NORTHWEST ENVIRONMENTAL ADVOCATES

March 18, 2011

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Via E-Mail: ToxicsRuleMaking@deq.state.or.us

Re: **Proposed Revised Water Quality Standards for Human Health Toxic Pollutants and Revised Water Quality Standards Implementation Policies – ADDENDUM – Quantitation Limits**

Dear Andrea:

This letter is Northwest Environmental Advocates' addendum to previously-submitted comments dated March 17, 2011 on the proposed rule revisions developed in the 2004-2011 triennial review of water quality standards.

In section III of our previous comment letter we discussed the use of quantitation limits (QL) in lieu of otherwise applicable numeric criteria for toxics, as is mentioned briefly in the DEQ Issue Paper. As DEQ has pointed out, 48 percent of the proposed human health criteria, and 40 percent of the currently effective human health criteria, have QLs that are higher than the proposed or current numeric criteria, respectively. Given that the difference between the proposed criteria and the QLs can be many orders of magnitude, the technological limitations related to detection and quantification have the effect of seriously undermining the human health benefits of the proposed adoption of criteria. From a practical perspective, these QLs will become the *de facto* criteria, thereby providing far less protection to human health than intended by the new criteria for almost half the toxic contaminants.

In our previous letter, we discussed this undermining effect of the QLs and, therefore why it is of the utmost importance that Oregon determine the best possible technology to detect and quantify toxic pollutants regulated under the numeric criteria, update those QLs on a regular and timely basis, make them readily available to the public, etc. In short, we made the case that *Oregon needs to establish that it will use QLs that come as close to the proposed criteria as possible*, both at adoption and over time. In this letter we want to briefly supplement those comments by pointing out an example of the problem and the opportunities to address the problem.

Oregon's current PCB criteria for human health are both 0.000079 µg/L (79.0 pg/L). EPA sets out minimum requirements for NPDES compliance monitoring in 40 C.F.R. Part 136. For PCBs, EPA recommends use of EPA Method 608, from which DEQ has derived the QL for PCBs set out in its Statement of Need and Fiscal and Economic Impact.[1] The level of detection for PCBs under EPA Method 608 is 0.5 µg/L (500,000 pg/L).[2] The difference between the current numeric PCB criteria and the level of detection is *four orders of magnitude*. Similarly, the proposed revised numeric criteria for PCBs, using 175 grams/day fish tissue, is 0.0000064 µg/L (6.4 pg/L). The difference between the proposed revised criteria for PCBs and the level of detection is *five orders of magnitude*.

In contrast, PCB monitoring by the Delaware River Basin Commission (DRBC) is conducted using Method 1668, Revision A.[3] As the DRBC states, there are "substantial differences in . . . both the type of results and detection limits achieved" between EPA Methods 608 and 1668A.[4] EPA Method 608 has a detection limit of 0.065 µg/L (65,000 pg/L).[5] In contrast, EPA Method 1668A has "detection limits in the single pg/L range," namely 1-3 pg/L per congener as demonstrated in over 1,000 samples collected from over 90 NPDES dischargers.[6] *The difference between these detection limits is four orders of magnitude*.

EPA Method 608 has other drawbacks in addition to its high detection limit. For example, it does not analyze for all PCB congeners,[7] whereas, in contrast, EPA Method 1668A provides results for all 209 PCB congeners.[8] The DRBC points out that this ability to identify individual

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[1] ODEQ Statement of Need and Fiscal and Economic Impact, Revised Water Quality Standards for Human Health Toxic Pollutants and Revised Water Quality Standards Implementation Policies, Appendix B, Table 1 Comparison of Current and Proposed Human Health Toxics Criteria and Quantitation Limits, undated.

[2] *Id.* at 65.

[3] Gregory J. Cavallo, Thomas J. Fikslin, Delaware River Basin Commission, Powerpoint: An Evaluation of Methods to Quantify PCB Concentrations, February 16, 2011.

[4] *Id.* at 4.

[5] *Id.* at 6.

[6] *Id.* at 9, 11.

[7] *Id.* at 7.

[8] *Id.* at 9.

