

**Virginia Department of Health (VDH)
Stakeholder Meeting Summary**

**Discussion of Implementation of Nitrogen Best Management Practices (BMP)
for Treatment Units for Small Alternative Onsite Sewage Systems**

September 25, 2013

1. A Power point presentation was used to outline process and information within the draft report on BMPs for the onsite sector. A summary of the initial discussion follows.

- If someone designs a proprietary system that exactly meets the standards in Table ES-1, does it get the credit?
 - Why is non-proprietary not mentioned specifically in Table ES-1? It is a unique system that does not meet the requirements of any specific BMP in Table ES-1. Clarification: BMPs are for $\leq 1,000$ gpd systems. The other testing requirements of our regulation do not go away. If they implement these BMPs, then the owner could have less sampling requirements.
 - Line between a Pad and a Mound has blurred over the years.
 - Spray irrigation is not included, because they are handled separately.
 - Table ES-3. Summary of Net TN Load Reductions: Can you use Drip and a Mound...it says you have to use Pressure Dosing. So no, you cannot use/add these two. This does not anticipate the Elgin and Presby systems. These are like a SF, but they will be unique. Comment: would it help to combine the "Shallow, PD" and "Mound" columns in the table?
 - For non-proprietary treatment units not in Table ES-3 the report, there is a discussion in the report. Does this only apply to systems installed in the Bay watershed? Yes.
 - Voluntary upgrades: allowed if the system is improved. Discussion between Bob and David.
 - NSF245 vs Gulf Coast Testing vs Massachusetts Tech; does not matter as long as they follow the NSF245 protocol.
- Field Testing: it's what the report recommends and not what we have to do. Assume influent is 60 mg/L TN due to no sampling report on some systems (this is what Maryland does). How do we measure flow for a SFH? Flow meter, number of people, pump, etc. Why do we need to test alkalinity? It is irrelevant. 3rd party testing gets you in the door. Field verify ONLY proprietary systems that are??? If you do all your field testing in the Shenandoah Valley you will probably meet the TN due to high alkalinity, whereas if the systems are tested in the Coastal Plain you may not meet the TN. Once again, this report is a recommendation and not a requirement.
- Greater than 50% reductions are penalized for their level of efficiency by the requirement of a renewable OP, operator, etc.
 - Do systems have to be tested in a Chesapeake Bay state for reciprocity? We discussed limiting the geographical range due to some systems tested in warmer states not performing well when they are brought to colder climates.
 - Annual inspection by a licensed operator is all that would be required to verify the system is operating properly in order to verify the BMP. This would be used in lieu of continuous sampling.
 - If there is a manufacturer that meets the criteria in Table ES-1, should they automatically get the reduction and not have to perform field testing.

- How fixed are these numbers; if you take an effluent and put it in the soil versus on top of the soil? [comment from Bob Mayer, we said we would go back and discuss].
- There is not time between now and December 7 to perform the sampling. Perhaps we would do conditional approval while you are doing field testing like we do for TL-3 approval.

2. Detailed discussion on options for VA policy for approval of proprietary treatment systems seeking approval under the BMP.

Proprietary Systems (a.k.a. 3rd Party Certified Systems)

- Manufactured systems

(STEP 1, gets you in the door)

3rd Party Testing

- NSF245
- EN 12566-3 (Not quite the same as NSF245); Is there any reason we would not want to accept the European testing?
- BNQ – Class III Test? (Canadian)
- NSF350 (follows NSF245, but goes above for WW Reuse)
- Case-by-case
- Other large body of data? May want additional information. Qualifiers on types of outside data: engineered data collection (valid method)-who, COC, 3rd Party; climate; timeliness (data from current units)
- NSF40, but had nitrogen testing (may be pre-NSF245); Advantex may fall under this

(STEP 2, Field Testing)

