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

Meeting Notes – December 12, 2008

MPCA St. Paul Office

Meeting Attendees

Committee Members	Present on December 12	Guests	Present on December 12
Ed Kerzinski	x	Jeff Iverson, Infiltrator	x
Mitch Johnson	x	Carl Thompson, Infiltrator	x
Loren Kohnen	x	Dick Bachelder, ADS/Hancor	x
Kemp Ritter	x	Jesse Kloeppner, Orenco	x
Sara Christopherson	x	Ron Suchecki , Hoot	x
Chad Viland	x	Brian McQuestion, Hoot	x
Bob Whitmyer	x	Ben Berteau, Ring Industries	x
Greg Halling	x		
Joe Enfield	x		
Vacant			
MPCA Staff			
Barb McCarthy	x	Lisa Thorvig	x
Gretchen Sabel	x		
Mark Wespetal	x		
Brett Ballavance			
Leah Hedman, Attorney General Office	x		

Meeting was called to order at 10:10 am on December 12, 2008 in the Board Room West of the MPCA building. Agenda was reviewed and introductions occurred. An error on the agenda was noted – the next meeting is January 22, not the 12th as the draft agenda stated.

Meeting Notes:

Notes from the November 20, 2008 meeting were discussed. **A motion made by Christopherson, second by Kohnen, to approve the meeting notes. Motion carried, unanimous.**

Website Update:

The website is now current. Barb made the changes that will link the 'How to Use the List' document with the product registration page.

Drainfield Rock Guidance Document Update:
The Drainfield Rock Distribution Media Recommended Standards and Guidance document (RS&G) was amended to reflect comments from the TAP and from Lynn Carlson from the Aggregate and Ready-mix Association of Minnesota (ARM). Comment - each identified practitioner should instruct the homeowner to operate and maintain their newly constructed system properly. **Motion Johnson, second Viland to approve the Drainfield Rock RS&G for consideration by the SSTS Advisory Committee's January 15, 2009 meeting. Motion carried, unanimous.**

Training/Testing for Registered Products**:**
The mailed packet included a draft outline for "Need to Know" for Advanced Designers and Inspectors as their training and exams are developed. Comments were made, and amendments will be made.

Submittal by Hoot Systems**:**
Barb McCarthy provided an overview of the checklist prepared based on Hoot System's submittal. Barb reviewed the documents and pointed out possible concerns.

Ron Suchecki, Research Director for Hoot Systems, and Brian McQuestion, Midwest Distributor for Hoot Systems, were present to present information on their treatment products. Ron Suchecki distributed some updated material to address some of Barb McCarthy concerns. Ron Suchecki gave a presentation on the products. He noted that in areas where the water is high in iron, there may be iron precipitate buildup on the porous ceramic air diffuser; this is treated with an acid back flush. Similarly, intermittent use may allow bacteria to grow into the ceramic diffusers; this is treated the same way. Question – where do the tanks come from? In Minnesota, Wieser Concrete out of Stewartville, MN, will supply the south end of the state and Wieser Precast out of Maiden Rock, WI, will supply the north portion of Minnesota.

Ron Suchecki stated that Hoot Systems is modifying the application; a new application will be submitted so it is clear what they are requesting. Questions – how do you control detention time in the tank? If flow is higher, does it matter? If flow is higher, are there alarms? Answer – detention time is not controlled, results are based on normal use. If the unit is being overloaded, solids will build up in areas and the service provider will know that there are problems. They have an optional telemetry system (via National Sanitation Foundation) that provides system tracking. This is used in some states, particularly those states that allow surface discharge. Question – what is a stone flush? Refer to the diagram on page 12 of the packet distributed today. The porous ceramic diffuser is the "stone" – this was explained earlier.

Question – why is Hoot Systems not seeking nitrogen approval? Answer – They will have a new product that they will seek this approval on when the nitrogen testing is complete. Larger treatment plants are being developed now. Question – what does the rule say about discharging from a treatment device to gravity distribution? Answer – this isn't allowed – the distribution in the soil must utilize pressure to provide for final treatment and dispersal of the effluent. The submitted drawings will be amended to clarify this. Question – regarding fecal coliform bacteria testing in the Testing Report – are there other data collected besides flow? Answer – yes, color and turbidity are also monitored in the testing

protocol. Page 4 of the handout distributed at today's meeting provides additional information to supplement what came in the initial packet – see Appendix L.

Question – what about intermittent use (like a cabin)? Answer – Ron Suchecki does not believe that any treatment device can be used in this way. He suggests holding tanks with alarms. Question – is a snowbird an intermittent use? Answer – not really. They should go through the shutdown procedure and then restart when they return. They would have to have it pumped and then fill with clean water. The device will handle high-efficiency furnace drip. Question – do you have additional guidance on level of use that defines what "intermittent" means? Answer – a few weekends a year would be intermittent use.

Question – what about biting ants? Answer – fire ants are the concern – their bites secrete acetic acid that actually causes corrosion. Regular ants are OK. Fire ants haven't made it to Minnesota yet; they are in the southern states. Question – do Minnesota rules require that fecal coliform bacteria testing results be determined – specifically based on Treatment Levels meeting 'monthly geometric means'? Answer – yes. Question – should there be an example(s) designing a system using a Hoot Treatment device? Answer – yes, as long this is consistent with other applications.

