Issues Identified in Recent VPDES Permit Reissuances
June 2016

As a Member benefit, VAMWA's Permit Committee and AquaLaw will conduct a brief review of any Agency or Associate Agency Member's draft VPDES permit, upon the Member's request. The purpose of this limited review is to screen draft permits to help the Member secure the benefits of past VAMWA successes, to help the Member identify potentially adverse changes in or deviations from standard statewide DEQ practices, and to help the Membership as a whole catch and head off adverse statewide policy changes early (before bad precedents are created). This is not a substitute for a more thorough permit-specific development and review process, but is effective for its intended VAMWA-level purpose. For the past quarter, here is a brief summary of issues that were noted to help you be on the lookout in upcoming permit actions.

Metals Limits. Ordinarily we have a lot of respect for DEQ's statistical Reasonable Potential procedures, which are rational and predictable. However, in one permit case there was a good 21 point data base for effluent zinc. The data were all below the 150 mg/l allocations (acute and chronic). But, the data were highly skewed on the low side, which is unusual. DEQ's "Stats" program printout for this purpose calculated maximum expected daily values well above the WLAs, and the result appeared to be driven by three single digit data points, on the low side of the larger group in the 50 – 70 range. When we removed the three single digit data points, the result was different (no Reasonable Potential, and therefore no zinc limits) because the variance or coefficient of variation was substantially lower. In a case such as this, we would advise first evaluating the apparent outlier values. In this one particular situation, the three results were an anomaly and created an anomalous variation-driven result that simply wasn't correct. That is, it's not right to let (good) low values predict higher values by themselves, when the high values alone would not trigger a finding of Reasonable Potential and limits. The zinc limits should be replaced with monitor-only. Also, in the larger sense cases like this emphasize the need to examine effluent and other data well before the reapplication, to determine the likely permit result, and to identify issues such as this at an early point in an effort to have a solution to such data irregularities in hand.

Mercury PMP Trigger. It's not uncommon to see permit provisions triggering a permittee requirement to develop a Pollutant Minimization Plan in the event of specified effluent data for mercury or PCBs, and potentially other pollutants. We examined one mercury PMP trigger that was worded in a manner that could have authorized DEQ to require a PMP on the basis of a single data point. For these pollutants, for which the concern is human health/long-term fish consumption, there is little value in a single data point. Any such permit provision should allow the permittee to develop a meaningful effluent data

set, if one is not already available, on which to base the decision about the need for a PMP.

Redundant Monitoring. We continue to frequently see permits with redundant monitoring, or monitoring that otherwise does not serve a real purpose. The current example was a requirement for TRC monitoring at the end of each of two parallel contact tanks, where the flows converged and monitoring at the combined flow point would serve the same purpose. This emphasizes the need for a simple, common sense permit review. If monitoring serves no purpose, or if it could be done more efficiently, it should be changed.

E. Coli Single Value Max Limits. We reviewed a permit that proposed limits for the E. coli 235 single value maximum requirement. DEQ's standard approach is to limit to only the 126 Geometric Mean standard, and the Permit Manual recommends that approach. The underlying EPA E. coli criteria consider that the 126 GM and 235 instantaneous numbers are based on the same statistical distribution of effluent data, and the GM limit is protective of the water quality standard. In any such case we would always ask that the 235 number be deleted. The Regional Office did delete it in this case.

Reduced Monitoring. Many POTWs find the reduced monitoring that is available under DEQ's Guidance to be helpful in simplifying O&M and allowing more operations staff attention to facility operations matters. However, the Guidance includes some highly restrictive provisions including a disallowance in situations where the facility has had enforcement activity within the previous three years, which DEQ considers to include NOVs and warning letters. In general we see this as an excessive restriction because NOVs and warning letters are not case decisions – they are cautionary in nature. In the case examined, the POTW had an NOV for a single TSS exceedance, which was the result of wet weather flows and a combinations of other, identified difficulties. Because of the resulting NOV for TSS, the permit proposal from DEQ increased the monitoring for TSS, CBOD and ammonia-N to the higher default frequency. The permittee met with DEQ Central Office personnel to emphasize the particular facts of the one TSS incident and the unnecessary effects on increased monitoring for the other unrelated parameters. They also noted for DEQ that the EPA guidance, on which the DEQ reduced monitoring guidance is based, handles such matter on a pollutant-by-pollutant basis. DEQ Central office reaction was not helpful, although they did eventually rely on a monitoring guidance detail and reinstate some but not all of the monitoring reductions. In our view, the purpose of a reduced monitoring program should be to reward well-operated facilities, and not to find individual issues or problems (that do not detract from the overall quality of O&M) on which to base a denial of reduced monitoring. We have flagged this issue in DEQ's Guidance for additional follow-up with DEQ management at our next opportunity to review and update DEQ's procedures.

Stream Modeling. Stream modeling by DEQ, in which Regional Stream Models are used to project effluent CBOD, TKN and D.O. necessary to maintain instream D.O. WQS downstream, continues to raise issues. In a current permit case the Model calculated a necessary effluent CBOD limit of 10 mg/l. The Regional Office then proposed to reissue the permit, retaining the previous 10 mg/l BOD limit. This was incorrect, because the Model results are believed and considered to be valid and representative of real-world stream conditions, and there is simply no basis to retain the more stringent BOD 10 mg/l limit.

More generally as to use of the Regional Stream Models, note that there is always trade-off among the three effluent variables – CBOD, TKN and D.O. For example, if the Model calls for a CBOD of 10 mg/l, and 12 mg/l would be more routinely achievable, the same positive water quality result may be achieved with a slightly more stringent TKN or D.O. limit.

Other Recurring Issues. We continue to see examples of problematic permit conditions that affect multiple members. Those issues include:

1. DEQ use of its 9 mg/l default ammonia-N value to force Reasonable Potential and permit limits (ammonia should be addresses with actual data as any other parameter);
2. Secondary treatment-based 85% TSS and BOD removal (unnecessary);
3. Permit wording that suggests non-Part 136 analytical methods may be used with DEQ approval (they may not);
4. TRC 0.6/1.0 mg/l minimum pre-dechlor limits, that should always provide that a contemporary E. coil test with a result < 126 supersedes the low TRC reading; and
5. Requirements for both acute and chronic WET testing, in spite of the Regulations requirement for acute or chronic (DEQ may correctly require that acute endpoints be extracted from the chronic testing).

We recommend that, when these permit issues arise, Members should routinely object and present DEQ with what we believe to be the correct permit procedures.