1.a. Table 4 – Effluent Limitations for Chronic Toxicity
V.A.19. – Receiving Water Limitations for Chronic Toxicity
VII.J. – Compliance Determination for Chronic Toxicity
Attachment E – Chronic Toxicity Monitoring requirements
Attachment F- Fact Sheet findings on Chronic Toxicity

1. Non-Authorized Effluent Limitations for Chronic Toxicity

Table 4 presents effluent limitations for chronic toxicity based on Pass/Fail and % Effect, none of which are authorized. On September 16, 2003, the State Water Resources Control Board (State Water Board) adopted two precedential orders, WQO 2003-0012, in response to petitions filed by the County Sanitation Districts of Los Angeles County (LACSD) and Santa Monica Baykeeper for the Los Coyotes and Long Beach Water Reclamation Plants (WRPs) NPDES permits [SWRCB/OCC File Nos. A-1496 and A-1496(a)], and WQO 2003-0013, in response to a petition filed by LACSD and Bill Robinson on the 2002 version of the Whittier Narrows WRP permit [SWRCB/OCC File Nos. A-1509 and A-1509(a)]. In these 2003 precedential orders applicable to the LACSD, which will supply the GRIP-AWTF with source water, 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 importance that should be addressed in a statewide plan or policy.

In addition, the State Water Board instructed Regional Water Quality Control Boards (Regional Water Boards) to **replace** any numeric chronic toxicity effluent limitations with the prescribed narrative chronic toxicity limitation until a statewide toxicity policy is adopted. These State Water Board Orders (WQO 2003-0012 and WQO 2003-0013) are considered precedential orders, binding upon and required to be followed by all Regional Water Boards in the state until overturned or new regulations overturned or revised the decision. Government Code §11425.60. Although the Fact Sheet at p. F-39 states that "many facts have changed since the State Water Board adopted [these orders] in 2003," nothing has changed in the law, and the cited "guidance documents" cannot modify regulations or precedential orders.

These precedential decisions were later upheld and followed in other, subsequent and more recent State Water Board orders, including WQO 2008-08 (City of Davis) and WQO 2012-0001 (City of Lodi). The 2012-0001 Lodi Order at page 22 recognized that "[t]he Board previously addressed this issue in a precedential decision" and "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." In the Lodi case, the State Water Board also determined that because the discharge had the reasonable potential to cause or contribute to an excursion above the Basin Plan's narrative toxicity objective, the Central Valley Regional Water Board, on remand, was ordered to amend that permit "to add an appropriate narrative chronic toxicity limitation." *Id.; see also* State Water Board WQO 2008-0008 at pp. 5-7 (concluding that a numeric effluent limitation for chronic toxicity is not appropriate at this time).

Thus, four precedential State Water Board orders over a span of a decade require that NPDES permits contain a narrative chronic toxicity effluent limit. All of these precedential orders directly conflict with the requirements contained in the tentative Order that includes Pass/Fail chronic toxicity limits. The Regional Water Board must follow the State Water Board's binding precedent and include a narrative effluent limitation, which states: "There shall be no chronic toxicity in the effluent discharge."

This is consistent with the Los Angeles Regional Water Board's Basin Plan's narrative objective,[1] and should be included along with a monthly median trigger for additional accelerated testing based on the No Observable Effect Concentration (NOEC) and chronic toxicity units (TUc).

"Pass" or "Less than 50% Effect" are not approved maximum daily or average monthly effluent limitations. Use of a "Pass/Fail" endpoint obtained through any statistical analysis is not included in 40 Code of Federal Regulations (CFR) §136.3(a), Table 1A, and the Test of Significant Toxicity (TST) statistical method is not listed in Table 1A. In addition, the United States Environmental Protection Agency (USEPA) has explained that (emphasis added):

> "The agency is concerned that single concentration, pass/fail, toxicity tests do not provide sufficient concentration-response information on effluent toxicity to determine compliance. It is the Agency's policy that all effluent toxicity tests include a minimum of five effluent concentrations and a control."[2]
>
> "Use of pass/fail tests consisting of a single effluent concentration (e.g., the receiving water concentration or RWC) and a control is not recommended"[3]

No changes in state or federal law warrant the effluent limits for chronic toxicity prescribed in the tentative Order. Because of the general unreliability and inaccuracy of these biological test methods, and the amplifying effects on the false positive error rate imposed by use of a non-prescribed two-concentration TST approach, strictly construed numeric ("Pass" or "% Effect") effluent limits for toxicity are inappropriate, infeasible to comply with, and should not have been imposed. The effluent limits for chronic toxicity in Table 4 of the tentative Order should be removed and changed to the narrative effluent limitation currently contained in the Receiving Water Limitations section of the tentative Order (Provision V.A.19.a.) with a numeric trigger for additional investigations (*e.g.*, the Toxicity Reduction Evaluation process).

