Technical Guidance Committee Meeting Agenda

Thursday, September 26, 2019

Conference Room C
Department of Environmental Quality
1410 North Hilton
Boise, ID 83706

TGC ATTENDEES:

Rachael Smith – REHS, Onsite Wastewater Coordinator, DEQ (TGC Chairman)
Joe Canning – P.E., B&A Engineers Inc.
Kellye Johnson – REHS, Director of Environmental Health, EIPH (via telephone)
Jason Peppin – REHS, Senior Environmental Health Specialist, PHD
Mike Reno – REHS, Environmental Health Supervisor, CDHD
Kendall Unruh – WEB, Inc. dba Western Septic & Excavation

GUESTS:

Lisa O'Hara – DEQ, Office of Attorney General
Lori Flook – DEQ, Administrative Assistant
Dave Lowe – Lowridge Onsite Technologies (via telephone)
PaRee Godsill – Everlasting Concrete Products (via telephone)
Dave Potts – Geomatrix (via telephone)
Jason Henderson - Geomatrix
Keith Taylor - BioMicrobics
Tristian Bounds – Orenco Systems

CALL TO ORDER/ROLL CALL:

Meeting is called to order at 9:37 A.M.
Committee members and guests introduced themselves

Public Comment Period:

Rachael Smith opened the meeting for public comments. No comments were presented.

APPENDIX A

Action Item: **June 27, 2019 Draft TGC Meeting Minutes**

Joe Canning mentioned that there was a mistake below Appendix F in the meeting minutes. He said he had used Lowridge technology for a couple of systems, but had not done engineering work for Dave. Rachael Smith said that she could correct this in the minutes.

Joe also mentioned that he had researched residual head since the last meeting and found that a possible reason for setting residual heads on low pressure distribution systems would be to increase pump run times in order to achieve better distribution in the

drainfield and to lengthen the lifespan of the pump. He said he had used one of his sand mound system pressure designs and altered the residual head in the calculations to see what it would do. He found the following:

5 feet of head with 1/8" orifices = 28.4 gpm
10 feet of head with 1/8" orifices = 40.2 gpm
15 feet of head with 1/8" orifices = 49.2 gpm

Using 5 feet of head as the baseline, the 10 feet of head results in a 42% increase of flow and the 15 feet of head results in a 73% increase in flow. Higher increases in residual head would continue to increase the flow to the drainfield. This would result in a shorter "pump on" time as the dose to the drainfield is usually set to so many gallons. The shorter run time could influence pump life and certainly might lead to less even distribution within the drainfield during a dose. Rachael said that she would add this topic and the information to the next meeting's agenda for further discussion.

Motion: Mike Reno moved to approve the minutes with the one correction.
Second: Kendall Unruh
Verbal Vote: Unanimously passed. The final minutes will be posted to DEQ's website within 30 days.

Old Business

APPENDIX B

Action Item: **TGM Section 4.23 In-Trench Sand Filter**

Rachael mentioned that no public comments were received on the modifications.

Motion: Joe Canning moved to approve the appendix.
Second: Mike Reno
Verbal Vote: Unanimously passed.

APPENDIX C

Action Item: **OSCAR-II Treatment System Installer Design Manual**

Joe Canning started by saying that he has used Lowridge technology on a couple of systems in the past and if there was any perceived conflict of interest that he would remove himself from the discussion. Kendall Unruh also said that he had installed some Lowridge systems. No one in attendance felt it was necessary to exclude these two from the discussion so discussion on the design manual began.

Rachael said that Dave Lowe had resubmitted the OSCAR-II Treatment System Design Manual with the changes that were requested during the last meeting. Mike Reno said that the soil preparation needed to be defined more clearly on page 2 of the manual. He also suggested adding a cut sheet with minimum and maximum requirements listed for basal area, separation between coils and shoulder widths and said that having all calculations listed on one sheet would make the review process easier.

Motion: Mike Reno motioned for final approval of the OSCAR-II once Rachael addresses the discussed edits with Dave Lowe.
Second: Jason Peppin
Verbal Vote: Unanimously passed.

New Business

APPENDIX D

Action Item: **Geomatrix GeoMat Leaching System**

Mike said that the trench designs were unclear and that a minimum 6' trench width should be specified as well as the maximum width. Dave Potts said that typically for a trench with sand fill, there would be a minimum of 2" of sand around the GeoMat and 6" under. He said that pipe is needed for each 39" wide section and sometimes the side of the product can be bent up the side of the trench. The systems are normally used in sand to achieve higher treatment. Joe asked if Geomatrix was asking for an increased application rate. Dave said that this would be the proposal with sand treatment. Mike said that the committee would need to see the design for standard trench installations so that staff would know how to permit the systems. Rachael mentioned that the sand under the system would need to be 12" rather than 6" for consistency with all other proprietary product reviews and approvals. Questions were raised whether NSF testing was conducted with a bed or a trench installation. Dave said it was a bed configuration with the GeoMat pieces placed side by side. Mike asked about the GeoMat Edge and said that only the bottom surface area of the trench system could be counted and not the sides.

Mike mentioned that there should be 6'of undisturbed earth in between each trench (calculated based on edge of excavation to edge of excavation). Joe said that they would need to see spacing between trenches and the committee would like to see specific examples listed in proposal. Joe also mentioned that any trench wider than 6' is considered a bed configuration.

Kendall asked for clarification as to the function of the GeoMat. Dave Potts explained that it is to ensure that the water is dispersed uniformly. Mike asked about the pressure-dosed design on page 12 and whether a GeoMat orifice shield is required. Dave explained that on page 7 of their manual the installation is explained. He said that the GeoMat edge is typically used for sites with limited sites and high permeability. Joe mentioned that a PE is not required for pump to gravity systems in Idaho.

