ADEQ Arizona Department of Environmental Quality Meeting Agenda/Summary

Water Quality Division: On-Site Wastewater PPL TWG
Meeting 4: Tuesday, October 12, 2021 1:00-3:00 pm

(See Link to Google Meets in Calendar Invite)

Members in Attendance:

☒Ashley Chatfield, Maricopa County Environmental Services
☒Bryan Chiordi, Essential Operations
☐Todd Christianson, Premier Environmental Products, LLC
☐Suzanne Ehrlich, Yavapai County
☐Marc Fleetwood, Fleetwood Engineering
☒Karthik Kumarasamy, ADEQ
☒Linneth Lopez, ADEQ
☒Nicholas Noble, Orenco Systems Inc
☒Naveen Savarirayan, ADEQ
☒Michael Stidham, EZ TREAT, INC
☒Michael Sundberg, MST Manufacturing DBA MicroSepTec
☒Fred Vengrouskie, Eljen Corporation
☒Joelle Wirth, Summit Environmental, LLC
☒Ray Morgan, ADEQ

Agenda (Est Time)	Lead	Overview	NOTES

Performance Based Approach	Fred	Review of draft approach submitted by Fred	Fred shared the key elements of a performance-based program:
			• Quality site evaluation – does the state intend to continue use of specific loading rates? Should industry be limited to just using those loading rates as established in Arizona? Each state uses their own specific loading rates. Technology works equally well in all of the soil loading rates. Switch to performance instead of based on specific loading rate.
			  ○ How would you size a drain field in a performance-based system?
			  ○ Soil table and formula needs review.
			  ○ Have we gone to far with the adjustments without looking at the hydraulic function of the soil.
			  ○ Can loading rates in other states be used in Arizona?
			  ○ Being conservative has helped Arizona not have a lot of failures; if we have more monitoring and regulation we can be less conservative. Or are we getting away conservative approach with the specific numbers.
			  ○ Renewable operating permit allows for enforcement and helps determine the performance.
			• Quality of design – tiered level of treatment or performance is a good approach and based on the performance tier could also adjust the parameters (i.e. setbacks)
			  ○ NSF testing doesn't represent how things are performing in the field. NSF 40 and 245 are in pipe standards.
			  ○ If use real world testing and prove the performance then you can have the rewards of adjustments to setbacks, etc.

			○ NSF to start and then have field verification if you want rewards or lower parameters? Potential change to current state. Average influent in the NSF 245 is very different than in field. ○ NEWIPICC study comparing NSF test center and field testing. ○ Need to know the influent value. ○ In several states NSF testing just gets you in the door and provides an ability to do demonstration project which requires field testing of multi systems over a period of time. Some states also limit the number of sales prior to certification. ○ Some states use nationally recognized third-party testing – not just NSF. Canada and Europe have testing programs. Canada (BNQ) and NSF have reciprocal approach. ○ Prescription and performance testing are going to clash when meeting state requirements with open bottom technologies. Maybe after proven in the field, the system may not have to have liners to allow continued testing. ○ Need testing in the field in different states because of the various climates, soil conditions, etc. ○ Testing in the field allows manufacturer to see if they are being maintained. ○ Should not be relying solely on NSF testing for the unique numbers. ○ Question: Is there agreement that ADEQ should shift to using NSF as the entry to do a demonstration with infield testing which will result in certification based on actual performance. ▪ Using Arizona loaded rates and system sizing is oversized and doesn't enable to draw a sample because they are dry. If wanting to test, then the system needs to be sized appropriately. ▪ Any system should be installed as tested and should be field tested.
Tiered Performance Approach	Karthik	Overview on potential parameters in a tiered program	Held till next meeting.
Testing and Testing Requirements	Mike Sundberg	Overview of requirements • Typical sewage definition • Stacking	Mike Sundberg reviewed the NSF testing methodology. The majority of the group agreed to have a list of third-party testing (defined with no variation) that gets you in the door in Arizona and then systems would be required to test in the field to determine which tier they would be certified for. There is a large variation in the measurements of BOD and CBOD. • Intermixing of these tests is one of the areas of inconsistency that should facilitate a reset of approvals. • We can measure both and don't need to use an adjustment factor. • Changing to CBOD should not be a burden as most labs do the test. • Need to have a standard methodology used for all. Arizona's typical sewage definition is very different from the standard or typical sewage being used by third parties. Mike

			presented several options for defining the typical sewage standard. • What is the driver to change the definition – what is the impact in the field? In other sections of the rule, references to the number don't relate to the standards we are accepting into the market. • There is a wide variation in what states define as a high strength waste.
Stacking	Joelle		• Stacking is a great idea but the requirement of more data would make it costlier and harder to do. • Requiring additional test data doesn't make sense; there is a lot of NSF and other third-party testing data that shows how the systems perform. • Stacking is to betterment of the environment, consumer, and everyone else. • If the system changes, does it change the nitrogen outcome? • Constituents can change (cooking, cancer patients, homemade milk, myriad of things that can change waste streams); these things are impossible to identify for every household. • Design of stacking should follow manufacturer recommendations; if it does not meet that, then it is changing the system. • What is considered stacking; what changes made to the system are representative of stacking? Is leveling the alkalinity to optimize treatment or using pretreatment changing the system enough to meet the definition of stacking? • Comments on stacking paper due on October 21st (along with other documents).
Next Steps	Joelle	Open Discussion Next agenda topics	Next Meeting: October 26, 2021 at 1:00 p.m. AZ time • SPS due October 21st and Joelle planning on asking for an extension. • Fred to provide third party test requirements and testing companies (HW)

Action Plan:

Task	Person Responsible	Due Date	Status
ADEQ to answer the industry the question about over reach and going beyond the rule today	ADEQ		
Refine discussion paper on parameters and SAR formula with some examples from residential and commercial	Karthik		Based on the discussion during the meeting