

**Virginia Department of Health  
Chamber and Bundled Expanded Polystyrene Technical Advisory Committee  
May 8, 2013**

**List of Attendees at Central Location**

Technical Advisory Committee Members

Dick Bachelder – ADS	Sandra Gentry – Installer	Dave Lentz – ISI
Curtis Moore – VOWRA	Brian Parker – Eljen	Joel Pinnix – ACECVA
Dan Richardson – VDH	Bob Savage – Eljen	Tim Woods – ISI

VDH

Jim Bowles	Roger Cooley	Dr. Marcia Degen
Allen Knapp	Lance Gregory	Dwayne Roadcap
Dave Tiller		

**List of Attendees at Remote Locations**

Technical Advisory Committee Members

Scott Honaker – VDH	Bill Southerland – PE	Jeff Walker – VAPSS
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**Technical Advisory Committee Members Not in Attendance**

Damon Hunley – ADS	Terry Nielson – ICC Flowtech
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**Administrative.**

Welcome.

Mr. Gregory welcomed members and reviewed the guidelines for the CBEP TAC. Mr. Gregory stated that the TAC would walk through the proposed language and identify key items for final discussion. He noted that this would be the final meeting of the CBEP TAC. He also noted the Mr. Moore would be sitting for Mrs. Pruet as the VOWRA representative to the CBEP TAC in her absence.

Approve agenda.

Mr. Gregory asked for additional agenda items or revisions. Mr. Lentz asked for discussion of reserve area and clarification that trench bottom area is calculated on trench width, not product width.

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

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

Mr. Gregory stated that he had received a number of comments and sent out a revised draft of the minutes for the April 16, 2013 CBEP TAC. Mr. Gregory asked if there were additional revisions necessary. With no suggested edits the TAC approved the minutes as revised.

### April 23<sup>rd</sup> TAC minutes.

The committee was asked how they would prefer to approve minutes going forward since this is the final TAC meeting. Members agreed to set a cut-off date for revisions and ask for approval by email. One week from the date of request for edits and approval was agreed as the cut-off date.

## **Walk through proposed language.**

Mr. Gregory then walked through the language presented to TAC members. He stated that following the walk through TAC members would be given the opportunity to vote on which topic they felt required additional discussion. He stated that suggestions to include reserve area and trench bottom calculations on the agenda had been added as potential priorities for further discussion. Discussion of GMPs was also included as a possible priority for further review.

Mr. Gregory stated that edits to section 920 and similar revisions in section 950 take out soil-gravel or sand interface and replaces with soil absorption of trench. This is intended to clarify that gravelless products are included.

He commented that section 930.E. discusses gravel percolation lines. Information for gravelless materials is proposed for inclusion in a new section F. This section uses the term gravelless material to describe chambers, bundled expanded polystyrene, and other gravelless products. The information at the begin of this new section is intended as a definition and specifically states that tire chips are not included as gravelless materials.

Mr. Moore commented that instead of “gravelless material” it may be more appropriate to use “proprietary product” and added that it may be necessary to define “proprietary product”.

Mr. Parker comment that he had no issue with the definition as long as it is understood that “may include chamber, bundled expanded polystyrene, and multi-pipe” is inclusive of other products not listed.

Mr. Gregory then explained the proposed approval process. Materials approved prior to December 12, 2013 (anticipated date for regulation to take effect) will be listed as approved products. Future technologies will need to go through an approval process.

Mr. Honaker asked how generally approved gravelless materials would be tracked.

Mr. Gregory stated that the intent is to have a listing similar to TL-2 and TL-3 generally approved materials on the VDH website, with manufacturer information.

Mr. Gregory commented that 930.F gets into minimum characteristics, including those required by House Bill 1726 (HB 1726). Exterior width and minimum height were based on current requirement in GMP 127. A requirement to include a permeable interface was also added since it is specifically referenced in HB 1726.

In regards to exterior width, Mr. Honaker asked for further explanation of the final sentence, "The department shall establish the width of material that is not considered chamber, bundled expanded polystyrene, or multi-pipe."

Mr. Gregory stated this language was included for new technology not contemplated by these requirements. In those cases, it would be a consideration of the approval process.

Mr. Walker asked how the sidewall of the trench is measured. Mr. Lentz also noted concern regarding minimum height and sidewall, and how that would impact the approval of products.

Mr. Gregory stated the intent of the proposed language is to require a minimum sidewall equivalent to a gravel trench. Manufacturer could make a request for deviations from this requirement upon application for approval.

Mr. Gregory discussed additional language regarding structural integrity and design requirement for gravelless products. These requirements were based on the existing GMPs and comments from TAC members. This included a requirement that gravelless material shall not decay or corrode when exposed to sewage for long periods of time. Several TAC members commented that "for long periods of time" should be stricken.

