

Minutes of the TAC Meeting for the Water Reclamation and Reuse Regulations
October 4, 2006

The TAC meeting began at approximately 9:30 a.m. James Golden welcomed members of the Technical Advisory Committee (TAC) and guests. Valerie Rourke reviewed the schedule to complete the regulation and reminded TAC members of the importance to meet deadlines in order to present the draft regulation to the State Water Control Board in December.

Ms. Rourke mentioned that she attended the National Water Reuse Symposium in September and passed around a "Site Supervisors Training" publication from the National Water Reuse Association (WRA) that she received at the symposium. Anyone interested in the publication can order it from the WRA

Ellen Gilinsky facilitated review of Part III of the regulation. Ms. Rourke noted that Part III was drafted with language borrowed primarily from the water reuse regulations of Florida, Washington, and North Carolina. Discussion followed regarding opening an existing VPDES or VPA permit to include water reuse standards and conditions. Would this be considered a modification of the permit subject to public comment? TAC members voiced concern over the public's ability to comment on the entire permit, including the point source discharge in the case of a VPDES permit, versus just the part of the permit containing the new reuse standards and conditions. DEQ staff will check the Administrative Process Act to determine if it is possible for the agency to limit public comment to only portions of an existing permit that are being modified (i.e., to add reuse language) or some how include new reuse standards and conditions without a permit modification and public comment. Public notice would include language on reuse. TAC members requested specifics on how new reuse standards and conditions would be inserted into a VPA permit.

End use tracking requirements were specifically mentioned. End user agreements with the permitted reclaimed water provider were discussed as a means to track implementation of reuse programs.

The TAC proceeded to review Part III of the regulation section by section with the following comments:

9VAC25-740-100 Application for permit

- Organizationally, it was agreed to move C. Reclaimed Water Management (RWM) plan to the beginning of this section, in front of Engineering Report. Reuse programs will always need a RWM plan but not necessarily an Engineering Report. It was recommended that 9 VAC 25-740-100 be reorganized with specific requirements for generator, distributor, and end user.

A. Engineering Report.

- A general comment made by the TAC was that too much information is needed for the engineering report. Valerie Rourke and Marcia Degen, DEQ-Office of Wastewater Engineering, will review the SCAT Regulations to determine what items required for the engineering report are already addressed by the SCAT Regulations. Items that can not be addressed by the SCAT Regulations will be requested in the engineering report. Some items should also be moved from the engineering report to the RWM plan. Also, consider stating "In addition to the items listed in the SCAT Regulations, a distributor must meet" and provide a concise list of required items.
- A.2. The reference to "as noted above" should be deleted.

- A.4 This item is addressed by the SCAT Regulations and should not be required in the engineering report.
- A.6. Description of the effluent to be reclaimed should be in C. RWM plan. This item and item A.8. (b) regarding expected physical, chemical and biological characteristics and constituent concentrations of reclaimed water need to be revisited.
- A.7. This information is already provided to DEQ through the pretreatment program. However, pretreatment only applies to POTWs with VPDES permits, not VPA permitted facilities. DEQ staff will revise the language to advise the applicant or permittee to reference documents or applications already submitted to the DEQ rather than having applicants submit the information again as part of an engineering report.
- Discussion followed on the overall purpose of an engineering report and the task of evaluating each report. A question was raised concerning reclamation of industrial wastewater for reuse off the site of the industrial facility. If the Water Reclamation and Reuse Regulation proposed to allow only the reclamation of municipal wastewater or sewage and not industrial wastewater, then requirements of the SCAT Regulations would apply to most, if not all, water reclamation projects. The SCAT Regulations could be referenced for most things and the proposed Water Reclamation and Reuse Regulation could be significantly streamlined. The percentage of industrial treatment plants wishing to reclaim and distribute reclaimed water will likely be very small. Most reclaimed water generated at industrial facilities will likely be used on-site. An option may be to mirror SCAT Regulations and handle industrial reclamation/industrial reuse on a case-by-case basis. DEQ staff will revisit inclusion of industrial wastewater reclamation and reuse in the proposed regulation and will review items requested for the engineering report that are already addressed for sewage treatment facilities in the SCAT Regulations. The engineering report could simply reference items already contained in the SCAT Regulations.
- A.9. This item applies only to VPA permitted reclamation projects with no alternative or option to discharge. This does would not apply to VPA permitted distribution systems for reclaimed water.
- A.12. Metering should be included in the RWM plan and should be done after reclamation. Further details regarding metering should be provided in the operations and maintenance manual, not in the engineering report. It was agreed that this was an accountability issue and that there is a need to measure losses in the distribution system.
- A.14. Backflow and cross connection should be in the RWM plan as this is an overview of how to run the system. The engineering report should address design and construction. Cross connection is the real issue, not backflow. For backflow prevention, it should be made clear that this applies to industrial users and not to end users such as homeowners, golf courses, etc.
- A.16 Public notification should be moved to C. RWM plan.

