Clearstream Ty Hunter comments Email.pdf

Clearstream Ty Hunter 04192018.pdf

Eljen Jim King Proposed 64E-6 009 ID 20209870 Volume 44 57 Email.pdf

Eljen Jim King Comments 4-10-2018.pdf

FOWA RGroover Additional Comments to Public Hearing Email.pdf

FOWA RGroover Draft Language Email .pdf

FOWA RGroover V2.1 draft language.pdf

Hazen Sawyer Anderson RE Proposed Rules 64E-6 009 email and response.pdf

Infiltrator Lentz RE public comments Email.pdf

Infiltrator Lentz FL 64E-6.009 and 6.012 rulemaking Infiltrator Water Technologies comments_Holcolm_041918.pdf

MDRPE Repasky PROPOSED RULE CHANGES--INRB COMMENTS ATTACHED Email.pdf

MDRPE Repasky COMMENTS FOR FINAL SUBMITTAL.pdf

Presby Environmental's Garrison Comments on Notice of Proposed Rule Email.pdf

Presby Environmental Rashkin FL Rulemaking Comments 4-12-2018.pdf

Realtors Rutledge Email and response.pdf

Water Tomorrow Brurrsema Comments on proposed rules 64E-6 009 Alternative Systems Email.pdf

WaterTomorrow Consulting LLC Comments_FL DOH 64E-6.009_04192018.pdf

Wilson Associates Hebrank Soil Lock Biochar.pdf

Wilson Associates Tina Ward Proposed Rule Amendment Email.pdf

Wilson Associates Tina Ward 04191803.PDF

Holcomb, Dale

From: ty@clearstreamsystems.com
Sent: Thursday, April 19, 2018 3:29 PM
To: Holcomb, Dale
Subject: See attached - Clearstream comments
Attachments: scan04192018.pdf

Dear Mr. Holcomb,

Please find attached are comments relating to the proposed rules of 64E-6.009 Florida Administrative Code.

Best regards,

Ty Hunter

President
Clearstream Wastewater Systems, Inc.

CLEARSTREAM®
WASTEWATER SYSTEMS, INC.
P.O. Box 7568 Beaumont, Texas 77726 (409) 755-1500

April 19, 2018

Dale W. Holcomb, MPH, CHP
Environmental Administrator
Onsite Sewage Program
Bureau of Environmental Health
Division of Disease Control and Health Protection
4052 Bald Cypress Way, Bin-A08
Tallahassee, FL 32399-1710

Dear Mr. Holcomb,

Clearstream Wastewater Systems, Inc. (Clearstream) has been in the residential wastewater treatment business for 85 years, starting as installers and for the past 30 years manufacturing advanced treatment technologies used nationwide. Since 1985 Clearstream has been undergoing field verification in the State of Florida with repeated demonstration of performance, in addition to having many local installers and maintenance providers. We are approved in Florida as an aerobic treatment unit manufacturer to the extensive requirements of 64E-6.012 *Standards for the Construction, Operation, and Maintenance of Aerobic Treatment Units*. Our systems meet the highest effluent quality of national standards for BOD_5, TSS, Total Nitrogen and Fecal Coliform, having been tested and certified to NSF/ANSI Standards 40, 245 and 350 by recognized, third-party accredited national organizations. We believe that we are uniquely qualified to comment on the proposed rules being considered for adoption in the 64E-6 Florida Administrative Code.

Having reviewed the research conducted by Hazan and Sawyer, including their summary and recommendations to the Florida Department of Health (DOH) Research Review and Advisory Committee (RRAC), the recommendations of the Technical Review and Advisory Panel (TRAP), and the extensive requirements of 64E-6 as applied to Clearstream and other companies for treatment systems providing nitrogen reduction, we have serious concerns with the proposed addition of section (7) In-ground Nitrogen-reducing Biofilters (INRB). Our reasons are as follows:

1. We believe the prior research is not adequate to demonstrate the performance of INRB's, as it failed to follow available, national standards for nitrogen reduction systems, i.e. NSF/ANSI Standard 245.
2. The proposed requirements for INRB's are inconsistent with the recommendations of Hazan and Sawyer, as presented to the RRAC.
3. The proposed requirements for INRB's are inconsistent with the recommendations of the TRAP.
4. The proposed design of the INRB raises questions of performance due to the lack of product components, such as a containment vessel for media saturation needed to achieve denitrification.

5. Clearstream and other companies who likewise provide nitrogen reduction technologies in Florida are evaluated to far more comprehensive initial and ongoing requirements to obtain and maintain approval in Florida as compared to those proposed of the INRB. If the proposed rules are approved as written currently, Clearstream and other small business owners will be required to compete directly and unfairly with INRB's.

Our recommendation is to place INRB systems under the same requirements as other nitrogen reduction treatment systems, but only in those cases where they are represented by a product manufacturer seeking approval. Doing so will allow for continued consistency in required compliance with well established, comprehensive standards and evaluations already applied in Florida, provide for a level playing field across the industry, provide continued support for a free market where suitable and approved systems are already available as manufactured and maintained by many small business owners, and support the DOH goals of environmental and public health protection.

We appreciate the opportunity to comment and look forward to revisions in the INRB proposed language that ensures all nitrogen reduction technologies used in the State of Florida are evaluated consistently and properly.

Sincerely,

James Ty Hunter

Ty Hunter
President
Clearstream Wastewater Systems, Inc.

Holcomb, Dale

From: Jim King <jking@eljen.com>
Sent: Wednesday, April 11, 2018 7:51 AM
To: Holcomb, Dale
Subject: Proposed 64E-6.009, ID: 20209870, Volume 44/57
Attachments: Proposed 64E-6.009, ID 20209870, Volume 4457.pdf

Dale,

Please see the attached response.

Thank you.

Jim King
Eljen Corporation
jking@eljen.com

Innovative Onsite Products and Solutions Since 1970

April 11, 2018

Dale Holcomb
Environmental Administrator
Florida Department of Health
Onsite Sewage Programs
4052 Bald Cypress Way
Bin #A08,
Tallahassee, FL 32399-1710

RE: Proposed 64E-6.009, ID: 20209870, Volume 44/57

Mr. Holcomb,

After Eljen Corporation's review of the Notice for Proposed Changes to 64E-6.009 Alternative Systems and 64E-6.012 Standards for the Construction, Operation and Maintenance of Aerobic Treatment Units and have the following comments.

Chapter 7 – In-Ground Nitrogen-reducing Biofilters INRB

Eljen feels that the entirety of Chapter 7 may exclude the development or inclusion of other technologies. The state should change Chapter 7 to allow for the production and testing of systems in this INRB category that can demonstrate greater or lesser amounts of sand, different types of carbon sources and more explicitly testing configurations.

While Chapter 7 is an excellent formula for a non-proprietary system, there needs to a section that allows for proprietary INRBs to compete in the same marketplace with the same rules and provisions. If the product can satisfactorily meet the requirements listed in Chapter 7, the proprietary technique and design should be incorporated even if it uses greater or lesser amounts of sand or construction standards.

The state should have a pilot program of the conventional INRB systems the state is proposing and use those results as a benchmark for the evaluation of all other technologies. Without any real-world test data from the State, it will be hard to measure proprietary systems in this environment. Furthermore, if the proprietary product meets NSF 245 requirements, it should be accepted outright without the need for additional testing.

The question of sampling is in the notes from the notice; however, there is no requirement or discussion on the frequency or where the sampling will occur. Nor is there a discussion on acceptable sampling tools and methods. The debate of sampling needs to be entirely removed or discussed and documented before the passage of the proposed rules.

125 McKee Street, East Hartford, CT. 06108 • Tel: (800) 444-1359 • Fax: (860) 610-0427

64E-6.012 Standards for the Construction, Operation, and Maintenance of Aerobic Treatment Units

After review for requests for variances 20180770 (3/15/2018), 19087289 (6/15/2017), 17150781 (2/12/2016), 14341952 (3/19/2014) and 13847543 (11/21/2013) it seems that with an amendment to the Standards for the Construction, Operation, and Maintenance of Aerobic Treatment Units that the state can address the issues that are continually coming up and being requested variances of by the passive treatment and single pass open bottom treatment technologies. In short, those requests are:

1. (1) (e) Provide a registered certification mark or seal which must be affixed in a conspicuous location on the units.
2. (2) (b) A minimum of a 4-inch diameter sampling access port located between the treatment unit tank outlet and the drainfield. This rule does not apply to passive treatment systems.
3. (2) (c) The requirement of High-Level Alarms are not necessary on passive no pump systems.
4. (3) (b) A permitted aerobic unit maintenance entity is not required for passive systems with no moving parts and should fall under the same maintenance requirements as conventional systems.

A review of all requested variances by the passive treatment and single pass open bottom treatment technologies should be reviewed and discussed as new passive treatment devices are coming onto the market. To not address these issues now is to continue to place one technology at a regulatory disadvantage to the market.

Thank you for this opportunity to comment, and I look forward to furthering discussions on these issues.