Mr. Gregory stated that the proposed language ties installation of gravelless material to the approval process; must follow the requirements in section 950 unless a deviation is granted.

Several TAC members commented a requirement for contractors to be certified by manufacturers should be included.

Mr. Gregory also outline the proposed language for low pressure distribution (LPD), the intent being that products will be installed based on the manufacturer's recommendation. He added that a section was also added for pump to gravity and enhanced flow distribution. This language was taken from a comparison chart attached to the GMPs.

Mr. Gregory stated that Table 5.4 was revised to include sizing of gravelless materials based on reductions allowed in GMP 135. A footnote was also added to Table 5.4 that allows the substitution of gravelless material for gravel without a new construction permit. The intent of the footnote was to address a requirement in HB 1726 that the regulations include criteria for substitutions. The footnote is silent on who has the authority to make that decision.

Several members of the TAC noted the need to discuss the footnote and design authority further.

**Discuss proposed action for GMP's.**

Mr. Gregory also discussed the intent of the proposed language in regards to the existing GMPs. He stated the intent is to include all currently approved products in the regulations at the reductions allowed under GMP 135. There was some discussion of the Eljen product during the previous TAC meeting. They would also be included as an approved product. There are other options for products that provide treatment. This regulation is for gravel substitutes, not treatment systems. Products that can produce less than TL-2 but better than STE would require a different analysis to examine reduction based on treatment. The intent of this language is just gravel replacement, no additional treatment.

Highlight specific items for further discussion.

Following the initial walk through of the proposal each TAC member was given three dots to place next to topics they felt required further discussion by the TAC. Members viewing the meeting via polycom were asked to comment on which topics they wanted to discuss further. The final vote on specific items for further discussion was as follows.

1. Footnote to Table 5.4 regarding substitution. (13 dots)
2. Reserve area requirements. (4 dots)
3. Pump to gravity requirements. (4 dots)
4. Installation requirements and certification of installers. (3 dots)
5. Sizing, revisions to Table 5.4. (2 dots)
6. Use of the term "gravelless material" and its definition. (1 dot)
7. Change "gravel or sand" to "absorption trench". (0)
8. Proposed approval process for new materials. (0)
9. Exterior width requirement. (0)
10. Minimum height requirement. (0)
11. Requirement for permeable interface. (0)
12. Minimum storage capacity. (0)
13. Structural integrity requirements. (0)
14. Design requirements. (0)
15. Low pressure distribution requirements. (0)
16. Application for review of new materials. (0)
17. What will happened to GMPs. (0)

**Discuss highlighted items.**

Footnote to Table 5.4 regarding substitution.

Mr. Gregory commented that the TAC has provided three options thus far to deal with design authority regarding substitution of gravelless material for gravel.

1. VDH could show both gravelless and non-gravel design on the permits.

2. A statement could be added to the application to allow the applicant to decide what product they want designed, gravel or gravelless.
3. Authority to design or allow substitutions is left with the designer.

Mr. Gregory commented that HB 1726 states that the Board of Health shall have criteria for substituting gravelless materials.

Mr. Richardson commented that the proposed footnote should be removed; let the regulations be silent. He added that the body of the text says how to substitute materials, but the authority over “who can do what” was given to DPOR.

Mr. Mark Courtney, Senior Director at DPOR, was in attendance and commented that DPOR houses the Board for Architects, Professional Engineers, Land Surveyors, Certified Interior Designers and Landscape Architects (APELSCIDLA) and the Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals (WWWOSSP). He commented that the Boards may have an opinion on the subject. He added that generally the board’s authority is over licensees, not non-licensees.

Mr. Walker commented that if VDH allows contractor to substitute materials, the APELSCIDLA Board and WWWOSSP Board cannot act and the contractor board has not made a call.

Mr. Moore commented that all professions should be treated equally. It should be assumed they are working competently. He added that the issue is twofold; you have public and private designers. From an industry perspective the concern is about documentation; you need the approval of the designer, some affirmative statement that the substitution will work.

Mr. Walker commented that there are local ordinances that prohibit the use of gravelless systems unless a professional engineer endorses it. He added that there is no reason for the revised Table to suggest anyone else other than designer can approve the substitution. He stated that the intent of the language is not supported on a technical basis.

Mr. Lentz suggested modifying the footnote to state something to the effect of “who is qualified to substitute or design”. This makes it clear that it’s designed by a licensed professional and if the original permit had allowance for gravel and gravelless then the installer has options.

Mrs. Gentry commented a statement needs to go into the regulation clarifying the authority to make substitution to avoid confusion and problems.

Mr. Bachelder commented that when moving from policy to regulation gravelless materials are on the same level as gravel.

