

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

Meeting Notes – November 20, 2008

Veterans Services Bldg.

Meeting Attendees

Committee Members	Present on November 20	Guests	Present on November 20
Ed Kerzinski	x	Jim Bell, Bio-Microbics	x
Mitch Johnson		Karin Holt, Larkin Hoffman Attorneys	x
Loren Kohnen	x	Mike Catanzaro, Delta Environmental	x
Kemp Ritter	x	Peter Miller, Wenck Associates	x
Sara Christopherson	x	Ron Suchecki , HOOT Systems	x
Mike Frauenkron		Lynn Carlson, Aggregate and Ready-mix Association	x
Bob Whitmyer	x		
Greg Halling	x		
Joe Enfield	x		
Chad Villand	x		
MPCA Staff			
Barb McCarthy	x		
Gretchen Sabel	x		
Mark Wespetal	x		
Corey Hower	x		
Leah Hedman, Attorney General Office			

Meeting was called to order at 10:10 AM on November 20, 2008 in the 5th floor conference room of the Veterans Services Building. Agenda was reviewed and introductions occurred.

Meeting notes:

Meeting notes were reviewed from the October 23, 2008, meeting. Greg Halling noted that he was indeed present. Sara Christopherson asked that the word “linear” be stricken from her discussion on loading rates on page 3. **A motion made by Villand , second by Kerzinski , to approve the meeting notes as amended. Motion carried, unanimous.**

Website Update:

Changes to the web page were discussed. Barb McCarthy replaced the application with a Word version that applicants can type into. All meeting notes and agendas will be on the website along with many of the handouts. Additional changes may be made to the application since people seem to be having issues with it. The “How to Use the List” document (final version) was reviewed. **A motion was made by Halling, second Christopherson, to approve the “How to Use the List of Registered products.”**
Approved unanimous.

The meeting schedule for December 2008 – June 2009 was distributed. Meetings are being moved to the MPCA St. Paul Office, Board Room West. The December meeting will be on December 12, 2008 rather than December 18, 2009 as originally scheduled.

The MPCA letter to Orenco Systems, Inc., indicating that the AX-20 treatment product could not be listed at 600 gallons per day, was distributed to TAP members. The letter indicates that adequate testing was performed to list the AX-20 at a flow of 500 gallons per day.

Bottomless Peat Filters:

Premier Tech Environment requested that the MPCA take no action on this; so the TAP will discuss and perhaps take action at the December meeting. Sara Christopherson had a question regarding the Premier Tech Environment letter dated November 11, 2008. In Table 1, the soil absorption area for the mound is identified at 2800 ft², while the peat filter is shown with an absorption area of 600 ft². Is this correct? Sara Christopherson commented the Virginia Study did not address different soil loading rates for peat filter effluent. Greg Halling asked what was the intent of the rule in requiring pressure distribution? The intent of the rule, according to Mark Wespetal, was to deal with more uniform dispersal of a cleaner effluent, which would not form a significant clogging mat. A Type IV system would not include both treatment and dispersal in the same unit. Greg Halling asked does the water then mound up into the peat? Will this affect treatment? Sara Christopherson indicated the question is - whether the absorption area is big enough since Premier Tech states the peat filter is not suitable with less than 12” of soil. Bob Whitmyer agreed; the Premier Tech letter does not address contour loading rates. The other issue with the Virginia Study is that it addresses treatment, not but dispersal into soils (i.e.: different soil properties and depths of soil). Halling indicted that perhaps the open bottom peat filters could be listed with restrictions for certain soil types.

Barb McCarthy indicated there won’t be a problem registering the product as a closed-bottom filter; the question will be how to deal with the open-bottom peat filters. A visitor indicated there are applications for open-bottom, but you can’t load them too heavily. Bob Whitmyer indicated that water moves in three dimensions, not just vertical. Sara Christopherson indicated that perhaps they could be sized with a larger absorption area. Greg Halling indicated it seems that when you try to fit this into a narrower footprint, you are getting away from even distribution. Question – in the Premier Tech Environment letter on page 3, what does “T value” mean?

Ed Kerzinski indicated that he did not think there were any problems with the treatment aspects of the peat filter. However, dispersal in the open bottom units depends upon soil conditions and is site-specific. One way to deal with this would be to register the peat filter as a closed bottom unit; however,

dispersal isn't quite there yet. Bob Whitmyer agreed and that it's not up to the TAP to come up with loading rates. Premier Tech Environment needs to come back to the TAP with additional information. Otherwise, the open-bottom peat filters would be considered a Type V System. Bob Whitmyer indicated that Premier Tech Environment can come back to TAP with specific information. The four things that need to be addressed are the following items:

1. Contour loading rate
2. Absorption ratios (compare to mounds)
3. Pressure distribution
4. Time dosing

Joe Enfield indicated that Barb McCarthy should also copy Bord-na-Mona on this (i.e.: Meeting Notes). Question – does the registration cover all types of soils, or can it be limited? Ed Kerzinski indicated that he's not in favor of doing dispersal in conjunction with treatment. A visitor indicated that other states have done this as two separate approvals.