Respectfully,

Jim King
President
Eljen Corporation
jking@eljen.com

Holcomb, Dale

From: RGroover <rgroover@fowaonsite.com>
Sent: Thursday, April 19, 2018 12:50 PM
To: Holcomb, Dale; Barranco, Ed
Subject: Additional Comments to Public Hearing

All,
As I mentioned at the meeting, I feel the design on elevations regarding drip irrigation should follow the manufacturers' recommendations. It sets a dangerous precedent for Florida DOH to redesign technologies given the expertise of the manufacturers, especially since this is NOT violating specific code but rather a clarification between drip systems and conventional gravity drainfields.
Thanks,
Roxanne

Sent from the iPhone of R Groover

Holcomb, Dale

From: Sherrill Parr <sparr@fowaonsite.com>
Sent: Thursday, April 19, 2018 12:26 PM
To: Holcomb, Dale; Barranco, Ed
Cc: 'Roxanne Groover'
Subject: Draft Language
Attachments: V2.1 draft FOWA language.pdf

Dear Dale & Ed,

Attached is the draft language that Roxanne referenced during the public hearing.

Would you please reply to let us know that you received it?

Thanks so much!

Sherrill Parr
Director of Financial & Business Management
Florida Onsite Wastewater Association, Inc.
P: (407) 878-4904 F: (877) 832-9434
sparr@FOWAonsite.com
www. FOWAonsite.com

Part V

Onsite Sewage Treatment and Disposal Systems for use in areas located within Basin Management Action Plans

64E-6.030 Definitions

For the purposes of this chapter, the following words and phrases shall have the meanings indicated:

(1) Anoxic means a dissolved oxygen concentration from 0-1 mg/L. Under anoxic conditions, free dissolved oxygen is essentially absent. Oxygen containing compounds such as nitrate are present, however

(2) Basin Management Action Plan means a set of strategies for restoring impaired waters by reducing pollutant loadings to meet a Total Maximum Daily Load (TMDL).

(3) Enhanced Nitrogen-reducing aerobic treatment system means the combination of an ANSI/NSF Standard 245 certified Aerobic Treatment Unit (ATU) followed by any properly-sized approved drainfield configuration or alternative drainfield product.

(4) INRB means an In-ground Nitrogen-reducing Biofilter as described in 64E-6.031(3).

(5) Nitrogen reducing aerobic treatment system means the combination of an ANSI/NSF Standard 40 certified Aerobic Treatment Unit (ATU) followed by a drip irrigation system in conformance with 64E-6.009(5)(a).

(6) Total Maximum Daily Load means a regulatory term in the U.S. Clean Water Act, describing a plan for restoring impaired waters that identifies the maximum amount of a pollutant that a body of water can receive while still meeting water quality standards.

64E-6.031 System location, design and maintenance criteria

(1) An onsite sewage treatment and disposal system which meets the location, design, construction, maintenance and operational requirements of subparagraphs 64E-6.031(2) or (3), F.A.C., shall be approved on properties within Basin Management Action Plans notwithstanding the requirements of Part IV of 64E-6 FAC, provided that if a nitrogen-reducing aerobic treatment system or an INRB is a component of the design, the certification, construction, operational and maintenance requirements of Rule 64E-6.012, F.A.C., shall also be met.

(2) When effluent is treated by a nitrogen reducing aerobic treatment system or an enhanced nitrogen reducing aerobic treatment system, the following requirements shall apply as applicable:

(a) No part of the system shall be located within 50 feet of the boundaries of surface water bodies.

(b) The bottom surface of the drip tubing shall be no deeper than 9 inches below final grade and simultaneously be at least 24 inches above the water table at the wettest season of the year.

(c) The overall percentage of nitrogen reduction for the nitrogen reducing aerobic treatment system shall established to be 65%.

(d) Under circumstances where more stringent nitrogen reduction targets are desired or required, enhanced aerobic treatment systems shall be used. The effectiveness of the enhanced nitrogen reducing aerobic treatment unit provided as part of the enhanced nitrogen reducing aerobic treatment system shall be established using the executive summary of the ANSI/NSF Standard 245 final evaluation report for the ATU technology in question. For instance, if the executive summary for a model of aerobic treatment unit states that over the course of the evaluation, the average influent Total Nitrogen was 40 mg/L and the average effluent Total Nitrogen was 10 mg/L, which resulted in a 74% reduction in the influent Total Nitrogen, the percentage reduction for the ATU is 74%.

(e) The drainfield component of the nitrogen reducing aerobic treatment system shall be credited with a 25% further reduction in total nitrogen. So, in the example above, the total percentage of nitrogen reduction for the complete system in (d) above would be [74% + ({100-74}/4)] = 80.5%.

(3) In-ground Nitrogen-reducing Biofilters (INRB) – Nitrogen-reducing media layers, also referred to as media layers, may be placed beneath the drainfield provided the resulting system meets all requirements of this chapter except as noted in this subsection.

(a) Nitrogen-reducing media layers shall be installed by licensed Master Septic Tank Contractors who have successfully passed a minimum six-hour duration in-person department approved training course on INRBs as follows:

1. The drainfield shall be installed over sand fill material that is at least 18 inches thick and conforms to the textures and colors in subparagraph 10. below and shall extend at least one foot beyond the perimeter of the drainfield. The drainfield shall be centered above the sand fill area.

2. Below the sand fill material layer required in subparagraph 1. above there shall be a media layer that is at least 12 inches thick and extends beneath the entire drainfield absorption surface and extends at least 24 inches beyond the perimeter of any portion of the drainfield absorption surface and any other effluent release point. The media layer shall also extend upward along the boundary of the sand fill material to a point four to six inches below the bottom of the drainfield. The drainfield shall be centered above the media layer. The media layer shall conform with subparagraphs 8. and 11. below. The media layer shall not be installed when the observed water table is at or above the lowest depth of the media layer.

3. The bottom of the media layer shall be at least 12 inches above the wet season water table. (NOTE: change figure beneath woodchips from 6” to 12”. Change citations to 64E-6.031(3)

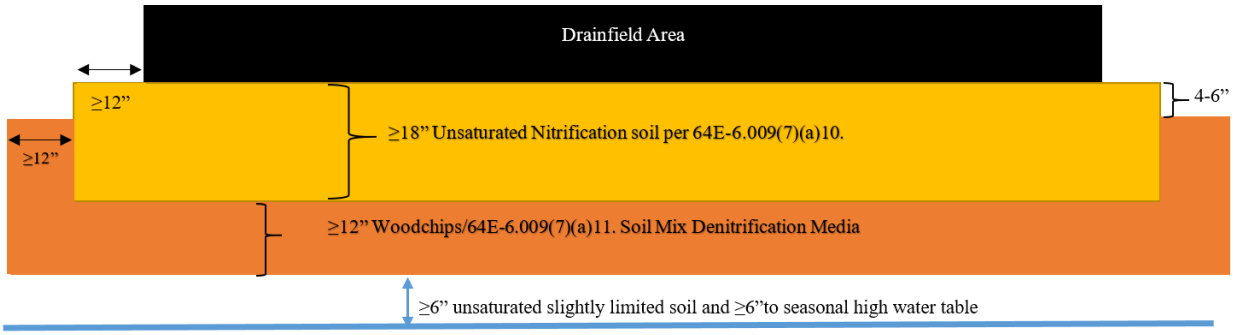

Figure 1. In-ground Nitrogen-reducing Biofilter media layer system

4. While media longevity and nitrogen reduction may be enhanced by the use of low-pressure distribution, any Department-approved drainfield effluent distribution method may be used.

5. The natural and existing soil profile throughout the area of the drainfield shall indicate slightly limited soils extending from the ground surface to at least 6 inches below the bottom of the nitrogen-reducing media layer.

6. Only drainfield materials approved per Rule 64E-6.014 or Rule 64E-6.009, F.A.C. shall be used.

7. As measured vertically, no portion of the media layer required in subparagraph 2. above, shall be within 18 inches of the infiltrative surface of the drainfield.

8. An example of nitrogen-reducing media is lignocellulosic material such as chips or shavings of untreated lumber, blended urban waste wood mulch, yellow pine sawdust, or 2-inch to 3-inch wood chips. The nitrogen-reducing media shall be demonstrated by documented research studies to be effective at

providing a substrate for denitrification.

9. The soil layer between the infiltrative surface of the drainfield and the media layer shall extend beneath the entire drainfield absorption surface and to a point at least one foot beyond the perimeter of any portion of the drainfield absorption surface and any other effluent release point and shall consist of fine aggregate having a texture of sand or fine sand but excluding:

a. those having color values less than or equal to 4 with chromas less than or equal to 3; or

b. those with colors on the gley charts.

10. The media layer shall be a combination of nitrogen-reducing media and fine aggregate, which shall be composed of 40-60% nitrogen-reducing media by volume, with the remainder to be fine aggregate. The media layer shall not be installed when the observed water table is at or above the lowest depth of the media layer. The fine aggregate to be mixed with the nitrogen-reducing media shall be one or more of the following textures: coarse sandy loam, sandy loam, loamy sand, fine sandy loam, very fine sand, loamy fine sand, and loamy very fine sand; and shall conform to the colors in subparagraph 10. above. The media layer shall be thoroughly mixed while the soil is in a non-plastic state, with the constituents uniformly distributed when installed. The layer's purpose is to create an anoxic condition in the media layer to force denitrifying bacteria naturally occurring in the layer to utilize nitrate as their electron acceptor.