Mrs. Gentry added, for a distribution box, if the permit does not specify concrete or plastic then the installer has options; that is an equal substitution. In her opinion, with gravelless material the difference is arguable. She added that the matter of who can approve the substitution of materials needs to be spelled out.

Mr. Walker stated that the WWOSSP Board might clarify the intention of this license and added that the focus needs to be on incorporation of products as a design decisions and only a design professional can allow substitutions.

Mr. Pinnix commented that the sizing of a system is a condition of the permit. If the designer goes out to inspect the system and it is not what they designed they don't have to approve it. However, the installer can go to the health department to certify the installation. He asked who would be responsible in this situation.

Mrs. Gentry comments that a private sector individual could null and void any warranties, but what unsure how this would affect VDHs responsibility.

Mr. Moore summarized the issue as "does substitution constitutes a design".

Mr. Bachelder commented that the file at the health department should state what was approved.

Mr. Woods commented that designers could state "gravel or accepted gravelless product" on their design. Designer makes the call. He stated that this proposal would not change private designs; private designer can specify stone.

Mr. Bachelder asked TAC members to keep in mind that the table is a minimum design requirement; designer can call for more than the minimum.

Mr. Pinnix commented that the substitution of products on VDH designs is a policy issue, not a regulatory issue. He noted that section 310 of the Sewage Handling and Disposal Regulations (SHDR) states that any deviation affecting hydraulic capacity must be approved beforehand; anything else is at the discretion of the designer. He added that section 330 indicates the installation must be completed substantially in compliance with the plans and specifications.

Mrs. Gentry commented that if you allow the substitution of gravelless material for gravel by contractors when the design does not specifically state that substitutions are not allowed, then the contractors can substitute fiberglass for concrete tanks or distribution box materials, etc. If it meets the minimum requirements, what stops the contractor?

Mr. Richardson stated that a compromise would be, as a matter of policy, to let the owner say what options they want. If the owner wants gravel, and the designer sees something installed the owner didn't request then the owner signs a release.

Mr. Moore commented that there two possible substitutions, one for one and taking a reduction. You could define substitution as taking the reduction, so if it is one for one there is no "substitution".

Mrs. Gentry stated that the GMPs are what allow contractors to makes substitutions. Unless they are revised or rescind, contractor can substitute materials.

Mr. Pinnix stated that the revised Table 5.4 meets the intent of the criteria for substitution required by HB 1726.

Mr. Bachelder noted concern for contractors who are accustomed to substituting products on VDH designs, and asked if that would be taken away. He added his hope is to inform the health department and modify the documentation without a new permit or a new fee.

Mr. Pinnix reiterated that he felt that is an internal policy call for VHD. He added that documentation of what goes into the ground is part of the completion statement and as-built drawing.

Mr. Moore emphasized the need to require that substitutions be based on the original design, not the estimated permeability; designers may oversize the absorption area in their design.

Mr. Gregory commented that key points taken away from this discussion seemed to be:

1. Require designer approval of the substituted system.
2. The question of substitution on VDH designs is an internal policy rather than regulations.
3. Make sure that any substitution is documented.

#### Reserve area requirements.

Mr. Lentz asked how reserve area designs would fit in the proposed language; could the reserve design be based on gravelless material.

Other members of the TAC stated that the reserve area can be met using any approved sizing in the regulations; gravel trench, low pressure distribution, treatment level 2, treatment level 3 and gravelless material once included in the regulations.

#### Pump to gravity requirements.

Mr. Gregory stated that during previous TAC meetings, members had mentioned the need to reduce the energy and flow of effluent entering open bottom trenches. He added that language for enhanced flow distribution, requiring a minimum 10 feet of percolation line, was based on the GMPs.

Mr. Lentz noted concern with the term “minimum” and felt this conveyed the potential need for additional percolation pipe.

Mr. Moore stated that it is at the designer’s discretion if they want to extend the pipe further.

Several TAC members commented on the need to clarify the pump dose volume required when enhanced flow distribution is used with gravelless products.

Mr. Bachelder suggested taking the equivalent length of pipe that would otherwise be use for a gravelles system to determine the dose volume.

Mr. Walker commented that this may lead to problems with unlicensed person making design choices.

Other members of the TAC noted that the requirements for enhanced flow distribution are dated and should be revised.

#### Installation requirements and certification of installers.

Several TAC members felt that installers should be certified by the manufacturer, similar to current requirements in the GMPs.

Mr. Moore questioned how certification would be enforced.

Mr. Pinnix's opinion was that certification is a licensing issue.

Mrs. Gentry comment that if not included in the regulations there should be some minimal requirement for installation manuals.

Mr. Lentz stated that certification would avoid installation error and allow manufacturers to meet the installers and have a relationship with them.

