

## AOSS Periodic Review Workgroup Meeting Minute

September 20, 2017

9 a.m. Monroe Building, 101 N. 14<sup>th</sup> Street, 15<sup>th</sup> Floor Training Room

Members Present: Dwayne Roadcap, Karri Atwood, Kemper Loyd, Doug Canody, Marcia Degen, Chris Beatley, Darren Mong, Mike Burch, Joel Pinnix, Nick Noble, Joe Soulia

**Objective:** Recommend to the Sewage Handling and Disposal Advisory Committee changes and/or revisions to the AOSS Regulations with respect to Sampling, 12 VAC5-613-90 & 100; TL3 field sampling procedures, 12 VAC5-613-70; and Performance Requirements, 12 VAC5-613-80 & 90.

### Sampling Procedures & SB 1577 Discussion

-VDH explains draft language for sampling, 12 VAC5-613-90 & 100 and the turbidity report. Agency couldn't connect turbidity to BOD, so put together a mechanism of collecting data, if it's out of compliance (1.5x limit), adds enforcement and verification of sampling. The time of sampling was changed to 45 to 180 days after startup to ensure system was functional at time of sampling.

-45 to 180 days sampling, first bad sample have to retest within 45 days. The change in the timing of sampling (45 to 180 days) is positive. Manufacturer brings up that 45 day resampling won't tell you anything (bad operator, bad system). Influent sampling instead of effluent sampling would be better because drugs could be taken by residents or overuse of cleaning products

Members expressed the following concerns:

1. The cost of all of the testing, is the system really impacting public health and the environment?
2. Agency didn't do anything with the data and as a manufacturer couldn't obtain the data had to go to each LHD and utilize FOIA.
3. Effluent sample doesn't really tell you anything, influent sample would tell you more but then you would have to start regulating people on medications in the home
4. Talked about possibility of utilizing a visual and odor test and whether you could tell system producing 30-30 and 60-60 through field parameters
5. Some operators are only doing a performance inspection and not maintaining the systems. These systems have to be maintained. Maintenance is not happening; the homeowners think they are but they're not.
6. Enforcement is the main difference in how different states approach the problem, look at North Carolina's enforcement letters. Prince William Health Department didn't have the money to send out enforcement letters, put a stamp on the letters for all systems that haven't submitted samples.

-Agency said they wants to keep BOD in the Regulations or have someone provide a reliable study to point to another method that the agency could replace BOD with, give agency something, a field parameter study demonstrating that system is reaching 30-30. If we accept that BOD is needed, then questions are: (1) how we do sampling and (2) how we do enforcement.

Members discussed the following concerns:

1. System start-up testing and then testing every 5 years
2. Right now we have either BOD v. field parameters. And no studies or other state doing field parameters, so as an agency, we're left with BOD.
3. Operators see problems with overdesign and intermittent usage, system isn't get fed enough.
4. Some manufacturers support field testing and more enforcement. Members stated could support sampling if there is a level playing field, and agency ensures that homeowners are protected, sampling is expensive for homeowners. Also make sure that we aren't simply penalizing people who are sampling and testing. A manufacturer expressed that they thought it was a good idea to get the sampling data, get a snapshot of how system performing.
5. One member thought that VDH created a mythical standard of TL2 v. TL3 and VDH data does not support it, VDH resources are better spent enforcing annual inspections. Does not support sampling.
6. Members talked about whether you should test just the system or the entire drainfield (soil treatment is added at this point). Need to look at what is going into the ground v. how the system is performing.
  - a. If monitoring receiving environment, then more protective of public health
  - b. Monitoring receiving environment won't tell you how the treatment unit is doing itself

#### Enforcement Discussion

VDH staff explained current approach is called plus one approach: bad sample plus another problem would lead to enforcement. The draft language adds additional sampling, may lead to additional enforcement and/or expense.

Members brought up the following:

1. If you have a bad sample you are violating the VDH mission to protect public health. Huge downside of plus one problem enforcement
2. Big economic problem for homeowners with additional sampling.
3. NC program is much more diligent in sending letters, not NOAVs.