2. A Receiving Water Limitation for Chronic Toxicity is Not Required or Necessary

Where, as in the tentative Order, an effluent limitation is proposed, then a duplicative receiving water limitation for the same constituent or parameter is unnecessary as the effluent limitation will control the discharge to protect the receiving water. Where no reasonable potential exists, then a Receiving Water Limitation would be appropriate to ensure compliance with the Basin Plan. However, as proposed, there are two separate and overlapping requirements (effluent and receiving water limitations) that are not necessary or authorized. One of these requirements should be removed. Based on the comments and reasoning in the remainder of this attachment, the effluent limitations for chronic toxicity should be removed.

3. The Compliance Determination Section and Monitoring Requirements Violate Federal Rules.

The tentative Order at Provision VII.J and Attachment E, Section V.A.5 state that: "The discharge is subject to determination of "Pass" or "Fail" and "Percent Effect" from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (USEPA 833-R-10-003, 2010),

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[1] In fact, the State Water Board's requirement in 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." (Basin Plan at p. 3-17 (emphasis added).)

[2] *See* USEPA, *Whole Effluent Toxicity: Guidelines Establishing Test Procedures for the Analysis of Pollutants - Supplementary Information Document* (SID) at p. 28 (Oct. 2, 1995).

[3] *Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms*, Fourth Ed., USEPA-821-R-02-013 (October 2002) at Section 2.2.3, p. 5.

Appendix A, Figure A-1, Table A-1, and Appendix B, Table B-1." These citations refer to an unpromulgated guidance document currently being litigated as an underground rule by the Southern California Alliance of POTWs (SCAP), the Bay Area Clean Water Agencies (BACWA), the Central Valley Clean Water Association (CVCWA) and the National Association of Clean Water Agencies (NACWA). Notwithstanding this challenge, the federal rules make clear that all compliance monitoring and determinations must be made in conformance with 40 CFR Part 136 approved methods. *See* 40 CFR §122.44(i)(1)(iv)(requiring each NPDES permit to include monitoring requirements to assure compliance with permit limitations, including requirements to monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR part 136) and §122.41(j)(4)(monitoring must be conducted according to test procedures approved under 40 CFR Part 136); applicable to states through 40 CFR §123.25(a)((12) and (15).

There is no evidence that the TST's null hypothesis that water is presumed toxic, the use of a single Instream Waste Concentration set at 100% effluent compared against a control, the use of Pass/Fail or % Effect endpoints, or the prescribed TST t-test are part of any 40 CFR Part 136 approved test procedures or methods. The proposed TST methods (as used herein, includes the null hypothesis of toxic water, the TST statistics used, the two concentration test approach, and the "pass/fail" test endpoint) are discussed in 2010 USEPA Guidance Documents, but have not been approved and promulgated under 40 CFR Part 136. Although the 2002 Methods have been modified or proposed for modification twice over the last decade and half, the TST has never been promulgated or proposed as a rule. Because the proposed TST procedures are not part of the promulgated 2002 Methods, the TST cannot be used in lieu of the currently recommended NOEC or IC25 endpoints or one of the four indicated statistics.

In addition, no promulgated rule requires daily toxicity limits to protect against chronic effects where the test itself runs 4 to 8 days. *See Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) at p. 30; *see also* 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). Daily limits are thus "impracticable" and not prescribed by law. 40 CFR §122.45(d).

4. <u>The Fact Sheet Findings are Inconsistent with State and Federal Law</u>.

a. <u>Inconsistency with the SIP</u>

The Fact Sheet at Finding III.C.3. states: "The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP."

The SIP requires a chronic toxicity effluent limit only where there is reasonable potential. SIP at p. 30. Reasonable potential is not triggered from a single sample test that exceeds 1 TUc as described in the Fact Sheet at p. F-39. Instead, chronic toxicity is *persistent* toxicity adversely affecting aquatic life in the ambient receiving water.