Mr. Pinnix commented that manufacturer could control the distribution of product to only certified installers.

Mr. Lentz added that GMP 135 requires certification. If we are going to move the GMP into regulations then it should be include, particularly because the GMP will be phased out.

#### Sizing, revisions to Table 5.4.

Mr. Gregory stated that the proposed language currently allows for a 25 percent reduction in texture group I, II, and III soils and a 15 percent reduction in texture group IV. This is based on comments from the TAC and GMP 135. This topic was discussed extensively during the previous two TAC meetings. Members reiterated points of concern from previous meetings. Members were asked if they could support a 25 percent reduction across the board. Mr. Pinnix and Mr. Moore stated they could not support a flat 25 percent reduction.

#### Use of the term "gravelless material" and its definition.

Mr. Moore commented earlier on the need to revise this terminology, and Mr. Parker added that the term must include other approved products.

Mrs. Gentry and Mr. Savage question if other unintended materials such as oyster shells or slag might be included in the definition.

Other members noted that the term "specifically manufactured" seemed to eliminate the use of such products.

Mr. Moore stated that the definition of gravelless materials should include the ability to demonstrate its appropriateness in an onsite sewage system.

Mr. Gregory asked if NSF 240 approval would be an appropriate requirement for demonstration.

Mr. Lentz commented that no manufacture has gone through the NSF 240 testing.

#### Additional Discussion Topics

Mr. Parker asked if financial assurances would be returned once this regulation goes into effect.

Mr. Lentz asked if level trenches for gravelless materials would be allowed as an exemption from section 950 of the SHDR.

Dr. Degen asked if all manufacturers will be required to apply for the reduction, or can a manufacturer be reviewed as gravel equivalent but opt out of the reduction. To that point, Mr. Lentz commented that the revised Table 5.4 is a minimum area.

Mr. Moore and Mr. Lentz both raised concern that the proposed language for exterior width would allow products that do not meet the spirit of the requirement. One example given was a hypothetical chamber with a 6 inch flange. If the product itself were only 22 inches wide, with 6 inch flanges on each side, would the product be considered to have an exterior width of 34 inches. Mr. Lentz suggested including language for a minimum open bottom area of 80 percent to protect against this possible scenario.

Mr. Lentz also raised concern that products less than 12 inches tall might be excluded because of requirements in section 950 for a minimum 12 inches of sidewall.

Mr. Lentz asked if the requirement for H-20 load bearing is necessary. He added that manufactures want criteria including something like American Association of State Highway and Transportation Officials (AASHTO) H-5 for shallow installations in no traffic areas.

Mr. Moore commented that the SHDR require 18 inch installations. Mr. Moore added that if you use H-5, then you don't need an H-10 requirement.

Mr. Lentz commented that H-5 is for 6 inches of cover, H-10 is 12 inches of cover. He added that AASHTO ratings are highway design ratings, not describing cover.

Mr. Parker commented that if you meet H-10, you will meet shallow installation requirements.

#### **Final thoughts from the TAC.**

VDH staff thanked TAC members for the tremendous work and effort put forward. Members then provided their final thoughts on the CBEP TAC process.

**Discuss process moving forward.**

Mr. Gregory stated agency staff must have a final draft together by June 12<sup>th</sup>, but will continue to listen to comments from the TAC and stakeholders. Mr. Roadcap added that a final draft will be presented to the Board of Health at its September 12<sup>th</sup> meeting. The June 12<sup>th</sup> deadline was set to allow adequate time for both internal review and review by members of the Board in advance of the September meeting. Mr. Roadcap again thanked TAC members for their contributions.

**Adjourn**

Attachment 1  
**Chamber and Bundled Expanded Polystyrene  
Technical Advisory Committee Meeting**

**Date:** May 8<sup>th</sup>, 2013  
**Time:** 10:00 pm to 4:00 pm  
**Location:** James Madison Building  
Mezzanine, Main Conference Room  
109 Governor's Street, Richmond, VA 23219

**Meeting Agenda**

1. Administrative.
  - A. Welcome.
  - B. Approve agenda.
2. Review and approval of previous meeting minutes.
  - A. April 16<sup>th</sup> TAC minutes.
  - B. April 23<sup>rd</sup> TAC minutes.
3. Walk through proposed language.
4. Discuss proposed action for GMP's.
5. Highlight specific items for further discussion
6. Break
7. Discuss highlighted items.
8. Lunch
9. Continue discussion of highlighted items.
10. Final thoughts from the TAC.
11. Discuss process moving forward.
12. Adjourn

Attachment 2

**Chamber and Bundled Expanded Polystyrene  
Technical Advisory Committee Guidelines  
May 8, 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. 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.
- If you miss a meeting, get up to speed before the next one, as the TAC cannot afford the luxury of starting over.
- 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.