4. When there is a bad sample, talk to operator, then talk to owner or take an influent sample
5. One member suggested putting a moratorium on sampling for five years and doing a better job on enforcement. An operator report to ensure compliance to capture the snapshot of the system.
6. An operator suggested a forceful letter to homeowner, saying these are the bad things that can happen to your system with potential financial costs included. Non-compliance can lead to system failure.
7. O&M provider is the triage for the system
8. Without enforcement there is no point in sampling
9. Is there a way to avoid a second sample if there is an obvious reason (cancer patient)
10. Goal is to not take them to court for a misdemeanor for not filing an O&M report

#### HB1577 Discussion-

Agency staff discussed the need for sampling, there is no other field studies that demonstrate the system is performing adequately. Manufacturers want a level playing field as long as the sampling isn't too burdensome or onerous. There is no study to allow for field testing to connect turbidity to BOD and agency needs to do a better job at enforcing the sampling. Need to know that systems are performing adequately. 180 day sample gives us some assurance that system is functioning.

Members expressed the following concerns:

1. Agency needs to do follow-up on these systems and that they are maintained and operated appropriately
2. Perhaps instead of just bad sample, if a sample is outside the standard deviation (1.5x) then goes straight to enforcement
3. Make sure there is a level playing field in whatever enforcement happens
4. One member suggested that if you do away with sampling everyone is treated equally

#### **Discussion of 12 VAC5-613-70**

TL2 or TL3

Agency staff discussed current regulations, general approval allowed only for in- state testing for units, proposed amendments to 12 VAC5-613-70 (1). Staff talked about proposed amendments,

including accepting out of state testing. Concerned about how cold weather can affect the performance of systems in other areas, the proposed amendments allow for data from Plant Hardiness Zones 1a through 7b. For climates that are at least as cold as Virginia. Amendments also allow for CBOD5 to be used in place of BOD5, there are several variances granted to that effectual ready. Members discussed current approach of in-state testing. An engineer is hired to oversee the entire program.

Members raised the following concerns:

1. How do you get an engineer to stamp something saying the data is collected correctly in another stated and analyzed correctly?
  - a. Agency replies that engineer not certifying the data process, he's certifying that he believes the data indicates it will perform to TL3 standards.
2. In last workgroup meeting, talked about TL3 testing was duplicative of NSF 360 testing, 360 testing mirrors well enough what VA does so as long as the units are in the plant hardiness zones then it would be fine from agency perspective
3. A manufacturer states that a lot of out of state testing programs, like Maryland, don't do influent samplings so you can't get a baseline when you have a recirculating system. So many bedrooms, or so many occupants, base effluent on numbers per capita. Influent sampling is in the manufacturers interest, gives him a sound basis for ignoring the effluent data from the system. Almost like background groundwater quality monitoring

#### **-De-listing Discussion**

-Manufacturer said that Oregon is dealing with the issue right now. The state made all manufacturers resubmit for approval and then sample a percentage of systems less than 10 years old and then resample if samples not good. If samples were continually not good then approval rescinded. The problem is if system malfunction is outside manufacturers control then can't help with resampling. They do this once every five years, 20 units from every manufacturer, if 20% not compliant, resample and another 20% noncompliant then they do a more in-depth review. Manufacturer submits a reapplication, reapplication fee is triple what is was, state uses the money to employ a statewide sampling procedure. One annual compliance sample and the five year sampling procedure.

Members brought up the following thoughts and concerns:

1. Needs to be a mechanism for manufacturers to work with department for noncompliance.
2. The annual grab sample not really enforced, during 5 year sampling, out of compliance, they work with you and if you can't make the compliant sample then they move to delisting
3. Manufacturer suggested based on Oregon program that recertification every 5 years for listing, at that event, test up to 20 random units (with a composite sampler) that are properly operated and maintained and higher than 20% threshold and enforcement