PCB compounds is "[c]ritical when evaluating weathered samples."[9] The DRBC points out several other major benefits of the Method 1668A over Method 608, including the ability to compare the results across all media sampled.[10]

Elsewhere, states have been able to use much more sensitive detection limits than assumed by Oregon. For example, in Washington, recent work has achieved detection limits in fish tissue at 0.04 ug/kg for total PCBs and 0.01-0.1 ug/kg for some congeners, 100 pg/L total PCBs (Yakima River) using semi-permeable membrane devices (the use of which was discussed in our previous comments), 5 pg/L for individual congeners (Puget Sound Water Column Study), 10-200 pg/L for individual congeners (Puget Sound Surface Runoff Study), and 10 pg/L (Yakima River TMDL/wastewater treatment plant effluent). All of these results are two to four orders of magnitude better than the current EPA Method 608 upon which DEQ seeks to rely.

EPA too appears to be distancing itself from Method 608. In 2010, EPA proposed to remove Method 608 from Table 1C of 40 C.F.R. Part 136.[11] EPA notes in the preamble to the proposed rule that Method 1668 "is being used in several environmental applications, including NPDES permits."[12] EPA is proposing use of Method 1668C in its revised Table 1C for 209 PCB congeners.[13] As the agency states, "EPA developed Method 1668 for use in wastewater, surface water, soil, sediment, biosolids, and tissue matrices."[14]

Oregon should not wait for EPA to changes its requirements before the state uses better detection

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[9] *Id.* at 10.

[10] *Id.* at 7 (single calibration standard added at 50 µg/L) vs. *id*. at 9 (multiple point calibration standard with lowest calibration point equivalent to 5 pg/L). Likewise whereas Method 608 applies only to wastewater, *id*. at 6, Method 1668A can be used for water, sediment, and tissue analysis. As a result of its many superior attributes, Method 1668A has multiple advantages including "reduced analytical uncertainty,"and better "comparability between samples and across media." *Id*. at 10.

[11] EPA, Proposed Rule Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act; Analysis and Sampling Procedures, 75 Fed. Reg. 58024, 58036 (September 23, 2010), http://water.epa.gov/scitech/methods/cwa/update_index.cfm.

[12] *Id.* at 58028-9.

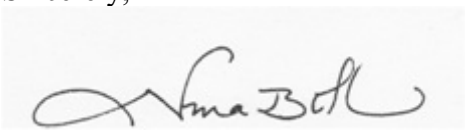
[13] *Id.* at 58058.

[14] *Id.* at 58027.

and quantification methods to identify and control the very toxic pollutants the state claims to want to protect the public from. Given DEQ's unwillingness to control nonpoint sources and indirect discharges to municipal sewage collection systems or to use its numeric criteria to control stormwater sources, it has left only municipal and industrial NPDES-permitted sources from which to wrest reductions in toxic discharges. Therefore, DEQ should do the utmost to ensure that it realizes this outcome by using the best possible detection and quantification limits. Or, in the event that DEQ also does not desire to control NPDES-permitted sources, which its actions suggest is the case, it could at least use the Clean Water Act to more precisely identify the degree of toxic pollution in Oregon so that its citizens can know the extent of the pollution the State government intends to willfully ignore. In either case, using the most technologically advanced methods of detection and quantification should be Oregon's goal so as to not expose the state to charges that it has adopted "the most stringent criteria in the nation" while at the time deliberately choosing not to find those very toxics in the environment and the pollution streams it allegedly regulates.

Proceeding on the basis of existing QLs as DEQ has to date reminds one of the three wise monkeys who see no evil, hear no evil, and speak no evil. When, however, the evil is toxic contamination, it is both unwise and misleading to fail to see what is there.

Sincerely,



Nina Bell
Executive Director

cc: Dick Pederson, Director, Oregon DEQ
Neil Mullane, Administrator, Water Quality Division
Jannine Jennings, Manager, Region X Water Quality Standards Unit
Christine Psyk, Associate Director, Region X Office of Water and Watersheds
Mike Bussell, Director, Region X Office of Water and Watersheds
Dennis McLarren, Regional Administrator, Region X
Ephraim King, Director, EPA OST

Attachment: Gregory J. Cavallo, Thomas J. Fikslin, Delaware River Basin Commission, Powerpoint: An Evaluation of Methods to Quantify PCB Concentrations, February 16, 2011.