

**Virginia Department of Health  
Drip Dispersal Technical Advisory Committee  
Meeting Minutes  
May 10, 2013**

**List of Attendees**

Technical Advisory Committee Members

Bob Mayer – AMC  
Kornell Davis – Operator

Tom Ashton – AMC  
Valerie Rourke – DEQ

Patricia Duttry – VDH  
Joel Pinnix – ACECVA

VDH

Rodger Cooley  
Dwayne Roadcap

Dr. Marcia Degen  
David Tiller

Lance Gregory

**TAC Members Not in Attendance**

Tim Smith – Pentair  
Mike Lynn – Operator/Installer

Mike Catanzaro – Pentair  
Rick Blackwell – VSPE

David Morgan – Geoflow

**1. Administrative.**

Welcome.

Welcome and review of guidelines for DD TAC.

Approve agenda.

TAC members were asked for any revision or additions to the proposed agenda. TAC members approved the agenda without change.

**2. Review and approval of previous meeting minutes.**

April 16<sup>th</sup> TAC minutes.

Several TAC members were not present at the meeting. Therefore, it was suggested that the meeting minutes be sent out via electronic mail for approval by all TAC members. The TAC agreed to provide comments and approve meeting minutes via electronic mail.

**3. Walk through proposed language.**

Dr. Degen walked members through the proposed language, allowing TAC members to comment with line by line edits.

Mr. Davis asked why the proposed language is being placed in the Sewage Handling and Disposal Regulations (SHDR) and not the Regulations for Alternative Onsite Sewage Systems

(AOSS Regulations). Mr. Davis noted that including drip dispersal in the SHDR may cause confusion regarding operation and maintenance requirements.

Dr. Degen commented on the prescriptive nature of the SHDR in comparison to the performance based standards provided in the AOSS Regulations; performance standards still apply to all AOSS.

Dr. Degen stated that the task following the April 16, 2013 meeting was to pull language from GMP 107 into the proposal.

Mr. Mayer commented that requiring treatment of drip tubing to reduce root infiltration is not necessary. While some products are treated, other drip tubing products provide pressure and mechanical barriers.

TAC members then discussed minimum installation and soil cover requirements for drip systems dispersing septic tank effluent. Dr. Degen noted the AOSS Regulations require a minimum of 12 inches of cover for septic tank effluent to drip dispersal. Mr. Mayer commented that drip dispersal designs should provide re-oxygenation. He stated that drip provides for unsaturated flow using time dosing of small volumes of effluent, keeping water underground, provided that large machines are kept off shallow installation sites.

The TAC was asked if there should be a limit for minimum installation depth. Mr. Aston stated the 12 inch installation depth in the SHDR is specific to trenches. He stated a 6 inch in-situ install depth is appropriate; adding that more than 6 inches of cover may not be appropriate for all designs.

Mr. Pinnix commented that, at only 6 inch, septic tank effluent has a higher risk of pathogenic contact. He added that in the fall or winter, with large dose volumes, systems could easily have saturated conditions to the ground surface.

Mr. Aston stated that pre-treated effluent on the ground surface presents an equal risk. He felt the discussion is about cover, not installation depth. Mr. Pinnix commented that installation could be part of the cover; however installation depth is based on depth to a limitation and the vertical separation distances to the limitation contained in the Sewage Handling and Disposal Regulations. If a system only provides 6 inches to water table, then the system would need to be designed under the AOSS Regulations.

Curtis Moore, a member of the public in attendance, commented that from a soil evaluator perspective it would be beneficial to have drip as an option on sites with 24 inches to rock or restriction. Currently, such sites must receive treatment. With a 6 inch install depth and 6 inches of cover for drip dispersal, evaluators would have other options. He stated there is a need to have a minimum installation depth of 6 inches. From a soil aspect, if you want to open options for nitrogen removal, shallower designs provide greater nitrogen uptake.

Mr. Rourke suggested language allowing installation or a combination of cover and installation equaling 12 inches.

Mr. Pinnix suggested that the definition of cover should be clarified.

Dr. Degen noted that the standard spacing in GMP 107 is 2 feet and asked TAC members if there is a need to address standard spacing. Mr. Pinnix commented that “standard” spacing or similar language is guidance, not a regulatory requirement; the focus is gallon per day over an area. Mr. Mayer added that the goal is linear feet of tubing. The general consensus of the TAC was to strike language for minimum spacing of tubing.

Mr. Pinnix commented on language requiring that the discharge rate of any two emitters not vary more than 10 percent. He questioned how the requirement would be enforced by VDH, suggesting that more relevant language be created.

Dr. Degen then discussed potential options for determining the soil absorption area. Two options were presented. The first used language from GMP 107, determine trench bottom for low pressure distribution (LPD) and multiply by three. The second option was to put loading rates into a table. Both options also recognized and set standards for treatment level 2 (TL-2) and treatment level (TL-3). The general consensus of the TAC was to use the first option. However, members noted that the verbiage was unclear. There was a suggestion to use verbiage directly from GMP 107. Mr. Pinnix noted that he did not feel TL-3 could be included, as it is not defined in the SHDR.

