

Alternative Discharge Regulations Technical Advisory Committee – Meeting Minutes

June 20, 2011

Committee members present: Joel Pinnix (VSPE); Bob Lee (VOWRA); Jim Pyne (VWEA); Ted McCormack (VACO); David Wachsmann (VEHA); Bob Marshall (VDH); Burt Tuxford (DEQ); Chris Miller (PEC) Marcia Degen (VDH) chairperson

Visitors: Mike McCulley, Premier Tech; Todd Borden (Borden Engineering); Dwayne Roadcap (VDH-OEHS).

Administrative Issues

Meeting opened at 10 am.

Introductions of TAC members were made.

Ms. Degen reviewed ground rules for the TAC :

- Meetings are open to the public and subject to FOIA
- Meetings will be posted on Town Hall website at least seven days prior
- Committee will have opportunity to approve the minutes before posting
- An opportunity will be provided for non-committee members to comment during the meetings
- TAC makes recommendations to board. Striving for consensus.
- Meeting etiquette rules reviewed.

Old Discussion

From June 10th meeting:

- VSPE prepared modifications to section 230 regarding construction permits. Purpose of the rewrite was to allow for the site evaluation of the discharge point prior to submitting a complete permit application. Bob Lee noted that the rewrite does not include submitting the denial of the onsite system with the package. Should be part of the pre-application package. Marcia Degen noted that the rewrite will have to be compared with the DEQ GP application requirements and the combined application form for completeness. VDH has sent this rewrite out to health districts (HD) for their review. Ted McCormack noted that he had reviewed the document and sent comments directly to VSPE, but that they were non-substantive. Further discussion is delayed until responses are obtained from local HDs and the TAC has a chance to review more thoroughly.
- There was a brief discussion on what was decided in meeting 1 regarding the threshold for onsite options to be explored before allowing a discharge. The TAC had discussed that soil and site conditions must meet the SHDR but that Table 1 of the E Regs for higher loading rates for TL2 and TL3 must be evaluated.
- Ted McCormack brought up some issues that Rick Blackwell had brought up regarding when to record plats. The timing of that issue is still unresolved. Marcia Degen also noted that Rick had asked if §32.1 163.6 of the Code applied. Marcia has not received clarification yet, but believes that it does. Marcia suggested delaying discussion until draft language was available. She will be taking the discussion from the first 2 meetings and developing draft language prior to the 3rd meeting. That may help focus the discussion.
- Members were asked to review the meeting minutes from June 10th and email any changes to M. Degen by June 22, 2011

New Discussion

Treatment Unit Approval Process Sections 350-380

- The current regulation outlines a process of moving a treatment unit through an experimental, preliminary approval, and general approval sequence. This is a very long process that requires VDH to track the number of units and the data, make a decision, and then advance the unit to the next category. This has not worked. There are a number of permits out there that are locked into a sampling protocol, primarily for preliminary approval, that have never advanced beyond a given approval level.
- VDH's desire is to have a protocol that mimics what's in the alternative onsite sewage system (AOSS) regulation so that the same criteria for recognizing general approval are used by both programs. In that regulation there are two levels – TL2 which is essentially secondary effluent (30/30) which recognizes NSF 40 certification or similar for general approval and TL 3 (10/10) which uses a protocol of 20 systems sampled quarterly. Non generally approved units are allowed, but they require more sampling (5 samples over 2 years) to document that the unit is functioning properly.
- Bob Lee noted that section 350 talks about system approval, not unit process approval. The real problem that he's seen is not so much with the unit processes, but with the additional treatment units – especially disinfection . Need to test the system.
- Jim Pyne noted that treatment processes ok for soil discharge may not be suitable for stream discharge. He noted that his small discharges cause the most problem because of having to meet limits such as metals. The soil provides a buffer that is not available for discharging systems so the protocols to test a soil discharge system may not be the same as for a discharging system.
- Marcia Degen noted that the effluent limits are set by DEQ.
- Other protocols were discussed. Marcia Degen noted that there is a Canadian, European, Gulf Cost Testing Center and several other testing organizations out there. Most are similar to NSF 40 protocol, but there are some deviations.
- Bob Marshal could a secondary polishing device be added on a case by case basis depending on the system proposed?
- Bob Lee noted that NSF 40 is not the issue. It's a standard with good and bad points. The problem is that is that disinfection is not working. UV lights are often non functional. It's a combination of design and maintenance that contribute to the issue. How do we address kids coming in contact with effluent that is supposed to be disinfected, but it's not working? Bob Marshall noted that proper filtration would aid in protecting the UV light since they do not work well in high suspended solid situations. The AOSS regs added a statement to require protection against bulking of solids – can we do that here?
- There was a discussion that VDH should be testing systems and not units. It is noted that some states do approve systems with treatment units plus disinfection and a number of units with NSF 40 were tested with disinfection at the same time. However there could be additional components that are not tested such as post aeration or filtration.
- VDH has not considered expanding their approval process to systems. VDH would run into conflicts with the engineering law which allows for non-engineers (AOSEs) to use catalogued, pre designed systems. VDH is interested in maintaining a preference for treatment units that have undergone testing to demonstrate their reliability as those are the main components of the treatment system.
- Discussion regarding the use of NSF or other standards for other unit processes. Consider requiring all unit processes meet NSF or ASTM standards so that every component is appropriately tested.
- NSF is in the process of developing a new disinfection standard NSF 385 to cover chlorine feeders, UV and ozone.

