

**Subsurface Sewage Treatment Systems (SSTS)
Technical Advisory Panel (TAP) for Product Registration**

Meeting Notes – February 19, 2009
MPCA Conference Rooms 2-A and 2-B

Meeting Attendees

Committee Members	Present on February 19	Guests	Present on February 19
Ed Kerzinski	x	Frank Connelly, JMK	x
Mitch Johnson	x	Mike Sundberg, Bord Na Mona	x
Loren Kohnen		Eric Larson, Septic-Check	x
Kemp Ritter	x	Alison Blodig, Premier Tech	x
Sara Christopherson	x	Marie-Christine Belanger, Premier Tech	x
Bob Whitmyer	x	Sean Riley, Wright County	x
Greg Halling	x	Jim Bell, Bio-Microbics	x
Joe Enfield			
Chad Villand	x		
MPCA Staff			
Barb McCarthy	x		
Gretchen Sabel	x		
Mark Wespetal	x		
Bill Priebe, Supervisor	x		
Leah Hedman, Attorney General Office	x		

Motion to approve minutes, Christopherson, second Kerzinski. Several changes were requested and will be made. **Motion to adopt with changes, passed unanimous.**

Proprietary Distribution Media

Mark Wespetal began the discussion by again explaining the spreadsheet that was distributed at the January meeting at the request of Carl Thompson. Mark explained that this piece is an internal MPCA discussion document, not an official MPCA policy. Sara Christopherson noted that the U also didn't endorse the table. It was developed as a tool for evaluating different options, not as any group's position or endorsement of reduction or downsizing.

February 19, 2009 Technical Advisory Panel
Final Meeting Notes

Chair Whitmyer then turned to the panel, requesting a recommendation on the distribution product manufacturer's downsizing request. **Motion, Christopherson, that the TAP does not recommend a uniform 25% downsizing of all gravelless distribution media. Second, Viland.** Ritter, no comment. Johnson, no comment. Comment Kerzinski, that his views are as he stated last month – there wasn't anything in these studies that definitively proved downsizing is OK, or that downsizing is a problem or is not a problem in the short term. St. Louis County has been looking at longevity for years, and this is why they reduced loading rates, and failure rates for mounds have dropped. They now pressurize their trenches, which has greatly increased longevity. He is not at all comfortable with downsizing trenches in heavy soils or in mounds. He stated that he supports the motion.

Comment Halling, based on scientific data, there isn't enough here to support downsizing. Comment Whitmyer, thinks the science is not sufficient to support downsizing. As a technical panel, our role is to look at the science and engineering behind the request. Research has documented the potential for embedment of and fines in gravel being a problem, but this does not justify downsizing of non-gravel media. Comment Christopherson – to warrant change, you need a sufficient body of evidence to support the change. There is not a preponderance of evidence that would support a statewide reduction in all soil types.

The question was called. **Motion passed unanimous with all voting.** Clarification McCarthy – when the individual products are submitted for listing, the geometry of each product will be considered individually. Comment Christopherson – the group should consider practicality in installation when dealing with the issue of open bottom width of a product.

High Strength Waste (HSW)

Barb McCarthy introduced the topic. She discussed the draft process for provisional registration of products to meet Treatment Level C provided to the TAP in the meeting packet.

Eric Larson summarized the issues relative to HSW that were raised at the SSTS Advisory Committee at their January 15, 2009 meeting. The concern was that the Design Guidance did not have provision for HSW so design of systems that receive HSW would require a Licensed Professional Engineer.

Chair Whitmyer guided the group to begin with a general discussion of this approach. Discussion: the certification form from Massachusetts asks for the manufacturer to certify that the design is sound. The TAP had previously discussed that the manufacturer would write a letter that states the technology is a good fit for the design, but would stop short of certification. This will take responsibility away from the Advanced Designer (AD) or Professional Engineer (PE) that designs the system.

Jim Bell described how it works in Massachusetts. The Massachusetts certification form would be more of a concern in Minnesota because he'd be working with designers who are not Professional Engineers. This could mean more liability for his company or his personal engineering license. Discussion. Sara Christopherson stated that Type V systems don't necessarily require PE's. She would like to see this requirement removed. Discussion.

February 19, 2009 Technical Advisory Panel
Final Meeting Notes

Summary of TAP comments re: High Strength Waste process. 1) The manufacturer should be required to submit a letter of approval stating that the technology would be a good fit for the system based on the conditions described by the designer, not a certification. 2) This process should be a short term fix, and the TAP should move ahead with identifying a protocol that could be used for High Strength Waste manufacturers to take the next step toward full certification. This may be a separate process. The word “provisional” may be misleading; “conditional” may be better – MPCA agreed to check with their attorney on possible words to use.