Revised Submittal - Delta Environmental Products (ECOPOD):

Barb McCarthy reviewed the material provided to the TAP on this item. Two draft operating permits were distributed at the meeting. The TAP indicated the first draft Operating Permit needed to be 'streamlined' and include the systems Management Plan as an attachment to the Operating Permit. The second draft Operating Permit removed the Management Plan and is 2-½ pages in length. Barb McCarthy reviewed the Ecopod Manual for Minnesota submitted by Delta Environmental Products.

Greg Halling noted on the drawing that it says both required tank sizing and per code. The Manual should specify the tank volume size and state that the tanks need to be built to meet Minnesota tank construction specifications and registration requirements. Mike Catanzaro, representing Delta Environmental Products, indicated there are a range of allowed tank sizes; this will be reflected in the drawings. Barb McCarthy asked whether there should be a table that shows tank size by bedroom? Greg Halling said no, tank sizing should be based on design flow. Bob Whitmyer asked what are the ramifications of not cleaning the air filter for six months? Mike Catanzaro commented that there is no problem because it was tested for six months without maintenance and passed the national Sanitation Foundation (NSF) test. Sara Christopherson indicated the first diagram is problematic because the pretreatment tank does not show a maintenance hole.

Sara Christopherson indicated that Appendix A shows minimum tank size. Chad Villand asked if this table could be changed to incorporate maximums, too, and then take the gallons off the diagrams? Mike Catanzaro indicated yes. Greg Halling said that sometimes, the Manual uses "design flow" and sometimes "average daily flow" – this should be consistent. Sara Christopherson commented that it's her understanding that Salcor (for Ultraviolet Light [UV] disinfection) provides instructions; will it be the same for all treatment devices? Is it updated often? Mike Catanzaro (and two visitors) indicated that the Instructions provided by Salcor are pretty consistent. It would be good to check the Salcor instructions for each device and note any differences. Greg Halling indicated that the tank write-up on the sixth page of the Manual needs to be modified to address tank sizing. **Motion to approve the Manual as amended by Christopherson, second Villand, approved unanimous.**

The draft Notification Letter to Delta Environmental Products was discussed. Barb McCarthy will make changes to items 4, 5 and 6 as discussed. Furthermore, the date will be changed to December 2011 for the period of Product Registration.

Drainfield Rock Guidance Document:

A brief overview of the Drain Rock Distribution Media Guidance Document was provided since Lynn Carlson, with Aggregate and Ready-mix Association (ARM) of Minnesota was present. The comments provided by ARM were reviewed so any questions could be asked by the TAP members of Lynn Carlson while she was able to attend the meeting.

Revised Submittal - Delta Environmental Products (continued):

Mike Catanzaro discussed the training that is provided to Delta distributors and installers. They are provided a certificate which includes their license number. Typically, the local unit of government or state agency gets a copy of these items. If they lose their license, their certification is void. This is a one-time training. The manufacturer does not post lists of certified persons on the web, but they will answer questions about who is certified by Delta Environmental Products. The Delta certifications are for a period of one year. Delta does not certify designers, only installers and service providers. MPCA will add a note at the top of the listing that when choosing a technology a consumer should make sure that they work with people who are properly trained in use of that technology. Delta was urged to attend the Minnesota Onsite Wastewater Association (MOWA) conference in March 2009.

Bio-Microbics (FAST) Issues:

Barb McCarthy outlined a letter she received from Tom Stevens from the National Sanitation Foundation (NSF) that describes how they 'up scale' systems. Barb McCarthy also relayed information from NSF that there is a protocol for testing high-strength waste, but it has not been used yet. Jim Bell, representing Bio-Microbics, discussed the NSF letter in more detail. NSF and Environmental Protection Agency (EPA) do not have an agreement related to NSF being 'delegated' as a testing entity for high strength waste. Any questions on the NSF letter should be referred to Tom Stevens. Barb McCarthy had a question on disinfection – how do you scale up the Salcor units with larger flows? Bio-Microbics does parallel installations with splitters to ensure equal flow for up to 1,500 gpd (3 units), then they switch to larger disinfection units that are used in wastewater treatment plants. These may vary by manufacturer, and no one system is chosen. And the maintenance requirements also vary. Massachusetts does this by splitting registration based on flow at two levels – up to 2000 gpd and then 2000 to 10,000 gpd. The rule specifies in 7083.4060 that disinfection systems have to be tested. Kemp Ritter raised issues with the maintenance of UV systems.

Bio-Microbics will send information on the larger UV units they use. Corey Hower will review the information; he has experience in approving products for use in wastewater treatment plants.