- Joel Pinnix noted that these classifications are used to set sampling and inspection frequencies. The engineer is responsible for selecting components that work. If you sample, it won't matter if its NSF 40 or not – you'll identify the problem if it exists. A lack of maintenance or an unintended use is not accounted for in the design process. Those are where the issues are. Suggests getting away from NSF 40 approvals and come up with a better inspection scheme. Suggests quarterly sampling for the first year and if all passes, then reduce to a less frequent schedule
- Bob Lee notes that if you put in an approved treatment unit, but the disinfection is not 'approved', then the whole system becomes 'unapproved' and is an engineered system.
- Marcia Degen suggested that if we were to split existing Table 3.4 into just two categories – generally approved and not generally approved – we could set up a different startup testing protocol for the two categories which would mimic the AOSS regs.
- The initial sample should be something like 90 to 180 days after startup to allow the system to stabilize and then quarterly for a year to cover all 4 seasons.
- Jim Pyne noted that could have different submittal standards for 'approved units' vs. not. For example, for an approved unit, the submittal would only need the minimum information – there would not be a need for justification, data, etc. If it's not approved, then data would have to be submitted along with engineering calculations and justifications for the design. Make the construction submittal requirements the point where the 'approved' units get a break and not in sampling.
- VDH has had a role in overseeing and reviewing new technologies. Those who have gone through NSF 40 have demonstrated some Level of reliability and VDH would like to encourage use of reliable units that have someone standing behind them. If we have a treatment unit approved, could that modify the parameters that are sampled in the accelerated start up protocol? For example:

Parameter	'Approved Treatment Unit' Start up samples	'Un approved Treatment Unit' Start up samples
BOD	2	4
TSS	2	4
Bacteria or TRC	4	4
pH	4	4
DO	4	4

- Most did not think the cost saving for 4 samples was worth it. The tough issue is disinfection. It's easy to contaminate a sample. The BOD should be easy, but not the disinfection.
- Ted McCormack summed up the discussion with: Regardless of the treatment unit, everyone will have to meet certain standardized sampling for the first year. We are looking at the system. You still must sample quarterly, or whatever the frequency ends up being, but then you go to lesser frequency depending on the outcome. While it's clear that VDH considers NSF certification is the good housekeeping seal of approval, it still does not less what is required based on what the TAC is saying.
- Marcia Degen looked for clarity on sample parameters and if informal (process control) testing was included in this accelerated startup sampling. Process control testing was not clearly identified as being desired at the same frequency. TAC asked how the facilities are doing – do we have data to review? VDH will try to obtain some information.
- Any sampling that is collected in compliance with the DEQ permit, i.e. the permitted parameters at the appropriate sampling points, is reportable for compliance. Question to

DEQ: The GP says that BOD and TSS are a maximum of 30 mg/l. for the purposes of this accelerated start up sampling, is it appropriate to average the samples and then compare the mean to limit for BOD and TSS? DEQ: Yes that would be appropriate.

- Related to this was what if the conditions on which the permit was issued changes such as increased number of residents, bakery etc.? How would that be picked up? In general it would become an enforcement issue when the flow or other parameters are violated. Until the permit is violated, no action would be taken. The exception may that if the use changes from a single family residence to a commercial or other system, then DEQ would have total authority over the system. Suggestion to make sure this is clearly relayed to homeowners – i.e. the limits of the permit.
- Question regarding these permits and the TMDL. DEQ evaluated the existing facilities based on 1000 gpd and default N in the discharge of 18.7 mg/l and TP of 2.5 mg/l. Recognizing that these systems discharge at less than half of the assumed flow, DEQ has determined that they can permit additional systems and still be under the existing allocation. DEQ thought that it was premature to control N from this segment, but will consider it again at the reissuance of the GP. TAC is afraid that this approach will quickly result in no available load for this sector and that nutrient limits should be considered. M Degen will investigate as to whether VDH has the ability to set nutrient limits for dischargers.
- Summary: eliminating most of section 350 through 380. Increase submittal requirements for non-approved unit processes.
- Chris Miller: so we are taking out the 25 systems and allowing folks to experiment at will as long as you test?
- That is the essence of what has been discussed. The other process has not been effective and has not been used.
- Concerns raised: could result in a lot of one-off designs that require a lot of specific analysis. Data handling will be an issue. VDH is not following the data now, can they do it on ALL new systems? The initial claim was that VDH was not able to evaluate these systems, can they do this? Will this result in wholesale 'experimenting' of designs?