B. Operations and maintenance manual

- This should be deleted. Revised operations and maintenance manual submissions are already addressed by conditions in VPDES and VPA permits.

C. Reclaimed Water Management (RWM) Plan

- The RWM plan should be placed before the engineering report under 9 VAC 25-740-100.
- C.1.a. There was much discussion on non potable wells and their required inclusion in a RWM plan. TAC members acknowledged this information was very difficult to obtain, as was private potable well information. It was agreed to eliminate requirements for an inventory of privately

owned potable and non potable wells, and springs that are not public water supply from the RWM plan. However, end user agreements for home owners should include a survey of potential water sources. Agreements will contain specified set back requirements from privately owned potable and nonpotable wells and springs. This will be dependent on the future discussion of setbacks.

- C.1.c. Compliance verification with the RWM plan and metering were discussed. In lieu of requiring a nutrient management plan (NMP) for each non-bulk irrigation end user, metering is a tool that can be used to monitor and control nutrient loads by all non-bulk irrigation end users within a service area.

DEQ staff also clarified that the owner of the reclaimed water distribution system within the service area would be responsible for monitoring compliance by end users. Where the owner of the reclamation system and reclaimed water distribution will not be the same, owners of each system are required to have either a VPA or VPDES permit as appropriate.

- There was a brief discussion on water balance needs. It was agreed that as presented, this was an economic issue and not part of a regulatory program.
- C.2. In the first sentence, strike the word “and” to begin a new sentence which acknowledges that BNR is not required for all reclaimed water, but is a benchmark to determine when a NMP is required for irrigation reuse. Irrigation with reclaimed water that meets BNR does not need a NMP. Discussion followed trying to clarify non BNR, BNR and the need for NMP. Differences between bulk and non-bulk irrigation reuse were clarified. It was noted that the combined affects of applications to residential lots <5 acres would be much greater than the turf grass industry yet the turf grass industry will be required to have a NMP. In lieu of a NMP requirement for non-bulk irrigation end users, the regulation is requiring other measures be implemented through the RWM plan to control non-point source nutrient loads to the service area.
- Discussion followed on non-point source implications of reclaimed water. One TAC member felt that non BNR bulk irrigation reuse should include a statement in the end user agreement with the permittee, prohibiting that application of reclaimed water to non pervious surfaces. This creates a problem in that some reuses allowed in the table under 9 VAC 25-740-90.A, such as street cleaning, would be eliminated by such a prohibition. It was also suggested that for non-bulk irrigation reuse of reclaimed water not achieving BNR, only partial nutrient credit be given to the generator of the reclaimed water.
- C.2.b(4) Discussion on monthly reporting resulted in an agreement that the generator should provide the monthly total N and total P analyses to the distributor. The distributor will use this data to calculate total N and P loads to the service area and to educate end users on appropriate irrigation rates and setbacks.
- C.3. The question was raised as to why a NMP would be required for irrigation to sites owned by the generator of the reclaimed water. DEQ staff expressed concern that in this scenario, too much reclaimed water could be used resulting in land treatment or disposal rather than reuse. This may be true even where there is an alternative to dispose of the reclaimed water, such as a VPDES permitted discharge to surface waters, due to nutrient caps and limited nutrient allocations for the facility to discharge its full nutrient load. Consequently, reclaimed water generators who also own the application site may be more likely to over apply or dispose of the reclaimed water rather than reuse it. It was noted that for BNR treated water, this requirement should be removed because the vegetation would die from too much water long before an environmental impact would occur.
- C.5 An hydrologic or water balance requirement was discussed again. It was agreed that a water balance would be required as part of a RWM plan (regardless of alternatives for discharging) when

the generator is also the owner/operator of the application site. This should demonstrate adequate area for supplemental irrigation and addresses non point source pollution issues. It was noted that for C.3 and C.5, ownership should not be a criterion for determining the need for a NMP or water balance. Other criteria should be used to achieve the intent, which is to avoid disposal of reclaimed water on irrigation reuse sites. Also, evaluate how changes to C.5 will/may affect C.6. DEQ staff will review and correct subsection C to the improve language.

