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September 30, 2013

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*Via Electronic Mail: [nagle.deborah@epa.gov](mailto:nagle.deborah@epa.gov)*

Dear Deborah,

Thank you for sharing the slides from the July 2013 permit writers' specialty workshop on nutrients with us. As you know, we have tracked EPA's efforts to provide guidance to state permit writers on nutrients since the Agency first announced several years ago that it would develop and issue a guidance document on the subject. We are disappointed that EPA has abandoned the guidance document approach in favor of conducting workshops and other training for state permit writers. We believe these issues are of national importance and deserve a thorough vetting through a public review and comment process, which would be accomplished by issuing a draft guidance document.

While the Agency did not request comments on the information presented in the slides, NACWA's members carefully reviewed the material and identified a number of concerns and comments that we wanted to share with you and your team. These comments build on the general concerns we raised in our March 7, 2013 letter (attached) to Acting Assistant Administrator Nancy Stoner with regard to translating narrative nutrient criteria into numeric permit limits.

Overall, we believe the presentation slides fail to adequately acknowledge and highlight the significant differences between the pollutants EPA's Technical Support Document for Water Quality-based Toxics Control (TSD) was designed to address and the nutrient pollutants to which the document is now being applied. While in limited instances the TSD can be a useful tool for developing limits with longer averaging periods for non-toxic pollutants (including nutrients), its use as outlined in the presentation raises numerous concerns. The suggested application of the TSD

gives a false impression to permit writers that the uncertainty between nutrients and designated use impacts is not important. Developing the science to establish linkages between nutrients and designated uses continues to be the primary barrier to state development of numeric nutrient criteria and should not be dismissed or understated in the training materials. At a minimum, there should be a detailed discussion of the difficulties in linking nutrients to designated uses.

The presentation materials do not adequately address when limits should not be developed and permittees are presumed to need permit limits unless proven otherwise. Based on the reaction of NACWA's members who reviewed the slides, the presentation sends the message that in many cases limits will be issued based on educated guesses by the permit writer rather than data. While we understand that the TSD outlines a process for a qualitative reasonable potential (RP) analysis, NACWA cannot support any RP determination without data or analysis, especially for nutrients. The TSD was not written for pollutants where the link between pollutant concentration and designated use impacts was so difficult to define.

EPA is recommending in the presentation that states interpret narrative nutrient criteria using the provisions in §122.44(d)(1)(vi) in order to conduct a quantitative RP analysis. In line with previously raised NACWA concerns, including in its March 7, letter, this translation of narrative criteria in order to facilitate RP is inconsistent with the regulations and the instructions the Agency provided when §122.44(d)(1)(vi) was added to its regulations: "The requirements of paragraphs [§122.44(d)(1)] (iii), (iv), (v) or (vi) apply *after* the permitting authority has determined that water quality-based effluent limits are necessary under paragraph (ii)" (54 *Fed. Reg.* 23868, at 23873; June 2, 1989). In other words, the narrative criteria translation provisions that are laid out in the regulations should only be used after RP has been established. Narrative criteria translations should not be used to facilitate evaluating RP.

### Detailed Comments on Workshop Slides

Below are our specific comments organized according to slide number in the presentation. These reflect the general themes above, but include more detailed input and reaction to the information presented.

Slide 14 – No perspective is given as to how many of the permits discussed in this slide may actually need permit limits. The percentages of permits with limits or monitoring requirements are presented as if all permits should have these limits.

Slide 19 – EPA does not mention the fact that nutrients do not have the same effects on aquatic organisms as other parameters such as metals and organics. Given that the TSD approach was not developed with nutrients in mind, no information is presented to document that it is valid for conducting RP and establishing water quality based effluent limits (WQBELs) for nutrients.

Slide 23 – The presentation starts off discussing WQBELs for Nutrients, but jumps to "Nutrient Effluent Limits for POTWs". Are these approaches just for POTWs? If so, that should be explained. If not, EPA should explain why it is now focusing only on POTWs.