11. Where the system has a total required drainfield size over 1500 square feet, the design engineer shall address the potential for mounding of the effluent between the drainfield and the bottom of the media layer at the estimated sewage flow and will increase the separation between the drainfield and the layer required in subparagraph 2. above, to ensure no less than 18 inches of unsaturated soil beneath the drainfield. A four-inch diameter observation port in the center of the drainfield shall be installed to monitor this parameter. The observation port shall be capped and lockable and installed within a protective surface cover. A toilet flange shall be securely attached to the bottom of the observation port to prevent the port from being inadvertently raised from its installed position. The observation port, including the flange, shall be perforated at the lowest elevation possible to allow accurate measurements. If installed within three feet of the sidewall of a bed or trench, the port shall be grouted to prevent effluent from flowing down the outer surface of the port to the media.

12. Drainfield repair shall not necessitate media replacement provided the media has been in use for less than 10 years or if sampling within the previous 12 months shows denitrification at or above the target level for mean total nitrogen (TN) removal efficiency which shall be a minimum of 65%.

13. Setback distances to the denitrification media or soil material directly above denitrification media extending to the infiltrative surface of the drainfield shall be reduced by the following:

a. Except for building foundations, vertical obstructions and pilings for elevated structures, where the required setback is $\leq$5 feet, the setback shall be reduced to one foot.

b. Where the required setback is $\geq$10 feet, the setback shall be reduced by five feet.

c. Setbacks to all other parts of the system shall comply with the requirements in this Chapter and section 381.0065, Florida Statutes.

(b) In addition to the inspections required in Rule 64E-6.003, F.A.C., upon completion of the installation of the media layer but before covering the media layer, the master septic tank contractor installing or constructing the system shall notify the Department's county health department office that the

media layer has been installed and shall have that portion of the system inspected by the department. If the inspection of the media layer is the initial inspection of the system, the initial inspection fee in Rule 64E-6.030(1)(i), F.A.C., shall be paid. If an initial inspection occurred before the media layer inspection, the reinspection fee in Rule 64E-6.030(1)(j), F.A.C., shall be paid.

(c) Repairs of systems incorporating media layers shall meet the current standard for nitrogen reduction. The provisions of Rule 64E-6.003(3), F.A.C., shall not apply to repair of systems that include media layers, nor shall repairs be allowed per Rule 64E-6.015(3), F.A.C.

(d) Final installation approval shall not be granted until the county health department has confirmed that the property owner has executed and recorded in the public property records at the county courthouse, a written notice that informs all subsequent property owners of the use of the nitrogen-reducing media onsite system that may require special repair or maintenance procedures. The notice shall include the department's construction permit number for the system, and that additional information may be obtained by contacting the local county health department.

Rulemaking Authority 381.0011(4), (13), 381.006, 381.0065(3)(a) FS., Ch. 99-395, LOF. Law Implemented 381.0065, 381.00655 FS., Ch. 99-395, LOF. History–New

PART ~~V~~ VI

64E-6.030~~3~~2 Fees.

Holcomb, Dale

From: Holcomb, Dale
Sent: Friday, April 13, 2018 9:02 AM
To: 'Anderson, Damann L.'
Cc: Barranco, Ed; Roeder, Eberhard; Goff, Kendra F
Subject: RE: Proposed Rules 64E-6.009

Good Morning Damann. Thank you for your comments. We will add them into the rulemaking documentation. Let me give you a couple of quick un-vetted responses while I play catch-up on emails and phone calls.

Regarding sampling, the intent is to work with DEP and the NWF Water Management District to arrange for sampling on a number of systems in their project. That way we are not impacting homeowners all over the state with who the first 5 to 10 systems are requiring monitoring and stopping installation of those system variations once the first 5 to 10 are installed.

Also, my thinking was that a suction lysimeter could be installed and samples taken should a homeowner desire that when a 10-year repair decision point occurred without requiring every system to be so equipped at the time of construction.

Regarding the dosing requirement. The push-back about a no-electricity option captured the moment and that resulted in the elimination of low-pressure dosing as the required method with a limited number of the non-dosed versions. Once an unlimited number of gravity-fed systems became the proposal, I added the notation about preferred method but the folks who addend the public hearing will be the only ones who ever consider it.

I look forward to chatting with you and discussing all of these matters in the next couple of days. We are accepting written comments through 5:00 PM EDT Thursday and will announce that at the hearing.

Dale

Dale Holcomb, MPH
Environmental Administrator

Florida Department of Health
Division of Disease Control and Health Protection
Bureau of Environmental Health
Onsite Sewage Programs
4052 Bald Cypress Way, Bin A08
Tallahassee, Florida 32399-1710

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850-245-4093
fax: 850-487-0864

From: Anderson, Damann L. [mailto:danderson@hazenandsawyer.com]
Sent: Wednesday, April 11, 2018 5:26 PM
To: Holcomb, Dale <Dale.Holcomb@flhealth.gov>
Cc: Barranco, Ed <Ed.Barranco@flhealth.gov>; Roeder, Eberhard <Eberhard.Roeder@flhealth.gov>
Subject: Proposed Rules 64E-6.009

Dale,

I was a bit surprised when I heard that the proposed rules for Nitrogen Reducing Biofilters were out on the street with a Workshop Hearing on April 16th, since I had not heard anything on the issue for almost a year. I cannot make the meeting, and have not had much time to review the rules, but below are my primary comments for your consideration.

1) I am very surprised there are no monitoring requirements for the proposed system, or no installation of at least one monitoring device at the time of construction. It will be very hard to monitor treated effluent from these systems without monitoring devices installed, and they are much harder to include post-construction. I recommend installation of a suction lysimeter or pan lysimeter just below the denitrification media at the very least, and it would be good to have a monitoring device below the nitrification layer as well, to determine if nitrification is occurring. Without such data, it will be impossible to tell if the systems are achieving their desired goals, or where the problem is if they are not. How will 7 (a) 13. Media replacement be evaluated if no sampling provisions are provided? What happened to the pilot testing of various configurations agreed upon at the last TRAP meeting, so that these systems could be further tested and refined to optimize performance?

2) It appears that you are allowing gravity distribution of STE for these systems. This will result in very deep systems on flat topography, which may be more costly than simply installing a pump and using pressure distribution, which would also give better treatment performance. The exception to this may be where a site has 6-8 ft of topographical drop away from the building, so that system components can still be relatively shallow, but these sites are rare in Florida. I recommend requiring pressure distribution unless such topography can be demonstrated.

These are my primary comments, there are other wording issues that are a bit confusing, but I am sure others will catch all of these. Feel free to contact me if you have any questions on my comments.

Regards,
Damann

Damann L. Anderson, P.E.

Water Resource Practice Leader
Vice President | Hazen and Sawyer
10002 Princess Palm Avenue, Suite 200, Tampa, FL, 33619
813 630-4498 (office) | 813 549-2116 (direct)
danderson@hazenandsawyer.com | hazenandsawyer.com

Holcomb, Dale

From: Lentz, Dave <dlentz@infiltratorwater.com>
Sent: Thursday, April 19, 2018 2:56 PM
To: Holcomb, Dale
Cc: Jobe, Lori L; Barranco, Ed; Roeder, Eberhard; Goff, Kendra F; Davenport, Ron; Harris, Gregory
Subject: RE: public comments
Attachments: FL 64E-6.009 and 6.012 rulemaking Infiltrator Water Technologies comments_Holcolm_041918.pdf

Dale,

The attached letter includes comments by Infiltrator Water Technologies (Infiltrator) based on a review of the Notice for Proposed Changes to 64E-6.009 Alternative Systems and 64E-6.012 Standards for the Construction, Operation and Maintenance of Aerobic Treatment Units.

Can you please confirm receipt of the public comments prior to the submission deadline.

Sincerely,
Dave Lentz

INFILTRATOR® water technologies

David Lentz, Professional Registration/PE – CT, IL, NY
Regulatory Director
Phone: (860) 577-7198 | **Mobile:** (860) 575-8099 | **Fax:** (860) 577-7793
4 Business Park Road, Old Saybrook, Connecticut 06475

Website | Facebook | LinkedIn | YouTube

From: Holcomb, Dale <Dale.Holcomb@flhealth.gov>
Sent: Tuesday, April 17, 2018 9:19 AM
To: Lentz, Dave <dlentz@infiltratorwater.com>
Cc: Jobe, Lori L <Lori.Jobe@flhealth.gov>; Barranco, Ed <Ed.Barranco@flhealth.gov>; Roeder, Eberhard <Eberhard.Roeder@flhealth.gov>; Goff, Kendra F <Kendra.Goff@flhealth.gov>
Subject: public comments

Good Morning, Dave,

Per our conversation following the hearing yesterday, attached are the written comments received thus far in response to the notice of proposed rule published 3/22/2018 and the public hearing health 4/16/2018.

