16

DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
937 NO. HARBOR DR.
SAN DIEGO, CALIFORNIA 92132-0058

IN REPLY REFER TO:
5090
Ser N40JRR.cs/073
August 20, 2012

Ms. Jeanine Townsend
Clerk of the Board
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Dear Ms. Townsend:

Subject: COMMENT LETTER - POLICY FOR TOXICITY ASSESSMENT AND CONTROL

On behalf of the Department of Defense (DoD) Regional Environmental Coordinator (REC) in California, we appreciate the opportunity to provide comments on the Water Board's Draft Policy for Toxicity Assessment and Control. We previously submitted comments on 18 November 2010, and January 21, 2011 (Enclosures). We are offering the below comments on the latest draft.

16.1 We believe the Test of Significant Toxicity (TST) provides certainty in the evaluation of Whole Effluent Toxicity (WET) testing that was not provided previously by the Technical Support Document for Water Quality Based Toxics Control, 1991(TSD) and Percent Minimum Significant Difference (PMSD) documentation and commend the work to develop its use and implementation. We believe that when the TST is applied appropriately, at a concentration equal to the Instream Waste Concentration (IWC), the test results will provide good prediction of toxicological effects in receiving waters.

16.2 We have considerable data to support that the use of toxicity testing when applied to 100% storm water is not predictive of toxicological effects in receiving waters. This leads us to conclude that the portion of the Policy definition of IWC that states: "A discharge of 100 percent effluent will be considered the IWC whenever mixing zones or dilution credits are not authorized by the applicable Water Board" will potentially be misapplied and result in an unintended consequence of an overly conservative outcome that is costly to dischargers with no benefit to the environment and the State.

16.3 We suggest that the Policy provide clear guidelines to Regional Boards for the application of mixing zones to storm water discharges. Specifically, mixing zones or dilution credits

16.3 → should generally be applied to storm water discharges unless a Regional Board finds specific factual reasons to support using 100% storm water. To further clarify, we also suggest the Policy include specific conditions when mixing zones or dilution credits standard should NOT be applied. Some examples of these conditions include:

a) When a storm water discharge makes up the majority of the flow or volume of the receiving water body;
b) When the initial zone of dilution is large enough to preclude clear passage of threatened and/or endangered species through the water body; and
c) When there is no natural mechanism for flushing of the water body.

16.4 → We have consistently identified the need for California's water programs to consider the significant contribution of deposition from aerial and mobile sources in storm water toxicity. Substantial research continues to show that sources such as automobile brake pads, and their contribution of metals, are key sources of toxicity. These sources are beyond the immediate control of facility operators whether that operator be a public agency, private businesses, or municipality.

We believe that any toxicity policy must recognize that the reduction of toxicity, especially in urbanized, areas must come from holistic changes such as the DTSC brake pad program created by SB 346 (Kehoe.) Absent this approach, the multiple testing requirements of the Toxicity Policy will merely affirm what we already know: first flush urban storm water runoff is toxic. Instead, we believe the policy should focus on promoting transformational changes and using toxicity testing that actually seeks to measure a true impact to receiving waters.

In summary, we believe that allowing Regional Boards authority to use an IWC=100% effluent, in most situations, is an incorrect application of WET testing procedures. This approach lacks scientific basis and is not a good method of predicting receiving water impacts. Regional Boards have inconsistently applied toxicity testing creating uncertainty for regulated

Subject: COMMENT LETTER - POLICY FOR TOXICITY ASSESSMENT AND CONTROL

parties. In addition, we believe the Toxicity Policy should promote transformational changes in how storm water toxicity is addressed. If you have questions or concerns regarding this letter please contact Brian Gordon at (619) 532-2273 or Chris Haynes at 619 532-2285.

Sincerely

C. L. STATHOS
By direction

Enclosures: 1. DoD REC Comment Ltr dated Nov 18, 2010
2. Navy Region Southwest Comment Ltr dated Jan 21, 2011

DEPARTMENT OF DEFENSE
REGIONAL ENVIRONMENTAL COORDINATOR, REGION 9
937 N. Harbor Drive, Box 81
San Diego, California 92132-0058

5090
Ser N40JRR.cs/0034
November 18, 2010

Ms. Jeanine Townsend
Clerk to the Board
State Water Resources Control Board (SWRCB)
1001 I Street
Sacramento, CA 95814

Subject: COMMENTS ON THE DRAFT POLICY FOR TOXICITY ASSESSMENT AND CONTROL

On behalf of the Department of Defense (DoD) Regional Environmental Coordinator (REC) in California, we appreciate this opportunity to provide the comments below on the Water Board's Draft Policy for Toxicity Assessment and Control.

In the Water Board's Staff Report on "Policy for Toxicity Assessment and Control" Project Background Section identifies the triggering event for this draft policy as the renewal of two NPDES permits for two publicly owned treatment plants (page 5 and 6). While chronic toxicity may be an established problem with discharges from publicly owned treatment plants, the staff report never indicates there is a demonstrated problem with chronic toxicity from storm water discharges. The proposed four chronic toxicity tests per year for storm water discharge (Part III, Section B.3, page 14) should not be required until it is established that chronic toxicity from storm water run-off has the reasonable potential to cause or contribute to an excursion above the chronic toxicity objective.