- How many systems do you need for TL-3? 20. 12 is the minimum for BMP.
 - With the “Experimental Flag” there was a barrier to getting the 20 samples.
 - Year-round residence
 - Can we make manufactures prove TL-2 before they can move forward to the Field Testing.
 - Manufacturer should notify VDH which units/location will be used in advanced so that data is not manipulated.
 - Frequency/Duration: quarterly (representative of seasonal variability, we could extend the time it takes to three to five years. This is similar to how TL-3 is set up). What is the purpose of allowing the three year timeframe? What happens if the manufacturer makes a change during testing; do they need to re-start testing? The testing is to prove that the system is meeting the 50% BMP.
 - Issues with sampling shopping and the requirement to submit all data.
- Locations: spread across state (“each physiographic province”). May want to put a qualifier on Drip and Mounds (not in Sands). Why are we concerned with this? Alkalinity. Perhaps an easier way to address this is to say that ‘no more than 25% can be in the Ridge and Valley region of Virginia’.
- Suggestion accept 60 mg/L TN influent; make it optional for manufacturer to use influent sampling. If they take it, make it required to be submitted. Recirculation systems confound the reliability of influent testing results.

Parameters

Influent	Effluent	40CFR136	Sample Type
Flow, number of occupants in home, flow meter, events counters			
	TN	Required	Grab, but composite allowed (may affect reciprocity of test acceptability with other states)
	pH	Field test/stick test	
	DO (optional)	Field test/stick test	
	Temperature	Field test/stick test	
	Alkalinity		
BOD5 (optional)			
TSS (optional)			
TKN (optional)			
Alkalinity (optional)			

Failures – Retest Options

- Already approved so no site failure (this is long-term averages, we don't want to fail for one bad, instantaneous sample. Other manufacturers have simply done additional sampling after correction of the apparent mechanical problem/issue. Resample within 30 days; submit both/all samples.) Does your sampling period restart.
- If the design is modified, there should be the ability to restart.

Reciprocity

- Similar climate (looking at similar seasonal temperature extremes)
- Data less than five years old; do we actually need to set a time limit for reciprocity?
- Alkalinity (no more than 25% of sites from carbonaceous rock physiographic region)
- Appropriate datasets (year-round residences, # people, seasonality)

Alkalinity Options

- Test
 - Minimum if not meeting
 - Water supply: problematic with spots, homeowner won't like/maintain it
 - NSF245: uses residential wastewater with adequate influent alkalinity in most cases.
- How frequently to manufacturers submit the results of testing? Model after TL-3, which requires quarterly reporting of results.

December 7th Plan

- List of 50% proprietary treatment units
- reach out to manufacturers to get necessary info
- Use an asterisks on the name as provisional or should we list only approved systems

Non-Proprietary Systems

- Why? Need a category similar to “Non-Generally Approved Designs”
- Engineered submittal of components
- Calculations
- What references are they using
- Is there data from a similar site
- Structural
- Watertightness, alarms
- Etc.
- Approval is site-specific (5 samples, if the same design is used for another site it requires a new set of sampling for the new site)
- If it fails, what else is needed as far as treatment (back up plan)? How do you handle liability? Do you bond it? Won't get that. How do we get reasonable assurance? Require TL-2 as a minimum (effectively NSF40). Who pays for the back up plan? We could limit the number of installs for the particular design. Require Financial Assurance instead of a bond. Require a renewable operating permit.
- If it's not functioning, bring it into compliance
- Can't make it so easy that a manufacturer takes this type of route. Need 3rd Party sample collection.

Testing

- BMP Verification, each install
- Sample TN (and other parameters, as needed) like non-generally approved (5 samples)
- Initial verification (mean of samples < 30 mg/L)

What do we do with failures?

- Accountability
- Back up (remediation) plan; it's more than just a ?
- Enforcement (how many times do you allow this to happen)
- Designer needs to take ownership of the system for a certain period (Use EPA model, RME's)
- Use a conditional permit (deed-restricts the property to some degree)

Attendees

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