The written comment period for the hearing closed at 5:00 PM EDT on Thursday 4/19/2018.

Dale

Dale Holcomb, MPH
Environmental Administrator

Florida Department of Health
Division of Disease Control and Health Protection
Bureau of Environmental Health
Onsite Sewage Programs
4052 Bald Cypress Way, Bin A08
Tallahassee, Florida 32399-1710

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DOH Vision: "To be the Healthiest State in the Nation."

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April 19, 2018

Mr. Dale Holcomb
Environmental Administrator
Florida Department of Health Onsite Sewage Programs
4052 Bald Cypress Way Bin #A08
Tallahassee, FL 32399-1710

RE: Comments on proposed 64E-6.009 and 6.012 rules

Dear Mr. Holcomb,

The letter includes comments by Infiltrator Water Technologies (Infiltrator) based on a review of the Notice for Proposed Changes to 64E-6.009 Alternative Systems and 64E-6.012 Standards for the Construction, Operation and Maintenance of Aerobic Treatment Units. Infiltrator is a manufacturer of onsite sewage treatment and disposal system (OSTDS) components. These components include Florida Department of Health (DOH) approved Quick4 and Arc chamber and EZflow drainfield media that could be installed within the proposed in-ground nitrogen-reducing biofilter (INRB) under 64E-6.009. Infiltrator also manufactures DOH-approved aerobic treatment unit (ATU) and performance-based treatment system (PBTS) products through its Delta Treatment Systems Whitewater and ECOPOD brands, respectively.

General Comments

To Infiltrator's knowledge, the promulgation of prescriptive rules for constructing and operating a passive INRB has not been done previously in the United States. An INRB is a simple system designed to perform a complex task. Successfully converting nitrogen from ammonia in sewage to nitrate/nitrate in effluent to nitrogen gas at the end of the treatment process is a complicated progression that relies on multiple physical, chemical, and biological parameters functioning satisfactorily in the uncontrolled conditions of the subsurface environment. The transformational chemical processes that convert ammonia to nitrate and ultimately to nitrogen gas are microbially mediated. Consequently, the processes rely on the ability of the passive INRB to support the correct microbe species in adequate populations to effectively treat nitrogen in wastewater. Under favorable environmental conditions, an INRB can be successfully in reducing the nitrogen concentration in sewage. Under unfavorable conditions that may result from environmental factors such as microbial toxins in influent wastewater, degraded or expended denitrification media, or excessive hydraulic load, complete conversion of ammonia to nitrogen gas may not be achievable. While an INRB is a simple system, the fact that it's performing a complex task warrants the need to periodically verify its proper function and administer it like an ATU or PBTS currently regulated under 64E-6, Standard for Onsite Sewage Treatment and Disposal Systems.

In April 1997, the United States Environmental Protection Agency (USEPA) developed its *Response to Congress on Use of Decentralized Wastewater Treatment Systems*[1]. In this document, the USEPA states (emphasis added) "*adequately managed* decentralized wastewater systems are a cost-effective and long-term option for meeting public health and

[1] EPA 832-R-97-001b

water quality goals". In *Decentralized Wastewater Treatment Systems A Program Strategy*[2], USEPA states that decentralized systems protect human health and water quality when they are properly sited, designed, installed, *operated and maintained*. Under the program strategy undertaken by USEPA in 2005, upgrading the performance of decentralized systems to achieve water quality objectives and public health protection goals included improving management practices, including elements such as siting, design, installation, permitting, inspections, *operation and maintenance*[2]. This national initiative should be shared by the DOH for INRBs.

Based on the above general comments, Infiltrator offers the topic-specific comments below, which are summarized as follows:

- **Performance verification** – Require verification that the complex task assigned to each passive INRB is being achieved by requiring periodic sampling and analysis of influent and effluent wastewater.

- **Periodic inspection and maintenance** – As part of the performance verification requirement, inspect and maintain INRBs at the same frequency as an ATU or PBTS.

- **Permitting** - Require INRB permitting that is consistent with permitting requirements for ATUs and PBTSs.

- **Prescriptive design modification via NSF 245** – Reducing the thickness of the prescriptive INRB through NSF 245 testing removes design safety factor and may compromise long-term performance and system longevity and should not be allowed.

Performance Verification

Compliance sampling of ATUs and PBTS is currently required under 64E-6, Standard for Onsite Sewage Treatment and Disposal Systems. The use of a passive INRB in lieu of a conventional mineral aggregate drainfield will be driven by a regulatory need for a higher level of sewage treatment than can be achieved by a conventional mineral aggregate drainfield. For example, an INRB may be installed in a Priority Focus Area (PFA) as part of a Basin Management Action Plan (BMAP). If the BMAP includes a calculated total maximum daily load (TMDL) from OSTDS within the PFA, then successful remediation of the PFA is reliant on achieving the target nitrogen reduction for the installed nitrogen-reducing OSTDSs.

In the above example, achieving the target nitrogen reduction is critical to the success of the BMAP, yet the proposed rules do not include an aspect of accountability for INRB nitrogen-reduction performance. This is inappropriate and inconsistent with the spirit of 64E-6, Standard for Onsite Sewage Treatment and Disposal Systems, which requires sampling to verify the performance of ATUs and PBTSs. The proposed rules assume that effluent flowing through an INRB will automatically be capable of adequately reducing nitrogen to the target level. However, an INRB is installed in a variable and uncontrolled subsurface environment that subjects the layered treatment media to conditions that may or may not promote the conversion of ammonia to nitrogen gas. Representative examples of factors that have the potential to impact proper INRB function and warrant compliance sampling include:

- **Toxic medications** – Occupants of the home that are taking antibiotics or chemotherapy medicines release unmetabolized and partially metabolized medicines in their urine and feces that can eradicate essential INRB microbes and impair or prevent nitrogen treatment.

- **Disinfecting cleaning chemicals** – Disinfectant products utilizing quaternary ammonium compounds as the active ingredient are among the most extensively used. While this

[2] EPA 832-R-05-002

chemical is well-suited for consumer products that combine cleaning with disinfection, it is also lethal to essential microbes and can impair or prevent nitrogen treatment in INRB systems.

- **Hydraulic overload** – Overuse of water in the home will lead to either rapid flow though the INRB, reducing the residence time available for microbially mediated chemical reactions, or cause effluent to flow around the INRB, preventing nitrogen treatment altogether.

- **Natural lignocellulose decay** – The Florida Department of Environmental Protection designed and installed a lined INRB that submerged the lignocellulose layer under anaerobic conditions, thereby mitigating the potential for aerobic biodegradation. The proposed INRB design does not include a liner, dramatically increasing the potential for aerobic lignocellulose decay and ultimately, ineffectiveness due to insufficient or a lack of carbon source for converting nitrate to nitrogen gas.

Given the factors listed above (others exist as well), there are multiple reasons why an INRB may not function properly. With the importance of reducing total nitrogen concentration where an INRB will be installed, verifying performance is critical through periodic sampling that mirrors sampling required for ATUs and PBTSs under 64E-6, Standard for Onsite Sewage Treatment and Disposal Systems.

Additional reasons to verify INRB performance through periodic compliance sampling are drainfield repair and setback distances proposed under 64E-6.009. Under proposed 64E-6.009(7)(a)(13), drainfield repair shall not necessitate media replacement, provided the media has been in use for less than 10 years or if sampling within the previous 12 months shows denitrification at or above the target level for mean total nitrogen removal efficiency which shall be a minimum 65%. The proposed rules do not require sampling for total nitrogen removal efficiency, but the need for drainfield repair is predicated on sampling data, which is an inconsistency that should be addressed by requiring compliance sampling.

Finally, under proposed 64E-6.009(7)(a)(13), preferential setbacks are allowed for INRBs if the setback is greater than 10 feet. With nitrogen treatment being the prerequisite to reducing setback distance, verification that the INRB is functioning as intended is fully warranted.

Periodic Inspection and Maintenance

While an INRB does not have moving parts and is not powered by electricity, it is a simple system performing a complex task. There are certain visually identifiable signs that can serve as indicators of ongoing or possible performance problems. While INRBs do not need to be plugged in or have motors maintained, they also should not be ignored in the hopes that the nitrogen treatment objectives for the system will be met with no further inspection and maintenance.

As described above, an INRB may be subject to hydraulic overload. Infiltrator has monitored wastewater flow into chamber-based drainfields as part of field monitoring programs in other states and observed a wide range of flows compared to the daily design flow. In one case, the average daily flow was three times greater than the daily design flow. In situations where the actual flow deviates substantially in excess of the design daily flow, the possibility exists that effluent could back up on the drainfield layer and pond on the ground surface. Ponded wastewater on the ground surface could flow overland to a protected surface water body. This would be a strong indicator that the system is malfunctioning both hydraulically and from a treatment perspective. This represents an example of why INRBs should be subject to periodic inspection and possibly maintenance (combined with sampling, as described above) to ensure that the system is performing as designed and meeting target performance benchmarks.

