May 15, 2017

U.S. Environmental Protection Agency
EPA Docket Center
Docket ID No. EPA-HQ-OA-2017-1090
Mail Code 28221T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Submitted electronically via *www.regulations.gov*

Re: Docket ID No. EPA-HQ-OA-2017-1090
Executive Order 13777 on Enforcing Regulatory Reform Agenda
SCAP Correspondence regarding Burdensome NPDES Permit Requirements

The Southern California Alliance of Publicly Owned Treatment Works (SCAP) respectively submits the following correspondence regarding an unpromulgated guidance water toxicity test method being required by USEPA in NPDES permits.

SCAP represents 83 public agencies that provide essential water supply and wastewater treatment to nearly 19 million people in Los Angeles, Orange, San Diego, Santa Barbara, Riverside, San Bernardino and Ventura counties. SCAP's wastewater members provide environmentally sound, cost-effective management of more than two billion gallons of wastewater each day and, in the process, convert wastes into reusable resources, such as recycled water, biosolids, and renewable energy.

Issue:

The "Test of Significant Toxicity" (TST), including its two concentration comparison (usually 100% effluent compared to a control), t-test statistical procedure, null hypothesis declaring water to be presumed "toxic" until proved otherwise, and pass/fail endpoint published in 2010 USEPA guidance has not been adopted into Title 40 of the Code of Federal Regulations, Part 136 (40 CFR Part 136). This guidance, therefore, should not be incorporated as a requirement for

toxicity testing, as the basis for effluent limitations, or for compliance determination with toxicity effluent limits in NPDES permits written or overseen by USEPA.

Background:

In June of 2010, USEPA issued guidance documents regarding a potential new statistical technique for use in whole effluent toxicity (WET) testing called the "Test of Significant Toxicity" (TST)[1]. The TST relies on an alternative hypothesis presuming toxicity and yields a Pass/Fail result as a test endpoint. The TST Guidance was not promulgated through notice-and-comment rulemaking, and includes an explicit disclaimer confirming that the document is not "*a permit or a regulation itself*." In fact, the TST Guidance further 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.*"

In November of 2002, USEPA promulgated through a formal rulemaking process acute and short-term chronic whole effluent toxicity (WET) test methods and procedures, for use in monitoring compliance with NPDES permit limitations in accordance with 40 CFR Part 136[2] (2002 Rule). The 2002 Rule specifies the parameter to be measured and the required units for determining the acute and chronic toxicity for freshwater and saline water. These specific parameters include:

- The No Observed Effect Concentration ("NOEC,") or the No Observed Effect Level ("NOEL"), both of which refer to the highest concentration of a toxicant that causes no observable effects in the exposed organisms;
- The 25% Inhibition Concentration ("IC25"), which is the concentration of a toxicant that causes a 25% inhibition in growth or reproduction in the exposed organisms;
- The 50% Lethal Concentration ("LC50"), which is the concentration of a toxicant that causes death in 50% of the exposed organisms.

[1] National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document, EPA 83-R-10-003 (June 2010)

[2] Guidelines Establishing Test Procedures for the Analysis of Pollutants; Whole Effluent Toxicity Test Methods; Final Rule, 67 Fed. Reg. 69,952 (Nov. 19, 2002)

Although the 2002 Rule discusses the use of 4 statistics used to determine the NOEC, namely: 1) Dunnett's Procedure; 2) T-test with the Bonferroni Adjustment; 3) Steel's Many-One Rank Test; and 4) Wilcoxon Rank Sum Test with the Bonferroni Adjustment, the 2002 Rule does not mention or authorize use of any other alternative statistical endpoints or procedures, including the TST. USEPA considered allowing alternative statistical procedures, but explicitly and thoughtfully chose not to do so, explaining that, "*EPA has not included such alternative statistical methods in today's modifications to WET test methods.*" Additionally, in 2012, USEPA amended the 2002 Rule's WET test methods and procedures in its modifications to the Promulgated Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act: Analysis and Sampling Procedures.[3] However, these amendments also did not incorporate or authorize use of the TST or other alternative analyses, even though the TST approach had been available as guidance for nearly two years. More recent USEPA regulatory proposals have also not included the TST.