- process, and before delisting, they will sample another 20 systems. Could provide manufacturer with good product control to see exactly how system is performing.
4. Could increase confidence for industry and the public, important to have carrots and sticks
  5. De-listing if product substantially changes, a manufacturer doesn't support retesting every five years. Maybe do it one time for a baseline and anyone wanting TL3 approval has to do the same thing.
  6. One member advocated for greater enforcement instead of sampling
  7. If you sample you discover problems and can work with agency to fix problem to greatest extent possible
  8. 5 year window for re-testing, if you've had TL3 approval, then you need to resubmit. Some manufacturers think it is unfair that they have to retest under the new protocol. They report it is unfair because they produced a robust data set already under old protocol. It's a long process with considerable expense. For new treatment units it's a reasonable request. Allow out of state data so service providers can collect data. Treatment unit hasn't changed.
  9. Mechanism to maintain approval needed. If manufacturers had to collect data like the Oregon approach only once to maintain approval. Or use data just recently submitted to another state to maintain approval.
  10. Possibly for renewal of listing, maybe just submit one sampling event from 20 units from similar climates like proposed language in 12 VAC5-613-70 9(1)(a-c).
    - a. A manufacturer asked if you have 20 years worth of data and system hasn't changed, how much more sampling do you need?
  11. Operator in favor of retesting, sampling and compliance, however not in favor of more data with no consequence. If system is a functioning and approved system, why would we retest?
  12. Maryland uses composite sampling which would be in the plant hardiness zones
  13. How do we make it a level playing field?
    - a. Maybe differentiate between manufacturers who did quarterly testing in Va v. those who didn't. Just need a third party testing within last number of years in a similar climatic zone, should be considered and given some weight.

### **TL3 Standard**

Members expressed the following thoughts and concerns:

1. Some members thought TL3 should stay in the Regulations. Requiring disinfection, increased turbidity impacts disinfection, on tight soils 30 30 units that is putting out 50 50 it impacts the life of a drainfield
2. Nutrient reduction, groundwater contamination increases with density of systems
3. What are other states doing on a 10-10 standard?

- a. Florida has 10-10 in certain areas of watersheds, for shallow groundwater.
- b. Washington very similar to Virginia, they have a tier with 10-10.
- c. In states that don't have a tier then proximity to lake or stream, Pennsylvania also has a 10-10 standard.
- d. Carolina the residential units are 15, Vermont has some higher standards. NY has it and Hawaii. Hawaii has a lot of government funding to reach 10-10. Out in western states water reuse is a big issue, its NSF 350, 5 average and have 1 out of compliance of 10.

4. VDH does not have a problem with keeping TL2 and TL3 standards.

## **12 VAC5-613-80 & 90 Discussion**

Agency staff talked about proposed language in 613-80, bulking of solids, VDH proposed three options. Members of the workgroup didn't think any of the options are necessary, just keep the old language.

-VDH said there was some concern with nongenerally approved systems, a manufacturer recommended that it should be part of the approval process

-One member stated there was no enforcement in Virginia

For the proposed amendments to 12 VAC5-613-80, members expressed the following thoughts and concerns:

- 1. Reconfigures 90 C and 90D4 tables somewhat, so just add a row for 0-6 to limiting feature besides water like rock
- 2. 12 VAC5-613-80.10, Table 1, Option 1: add in ranges instead of maximums;  
Option2: add in soil descriptors
  - a. A member expressed concern that the amendments were looking more and more descriptive, doesn't like that it removes flexibility, people should be able to exercise professional judgment, doesn't think AOSS regs apply to AOSEs
- 3. A manufacturer stated the regulations don't allow for new technology to become generally approved. There should be a mechanism to demonstrate to the department that this is a good system without individual variances. Right now you could have a non generally approved system and then go thru testing and get a generally approved system, don't have that for dispersal systems. If we add language for drip and LPD, does that limit what can be done
- 4. Members generally didn't like any of the proposed options
- 5. Need to add a requirement for 0 to 6 on other limiting features.

For the proposed amendments to 12 VAC6-613-90D, members expressed the following thoughts and concerns:

1. DEQ wanted the 40,000 gpd as the middle AOSS size. Ok would allow for use of BMPs to increase TN concentration
2. Clarify section to allow commercial systems (like a church) to demonstrate they meet residential standards and can use BMPs, which is a simpler process, to meet TN standards
3. Potential to add something for groundwater monitoring parameters and frequency under 90B. In general the group was positive about the proposed language with the exception of fecal coliform as a parameters. 90B is addressing compliance with TN so why not just sample for TN?
4. Member stated that a semi-annual frequency for groundwater sampling would make more sense
5. Agency needs to consider what will happen if groundwater TN goes up, maybe through statistical increase, then what type of enforcement will happen?
6. Member suggested eliminating TN for really small systems, maybe 200 gallons/day or less

#### Final Thoughts and Next Steps

Operator said on 180 day testing – paragraph e ‘should retest’ after a power outage – don’t need it

VDH will review the sampling, and suggested edits from today’s meeting and create draft language for group to review; may need to meet again

Would like to present ideas for amendment to SHADAC on Nov 8; SB 1577 report is due Dec 1 and has to be done by November for Commissioner’s review.