Under proposed 64E-6.009(7)(a)(8), the nitrogen-reducing media is lignocellulosic material such as chips or shavings of untreated lumber, blended urban waste wood mulch, yellow pine sawdust, or 2-inch to 3-inch wood chips. All of these options represent organic material that is susceptible to aerobic decomposition. Over time, the 12-inch-thick lignocellulosic layer would be expected to diminish in thickness as the material degrades and is consumed in the denitrification treatment process. Part of the inspection process should be a periodic visual check that there is no evidence of ground subsidence within the INRB footprint, which would be an indicator of excessive lignocellulosic layer volume loss.

Permitting

All systems that are designed to treat effluent to meet specified performance benchmarks should be constructed under uniform permitting requirements. There is no justification for permitting a nitrogen-reducing INRB differently from an ATU or PBTS.

Prescriptive Design Modification via NSF/ANSI 245

Infiltrator is not opposed to the use of a prescriptive INRB design in Florida's rules, provided appropriate provisions are included with the prescriptive system design that ensure successful long-term operation and nitrogen reduction. Infiltrator's review of rulemaking comments submitted to the DOH by other organizations reveals advocacy for using NSF/ANSI 245 as a means of reducing the required strata that make up the unsaturated nitrification soil and soil mix denitrification media. Infiltrator opposes reducing the thickness of these layers.

The principle reason Infiltrator opposes using NSF/ANSI 245 to reduce strata thickness or composition is that NSF/ANSI 245 is a six-month-long test that provides no indication of nitrogen treatment system longevity. The only factor that can be determined under NSF/ANSI 245 is whether the system adequately reduces nitrogen concentration within a 6-month timeframe. A manufacturer using NSF/ANSI 245 to reduce layer thicknesses is effectively removing design safety factor from the prescriptive INRB design. This does not promote public health or consumer protection.

Thank you for the opportunity to comment on the proposed rules. Please do not hesitate to contact me for clarification or additional information at 860-577-7198.

Sincerely,

David Lentz

David Lentz, P.E.
Regulatory Director
Licensed in CT, IL, and NY

cc: Ed Barranco, DOH
Lori Jobe, DOH
Dr. Eberhard Roeder, DOH
Kendra Goff, DOH
Ron Davenport, Infiltrator Water Technologies
Greg Harris, Infiltrator Water Technologies

Holcomb, Dale

From: Mark Repasky <repaskymd@aol.com>
Sent: Thursday, April 19, 2018 3:57 PM
To: Holcomb, Dale
Cc: Roeder, Eberhard; Ursin, Elke
Subject: PROPOSED RULE CHANGES--INRB COMMENTS ATTACHED
Attachments: MDRPE COMMENTS FOR FINAL SUBMITTAL.pdf

Hey Dale,
I hope that all is well.
Pls find pdf of my comments (this one INRB-specific) attached.

Mark D. Repasky, PE
President, Wastewater Technologies, Inc.
3096 S. Adams Street
Tallahassee, FL 32301
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	Roger Wayne Runyon	George Wade Upperman	Mark D. Repasky	
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	R.Runyon@hotmail.com	GeoPlumber@aol.com	RepaskyMD@aol.com	

Thursday 2018.04.19

Subject: 64E-6 PROPOSED RULEMAKING—2018 CHANGES

Regarding the Proposed In-ground Nitrogen-reducing Biofilter (INRB):

As described, the proposed combination of soil layers beneath a drainfield cannot create the conditions for Nitrogen removal and has no place in FAC 64E-6.

Specifically:

- The State offers no compelling scientific evidence that its proposed INRB will work
- State of Florida research and reports consistently confirm biological Nitrogen removal as a two-stage process. As described, the INRB cannot create that second stage, an anoxic environment in the presence of an electron donor. Nitrate will not be converted to nitrogen gas, therefore denitrification will not occur.
- The proposed inclusion of this INRB in rule illegally circumvents both Rule (64E-6) and Statute (Chapter 381).
    - No third-party testing has occurred showing successful and consistent Nitrogen removal, neither NSF, ETV, EPA, State of Florida Big Pine Key or FOSNRS, nor any University or other governmental entity
    - FAC 64-6.026, the Innovative System Permitting process, is also available but in this case has been completely ignored

To be included in Rule, the INRB (or any system) must have been:

- Thoroughly tested via one of the Florida-mandated processes listed in Rule and Statute
- Modified as required to help ensure proper function, constructability, and tolerances to allow inspection
- Shown capable of Nitrogen reduction under the climactic and soil conditions of Florida

Until meeting these milestones, the INRB has no place in Rule and therefore must be discarded forthwith.

for electronic submittal

Mark D. Repasky PE

Holcomb, Dale

From: Ashley Garrison <ashley.garrison@presbyeco.com>
Sent: Thursday, April 12, 2018 3:01 PM
To: Holcomb, Dale
Cc: Barranco, Ed; Roeder, Eberhard; thomas.frick@dep.state.fl.us; larry.sellers@hklaw.com
Subject: Presby Environmental's Comments on Notice of Proposed Rule
Attachments: PEI FL Rulemaking Comments.pdf

Dear Mr. Holcomb:

Attached please find our company's comments on proposed rules 64E-6.009 and 64E-6.012.

Sincerely,

Ashley Garrison

--
Ashley Garrison
Project Coordinator
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April 12, 2018

Mr. Dale Holcomb, Environmental Administrator
Onsite Sewage Programs
Florida Department of Health
4052 Bald Cypress Way, Bin #A08
Tallahassee, FL 32399-1710
dale.holcomb@flhealth.gov

RE: Comments on Proposed Rules 64E-6.009 &64E- 6.012; Proposed Lower Cost Regulatory Alternatives; and Request for Statement of Estimated Regulatory Costs

Dear Mr. Holcomb:

Presby Environmental, Inc. (PEI) is providing these comments in response to the Notice of Proposed Rule for 64E-6.009 (Alternative Systems) and 64E-6.012 (Standards for the Construction, Operation, and Maintenance of Aerobic Treatment Units) recently published by the Florida Department of Health (FL DOH). Attached please find PEI's comments on individual sections of the rules, as well as general commentary on the subject matter of these proposed rules, below.

Comments on 64E-6.009, Alternative Drainfields

The proposed rules advocating the use of an unlined denitrification media system which has not been supported by public demonstrations showing successful use and sampling in the state of Florida. To the extent that there may be Florida data, there is very little detail on the media mixture, the test configuration, or results that would be necessary to replicate this system in the real world.

The proposed rules are also giving beneficial treatment to a class of wastewater treatment systems, while not allowing other similarly situated products the same benefits. Therefore, PEI suggests striking the proposed In-ground Nitrogen-reducing Biofilters rule set forth in 64E-6.009(7) as a whole, and instead deferring to the proven, reliable, and effective framework that already exists for ensuring denitrification, namely systems that are in adherence with NSF/ANSI Standard 245 as set forth in proposed rule 64E-6.012(1) (Comment No. 1). If FL DOH would like to move forward with its in-ground nitrogen-reducing biofilter, it can easily be tested at any NSF/ANSI testing facility to ensure effective removal of nitrogen using a standardized process, where the appropriate level of detail would be provided in the form of an NSF report and manual. This would streamline the process and be fair to all technology in the marketplace.

If FL DOH declines to entertain PEI's suggestion of relying on proposed rule 64E-6.012 and deferring to NSF/ANSI Standard 245, PEI is submitting, as an alternative, comments to proposed rule 64E-6.009 (Comments Nos. 2-7).

64E-6.012, Standards for the Construction, Operation and Maintenance of Aerobic Treatment Units

PEI is using FL DOH's Notice of Proposed Rule for 64E-6.012 as an occasion to address longstanding concerns that passive combined treatment and dispersal (CTD) wastewater systems are not recognized appropriately by existing regulations. Currently, manufacturers of these innovative treatment systems,

like PEI, Eljen, and Geomatrix, must file Chapter 120 Petitions to obtain variances from unnecessarily burdensome rules that prevent passive systems from operating as they are intended in the state of Florida.

Industry and regulators alike acknowledge that most aerobic treatment unit (ATU) rules across the country, including Florida, were written at a time when the only ATUs were so-called 'black box' units, that required electricity, moving parts, and/or chemical processes to treat wastewater in the unit, before dispersing separately to a drainfield. This original intention is evidenced in the use of the term 'treatment receptacle' and reference to mechanical components throughout the rule. Current innovations in wastewater treatment technology have led to a wave of passive alternative CTD products that operate with the same simplicity as a conventional drainfield.

To require these new products to abide by outdated, cumbersome, expensive and ultimately unnecessary requirements prevents these technologies from solving some of the most pressing environmental concerns in Florida. PEI is using this Notice of Proposed Rule as an opportunity to suggest language to FL DOH that will help update the marketplace and make sure the rules reflect current technology. PEI's comments on 64E-6.012 will use current rule language where no changes have been proposed by FL DOH, and will reference proposed rule language for those subsections where FL DOH has made changes; in either case, the substance of PEI's comment remains the same, whether it is the current or proposed language of 64E-6.012.