The TAC then discussed requirements for slope correction. Dr. Degen discuss the proposed language and table which were taken directly from GMP 107. TAC members were asked if a requirement for slope correction is necessary. Mr. Mayer commented on the background of the slope correction table, stating that the intent was to maintain the area required for conventional trench systems. He stated that the technology has improved and the increased spacing no longer applies. Mr. Moore commented that, from a soil perspective, there is no need to increase the area; it’s actually the exact opposite.

Mr. Pinnix commented that the slope correction language in GMP 107 would be bad regulatory language. He suggested maximum linear loading rates based on the slope and soil. Several members mentioned rates included in the Wisconsin Mound Manual. Mrs. Rourke suggested that the language set a goal for landscape linear loading. Mr. Aston commented that the issue of landscape linear loading should not be exclusive to drip dispersal. The issue needs a global solution later on, not now for this specific technology.

Mr. Pinnix commented it is unlikely that a system could be installed on a 50 percent slope. Mrs. Rourke commented on the issue of maintaining cover on steep slopes.

Dr. Degen then walked through proposed language for redistribution and flow equalization which was pulled from GMP 107.

Mr. Pinnix commented that when discussion time dosing, the term “regular intervals” is unclear. He suggested including a minimum number of dosing intervals. He added that “throughout the day” should be replaced with “24 hours”.

Dr. Degen stated the proposed language for minimum dose volume per zone was based on Wisconsin's regulations for drip dispersal. Mr. Davis commented that actual wastewater flows may not meet a minimum dose volume or number of dosing intervals. Mr. Pinnix commented that the minimum dose volume and intervals is a design aspect; a system designed for 8 doses a day at 8 minutes per dose may only run 4 times per day but the system is still set correctly. Mr. Mayer stated that drip dispersal needs a dose and a rest time before the next dose. Mr. Ashton commented that the goal is to provide equal distribution. He suggested a minimum dose volume per zone no less than 3.5 times and a maximum of 7 times the liquid capacity of the drip laterals plus the liquid capacity of the supply and return manifolds lines. Mr. Pinnix stated that he supported the minimum dose interval and minimum dose volume concept, but is concerned about setting maximum requirements.

Next, the TAC discussed time enable level controls. Mr. Mayer was concerned that in some cases the system may not receive equal distribution. Mr. Davis commented that if the system short cycles you may not get forward flushing and may not generate enough pressure. Mrs. Rourke asked if these terms are defined in the regulations. Mr. Mayer responded that they are industry standards terms. Mr. Pinnix suggested a requirement that each dose volume must be 100 percent of design dose. Mr. Mayer commented that this would place a burden on regulators to confirm the requirement is met in the design.

TAC members discussed a proposal that the control center for large flows (3,000 gallons per day) provide a means to take each zone off line separately to facilitate operation and maintenance. Dr. Degen noted that one TAC member had suggested greater than 1,000 gallons per day. Mr. Davis agreed that 1,000 gallons per day is likely correct. Mr. Pinnix noted concern with the term "control center", stating that a by-pass or cut-off valve is a reasonable solution without electronic control. He added that "to facilitate operation and maintenance" is unnecessary language.

The TAC then discussed filtration requirements for drip dispersal. Mr. Mayer commented that "backwashed" or "forward flushing" should not be specified. Mr. Pinnix and Mr. Davis agreed that washing of filters at a set interval is a matter of operation and maintenance rather than design. Other options for filtration presented by the TAC were:

- As specified by the manufacturer.
- Use the language from GMP 107.
- As prescribed by the operation and maintenance manual.
- Filtration shall be appropriate for the type of effluent.

In regards to flow measurement, Mr. Pinnix commented that verification of field dosing is onerous. Mr. Mayer commented that during start-up flow should be verified.

TAC members identified several concerns with network flushing; most notably the need to assure that flushing does not impact effluent quality or hydraulically overload the system. Mr. Pinnix commented that you will impact one or the other, but the impact to hydraulic capacity is of greater concern. Mr. Davis stated that manual, continuous forward flush, may hydraulically overload the system. Mr. Ashton commented that effluent quality in the AOSS Regulations is

important for restrictive environments and can't be compromise; hydraulic impacts will also affect quality. Mr. Mayer stated that if you are returning solids you will affect quality but not hydraulics. Mr. Rourke commented that the issue is implicit; design to an effluent quality, hydraulic capacity must not affect quality.

Dr. Degen asked for comments on possible electrical component requirement, specifically UL and NEMA. Mr. Pinnix asked if UL is a current requirement, and if these requirements should be expanded to cover more than just drip. Likewise, Mr. Davis asked if electrical component requirements could cover other sections in the SHDR. Mr. Mayer commented that he felt UL and NEMA 4x (waterproof outdoor use) are appropriate.