Additionally, the SIP requires use of the Short-Term Methods for Estimating Chronic Toxicity-Fresh Water, which does not include or authorize the use of the TST.

b. <u>Reasonable Potential and the Necessity for Chronic Toxicity Limits</u>

Under applicable federal regulations, reasonable potential is determined in accordance with 40 CFR §122.44(d)(1). Where the Basin Plan contains a narrative objective for toxicity, subsection 122.44(d)(1)(v) controls. Here, the Basin Plan's toxicity objective is a narrative objective that requires "no chronic toxicity in ambient waters outside mixing zones." (Basin Plan at p. 3-17.) To determine reasonable potential under subsection (v), the permitting authority must use the procedures in subsection (ii), toxicity testing data, and other information that the discharge causes, has the reasonable potential to

cause, or contributes to an instream excursion above a narrative criterion within an applicable State water quality standard.

The Fact Sheet at p. F-39 states that "The effluent limitations for chronic toxicity were established because effluent data showed that there is reasonable potential for the pollutants to be present in the discharge at levels that would cause or contribute to a violation of water quality standard." Here, because the GRIP-AWTF is a new discharge, there is no effluent data to review. Instead, the Regional Water Board used *influent* information to conclude that the *effluent* would have reasonable potential. Nothing authorizes such a finding.

The tentative Order at p. F-39 finds: "No exceedances of the 1.0 TUc monthly median accelerated testing trigger were reported in the effluent from either plant. However, there are few exceedances of the 1.0 TUc in a single test observed for both East and West plants. Regional Water Board staff determined that, pursuant to the SIP, reasonable potential exists for chronic toxicity." As previously stated, USEPA recommends against the use of single toxicity hits. "Single measurements on effluent involve some uncertainties about the true concentration or toxicity related to the representativeness of the sample… Like all analytical measurements, WET measurements (NOEC, EC25, LC50) are inexact." USEPA, *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications under the NPDES System*, USEPA 833-R-00-003 at p. 6-2 (June 2000). Reliance upon a single test is also highly problematic and imprecise given that toxicity tests often inaccurately identify non-toxic samples as toxic. Further, the results from a single effluent test provide no indication of actual chronic aquatic toxicity in the ambient ("in-stream") receiving waters outside a mixing zone, as proscribed by the Basin Plan's toxicity objective and federal regulations.

In addition to not being able to demonstrate reasonable potential, the applicable federal regulations do not even require limits where the permitting authority demonstrates in the fact sheet that chemical-specific limits (such as for ammonia, copper, and lead) will be sufficient to attain and maintain water quality standards. 40 CFR§122.44(d)(1)(v). Thus, no effluent limitation has been demonstrated to be necessary. Instead, the Regional Water Board should require monitoring for chronic toxicity and use the reopener provision, if necessary, to add chronic toxicity limits later if deemed necessary based on actual effluent and related receiving water data.

c. The TST is Not Authorized for Use in NPDES Permits without an Approved ATP

On March 17, 2014, USEPA issued an Alternative Test Procedure ("ATP") letter approving statewide use of a two-concentration TST test approach without consideration of concentration-response relationships. *See* Letter from Eugenia McNaughton, USEPA Region 9 Quality Assurance Office Manager to Renee Spears, State Water Board Quality Assurance Officer, untitled, dated March 17, 2014 ("ATP Approval Letter"). In its ATP Approval Letter, USEPA ostensibly granted the State Water Board and Regional Water Boards a "Limited Use Alternative Test Procedure" under Part 136 (40 CFR §136.5(a)).

The validity of the ATP approval was litigated in federal court (*see SCAP and CVCWA v. USEPA,* Case No. 2:14-cv-01513 MCE-DAD, U.S. District Court, Eastern District), and prior to a final decision by the District Court judge, USEPA withdrew its ATP approval on February 11, 2015. Thus, even if there were an argument that the ATP allowed statistical analysis using the Instream Waste Concentration ("IWC") and a negative control in compliance determinations as has been proposed in the tentative Order, or allowed the use of the TST, that potential authorization ended on February 11, 2015, and there is no current authorization for the use of the TST approach.

If numeric effluent limits are maintained notwithstanding the other comments contained herein, the tentative Order must be amended to explicitly and clearly specify use of the 2002 Methods (i.e., NOEC or IC25), including a multi-concentration test design with full evaluation of the concentration-response prior to any compliance determination. Review of only one concentration against a control is unreliable for NPDES compliance purposes. *See accord* 2002 Methods at p. 45, Section 9.6.5.1 ("If in the calculation of an NOEC by hypothesis testing, two tested concentrations cause statistically significant

adverse effects, but an intermediate concentration did not cause statistically significant effects, the results should be used with extreme caution.")