Motion: Mike Reno motioned to table the review until the next meeting to discuss the revised manual.
Second: Joe Canning
Verbal Vote: Unanimously passed

APPENDIX E

Action Item: **TGM Section 3.2.8.1.2 Medium Sand**

Rachael said that based on the discussion during the last meeting, changes were made to include the word "Manufactured" to this section of the TGM. The committee did not recommend any further edits.

Rachael also mentioned that while researching for rulemaking, she found that the ASTM-C33 gradation requirements had more differences than only the 200 sieve as this section of the TGM indicates. There are differences in the TGM/ASTM C-33 tables for the 50 and 100 sieves as well. She asked if anyone knew the history on it. Someone said that they thought only the 200 sieve percentages were different and that the TGM required fewer 200 size fines passing through to prevent these fines from washing off the sand and creating a layer with less permeability. Rachael said she would check on the ASTM C-33 history prior to the next meeting. Rachael said she would post the draft changes to DEQ's website for 30 days to allow public comment.

Motion: Joe motioned to preliminarily approve the proposed changes.
Second: Jason
Verbal Vote: Unanimously passed

APPENDIX F

Action Item: **BioMicrobics Proposal for Changes Regarding Effluent Screens & SaniTEE Screen**

Keith requested to join the discussion to present the manual and asked if it was possible to modify the language of Section 4.19.3.4 of TGM to allow their product to be approved. He requested that specific flow area and close-off feature language be removed because it did not allow their product to be approved. He said that once the BioMicrobics SaniTEE is installed, there is a clean in place swab for cleaning as needed. He also said that their product is designed to prevent a specific head loss and that the committee should research other products based on the head loss created rather than flow area. Mike questioned what percentage plugging of the filter the head loss calculations were based on. Jason said that there should not be language in the manual that restricts usage of specific manufacturer's products. Rachael said that the original 1 ft^2 filter flow area requirement was based on a proposal from Allen Worst for a TGC meeting in 2017. The 1 ft^2 was created to provide for a 3-4 year mean time between cleanings for systems rated at 500 gpd or less. The proposal stated, *"Requiring effluent filters with a flow area sized to provide longer term cleaning intervals would help to reduce the chance a homeowner would remove the filter permanently therefore eliminating the need for a close-off device."* Someone mentioned that it may be better to size based on flow and estimated head loss. It was decided to table the discussion until more information is provided on the head loss calculations and other products that may use head loss calculations for their product.

Motion: Jason motioned to table the discussion until more information is provided.
Second: Mike
Verbal Vote: Unanimously approved.

Action Item: **TGM Section 1.4.2.1.1 Initial Septic Tank Approvals**

Rachael said this item was added to the agenda because some health districts said that the septic tank manufacturers did not agree with the testing above ground requirement. The manufacturers believed that the tanks are designed to be supported on the sidewalls by soil. Rachael said that she had researched the ASTM C1227-13 Standard Specification for Precast Concrete Septic Tanks and also the Precast Best Practices Manual and neither specified whether the testing had to be conducted above ground or below ground. She said the only thing she found regarding above/underground testing was an article in the latest Installer magazine that said, "Be careful when performing hydrostatic tests on plastic and fiberglass tanks, as they gather much of their strength from soil support. For all midseam tanks, keep the backfill near the midseam but leave the seam itself exposed to monitor the test."

Jason said that a manufacturer in his area would not complete the leak testing because they said the tanks were not designed to be filled above ground. Kellye asked whether her health district would be required to do an inspection while the tank was above ground for measurements and then return later for the tank fill measurements, thus creating extra time involved with the inspection. It was agreed that the TGM language did not require the health district to complete these inspections and that the manufacturer could instead have an Idaho licensed PE to complete the inspections. Draft edits were made to section 1.4.2.1.1 of the TGM to allow testing either above or below ground.

Motion: Jason motioned to preliminarily approve the changes.
Second: Mike
Verbal Vote: Unanimously approved.

Action Item: **Issue of Infiltration from Unsealed Septic Tank Risers**

Rachael said that this was added to the agenda after a discussion with an installer who said that he has seen issues with infiltration around the risers on tanks because the risers are not sealed where they join the septic tank. The installer said that this is especially problematic with ETPS where the extra flow can create issues with proper treatment. Keith Taylor said that sometimes the riser is not even attached to the septic tank so when the septic tank is set, the riser may not be lined up and he sees significant water infiltration. Someone suggested that attaching and sealing risers could be added as a recommendation in Section 3.2.3 of the TGM. Revisions were made to the TGM during the meeting to include this verbiage.

Motion: Mike motioned to preliminarily approve revisions made to section and to post for public comment.
Second: Kendall
Verbal Vote: Unanimously approved.

On-site Wastewater Program Update

Rachael noted that the 2019 subsurface sewage disposal program audits were on hold this year due to the Individual/Subsurface Sewage Disposal Negotiated Rulemaking. She said

that the first draft rule was posted for public review, and a meeting was held was held September 18th. The public comment period is going on now through October 2nd.

She said there have been many septic tank submittals and reviews lately and that the recently approved tanks will be added to the TGM and posted with the next TGM update.

NEXT MEETING

It was decided that the next meeting would be scheduled for December 5th , at 9:30AM to be held at the Idaho Department of Environmental Quality state office.

Motion: Mike motioned to adjourn the meeting at 12:42 p.m.
Second: Jason
Verbal Vote: Committee unanimously approved.

Meeting was adjourned.