

Periodic Review Sub-group Meeting on Performance Requirements of the AOSS Regulations

May 24, 2017

10:00 a.m.

109 Governor Street, Richmond, Virginia

5th Floor Conference Room

(12VAC5-613-80 and 90)

Members: Curtis Moore, Mike Burch, Jim Bell, Dwayne Roadcap, Karri Atwood, Marcia Degen, Valarie Rourke, Bill Sledjeski

Introductions: Curtis Moore, OSE; Karri Atwood, VDH; Marcia Degen, VDH; Jim Bell, Bio-microbics; Dwayne Roadcap, VDH; Valarie Rourke, DEQ; Bill Sledjeski, VAPSS; James Davis-Martin, VDH.

Ground Rules Discussed: No talking over other persons

Marcia Degen reviewed sections 80 and 90 of the AOSS Regulations with commentary on items that have been problematic for the agency.

Reviewed Townhall comments received concerning performance requirements.

- Tom Ashton – Table 1 and soil evaluation
- Colin Bishop – modification to 80.6 – peak flows

Discussion of TL3 vs TL2 is it effective or not? Curtis stated the soil does not know the difference. TL3 is driving the industry to smaller systems so end up with multiple minimums.

TL3 is really more about reliability.

Group Brainstorm on what issues the group wanted addressed:

- 80.10 – clarify Table 1 and 2 to reduce confusion
- 90.D – maintain a Bay N requirements but flexible on what those are
- Agree on Table 1 and 2 – need clarification on how to use the Table 1 – modify it substantially
- 90.B – concerns over the N standard for groundwater that you can increase property area and not decrease load
- Emerging topics – recycle/reuse and sea level rise; pads and drip and level of detail associated with that; do have some prescriptive rules for drip in 610 so could reference those
- Table 1 and Table 2; add in soil characteristics instead of perc rates; 80.15 go away or better definition. 90.D. holding onsite to same treatment level as constantly operated treatment systems is too aggressive (8 and 3 specifically for TN)
- 90.D.: 8 mg/l is too aggressive; 90.B confused on if have to meet 5 at the boundary, how do you figure in background level
- 90: focus on this section, but no major issues
- Methodology for soil testing/evaluation for AOSS systems
- Appropriateness of mounding tools for small systems

80.15 Options

Replace with language from 610.800

“Where an activated sludge process is used to produce a secondary effluent, provisions shall be made to protect the drainfield from bulking solids.”

Incorporate into a broader item that addresses design of non-generally approved units or delete it entirely.

Discussion of Table 1 in 12 VAC5-613-80:

Was originally created with guard rails to control the rates

Can we create a policy with guidance that creates more detail?

Review ksats

Consider requiring more ksats testing – design on it

Discharging to water table should require it.

Can do ksats relatively quickly – are there conditions where a ksats may be required for small system such as shallowness of depth; for 45 mpi and slower

Maybe have the detailed table – to go outside that table you have to provide ksats and go to another section

More detailed in guidance

Should we add in soil texture/structure – consider Tyler chart

Add ranges to rates

Divide 45-90 rate into two layers, perhaps 45-60 and 60-90

Add in rates for drip, pads, and gravity; remove ksats

Add in trigger for when ksats required for small systems (over a given perc rate have to measure, etc)

Review a-f of subsection (80) to ensure changes and they are still ok and address the factors listed in 12 VAC5-613-80 (a-f)

Table 2

0-12 inch – change to 6-12” for all other limiting features

Add in a fourth line for direct dispersal and effluent quality under 90.C, D.4

Concern over use of a fill material

Should a LPSS have to sign off on it?

Need ksats results that show that it will transmit water; additional soil borings; require a performance bond if design falls into certain categories

NSF 350 on reuse

90D: 8 mg/l TN – change to 10-15 mg/l with at least 12 inches of soil under dispersal field

Keep 8 for certain conditions

Can we match soil dispersal to an effluent quality – assign a reduction

15 vs 20?

Consider changing the ranges, could we extend to 40,000 gpd. as 20 mg/l but relate to soil dispersal field

90B – should background N affect the limit; how is that handled; is that really accomplishing the intended goal

The agency will draft some regulatory language for the group to review and see if it addresses concerns. After review will determine whether another meeting is needed.

Adjourn.

Periodic Review Sub-group Meeting on TL3 Field Sampling Requirements of the AOSS Regulations

May 24, 2017

2:00 p.m.