Section 490 – Monitoring

- VDH raised a desire to have electronic reporting of data. VENIS can be modified to make this happen.
- Concerns were raised over what's done with the data once VDH gets it. Without a program that can flag compliance issues or civil penalties, what's the point.
- Should e reporting be mandated or voluntary? DEQ noted that voluntary e reporting is not working well for them and it's been tough to get folks into the system.
- Question regarding the data – Does DEQ want it? No, DEQ does not want the data. VDH is responsible for inspecting and enforcing the program. DEQ will come in as needed for enforcement.
- VDH does identify non-compliant facilities and initiates enforcement action, but have limited tools. Could use civil penalties.
- Regarding monitoring – section needs to be rewritten to reflect discussion on startup testing previously for parameters limited by the GP. The actual permit limits should be referenced
- Process control testing (informal testing) is currently specified by the regulation. TAC recommended adding an O&M manual requirement and have the process control testing follow the manual. The TAC also recommended maintaining the monthly visits for six months (490.C.2) after startup.

- Discussion on minimum visits. Current reg for generally approved systems requires a minimum of 2 sampling events per year (one formal, one informal). The TAC's recommendation was to maintain this as a minimum requirement.
- 490.D. – The statement that a health director or a sanitarian can require additional compliance testing was discussed. Consensus was that it should be at the environmental health manager level or above, but should be consistent with chain of command. The rest of this section was recommended to remain as written.

There was concern expressed that the time lag between a obtaining a non-compliant sample and the re-sample was too long. For the BOD/TSS samples the time lag is justified to allow time to get results, make modifications, and resample. Unusual events should be reported within 24 hours in accordance with the DEQ permit (Part II). The TAC felt that the combination of the GP and the VDH reg was sufficient to cover events. The pass/fail criteria must be based on the DEQ permit limits.

There was also concern over whether VDH would follow up and require that second sample.

- 490.E. – There was discussion over the annual inspection requirement. The Code requires that VDH inspect and charge a fee each time. Discussion ensued around risk based inspections as opposed to across the board annual inspections. This topic was not resolved. VDH will send to local HD for consideration.
- 490.F. allows homeowners to collect their own samples or have a separate monitoring contract. Should this be continued? The separate monitoring contract came from the fact that systems permitted prior to 1992 were not required to have maintenance contracts. General consensus was that allowing homeowners to collect own sample should not be continued. However, it was noted that in some areas of the state, the nearest maintenance provider is hours away

Section 500. Maintenance

- Replace section C with the verbiage from DEQ maintenance contract language
- Keep section D as it may be helpful in the future if utilities do get into home system maintenance.
- Operator requirements: VDH had hoped to expand the licensed operator classes that could operate small systems to include AOSS operators. However, DPOR has said that while they could not prohibit an AOSS operator from operating a small discharging system (DPOR regs do not require a licensed wastewater operator for <40,000 gpd unless VDH or DEQ designates the facility as a Class IV facility), they also could not take disciplinary action against the AOSS operator if there were an issue. It may create a false sense of security for the homeowners.
- Discussion to expand to include any appropriately trained person can be an operator? This was discouraged by the TAC as the need for a licensed individual is seen as necessary to ensure accountability.
- Several TAC members suggested that they could take this idea forward to obtain the necessary legislation to allow AOSS operates to operate these small discharging systems under DPOR regulations
- Decision was to right the reg to allow all 'appropriately licensed individuals' for the type of discharging systems as allowed by DPOR so that if future changes are made, the universe of operators can expand as well.

Section 510. Reporting

- A. Ensure that the owners are responsible for having the data reported to VDH on a form and in a format acceptable to the department. Form needs to be modified for discharging systems.
- B. Modify what must be reported to eliminate 'expansions'. Expansions are not 'reported', they are proposed and the appropriate permits are issued. Discussion on what constitutes an expansion and modification and what requires a construction permit. Language from the AOSS regs on maintenance and repair may be helpful in making distinction.
- C. DEQ concurred that having the reports received by the 15th of the month following the month the activity occurred in is ok with DEQ.
- D. All reports should be reported online. The section on reporting within 24 hours of non-compliance should be struck as that is duplicated in the DEQ GP Part II. (consider referencing the permit?)
- Who should be able to report the data? The owner is responsible for reporting the data. Should they have access the online reporting? It could be done but no consensus on should report.

VDH will be making modifications to the existing regulation to incorporate the changes suggested by the first two meetings. At the next meeting, the discussion will move to the potential use of wetlands as a discharge category and the other discharge point requirements.

Meeting was adjourned at 2:45 pm.