Proposals for Lower Cost Regulatory Alternatives

PEI submits the following lower cost regulatory alternatives to the Proposed Rule pursuant to 120.541, Florida Statutes: those suggested revisions or changes set out in Comment Nos. 1, 4, 6, and 7.

PEI is not wed to this exact language, and we would welcome the opportunity to discuss the proposed alternatives with appropriate Department officials prior to any hearing.

Request to Prepare a Statement of Estimated Regulatory Costs

The submittal of these lower cost regulatory alternatives require the Department to prepare a Statement of Estimated Regulatory Costs (SERC) as provided in Section 120.541(2), Florida Statutes. The Department then is required to adopt the proposed alternative or to give a statement of the reasons for rejecting the alternative in favor of the proposed rule. See Section 120.541(1)(b), Florida Statutes.

If the Department determines not to adopt the proposed alternatives (or something substantially similar), PEI respectfully requests that the Department prepare the required Statement of Estimated Regulatory Costs and provide us with a copy as soon as it is prepared.

We appreciate the opportunity to submit these comments. We plan to attend the public hearing on Monday, April 16, 2018. We would welcome the opportunity to discuss these comments or answer any questions you have at that time—or at a later time that is mutually convenient.

Sincerely,

Lee Rashkin
CEO

CC: Ed Barranco
Tom Frick
Eberhard Roeder
Larry Sellers

Presby Environmental, Inc.'s
Comments on Proposed Rules 64E-6.009

Comment 1: 64E-6.009(7) et seq.

Proposed Language
(7) In-ground Nitrogen-reducing Biofilters (INRB) – Nitrogen-reducing media layers, also referred to as media layers, may be placed beneath the drainfield provided the resulting system meets all requirements of this chapter except as noted in this subsection.

Suggested/Revised Language in ~~strike~~/add format
~~(7) In-ground Nitrogen-reducing Biofilters (INRB) – Nitrogen-reducing media layers, also referred to as media layers, may be placed beneath the drainfield provided the resulting system meets all requirements of this chapter except as noted in this subsection.~~

Rationale
PEI proposes deferring to the existing denitrification systems that are already certified to NSF/ANSI Standard 245 performance levels. Attempting to create a non-proprietary onsite wastewater system from scratch without years of field testing, third party testing, and strenuous evaluation and examination by the regulatory and onsite community is inviting problems. By deferring to the denitrification systems already proven to work by NSF/ANSI certifying bodies, that have conducted testing and evaluations of denitrification systems in strict accordance with NSF/ANSI Standard 245, Florida and its citizens can rely on proven, demonstrated systems. This approach would provide the citizens of Florida with a system that is:

- Tested under a standardized process applicable to all technology,
- Sampled under a schedule and methodology that is representative of field performance, and
- Evaluated for critical aspects of the system not currently addressed such as:
    - Startup periods, working parent households, wash days, vacation, power outages, and other real-life situations that are required to be evaluated for all technologies.

This process would also provide three important documents that are critical to the successful operation of the product in the marketplace, namely a test report that aggregates data in a standardized format, a design and installation manual, and an operation and maintenance manual.

Relying on NSF/ANSI Standard 245 is a cost-effective way to have a benchmark for denitrification removal in Florida; this will also protect the investment made by the constituents that install these systems, and forestall any potential damage sustained by not evaluating the system using a standardized protocol. Further, if FL DOH agrees with the changes suggested by PEI in its comments to 64E-6.012 (Comments Nos. 8-18), which would allow for passive wastewater treatment systems to enter the aerobic treatment unit marketplace, it would provide for lower cost alternatives without the burdensome maintenance and operating requirements commonly associated with traditional, mechanical ATUs.

Comment 2: 64E-6.009(7)

Proposed Language

(7) In-ground Nitrogen-reducing Biofilters (INRB) – Nitrogen-reducing media layers, also referred to as media layers, may be placed beneath the drainfield provided the resulting system meets all requirements of this chapter except as noted in this subsection.

Suggested/Revised Language in ~~strike~~/add format

(7) In-ground Nitrogen-reducing Biofilters (INRB) – Nitrogen-reducing media layers, also referred to as media layers, may be placed beneath the drainfield provided the resulting system meets all requirements of this chapter except as noted in this subsection. The In-ground Nitrogen-reducing Biofilter media layer system (including drainfield area) shall be demonstrated in Florida-based studies to be effective.

Rationale

It would appear, based on earlier versions of this rule discussed during the Technical Review and Advisory Panel meetings, that the proposed design for "In-ground Nitrogen-reducing Biofilters (INRB)" has changed. Previous versions detailing installation and design methods for INRBs required a liner to surround the INRB. This currently proposed version eliminates the liner. Presby Environmental, Inc. had previously communicated with DOH representatives, and discussed at TRAP meetings, the belief that those proposed INRBs infringed upon patents owned by PEI and the Presby Patent Trust. DOH repeatedly failed to address this directly with PEI representatives, but appears to have deliberately re-designed the INRB in an attempt to avoid infringement issues. While infringement would have already occurred once the test systems for the INRB were installed in the ground and used, this amendment appears to be an effort by DOH to avoid the infringement issue. Unless and until DOH representatives are willing to engage concerned parties in a conversation, it is still undetermined whether this new configuration is covered by previously existing intellectual property.

Presby Environmental, Inc. is concerned to what extent and with what type of results this unlined INRB configuration has actually been tested in Florida. Previous conversations and proposed rules (and indeed, this version's 6.009(7)(a)8) requires INRBs to be successfully tested in Florida for the purposes of denitrification. This Florida-based demonstration requirement is also one frequently imposed upon technologies seeking approval in Florida for use as alternative drainfields, which is the category that INRBs fall under. The current Florida rule 64E-6.009(7)(a)4 requires manufacturers to provide empirical data showing results of innovative system testing in the state of Florida. Therefore, it would be prudent and logical to ensure that this unlined INRB be tested in Florida as well, in accordance with the requirements currently imposed on other technologies seeking introduction to the Florida marketplace.

PEI would like to know how many of the proposed INRBs have been used in Florida, both in real-world systems and test systems. If Florida is going to promote a potential solution to the denitrification issue by proposing specific design configurations, it would benefit the public to know the science and results underlying this proposal. It is important to know if the configuration proposed in the rules has been used successfully in Florida. If it has, FL DOH should make widely available this data, including length of testing, daily flow, type of use, fluctuation of performance levels, sampling methodology, and other

appropriate details necessary for replication of these systems in the field. Similarly, it is vital for FL DOH to publish information regarding the longevity of the denitrification media proposed for use, including how often the media should be replaced, and the best methods for replacement without causing undue disruption to system owners.

Finally, PEI would also like to raise concerns regarding the plumbing fixtures (PVC pipes, connections, etc) and how they will withstand the decomposition and eventual settling of the nitrogen-reducing media. If FL DOH has addressed this issue, it should make this information widely available; if no such research has been undertaken to address this concern, PEI strongly suggests that FL DOH undertake this study, so that damages and disruptions to system owners who may experience problems can be minimized.

Comment 3: 64E-6.009(7)(a)

Proposed Language

(7) In-ground Nitrogen-reducing Biofilters (INRB) – Nitrogen-reducing media layers, also referred to as media layers, may be placed beneath the drainfield provided the resulting system meets all requirements of this chapter except as noted in this subsection.

(a) Nitrogen-reducing media layers shall be installed as follows:

1. The drainfield shall be installed over sand fill material that is at least 18 inches thick and conforms to the textures and colors in subparagraph 10. below and shall extend at least one foot beyond the perimeter of the drainfield. The drainfield shall be centered above the sand fill area.

2. Below the sand fill material layer required in subparagraph 1. above there shall be a media layer that is at least 12 inches thick and extends beneath the entire drainfield absorption surface and extends at least 24 inches beyond the perimeter of any portion of the drainfield absorption surface and any other effluent release point. The media layer shall also extend upward along the boundary of the sand fill material to a point four to six inches below the bottom of the drainfield. The drainfield shall be centered above the media layer. The media layer shall conform with subparagraphs 8. and 11. below. The media layer shall not be installed when the observed water table is at or above the lowest depth of the media layer.

3. The bottom of the media layer shall be at least 6 inches above the wet season water table.

Suggested revised language in ~~strike~~/add format

(7) In-ground Nitrogen-reducing Biofilters (INRB) – Nitrogen-reducing media layers, also referred to as media layers, may be placed beneath the drainfield provided the resulting system meets all requirements of this chapter except as noted in this subsection.

(a) Nitrogen-reducing media layers shall be installed as follows:

1. The drainfield shall be installed level over sand fill material that is installed level and at least 18 inches thick and conforms to the textures and colors in subparagraph 10. below and shall extend at least one foot beyond the perimeter of the drainfield. The drainfield shall be centered above the sand fill area.

2. Below the sand fill material layer required in subparagraph 1. above there shall be a media layer

that is installed level and at least 12 inches thick and extends beneath the entire drainfield absorption surface and extends at least 24 inches beyond the perimeter of any portion of the drainfield absorption surface and any other effluent release point. The media layer shall also extend upward along the boundary of the sand fill material to a point four to six inches below the bottom of the drainfield. The drainfield shall be centered above the media layer. The media layer shall conform with subparagraphs 8. and 11. below. The media layer shall not be installed when the observed water table is at or above the lowest depth of the media layer.