Should the state elect to move forward with the chronic toxicity monitoring requirements for storm water discharges, the definition for "instream waste concentration" (page 2, Definition H.) should be revised to clarify storm water discharges can only be assessed after considering mixing in the receiving water, and read as follows:

"Instream waste concentration (IWC) is the concentration of a toxicant or effluent in the receiving water after mixing (the inverse of the dilution factor). For discharges other than stormwater, a discharge of 100% effluent will be considered the IWC whenever mixing zones or dilution credits are not authorized by the applicable Water Board."

The draft policy allows Regional Water Boards to determine "reasonable potential" by applying toxicity testing to whole effluent storm water runoff instead of considering the actual exposure to aquatic life. Storm water discharges are generally short term, intermittent discharges that typically do not cause toxicity in receiving waters after mixing. Applying toxicity testing and objectives directly to storm water discharges is overly conservative and will result in reasonable potential determinations that do not reflect actual affects to aquatic life. The acute and chronic

toxicity reasonable potential analyses and effluent limitations for storm water discharges and other intermittent, short term discharges should be performed on the effluent after considering the mixing that occurs in the receiving water. This will provide for the consistent statewide application of toxicity limitations and objectives and prevent the application of overly conservative standards that are not based on real impacts to beneficial uses.

In addition, we would request that the policy on compliance schedules be modified to recognize the differences between acute toxicity and chronic toxicity. As currently written, a discharger with existing toxicity monitoring requirements is ineligible to receive a compliance schedule. This would mean that a discharger with existing acute toxicity monitoring requirements would not be eligible for a compliance schedule for the proposed chronic toxicity requirements. The SWRCB's "Policy for Compliance Schedules in NPDES Permits" allows for a compliance schedule for a new permit limitation "more stringent than the limitation previously imposed." We believe requiring compliance with chronic toxicity tests constitutes a more stringent limitation than a previously imposed acute toxicity limitation. As such, we propose insertion of the word "chronic" into the last sentence of Part III, Section B.4 (page 14) so it would read:

"Phase I and Phase II MS4 dischargers and individual industrial storm water dischargers with existing chronic toxicity monitoring requirements are not eligible to receive a compliance schedule."

Please direct any questions or concerns you may have regarding this letter to Mr. Michael Huber at (619) 532-2303.

Sincerely,

C.L. STATHOS
By Direction

DEPARTMENT OF THE NAVY
COMMANDER NAVY REGION SOUTHWEST
937 NO. HARBOR DR.
SAN DIEGO, CALIFORNIA 92132-0058

IN REPLY REFER TO:
5090
Ser JWB.bg/0016
January 21, 2011

Ms. Jeanine Townsend
Clerk of the Board\
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Subject: Comment Letter – Policy for Toxicity Assessment and Control

On behalf of the Commander, Navy Region Southwest (CNRSW), we appreciate the opportunity to provide comments below on the Water Board's Draft Policy for Toxicity Assessment and Control. We previously submitted comments on the draft policy in August 2010. The comments in this letter address our concerns with economic considerations associated with the policy, and the unguided discretion provided to Regional Boards in utilizing 100% effluent as the Instream Waste Concentration (IWC).

Economic Considerations

We believe that the State Board should not adopt this policy until it considers the full costs of implementation/compliance similar to how the Air Resources Board quantifies the costs of its proposed air quality regulations. The Staff Report provides very little consideration of the costs associated with compliance where chronic toxicity limitations are included in permits. This is particularly true if the policy provides discretion to the Regional Boards to apply chronic toxicity limitations where the IWC=100 effluent. We question whether or not compliance in this situation for storm water discharges is even consistently feasible with costly treatment and whether diversion to sanitary sewage systems is the only method to achieve compliance, if this option is even available. These potential costs were not considered in the Staff Report. We have in the past provided a number of written letters to the State and Regional Board concerning this issue. We also point to the fact that should Regional Boards apply chronic toxicity limitations utilizing an IWC=100% effluent for storm water discharges from general urban populated areas it may have tremendous costs both fiscally and socially.

We further believe that implementation of this standard may have serious impacts on the ability of several of our major installations to conduct their missions as it may prevent the ability to do ongoing maintenance activities that are a standard part of home-porting.