Next steps: Barb McCarthy will review the data once it is submitted directly from the testing agencies and let the TAP know if the state's requirements are met. Barb will work with Hoot to resolve issues.

Lisa Thorvig, director of the Municipal Division, joined the group for lunch and thanked the members for their work.

<u>Proprietary Distribution Media:</u>
Gretchen Sabel recounted the history of how the rule and law has addressed synthetic distribution media, and told the TAP that this discussion was about sizing for chambers and expanded polystyrene, not about specific products. Barb McCarthy described the information that was in the packet for the TAP's consideration. Question – what does MPCA want from the TAP today and in this process? Discussion relative to how this is different – it's a class of products versus a single product seeking registration. Individual products must then come through once the framework is decided.

Carl Thompson with Infiltrator Systems introduced the visitors representing the various products (Ben Berteau, Dick Bachelder, Jeff Iverson, and Peder Larson) and then provided a powerpoint presentation regarding their request. Information provided in the presentation included 1) "Who We Are" 2) Why Are There Products Preferred in Many Areas? 3) Drainfield rock Quality Control Consideration 4) How Our products Are Used 5) Minnesota History 6) Use in Wisconsin, Washington and other states 7) Technical discussion with establishment of an Equivalency Factor = (LTAR Non-gravel system) ÷ (LTAR gravel system), including citations of publications 8) Column Studies and controlled field studies (Lowe et al, Walsh et al., Uebler et al., 8) Technical Summary – Demonstrated Equivalency Factor Range 1.33 – 3.2 9) Conclusions – Draft Document for Proprietary Distribution Products Recommended Standards and Guidance prepared by Infiltrator et al. 9) and Going Forward.

Question on the geotextile for EZFlow – is the geotextile inside the bundle the same as a geotextile cover? Yes, it is. The states of Washington and Virginia both vary their allowable reduction based on soils. Carl Thompson distributed a one-page summary of twenty papers, attached. Carl discussed five papers – Radcliffe, White (Small Flows), Lowe (new research at the test site), Walsh thesis, and Uebler's work. The powerpoint presentation provides information on these authors.

Carl Thompson indicated that additional reduction in length, based on pretreatment, is not appropriate (cited Walsh thesis). Question – is embedment documented? Answer – yes, in Lowe and Keys work. How should the 'width' be addressed since the products vary in width? Carl et al recommend that something that is 90% of the width of the trench = the width of the trench.

Question – are the manufacturers asking for the 25% reduction on top of the 90% width equivalency factor? Answer- yes, that's how it's done in different states. Discussion – in at-grades, the area that the distribution media covers is actually the absorption area. Discussion – yes, the at-grade would be sized like a trench, not like a mound.

Question – The rationale for the requested reduction includes the factors of 1) embedment, 2) fines, and 3) because other states are doing it. Dick Bachelder – added compaction (could also be embedment). Question - would this also apply to gravelless pipe and a packed bed system? Answer – no, just chambers and expanded polystyrene. Idaho gives a 1.33 factor for all gravelless pipe; this would be your state's choice. Dick Bachelder – they are not seeking approval for ADS's gravelless pipe or their multi-pipe product.

Question – do manufacturers keep records on how many people have made claims on the warranty and how many times it was honored? Answer – Infiltrator indicated yes and they will prepare a summary for the January TAP meeting. What about ADS and Ring? Yes, they will also prepare this information for the TAP meeting in January.

Question – what about the draft Proprietary Distribution Media RS&G prepared by the manufacturers? Leah Hedman – stated that the document clearly needs to say draft with no MPCA logo (this document was not prepared by the MPCA but by the manufacturers). Question – would it be appropriate to see the individual proposed product applications? Answer – yes, either in January or February 2009. Question – would products be cheaper if they are allowed to install downsized? Answer – material costs would be less for rock; labor costs would be less for installation of synthetic products.

<u>Treatment Products for Residential Systems for Flows >1500 and <10,00 gallons per day:</u>
Barb McCarthy described what's happened on this issue since the last TAP meeting as it relates to up-scaling the FAST Bio-microbics treatment systems to 9000 gallons per day. The handout provides points of the discussion.

Regarding High Strength Waste, Barb described what's happened on this issue since the last TAP meeting (see handout). Question – Is Bio-Microbics listed in Washington? How about Nibbler? We should check their data. Discussion – Concern is that 'registration' of High Strength Treatment devices

may end up being misleading – there are many variables that would impact the treatment outcomes. There's no way you can have a unit that takes care of every situation. You can't go that far; perhaps we could get to a point where the state has a 'list' of registered products that indicate the products can be used to treat High Strength Waste. The role of the engineer needs to be defined.

Ron Suchecki (Hoot Systems) indicated that if we require a letter from the manufacturer as part of the design, this will help to ensure system success (and provide a warranty on it if not).

Move to adjourn Halling, second Kohnen, to adjourn. Unanimous. Meeting concluded at 3:28 pm.