Next Mrs. Rourke discussed the need to eliminate confusion where drip systems may serve dual purposes; one use for water reclamation and reuse (supplemental irrigation) that would fall under the authority of DEQ and a second use for year round onsite disposal under VDH. Mrs. Rourke stated that a reference to DEQ's Water Reclamation and Reuse Regulations (9 VAC 25-740) is necessary to assure that designers are aware of separate requirements.

Mr. Pinnix commented that most drip designs are completed under the AOSS Regulation. He presented draft language to create a performance based regulations. He felt this would be more relevant than a prescriptive standard.

4. Discuss process moving forward.

TAC member were informed that they will be given the opportunity to provided comments on additional revisions to the proposed language. However, the comment period will be limited given the expedited nature of the emergency regulation process. OEHS must complete its work no later than June 12, 2013 to allow for internal review followed by a final draft being provided to the Board of Health well ahead of the Board's meeting on September 12, 2013.

5. Final thoughts from the TAC.

VDH staff thanked TAC members for their diligent efforts and TAC members were given an opportunity to provide their final thoughts on the DD TAC process.

6. Adjourn

Attachment 1

**Drip Dispersal Technical Advisory Committee Meeting**

**Date:** May 10<sup>th</sup>, 2013  
**Time:** 9:00 am to 12:00 pm  
**Location:** James Madison Building  
5<sup>th</sup> Floor, Main Conference Room  
109 Governor's Street, Richmond, VA 23219

**Meeting Agenda**

7. Administrative.
  - A. Welcome.
  - B. Approve agenda.
8. Review and approval of previous meeting minutes.
  - A. April 16<sup>th</sup> TAC minutes.
9. Walk through proposed language.
  - A. Highlight specific items for further discussion.
10. Discuss highlighted items.
11. Discuss process moving forward.
12. Final thoughts from the TAC.
13. Adjourn

## Attachment 2

### **Drip Dispersal Technical Advisory Committee Guidelines May 10, 2013**

The creation of a TAC is the creation of a public body. TAC meetings are open to the public, and are subject to the provisions of the Virginia Freedom of Information Act. Meeting minutes are taken and posted on the Virginia Regulatory Townhall website ([www.townhall.virginia.gov/](http://www.townhall.virginia.gov/)).

Meetings are noticed at least seven (7) working days prior to any meeting.

Agenda's are posted on Townhall at least 3 days prior to the meeting.

Draft of minutes must be posted within 10 days after the meeting with a final posted within 3 days of approval of the minutes.

The purpose of the TAC is to assist in the development of proposals to address the emergency regulations as required by Chapter 202 of the 2013 Acts of Assembly. Please note that the development of emergency regulations for drip dispersal is an optional mandate. The TAC has been formed to help the Department balance the concerns of all those interested in these emergency regulations. All such concerns will be addressed by the TAC, and any member of the TAC is free to advance any opinion.

The role of the TAC is advisory only. The TAC's primary responsibility is to collaboratively contribute to the development of proposals to address the emergency regulations in the best interest of the Commonwealth as a whole.

The goal is to reach a consensus on how best to address development of the emergency regulations in a manner that will be protective of human health and the environment.

**Consensus** is defined as a willingness of each member of the TAC to be able to say that he or she *can live with the decisions reached and recommendations made and will not actively work against them outside of the process*. This is not to say that everyone will be completely satisfied by the result of the process. It is necessary; however, that each participant comes prepared to negotiate in good faith around complex and sensitive issues.

Also, because the group represents many different interests, all members should expect to **compromise** in order to accomplish the group's mission. If the TAC cannot reach consensus, the Department staff will present the differing opinions to Department management and the Board.

Because TAC meetings are public meetings, any member of the public may attend and observe the proceedings. However, only TAC members have a seat at the table and participate actively in the discussions. Those persons not on the TAC are encouraged to work with and through the TAC members that have common interests to ensure that their concerns are heard.

As warranted, the Department will provide access for non-TAC members to make their concerns known to the TAC during meetings, to ensure full consideration of all issues surrounding the emergency regulation in question, provided it is not disruptive or does not inhibit the advancement of the work of the TAC. Time limitations may be necessary in order to ensure that all persons have an opportunity to address the group.

- Please mute or turn-off your cell phones to minimize interruptions. You can reconnect during the breaks.
- Listen with an open mind and heart – it allows deeper understanding and, therefore, progress.
- Speak one at a time; interruptions and side conversations are distracting and disrespectful to the speaker. “Caucus” or private conversations between members of the audience and people at the table may take place during breaks, not during the work of the group.
- Be concise and try to speak only once on a particular issue, unless you have new or different information to share.
- Simply note your agreement with what someone else has said if you feel that it is important to do so; it is not necessary to repeat it.
- Focus on the issue, not the speaker – personalizing makes it impossible to listen effectively.
- Present options for solutions at the same time you present the problems you see.