9VAC25-740-110 Distribution systems

- B.3. and B.4. Combine and reword these two paragraphs. It should be made clear that it's not potable water to be regulated, but rather cross connections.
- C. Minimum separation distance language is already addressed in the Drinking Water Regulations and the SCAT Regulations. Strike paragraph on Board approval of reduced in ground separation distances. Some TAC members felt that regulating reclaimed water lines as sewage lines was overly restrictive
- E.3. For fire hydrants, labeling alone is adequate. Delete the need for a special wrench.
- F. There was a discussion on "Board approval" for this item and in numerous other places in the regulation. In Section 9 VAC 25-740-210, the Director of the DEQ is delegated the authority of the Board except where limited by law.
- F.6. There was a question regarding the need to provide a description of cleaning procedures. It was agreed this is needed for conversion of potable water lines, as well as sanitary sewer lines. Potable water lines can build up scum that can clog lines.
- G.4. Tank trucks used to transport and distribute reclaimed water should be labeled "non potable water".
- H.1. and H.2. Item H.2. should be inserted before item H.1.
- H.2. There was a question about why Pantone 522 is the shade of purple specified in the regulation for labeling piping. This is considered the universal color and shade for all water reuse identification.
- H.2.C. This is too prescriptive. Identification tape on reclaimed water lines should be affixed only to the top of the pipe regardless of pipe size, similar to what is required by North Carolina.
- H.5. Locks on valve boxes and valve box were discussed. It was agreed that locks and shape of the box would be deleted as Pantone 522 coloring was enough.
- I. There was concern regarding the recommendation for residual chlorine maintenance in reclaimed water distribution lines. This is a maintenance activity that should be in the operations and maintenance manual or in guidance, not in the regulation.

9VAC25-740-120 Storage requirements

- There was a general comment on the use of "sewage" vs. "effluent". The word "sewage" should not be used if "effluent" is the more accurate term.
- Storage terminology was discussed. "System storage" is currently defined in the draft regulation as on-site or part of the reclamation system. "Non system storage" is defined as off-site, sometimes part of the distribution system and may be a lined storm water management pond. DEQ staff indicated that the basis for requiring system storage to be lined was to ensure that storage facilities did not become rapid infiltration basins. It was suggested that rather than divide storage into

system versus non-system, storage should be differentiated as reclaimed versus reject water storage. DEQ Staff will review and work further on 9 VAC 25-740-120.

In the interest of time, the TAC skipped 740-130 CTC/CTO and 740-140 Operator requirements and system reliability.

9VAC25-740-150 Management of pollutants from significant industrial users

- What is meant by “where human contact with the reclaimed water is likely”? DEQ staff explained that if the regulation allowed only reclamation of municipal wastewater, this could be replaced with “reclaimed water treated to Level 1”. Because the regulation allows the reclamation of industrial wastewater for reuse and standards different from those contained in Level 1 may apply to the reclamation of industrial wastewater, this language could not be used. Discussion followed on standards development and the pretreatment program. A strong pretreatment program is key to maintaining the integrity of a plant and preventing discharges of pollutants of concern to surface waters. However, pretreatment does not apply to treatment works with significant industrial users where the treatment works are privately owned or are covered by a VPA permit, and this is the concern. DEQ Staff will review and work further on 9 VAC 25-740-150.

At 3:10 p.m., Mr. Golden reviewed progress on Part III and informed the TAC that the regulation would now be taken to the Board in March 2007 rather December 2006. DEQ staff will meet to review the problematic sections of the regulation discussed earlier. Ms. Rourke will address comments of the TAC meeting in a revised draft of Part III to be sent out for further comments. With this change in the schedule to complete the regulation, another meeting of the TAC will be set and the TAC notified.

Public comments by non-TAC attendees were solicited and none were received. The meeting was adjourned at approximately 3:30 p.m.