Instream Waste Concentration

The draft policy inappropriately provides the Regional Boards unguided discretion in utilizing whole effluent toxicity (WET) testing on discharge samples in which the instream waste concentration (IWC) is equal to 100% effluent. We believe that this is a misapplication of WET testing procedures in predicting receiving water community impacts and are concerned that this requirement would be applied in a non-uniform or inappropriate way. The allowance for Board discretion is found in the second version of the Policy which defines the Instream Waste Concentration as:

> "*Instream waste concentration (IWC) is the concentration of a toxicant or effluent in the receiving water after mixing (the inverse of the dilution factor). A discharge of 100% effluent will be considered the IWC whenever mixing zones or dilution credits are not authorized by the applicable Water Board.*"

This definition was altered from the first version of the Draft State Policy by inclusion of the second sentence, thereby allowing Water Boards authority to make the IWC=100% effluent. According to the Staff Report on the Draft Policy, the underlying rationale to use an IWC=100% effluent was for "...water for which mixing zones would not be allowed (e.g., ephemeral and low flow streams, impaired water bodies)". However, this or any other rationale has not been included in the policy and the historical usage of toxicity testing in the State has shown that Regional Boards will inconsistently utilized the IWC=100% effluent toxicity testing on all manner of receiving water conditions so that there is no standardized approach for toxicity testing. As a member of the regulated community it would be difficult or impossible to know in advance what standard would be applied. The Staff Report on the Draft Policy identifies numerous examples of current and historical requirements to evaluate toxicity at an IWC=100%, regardless of receiving water conditions, and there is no discernible, predictable regulatory pattern. This data also includes discharges from Navy facilities that are also subject to WET testing of an IWC=100% effluent, even though receiving water conditions warrant mixing zones or dilution credits.

We believe that WET testing is appropriate for evaluating potential impacts in receiving water when the stated methods, conditions, and evaluations for WET testing are conducted in accordance with how the EPA's Toxicity Support (TSD) Document, Percent Minimum Significant Difference (PMSD) Document, and Test of Significant Toxicity (TST) Document. These documents identify methods, data, and study results designed to show that WET testing is appropriate for predicting receiving water community impacts. The testing in all of these EPA studies evaluates the Instream Waste Concentration (IWC) against a control sample, where the "*IWC is the concentration of a toxicant or effluent in the receiving water after mixing. The IWC is the inverse of the dilution factor. It is sometimes referred to as the receiving water concentration (RWC).*" We agree that WET testing results can be used for the purpose of hypothesis testing that will successfully predict receiving water impacts when the test sample is the IWC. However, we do not agree that a 100% effluent sample collected at the end-of-pipe represents the IWC.

The Navy's position on this point is based on the EPA's stated goals, hypothesis testing, and its own extensive research and datasets used to develop WET test methods and guidance. To our knowledge the EPA has never published data or an evaluation of the use of 100% effluent samples in predicting receiving water impacts. In particular, the EPA's TSD specifically points out the efficacy of its large database and WET tests conducted on samples that were correctly diluted to their ambient condition and the appropriateness of considering dilution:

> "Together, these studies comprise a large data base specifically collected to determine the validity of toxicity tests to predict receiving water community impact. In order to address the correlation of effluent and ambient toxicity tests to receiving water impacts, EPA evaluated the results of the studies discussed above [29]. The results, when linked together, clearly show that if toxicity is present after considering dilution, impact will also be present."

The Navy conducted its own extensive research, described in a 2006 report and provided to the San Diego Regional Board, which conclusively showed that WET testing of 100% storm water effluent was not predictive of effects in an estuarine environment. The Navy's study showed that 34% of 64 acute toxicity tests conducted on 100% effluent samples failed (using t-testing for significance) even though acute toxicity was never found in 129 receiving water samples collected adjacent to outfall pipes. The Navy's data also showed that 90% of 40 chronic toxicity tests conducted on 100% storm water effluent samples failed even though chronic toxicity testing was found only twice in 60 (3%) receiving water samples collected adjacent to outfall pipes. The major difference in results between WET tests conducted on 100% effluent and WET tests conducted on receiving waters clearly shows a lack of test predictability. This result was the basis for the Navy recommending that samples be measured in the ambient or adjusted for true exposure conditions in the receiving environment (i.e., samples that represent the IWC) when performing WET testing instead of using 100% effluent.

The reason end-of-pipe 100% effluent tests are not predictive of effects in the receiving environment is that they do not account for the true exposure conditions that organisms in the receiving environment are subject to during storm events. While the permit-required WET tests in the study were conducted on 100% storm water over a 96-hr period, organisms in the receiving environment were subject to 100% effluent on the order of minutes, if ever, and typically at effluent concentrations less than 5% for periods of less than 12 hours. Additionally, there is a well-known capacity of estuarine waters to mitigate the toxic effects of pollutants through natural complexation (biotic ligand model) that is not taken into account in WET testing procedures on 100% effluent.

In summary, we believe that allowing Regional Boards authority to use an IWC=100% effluent is an incorrect application of WET testing procedures and lacks scientific basis as a good method of predicting receiving water impacts. In addition, Regional Boards have inconsistently applied toxicity testing to IWC=100% effluent, creating uncertainty for regulated parties. Finally, chronic WET testing on 100% effluent is an inappropriate and unproductive testing method because storm water discharges will almost always fail even though there may be no impact in the receiving water. We therefore urge you not to grant the Regional Boards authority

to allow IWC=100% effluent, or at minimum provide clear direction when an IWC=100% can be utilized (e.g., ephemeral and low flow streams, impaired water bodies).

If you have questions or concern regarding this letter I can be contacted at (619) 532-2273.

Sincerely

B. S. GORDON
By direction