Additional comment -Mike Sundberg with Bord na Mona: There should be a minimum number of systems that have to be installed to be considered for moving from provisional to full registration. Comment Christopherson – there needs to be a certain amount of review conducted to allow the product entry onto the provisional list.

Premier Tech – Bottomless Peat Filters:

Allison Blodig and Marie-Cristine Belanger from Premier Tech presented new information that is somewhat different than the past presentation. They have new designs that are more respectful of the requirements in Minnesota. See presentation. Question – all the testing was conducted at BNQ using liners – are there problems with acceptance of water in slow-perc’ing soils? The Premier Tech systems showed contour loading rates (CLR) of 12 and 18. We have soils in Minnesota where we design with CLR of 6 or 4. Question – how were contour loading rates calculated? Answer – it is based on the cross-slope width of bed, not the width of the Ecoflow. Question –What kind of dispersal system is this? Is it a mound, an at-grade? It is the same principal as a sand mound. Question – what is the loading rate to the peat? Answer – a little less than six gallons per square foot. Comment – it may need a manifold to ensure even distribution. Counter-comment – no, won’t the slope at the base of the trench will ensure even distribution below. Question – can the tipping bucket be leveled independent of the unit? Answer – no. The whole unit would need to be leveled. There is the ability to have a counter on the tipping bucket, it works like a pedometer.

Additional stress testing was also conducted at BNQ to simulate the testing that NSF does. Data showed that the CBOD did not vary (was still undetectable) even with much greater loading rate. In European testing, the Ecoflow consistently met 7 ± 3 mg/l TSS and 5 ± 3 mg/l CBOD. The Ecoflow is able to sustain high quality treatment because the peat acts like a sponge and absorbs water, spreading out the peaks. A video was shown of the tipping bucket in operation at a flow rate of 9 gallons per minute.

Barb McCarthy asked the Premier Tech reps if they want to proceed with getting the closed bottom filter listed now? Yes, they do. They will also tweak their installation manual draft of the open bottom filter to meet Minnesota’s rules and bring it back. Their goal is to have both products registered.

BioMicrobics: Jim Bell discussed the letter he sent regarding the draft listing for the FAST products (see). He wants to hold on the registration of all products but those shown in the bottom row of the

February 19, 2009 Technical Advisory Panel
Final Meeting Notes

draft listing that are requesting listing for treatment levels A, B and TN. The RetroFAST models 0.15, 0.25 and 0.375 would also be included in this group.

What about adding an aeration unit to an existing system with a clogged drainfield (not failing to protect groundwater)? BioMicrobics would like to get the RetroFAST Model 0.15 listed for this use. How is this handled in the rule? It is not. 7080.2450 sub 8 deals with remediation but was not written with aeration units in mind. BioMicrobic's goal is to get products registered ASAP. He now has an understanding of the missing pieces.

Additional issue: There was a discussion of the use of a series of treatment products that weren't tested together. Can an Advanced designer design a treatment train like this or will a PE be required? Does it make a difference if the products are all registered?

Additional questions from Jim Bell: Is dechlorination required if chlorine is used for disinfection? Also, what about a treatment product that can achieve Treatment Level B for TSS and BOD but not fecals – he's noticed that a recent Water Environment Research Federation (WERF) study that shows lower fecal counts in septic tank effluent of individual onsite systems compared to those observed during National Sanitation Foundation (NSF) testing, which uses effluent that passes through a large collection system. Jim Bell postulates that this is because the fecal organisms reproduce within the collection system; a shorter time in the collection system will lead to lower levels. He submitted information that MPCA should examine.

Operating Permit: Barb McCarthy reviewed the operating permit that was distributed in the meeting packet. Comment – the actual contract for service should be attached to the Operating Permit. Answer – the Operating Permit form is to be filled out by the Designer at the time the design is submitted to the LGU for construction permitting. The requirement to attach the service contract to the operating permit will be added. Sara Christopherson went through the distributed Management Plan templates and how they will be used. The Ecopod and Salcor sheets have not had outside review, comments are requested from the TAP. Concerns were raised about how violations are noted and reported –it may be overly restricted. Discussion: there should be time allowed to bring the system back into compliance. Long discussion – Sara will make changes to the draft management plans and send them back out to the TAP for review.

Mike Sundberg with Bord na Mona had a series of questions about what additional documentation will be required of Premier Tech for their submittal. This will guide his submittal for Bord Na Mona.

Alison Blodig with Premier Tech indicated during the open form that the attenuation of effluent in the peat filter, is being offered as an equivalency for code-required timed-dosing of effluent.

Meeting adjourned at 4:20pm. Next meeting will be March 19, 2009 in the Board Room West at MPCA.