The Fact Sheet at p. F-40 states: "…in June 2010, USEPA published another guidance document titled, Test of Significant Toxicity Implementation Document (USEPA 833-R-10-003, June 2010), in which they recommend the following: "Permitting authorities should consider adding the TST approach to their implementation procedures for analyzing valid WET data for their current NPDES WET Program." (emphasis added). Thus, the TST was meant to be *supplemental*, not a *replacement* for promulgated methods.

The Fact Sheet also states on p. F-40 that "Use of the TST approach does not result in any changes to USEPA's WET test methods." This is not true. The TST modifies the hypothesis from "not toxic" to "toxic," ignores the concentration response and percent minimum significant difference (PMSD) that are required quality assurance/quality control (QA/QC) procedures to ensure reliability of the result, and uses "Pass/Fail" on a single sample, both of which are not recommended under the promulgated methods. These changes actually can produce different test results, demonstrating that the methods have been modified.

The null hypothesis used with the TST, which presumes all water to be toxic until the Whole Effluent Toxicity (WET) test results prove otherwise, is exactly opposite of the promulgated hypothesis for hypothesis testing. Such a negative presumption that water is presumed toxic until proven otherwise contradicts the promulgated hypotheses in USEPA's 2002 methods (USEPA, Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms - 4th Ed. October, 2002, USEPA-821-R-02-013 ("2002 Methods")).

Failure to utilize all 5 test concentrations against a control also modifies the prescribed methods. According to USEPA, additional concentrations are essential in order to reduce the number of false positives:

> "In today's action, EPA proposes to require the review of concentration-response relationships generated for all multi-concentration WET tests reported under the NPDES program. EPA proposes to modify section 10 of the two chronic method manuals and section 12 of the acute method manual to incorporate this required test review procedure…Use of the concentration-response review procedures would ensure that a valid concentration-response relationship is demonstrated prior to the determination of toxicity...the use of these review procedures reduced the rate of reported false positives in the WET Variability Study from 11.1% to 3.7% in the *Ceriodaphnia dubia* Survival and Reproduction Test and from 12.5% to 4.35% in the Fathead minnow Larval Survival and Growth Test."

Since the TST procedure does not utilize the information obtained from the multiple different effluent concentrations, the TST procedure produces insufficient data to evaluate the validity of the dose-response relationship. Without this important tool to identify anomalous results that frequently lead to false indications of toxicity, it is not surprising that the TST reports twice as many test failures as are observed when using the promulgated method. According to the two USEPA scientists most directly responsible for developing the 2002 Methods:

> "A predictable dose-response curve is one of the mandatory requirements for a valid toxicity test. We would never accept analytical results from an instrument producing an abnormal standard curve. The predictable dose-response curve, that is increasing toxicity with increasing concentration, is the analogue of the analytical standard curve and is of equal importance in toxicity testing."[4] (emphasis added)

[4] Dr. Donald Mount, National Effluent Toxicity Assessment Center, EPA Environmental Research Laboratory - Duluth, MN, NETA Communique, Jan. 1990.

"The dose response curve is the basis for the validity of a toxicity test. The control serves as the starting point from which the dose response is evaluated. If a dose response is not obtained, then toxicity cannot be inferred."[5] (emphasis added)

The TST procedure fails to provide the necessary dose-response curve to ensure actual toxicity exists. This failure can place the permitted entity at risk of non-compliance without adequate justification and provides an explanation why toxicity data can show more TST failures than those under the other two promulgated methods. The proposed TST procedure has been demonstrated to not accurately identify non-toxic samples. When non-toxic method blank data from USEPA's Interlaboratory WET Variability Study is re-evaluated using the TST procedure, the number of false positives increases dramatically. Approximately 15% of all non-toxic samples would be declared "toxic" in the *Ceriodaphnia dubia* reproduction tests – 4 times more than occurred when using either the NOEC or IC25 method. And, 7.4 % of all non-toxic samples were declared "toxic" using the TST procedure to evaluate Fathead minnow growth. This is double the rate at which similar false conclusions occurred when evaluating the same data with the traditional NOEC or IC25 methods (see Table 1 below).