3. The bottom of the media layer shall be level and at least 6 inches above the wet season water table.

Rationale
DOH requires level installations of sewer lines, distribution boxes, and wastewater receptacles, and treatment bed bottom of combined treatment and dispersal wastewater system technology, so it follows that the INRB installation should be level as well.

Comment 4: 64E-6.009(7)(a)1

Proposed Language
64E-6.009(7)(a)1. The drainfield shall be installed over sand fill material that is at least 18 inches thick and conforms to the textures and colors in subparagraph 10. below and shall extend at least one foot beyond the perimeter of the drainfield. The drainfield shall be centered above the sand fill area.

Suggested revised language in ~~strike~~/add format
64E-6.009(7)(a)1. Unless nitrification has already occurred, ~~T~~the drainfield shall be installed over sand fill material that is at least 18 inches thick and conforms to the textures and colors in subparagraph 10. below and shall extend at least one foot beyond the perimeter of the drainfield. The drainfield shall be centered above the sand fill area. Nitrification is understood to mean performance which is consistent with the purpose of the nitrifying layer described in 64E-6.009(7)(a)10.

Rationale
FL DOH needs to publish the nitrification levels provided by the nitrifying layer in the configuration of the proposed INRB. The nitrifying layer is obsolete if a substantially similar level of nitrification has already occurred. Many systems which accomplish nitrification are more expensive and have an increased vertical profile due to the nitrifying components; requiring this layer when nitrification has already occurred imposes an added expense, potential for increase vertical profile, and places an unnecessary burden on competing systems in the marketplace. This will allow for lower cost alternatives to perform the function of nitrification in place of the proposed nitrifying layer.

Comment 5: 64E-6.009(7)(a)3

Proposed Language
3. The bottom of the media layer shall be at least 6 inches above the wet season water table.

Suggested revised language in ~~strike~~/add format
3. The bottom of the media layer shall be at least ~~6~~ 24 inches above the wet season water table.

Rationale

The current language provides for the bottom of the denitrification media to be at least 6 inches above the wet season water table. Presby Environmental objects to this provision, as other technologies approved in Florida, and Presby's own technology that is in the innovative permit process in Florida, has been required to be 24 inches above the water table (64E-6.006(2); 64E-6.009(5)(a)12). FL DOH has been adamant that our vertical separation needs to be measured from the bottom of our aggregate, as FL DOH considers that part of the system in its totality. PEI's request to include our sand as part of our separation distance was denied. This arbitrary distinction unfairly favors the INRB technology over competing systems in the marketplace and increases costs to the consumer of other alternatives. The new rules are inconsistent with the previous position held by FL DOH.

The seasonal high water table can vary by +/-6 inches, which means the media layer could be resting on the water table. To our knowledge, no systems have been tested in this proximity to the water table and the effects of such installations are unknown. FL DOH has stressed the importance of this layer for viral reduction; has the effect of this INRB on viruses been evaluated by FL DOH? Further, testing of wood-based denitrification systems have consistently shown an increase in BOD. The impact of this increased BOD in relation to the water table could have unknown effects on environmental health.

Comment 6: 64E-6.009(7)(a)13

Proposed Language

13. Drainfield repair shall not necessitate media replacement provided the media has been in use for less than 10 years or if sampling within the previous 12 months shows denitrification at or above the target level for mean total nitrogen (TN) removal efficiency which shall be a minimum 65%.

Suggested revised language in ~~strike~~/add format

13. Drainfield repair shall not necessitate media replacement ~~provided the media has been in use for less than 10 years or~~ if sampling within the previous 12 months shows denitrification at or above the target level for mean total nitrogen (TN) removal efficiency which shall be a minimum of ~~65~~50% to be determined by sampling protocols that will be deemed acceptable for use with combined treatment and dispersal systems approved for use in Florida.

Rationale

If FL DOH is setting nitrogen removal goals to be met by INRB systems, and requiring Florida-based demonstrations of denitrification, then FL DOH needs to specify the sampling procedure it has used and will require third parties to use in order to ascertain performance levels of these INRB systems. These rules do not specify a procedure for accurately monitoring the denitrification performance of these systems, let alone basic sampling protocols or placement. Further, any sampling procedure that is being considered by FL DOH should have a history of successful field use in similarly configured systems.

PEI would also request that FL DOH explain why the target level for mean total nitrogen (TN) removal efficiency" is 65% rather than the 50% removal target of NSF/ANSI Standard 245. By relying on the performance-based parameters of NSF/ANSI Standard 245 (rather than an arbitrary time-based guideline), there are more options available to system owners, and thus lower costs due to the increased range of systems available.

If the goal of these proposed rules is to reduce nitrification from onsite systems, the rules should be performance-based. However, this proposed 64E-6.009(7)(a)13 is also using an arbitrary timeline for replacement, which could impose unnecessary burdens on system owners forced to replace the denitrification media simply because 10 years have passed, and not because the system is no longer performing. There are many instances where houses may have been vacant, or been used seasonally, that may not necessitate mandatory 10-year repair.

PEI would suggest that FL DOH provide further guidance on what would necessitate repair, what methods FL DOH would propose for replacing the denitrification media, and how that media will be sampled.

Comment 7: 64E-6.009(7)(a)14

Proposed Language

14. Setback distances to the denitrification media or soil material directly above denitrification media extending to the infiltrative surface of the drainfield shall be reduced by the following:

a. Except for building foundations, vertical obstructions and pilings for elevated structures, where the required setback is ≤5 feet, the setback shall be reduced to one foot.

b. Where the required setback is ≥10 feet, the setback shall be reduced by five feet.

c. Setbacks to all other parts of the system shall be in compliance with the requirements in this Chapter and section 381.0065, Florida Statutes.

Suggestion

All aerobic treatment systems, alternative drainfields, and performance-based treatment systems meeting wastewater treatment requirements should have setbacks that utilize similar reductions as well.

Rationale

DOH is acknowledging the denitrification media layer for the purposes of calculating setbacks and reductions to same, but NSF/ANSI Standard 245 certified denitrification systems, conventional systems, and alternative systems, do not get this same advantage. FL DOH should apply reductions for treated wastewater to all proven performance systems to ensure consistency and a level playing field across all categories of treated wastewater products. This would also ensure that system owners can choose from a larger variety of wastewater treatment options than might otherwise be available to them, allowing for fair competition and innovation in this marketplace, potentially lower costs, and easier placement of the system on smaller lots.

Presby Environmental, Inc.'s
Comments on Proposed and Current Rule 64E-6.012

Comment 8: 64E-6.012(1)(e)

Proposed Language

64E-6.012(1)(e) Provide a registered certification mark or seal which must be affixed in a conspicuous location on the units it has certified. This mark or seal will alert persons evaluating or maintaining the unit that the unit is in compliance with the NSF/ANSI standard appropriate for the application.

Suggested revised language in ~~strike~~/add format

64E-6.012(1)(e) For systems requiring electrical power or mechanical means to achieve ANSI/NSF Standard 40 effluent treatment standards, ~~P~~provide a registered certification mark or seal which must be affixed in a conspicuous location on the units it has certified. This mark or seal will alert persons evaluating or maintaining the unit that the unit is in compliance with the NSF/ANSI standard appropriate for the application.

Rationale

Florida is starting to install and see an influx of passive wastewater treatment systems. These systems operate in such a way as to render moot regular visits for the purposes of verifying electricity, and proper functioning of control panels, high water alarms, moving parts, and mechanical and chemical processes. To require system owners, regulators, and manufacturers of these technologies to shoulder an unnecessary burden is unfair and inhibits the ability of these innovative treatment products to provide their intended benefits to the citizens of Florida. Further, the majority of manufacturers who sell products that have been NSF/ANSI certified to perform to Standard 40 levels do not typically sell NSF-certified configurations, in recognitions of the burdens caused by these unnecessary procedures.

The purpose of an identifying mark is to identify to system owners and maintenance entities the existence and location of a system that will need to be powered by electricity and regularly inspected to insure all mechanical components and moving parts are working. Systems that operate similarly to conventional drainfields and are buried underground need no such identifying sign.

Comment 9: 64E-6.012(2)(a)

Current language

64E-6.012(2)(a) An appropriate mechanism shall be provided to make access ports vandal, tamper, and child resistant. Acceptable protection of openings shall consist of one or more of the following methods as specified by the tank manufacturer:

1. A padlock.
2. An "O" ring with twist lock cover requiring special tools for removal.
3. Covers weighing 65 pounds or more, net weight.
4. A hinge and hasp mechanism which uses stainless steel or other corrosion resistant fasteners to fasten the hinge and hasp to the lid and tank for fiberglass, metal, or plastic lids.