Slide 28 – This slide and others suggest that public complaints and increased drinking water treatment costs are sufficient evidence to link nutrients to impairment. All of these observations could be linked to conditions other than excessive nutrients, such as low flow or degraded habitat. This comes across as a checklist the

permit writer can use to confirm nutrient impairment without doing the work necessary to link nutrients to the uses.

Slide 29 – Vulnerability of downstream waters can also be caused by water diversions and habitat degradation.

Slide 30 – This information on vulnerable water bodies might be helpful to guide permit writers, but again, it is only a starting point. Where will quantitative science be used to link nutrients to designated uses and the need for permit limits? The TSD approach would be wrongly applied here.

Slide 34 – Numeric criteria for total nitrogen (TN) or total phosphorus (TP) that do not include duration and frequency components would not constitute legal Clean Water Act criteria.

Slides 32 and 35 – NACWA is pleased to see that EPA openly recognizes that criteria can be based on indicators/response variables and that they can be load-based. However, the remainder of the training material dedicates little if any discussion to these concepts.

Slide 39 – References should be included for the “emerging studies”.

Slides 40 and 41 – These slides seem to be relaying the message that permit writers can and should act on conjecture rather than data. If a permit writer thinks downstream waters **may** be affected, he or she should move forward with limits. NACWA believes that permit limits should not be developed without data. Again, the training should also outline when limits should not be developed. In situations like those described in the slides, more study is clearly needed to identify causal variables

Slide 50 – If there is a wasteload allocation (WLA), then that is a quantitative evaluation for permitting purposes. This slide and others suggest that permit writers follow 303(d) lists as if they were unquestionable. In our experience, little work is done to tie nutrients to designated uses in listing these waters. 303(d) lists are not the final determination of impairment. A TMDL is needed to fully evaluate the causes of impairment.

What is meant by “Other evidence” of nutrient-related impacts? There needs to be scientific data.

Slide 51 – It is inappropriate to move forward with developing permit limits for POTWs when no causative pollutant has been identified. The examples in this slide are “observations” and would likely prompt a POTW or other discharger to appeal any permit requirement if these examples were used.

Slide 52 – The statement that “Permit writers might need to interpret nutrient criteria for a quantitative RP” is particularly troubling for the reasons stated above and in NACWA’s March 7, 2013 letter.

Slides 65 and 66 – The concept of dilution only applies to a concentration-based goal, not to a load goal. The statement that no water quality models are needed for end-of-pipe effluent limits is not true for non-conservative constituents such as TN. Also, how does this line up with the earlier slides about protection of downstream waterbodies?

Slides 72 - 97 and 113 – All these steps assume that a concentration-based nutrient criterion exists. What if the water quality goal is based on load? What if the criteria are based on a nutrient stressor? How do you perform

RP in these cases? This is problematic because it suggests to permit writers that you must have a concentration-based approach to conduct RP. This will push permit writers to avoid other approaches that are more defensible.

Slide 74 - Critical condition concept can apply to dynamic and static models.

Slides 82 - 97 - The concept of using the 95<sup>th</sup> or 99<sup>th</sup> percentile highest concentration and/or CV for receiving water or effluent to establish RP or limits does not apply where concentrations do not correlate with impact, as is the case often with nutrients. Impact can be due to average concentrations or periods of higher concentrations rather than due to a single concentration at an instantaneous point in time or the variability in the concentration.

Slide 107 – NACWA is pleased to see the reference to water quality trading.

Slide 108 - 112: The definition is incorrect; a WLA is not a concentration, it is a mass.

Slide 139 – Using concentration-based and load-based limits in permits only makes sense when both are water-quality based. If one is technology-based there will be a conflict.

Again, we appreciate the opportunity to review these training materials. We understand that the July training was only a pilot for future workshops on the same subject. NACWA would like the opportunity to work with your office to address our concerns and help improve these training materials.

Please contact me at [chornback@nacwa.org](mailto:chornback@nacwa.org) to discuss further.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Hornback", with a stylized, cursive script.

Chris Hornback  
Senior Director, Regulatory Affairs

ATTACHMENT