Problem:

USEPA Region IX has been incorporating or encouraging the use of the unpromulgated TST statistics and pass/fail endpoint into NPDES permits and approving NPDES permits containing WET requirements using the TST. Furthermore, the State of California, with encouragement and support from USEPA Region IX, is in the process of adopting a statewide action that would require all non-stormwater NPDES permittees to incorporate numeric WET limits based on the TST statistical procedure. Through these actions, USEPA is exceeding its statutory authority in using or allowing the use of an unpromulgated statistical procedure in modified permitting and compliance requirements in relation to WET requirements in NPDES permits.

Impact:

USEPA's actions have already resulted in increased Clean Water Act violations being assessed. The false positive error rate, which is the frequency of incorrectly identifying a non-toxic sample as toxic, of the TST has not been conclusively quantified, but has been estimated to be between 15%[4] and 50%[5] for some test methods. The TST test species of greatest concern is the

[3] Final Rule, 77 Fed. Reg. 29758 (May 18, 2012)
[4] USEPA Interlaboratory Variability Study Final Report. September 2001. EPA-821-B-01-004.

Ceriodaphnia dubia (water flea); this test species has the highest false positive rate. In comparison, the false positive error for the 40 CFR Part 136 promulgated endpoints has been conclusively quantified as less than 5%. This difference in false positive error rate associated with the TST and the inclusion of this non-promulgated endpoint into NPDES permits has resulted in and will continue to result in increased rate payer costs with no environmental benefit. There is also a substantial risk that these false positive errors will result in the public incorrectly perceiving wastewater effluent and recycled water as inherently "toxic," which would deter recycled water usage and limit beneficial reuse and discharge options.

Economic Costs:

California has approximately 230 wastewater treatment plants regulated under NPDES permits. Approximately half of these facilities would be required to conduct monthly effluent toxicity testing under the pending toxicity regulation, with the other half conducting quarterly toxicity testing. Based on the range of false positive error rates, this regulation would result in an additional 75 to 700 incorrectly assessed NPDES "violations" for completely non-toxic effluents per year. The economic impact to the public associated with these violations would conservatively range from $5 to $40 million per year in California alone based on required additional testing, initiation of additional studies, and unjust regulatory enforcement actions including penalties against non-toxic discharges falsely identified as "toxic." [6] These substantial economic and laboratory resources would be better utilized addressing other known, real water quality impairments.

Desired Outcome:

The USEPA should only use rules issued after notice and comment rulemaking, and should immediately issue clarification to states and USEPA Regions that the TST statistical procedure is

[5] Stormwater Monitoring Coalition: Toxicity Testing Laboratory Guidance Document. December 2016. http://ftp.sccwrp.org/pub/download/DOCUMENTS/TechnicalReports/956_StrmWtrMonitCoalitToxTestingLabGuid.pdf

[6] Each individual exceedance will result in the initiation of two additional toxicity tests (552 to 1840 additional toxicity tests or $1.1 to $3.7 million). Enforcement penalties of $10,000 per day per violation under state law (75 to 690 permit violations) will result in an additional $0.75 to $6.9 million. Under federal law, the current daily penalty exceeds $50,000 per day, or an additional $3.75M to $34.5 million in penalties. The costs for required extended studies (TREs) in response to consecutive violations and other facility actions (industrial waste and operational investigations) are conservatively estimated to add an additional $0.65 to $9.4 million dollars. These values are staggering when they may not even represent real instances of toxicity.

not promulgated under 40 CFR Part 136 and as such, should not be used to impose NPDES permit requirements or assess compliance with whole effluent toxicity requirements under the NPDES permitting program. Additionally, this clarification should direct states to formally rescind any previous permits issued or violations assessed using the non-promulgated TST statistics and pass/fail or percent effect endpoints under the TST.

If there are any questions or additional information desired regarding this correspondence please do not hesitate to call or email me at 760.479.4332 or sjepsen@scap1.org.

Sincerely,

Steve Jepsen, Executive Director
Southern California Alliance of POTWs (SCAP)
P.O. Box 231565
Encinitas, CA 92024-1565