Chronic Test Endpoint	**TST**	**NOEC**	**IC25**
C. dubia Reproduction	4 of 27 **(14.8%)**	1 of 27 (3.7%)	1 of 27 (3.7%)
C. dubia Survival	2 of 27 **(7.4%)**	0 of 27 (0%)	0 of 27 (0%)
Fathead minnow Growth	2 of 24 **(8.3%)**	1 of 24 (4.2%)	1 of 24 (4.2%)
Fathead minnow Survival	0 of 24 (0%)	0 of 24 (0%)	0 of 24 (0%)

In addition, recent Southern California Coastal Water Research Project (SCCWRP) studies call into question presumed false failure rates as being much higher than anticipated. Recent efforts by SCCWRP to assess the accuracy of the TST technique on method blanks as USEPA had done in the Interlaboratory WET Variability Study to validate the NOEC and IC25 confirmed these problems, which may be worse than shown above (and potentially up to 50% false failures). These serious issues with the unpromulgated TST cannot be ignored.

Many of the important QA/QC procedures established by USEPA to assure the accuracy and reliability of WET test results become obsolete and irrelevant if the TST method is mandated. For example, laboratories routinely prepare control charts reporting the results of their reference toxicant tests based on the NOEC or IC25. Neither USEPA nor the State has established an equivalent control chart metric for the TST. Nor is it clear whether or how the discharger would demonstrate compliance with the existing requirement to calculate the PMSD (a mandatory regulatory measure of test sensitivity) using the TST. Instead, the Fact Sheet at p. F-42, without authority, states that this mandatory PMSD requirement does not apply.

The TST is not an approved statistical method. While the 2002 Methods and the tentative Order Fact Sheet at p. F-40 recognize that "[t]he statistical methods recommended in this manual are not the only possible methods of statistical analysis,"[6] the tentative Order ignores other language stating that "[m]any other methods have been proposed and considered." Nevertheless, USEPA chose the specific statistical methods and hypothesis tests in that manual, which were incorporated by reference into Part 136,[7] "because they are (1) applicable to most of the different toxicity test data sets for which they are recommended, (2) powerful statistical tests, (3) hopefully 'easily' understood by nonstatisticians, and (4) amenable to use without a computer, if necessary. 2002 Methods at p. 40, Section 9.4.1.2. The promulgated methods standardized testing procedures to be consistent nationwide, even though other procedures existed.

[5] Norberg-King, Teresa J., U.S. EPA Environmental Research Laboratory - Duluth, Memorandum to Rob Pederson, EPA Region X, Review of the Toxicity Results from West Boise and Landers Street POTWs (June 5, 1989).

[6] The tentative Order at page F-40 takes this one statement out of context and ignores the remaining explanatory statements.

[7] 40 CFR §136.3(a), Table IA, footnote 27. *See* 67 Fed. Reg. 69955 (2002)("these methods, including the modifications in today's rule, are applicable for use in NPDES permits.").

No field studies demonstrate that chronic WET test results derived using the TST two-concentration pass/fail procedure are well-correlated with actual instream conditions. Such studies are essential to prove that the TST produces results "comparable" to the existing methods that have already been field-validated.

Any claim that the TST is "at least as sensitive" as the NOEC or IC25 is based solely on the observation that the TST indicates the presence of toxicity more often than either of those previously promulgated methods. However, more frequent failure only indicates greater sensitivity if the results are actually accurate. As noted above, the TST procedure finds non-toxic method blank samples to be "toxic" at least twice as often as the NOEC or IC25. Consequently, no reason exists to conclude that the proposed method is better than (or even as good as) the current promulgated statistical measures. And, there is no basis to believe that TST results will correlate well with the richness and abundance of aquatic organisms downstream of any given discharge. This is particularly true when USEPA has admitted that it lacks any field data on the predictive reliability of WET testing for effluent-dependent ecosystems, such as the San Gabriel River.[8]

In addition, the correlation between WET test results and instream conditions in USEPA's existing field validation studies is based almost entirely on failures induced by excess mortality. USEPA has acknowledged that WET test failures caused solely by changes in growth or reproduction (not survival) may not accurately predict instream impairment.[9]

> "The U.S. EPA studies have been criticized for selecting sites with high instream toxicity and known biological impact. Further, none of these studies demonstrated predictive accuracy."[10]

Independent, peer-reviewed scientific studies clearly show that WET tests results are not correlated with the abundance or diversity of species found in aquatic ecosystems after properly controlling for other influential variables, such as available habitat. The best such study was performed by the very same expert that developed the TST method for USEPA - Dr. Jerry Diamond:

> "There is nearly a 50% probability that toxicity exhibited in WET tests may not be reflected instream, even for those effluents exhibiting a relatively high failure rate (>90%) … <u>A surprising result of this study was the lack of relationship between Ceriodaphnia acute or chronic WET endpoints and instream biological results</u>."[11] (emphasis added).