High-strength waste – Wastewater Treatment Center Environmental Technology Verification (ETV) is in limbo and has no funding. The NSF high strength water testing would be costly, and only cover the waste that was tested – it has no applicability beyond that waste. Bio-Microbics distributed data from Sara Christopherson's milk house waste study. Jim Bell presented information from this study. Sara Christopherson stated that several papers were developed from this study; she can provide these to the

TAP. Other treatment units were also tested. Jim Bell also talked about some other types of wastes they have treated recently (wine producer, slaughterhouse). He stressed that there's a need to check back with the manufacturer on all this. Both Delta and Bio-Microbics require involvement of a PE to design systems. They require the system designer to have a signed verification from a PE. Jim Bell indicated that Bio-Microbics sends 'engineering review letters' to permitting authorities regarding system designs using their treatment products for high strength waste applications (these waste are highly variable).

Additional discussion followed. The problem is that the waste is so variable that NSF testing will only certify this waste with this unit. Jim Bell indicated that whatever is done initially by a manufacturer; make sure that other companies follow the same requirements, too.

Conclusion: So what's the next step for high strength waste? Barb McCarthy will get together with MPCA folks, maybe Christopherson, and figure out how this all works together with the proposed Design Guidance. Jim Bell requested that Bio-Microbics be initially registered for residential effluents; high strength products will proceed as these issues are resolved on a longer timeframe.

Drainfield Rock Guidance Document Final Review:

There was discussion on the drainfield rock guidance document. The pictures should be deleted because they are hard to see when printed and make files bigger for downloading. Regarding the Mohs hardness test – keep; this is referred to in many sources. The Operation and Maintenance section should be deleted and refer to the Septic System Owner's Guide for more detailed discussion and individual Management Plans.

Motion to approve the Drainfield Rock document was made by Halling, second Christopherson.

Discussion by Loren Kohnen. The document says that the rock can't get dusty. Does this mean that all rock will have to be transported covered? What about when it's stored near a road that's made with Bryan Red Rock? Barb McCarthy indicated that this is a 'best practice' at the pit where the rock is washed and stockpiled for long periods of time. **Motion passed unanimous; it will be moved to the full SSTS Advisory Committee for final review in January 2009.**

Ron Suchecki, representing HOOT Systems, indicated their company will be submitting a new Minnesota manual to Barb McCarthy by December 3, 2008 for distribution to the TAP on December 4, 2008. TAP should ignore sections G and J when reviewing the application dated November 3, 2008 since these sections will be revised.

Is there any additional discussion for the Open Forum section? No.

Discussion of Operating Permit – should it include sampling?

Kemp Ritter indicated that grab samples are not the way to go; don't truly represent what's going into the soil. Joe Enfield indicated the operating permits need to be both right and consistent; need guidelines on where each type of unit should be sampled. Relative to the ECOPOD unit, we'll need to ask Mike Catanzaro about sampling. A visitor highlighted the 'New England Report' regarding statistical analysis on field data from units. The TAP was recently emailed this report.

Sara Christopherson indicated the U of M is not comfortable with allowing these systems to be used without requiring testing. They are especially concerned about the UV units since they have not been used much in Minnesota. Ideally, each system should be tested; a fallback would be to have the state spot check systems. Bob Whitmyer asked - are you talking about single-family homes or commercial or all? Sara Christopherson indicated that NSF isn't really representative of real world use; we need data that shows how systems are actually working in the field. Mark Wespel asked – if operated as required and management verified, is testing needed?

Greg Haling indicated his thoughts are more like Mark's. We're talking about single family homes and going into soil; the risks are greatly reduced. Kemp Ritter – testing is critical so we can know what's really happening. A visitor asked – couldn't you require testing at time of operating permit renewal and have the local governmental unit do it, adding the cost of testing to the permit fee? Enforcement of identified problems is critical.

Ed Kerzinski –indicated that County Commissioners are very sensitive to costs. Bob Whitmyer indicated that we shouldn't just make people test because we don't know how they are working in the real world. Sara Christopherson indicated that if people knew that systems could be spot checked, there would be better compliance with Operation and Maintenance requirements.

A visitor indicated that the state of Massachusetts has problems with people not doing Operation and Maintenance, and letting service contracts lapse because the cost of Operation and Maintenance with testing is too high. Another visitor indicated that permit fees should be raised to collect data.

Barb McCarthy suggested that we need to think of this in two ways; split individual residential systems from cluster systems, for example. Perhaps an audit program that evaluates a number of systems, systematically, may be a good way to manage single-family residential systems. Other systems (i.e.: commercial and cluster systems) would be required to do some testing. Greg Haling suggested that pump tank be used for 'composite' sampling. Loren Kohnen was in agreement that it's really hard to get homeowners to sample; they gang up on a city council and then nothing gets done.

Ed Kerzinski indicated that St. Louis County used to require testing; however, they have backed off on this requirement. Rather, Operation and Maintenance is required as a condition of renewing the operating permit, and even this has been problematic. Corey Hower agrees that an audit approach of single family systems is a good idea. Operating permits for systems less than 2500 gpd will be much different than for larger systems. A visitor indicated that he would send their protocol for testing single family homes.

Barb McCarthy, Joe Enfield and Sara Christopherson will work on the operating permit template for the January meeting.

Move to adjourn Kohnen, second Enfield, to adjourn. Unanimous. Meeting concluded at 3:40 pm.