109 Governor Street, Richmond, Virginia

5th Floor Conference Room

(12VAC5-613-90 and 100)

Members: Curtis Moore, Mike Burch, Jim Bell, Curtis Bishop, Dwayne Roadcap, Karri Atwood, Kemper Lloyd; Darrin Long, Chris Beatley

Introductions: Curtis Moore, OSE; Karri Atwood, VDH; Kemper Lloyd, VDH; Jim Bell, Bio-microbics; Colin Bishop; Darrin Long with EZ Treat; Chris Beatley with Premiere Tech

Periodic review of AOSS Regulations, establish ground rules: (1) don't talk over people, want to capture information.

Discussion of how the current regulatory scheme developed. Dwayne and Kemper went through the current requirements of the Regulations.

Manufacturers discussed how they felt the protocol appeared in Regulations without a comment period, disconnect with emergency regulations, commented there was confusion on TN. The advisory committee sent letter to Commissioner to evaluate the cost. AOSS Regulation had been promulgated in 2010; the comment period was in 2016. Section 60 provided for a 5 year window, however time period eaten up by waiting for the GMP, that was a foul, there was a policy being drafted, GMP 156. Better if you are required to test for TN at the same time to reduce costs, but no way for us to effectively do this, only thing that is defined is BOD, there is no or clear statutory action, there is no statutory connection. The other issue that is problematic is the Chesapeake Bay requirements test for BOD, and some uses cBOD5, not mentioned in the comments, in the GMP, any changes to this need to be done by a variance, leads to a question of how many variances one can ask for.

Colin Bishop discussed how sampling needs to be equally applied across the board. Enforcement program needs to improve.

Discussion of what issues group wants to see addressed in revisions to the Regulations. Concerned about the 180 day sampling and no enforcement. Need to have confidence in the system, can't tell you the right answer, using the NSF 40 is woefully inadequate for some systems, support higher bar than NSF, there is a lot in the code about how to list someone, but how would you de-list, what if manufacturer radically changes something in his treatment process.

Revisions to include cBOD, out of state data, 5 year window extended to May 6, 2021 because of the intent of the regulations at that time, and the time it took to get GMP to reflect the details, couldn't start testing until the GMP was out there, then throw out TN, no defined requirement.

Determination of N testing, establish a level playing field for different manufacturers. NSF 360, reuse for 350, if the system meets that, would we need to meet that when there is already stringent NSF testing, it is not dependent on field testing, is that slowing the manufacturers with 350 approval from getting into the state?

For TL-2 approval, look at BNQ and European testing, EZ Treat, looked at others for TL-3, what is the reason for requiring testing data in the state of Virginia, because of climate? If data is coming from similar area or an area that doesn't produce better results, even if you cut the costs to the manufacturer, 10 in state and 10 elsewhere. System doesn't test the same. Perhaps accept sampling in state or state with similar or colder climate.

Use simple field test, can start with NSF 245, 350, but in reality, that's some type of manufacturer, if you check the boxes, then you have a higher degree of confidence.

Concerned about a provisional approval and didn't maintain that approval, what do we do with the status of that system. Can the individual system still be approved?

From treatment perspective, dose volume and rate controlled, will get enhanced nitrogen volume. When you look at regulations are the baseline, regardless of treatment, we want to avoid sampling scheme in NC where system sampled for three decades, thousands of data points, and no reduction in sampling frequency. As time goes on, as you demonstrate, there needs to be some mechanism, reduce sampling or frequency, for the people not complying and not meeting, need to be de-listed. A frustration we have, system sampled to death, tens of thousands installed, and now we are told that we have to resample, you need to be aware of that from a bigger picture.

Need to have some more reliance and maintenance, more stringent monitoring.

Testing of systems in Virginia versus out-of-state: need same protocol for testing, use out-of-state data.

Utilize a matrix to provide different ways to demonstrate performance. Manufacturers tested in VA, NSF 350, way forward is to develop weighted criteria to level the playing field.

NSF testing is one level of assurance. Discussion of field testing, doesn't translate to real world performance, ½ time they work, bell shaped curve, if we want 95% confidence, add further criteria.

NSF 350, BOD, TSS, Fecal, and turbidity it's reuse and recycling, 80% of the state, will need to demonstrate TN reduction. Manufacturers want to run TN concurrently.

Colin—the NSF 350 is interesting, it is water reuse, overlap with plumbing code, looking it for toilet flushing, for TL-3 is BOD and TSS, one of the criteria in 350 can't exceed cBOD on any single sample, never exceeded, I think this is the matrix, what is it you really want from NSF 350 or 360, check the box,

as you know, if you tested before 350, didn't get to do the concurrent testing, spend another \$100K for 350 testing, need to drive to what we are trying to demonstrate.

From a treatment train, does NSF 350 give you more confidence? NSF 40 and NSF 350?

Agency will draft revisions to the AOSS Regulations based on discussion of interests and will send back to group for feedback.

Adjourn.