Therefore, unless the TST procedure can show nearly perfect consistency with the results reported using the NOEC or IC25, the method must be independently validated (in accordance with 40 CFR Part 136.5) before being used as a primary indicator of potential instream impairment. According to USEPA's own Administrative Law Judge:

> "… the proposed [toxicity] tests must be reasonably related to determining whether the discharge could lead to 'real world' effects. <u>The Clean Water Act objective to prohibit the discharge of 'toxic pollutants in toxic amounts' concerns toxicity in the receiving waters of the United States, not the laboratory tank</u>"[12] (emphasis added).

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[8] Letter from Gregory R. Grinder, USEPA Office of Research and Development to Mark T. Pifher, counsel for the Western Coalition of Arid States dated Sept. 11, 1996 [in response to FOIA request].

[9] U.S. EPA, A Review of Single Species Toxicity Tests: Are the Tests Reliable Predictors of Aquatic Ecosystem Responses? USEPA/600/R-97/114. July, 1999 at p. 24.

[10] Chapman, P.M., 2000, Whole effluent toxicity testing-usefulness, level of protection, and risk assessment. *Environ. Toxicol. Chem.* 19:3-13.

[11] Diamond, J. and C. Daley, 2000 What is the relationship between whole effluent toxicity and instream biological condition? *Environ. Toxicol. Chem.* 19:158-168.

[12] Pearlstein, Andrew S., *In the Matter of Metropolitan Dade County (Fla.), Miami-Date Water and Sewer Authority* (NPDES Permit No. FL0224805), 1996 USEPA ALJ Lexis 80 (Oct. 3, 1996); *also cited in* Water Environment and Technology, May 1997, at p. 104.

And, this obligation to more fully validate the TST procedure is entirely consistent with USEPA's own guidance on the matter:

> "A fully validated and standardized method is a method that has been ruggedized by a systematic process and is applicable for its intended use. Ideally, only those methods that have been fully validated and standardized should be used for Agency [EPA] needs. However, due to resource and time constraints, it is not always possible to fully validate and standardization required for a given method depends to some extent on the intended use of the data. For example, methods which will be used extensively for regulatory purposes or where significant decision must be based on the quality of the analytical data normally require more extensive validation and standardization than methods developed to collect preliminary baseline data… Where possible, and in all cases for methods that will have extensive regulatory use, a method should be fully validated and standardized. This increased level of validation verifies that the method is suitable for its intended purpose."[13] (emphasis added).

The TST procedures proposed in the tentative Order have not been subjected to the validation efforts that USEPA undertook for the NOEC and IC25. Until such time that USEPA promulgates the TST as part of an approved 40 CFR Part 136 method, the Regional Water Board must provide the comprehensive validation documentation normally prepared by USEPA and obtain a valid ATP, or wait until USEPA completes this validation, which includes appropriate inter-laboratory studies, analysis of method blanks, and confirmation of a correlation to instream conditions.

To date, none of this supplemental information has been compiled or submitted to formal Peer Review as required by both state and federal law. As such, the Regional Water Board lacks the authority to require use of the TST procedure in lieu of the formally promulgated methods (NOEC or IC25) for the purpose of determining the need for, imposing, and assessing compliance with, effluent limitations in an NPDES permit.

Finally, although the proposed permit at Fact Sheet p. F-42 offers an option to request a Time Schedule Order (TSO), such a TSO would not be needed if monitoring only or a narrative effluent limit with numeric triggers were adopted as prescribed by federal and state law.

For the reasons set forth above, the chronic toxicity provisions in the tentative Order should not be adopted as presently drafted.

[13] Availability, Adequacy, and Comparability of Testing Procedures for the Analysis of Pollutants Established Under Section 304(h) of the Federal Water Pollution Control Act - Report to Congress, USEPA/600/9-87/030, September 1988, at p. 3-5 & 3-6.