Suggested revised language in ~~strike~~/add format

64E-6.012(2)(a) For systems designed with riser(s) or similar means of access to grade, an ~~An~~ appropriate mechanism shall be provided to make access ports vandal, tamper, and child resistant. Acceptable

protection of openings shall consist of one or more of the following methods as specified by the tank manufacturer:

1. A padlock.
2. An "O" ring with twist lock cover requiring special tools for removal.
3. Covers weighing 58 ~~65~~ pounds or more, net weight.
4. A hinge and hasp mechanism which uses stainless steel or other corrosion resistant fasteners to fasten the hinge and hasp to the lid and tank for fiberglass, metal, or plastic lids.

Rationale

Reading parenthesis a, it is clear that the writer's focus is on aerobic treatment units that involve one or more risers to finished grade. Although many systems included under this section require close to immediate access to the atmosphere to provide needed oxygen to the system, a small but expanding category of systems included under this section instead use standard septic tanks in their designs.

These septic tank designs are described in detail in section 64E-6.013. This section specifes the minimum number and opening size of access manholes (this term is synonymous with access ports in 64E-6.012). Section 64E-6.013(2)(k) also states that "The access manhole over the inlet and outlet shall extend to within 8 inches of finished grade." This alternate method of making access ports vandal, tamper, and child resistant is absent in 64E-6.012(2)(a). The method is simpler and less expensive than the listed options and protects the access ports from detrimental levels of UV radiation common on sunny days in Florida. In the long-term this option is more reliable at achieving the goal of the parenthesis than the four options currrently listed in 64E-6.012(2)(a). Standard septic tanks must comply with 64E-6.013(2)(k) anyway. So there is no need to cite this section of code in 64E-6.012(a). The cover weight change is to make the requirements in 64E-6.012(2)(a)3 consistent with 64E-6.013 (2)(k)3.

Without the suggested edits above, 64E-6.012(2)(a) requires those manufacturers using standard septic tanks in their designs to add unnecessary and costly modifications to the tanks to no valid purpose. The otherwise unnecessary cost and greater risk to the public incurred creates a significant economic hardship that has a disproportionate impact on one class of treatment devices.

The suggested revised language removes an illogical, unnecessary and expensive requirement for an entire class of technologies and does not benefit a single manufacturer. A number of suspended growth and attached growth aerobic treatment units use standard septic tanks as recirculation tanks. An absurd, but currently permittable interpretation of 64E-6.012(2)(a) would be that recirculation tanks would have to employ one of the four options to comply with this section of the rule.

Comment 10: 64E-6.012(2)(b)

Proposed Language

64E-6.012(2)(b) A minimum of a 4 inch diameter sampling access port located between the treatment unit outlet and the drainfield.

Suggested revised language in ~~strike~~/add format

64E-6.012(2)(b) For systems contained in treatment receptacles that discharge effluent to a separate drainfield, ~~A~~ a minimum of a 4 inch diameter sampling access port located between the treatment unit outlet and the drainfield.

Rationale
Combined treatment and dispersal systems (systems that both treat and disperse effluent in one footprint) do not have a line between the treatment tank and drainfield, so it would be impossible to comply with this rule.

Comment 11: 64E-6.012(2)(c)

Current language
64E-6.012(2)(c) A visual or audio warning device shall be installed in a conspicuous location so that activation of such warning device will alert property occupants of aerobic unit malfunction or failure. All warning devices shall be wired separately from the aerobic unit so that disconnecting the aerobic unit from electricity will activate the warning device. If installed outside, the alarm shall be waterproof.

Suggested revised language in ~~strike~~/add format
64E-6.012(2)(c) For systems requiring electrical power to achieve ANSI/NSF Standard 40 effluent treatment standards a ~~A~~ visual or audio warning device shall be installed in a conspicuous location so that activation of such warning device will alert property occupants of aerobic unit malfunction or failure. All warning devices shall be wired separately from the aerobic unit so that disconnecting the aerobic unit from electricity will activate the warning device. If installed outside, the alarm shall be waterproof.

Rationale
64E-6.012(2) begins with the language "The following additional requirements shall also apply to the construction, design, and operation of aerobic treatment units treating 1500 gallons per day or less:" This opening statement for the section clarifies that the requirements in section 2 are subsequent to those in section 1.

Reading parenthesis c, it is clear that the writer's focus is on aerobic units that are powered electrically. Use of the terms "activation", "wired", "disconnecting the aerobic treament unit from electricity" and the necessity for alarms to be "waterproof" if installed outside provide tangible evidence of this unstated perspective.

Currently, multiple manufacturers of ANSI NSF Standard 40 tested and certified systems are in the process of navigating the Department's innovative system approval process. Some of these manufacturers produce systems that have combined treatment and dispersal components in the same footprint. These systems do not require electrical power to produce effluent meeting or exceeding ANSI NSF Standard 40 concentrations.

Without the suggested edit above, 64E-6.012(c) requires those manufacturers to provide electricity to their installations anyway for ancillary purposes. The otherwise unnecessary cost incurred by running electrical power from the home's electrical box to an alarm on the sewage treatment system and hiring an electrician to install it creates a significant economic hardship that has a disproportionate impact on one class of treatment devices. Manufacturers of electrically powered systems have smaller continuation costs complying with this criteria as they have already hired an electrician to run electrical power to the treatment unit.

The Department's current language fosters a restraint of an intentional design advantage provided by these more passive systems. The Department's own research (Roeder and Ursin, 2013) purports to demonstrate numerous defficiencies with electrically powered treatment devices. Many of the noted

defficiencies involved homeowners turning off power, ligtning strikes, etc. These issues would be avoided with the class of technologies currently negatively impacted by 64E-6.012(2)(c).

The suggested revised language removes an illogical, unnecessary and expensive requirement for an entire class of technologies and does not benefit just a single manufacturer. It allows the Department to be prepared for manufacturers already enrolled in their innovative process and removes barriers to future generations of more passive system manufacturers.

Comment 12: 64E-6.012(2)(j)

Current language

64E-6.012(2)(j) Manufacturers shall provide a listing of approved maintenance entities they have authorized to provide service in the state and shall demonstrate that the entire state is covered by at least one maintenance entity. A system using a manufacturer's unit shall not be approved in the state if the manufacturer cannot demonstrate that there are maintenance entities to service it.

Suggested revised language in ~~strike~~/add format

64E-6.012(2)(j) For systems that have the same required maintenance as that of a conventional drainfield, manufacturers shall make available operation and maintenance manuals to system owners, designers, installers, and regulators. In all other cases, ~~M~~manufacturers shall provide a listing of approved maintenance entities they have authorized to provide service in the state and shall demonstrate that the entire state is covered by at least one maintenance entity. A system using a manufacturer's unit shall not be approved in the state if the manufacturer cannot demonstrate that there are maintenance entities to service it.

Rationale

Passive combined treatment and dispersal systems currently available in Florida (and whose manufacturers are seeking approval in Florida) do not require maintenance typically expected of traditional ATUs, since there are no replacement parts, moving parts, chemical processes, or electrical connections required to ensure effective treatment and dispersal of effluent. To require these types of systems to undergo maintenance processes that were designed for a completely different type of treatment product is unnecessarily burdensome and represents a significant investment on the part of the system owner. FL DOH should rely on the manufacturer-recommended maintenance practices, which have also been adopted by other jurisdictions and have been deemed acceptable for other wastewater systems in Florida like chambers, namely pumping the septic tank on an as-needed basis. This would provide significant cost savings to the citizens of Florida.

Comment 13: 64E-6.012(2)(k)

Current language

64E-6.012(2)(k) A distributor of a specific manufacturer's brand or model of an approved aerobic treatment unit shall provide to the DOH county health department and State Health Office written assurance that spare mechanical and structural parts are available, upon request, for purchase, to all other approved maintenance entities.

Suggested revised language in ~~strike~~/add format

64E-6.012(2)(k) A distributor of a specific manufacturer's brand or model of an approved aerobic treatment unit shall provide to the DOH county health department and State Health Office written

assurance that spare mechanical and structural parts <u>if any are used in the model</u> are available, upon request, for purchase, to all other approved maintenance entities.

Rationale
The current language does not contemplate that aerobic treatment units can be manufactured without need of replacement components. Systems that have combined treatment and dispersal components in the same footprint are examples of a class of aerobic treatment units that do not contain mechanical nor structural components.

Without the suggested edits above, 64E-6.012(2)(k) is not reflective of a segment of its regulated community. The suggested revised language signals that the Department has noted that for the some manufacturers the term "spare mechanical and structural parts" does not fit.

Comment 14: 64E-6.012(2)(l)

Current language
64E-6.012(2)(l) Where local building occupancy codes require that the DOH county health department approve the means of sewage disposal prior to building occupancy or change of occupancy, and where an aerobic treatment unit is utilized, a current, unexpired aerobic treatment unit maintenance contract between the property owner or lessee and an approved maintenance entity shall be one of the required conditions of system approval.

Suggested revised language in ~~strike~~/<u>add</u> format
64E-6.012(2)(l) Where local building occupancy codes require that the DOH county health department approve the means of sewage disposal prior to building occupancy or change of occupancy, and where an aerobic treatment unit is utilized, a current, unexpired aerobic treatment unit maintenance contract between the property owner or lessee and an approved maintenance entity shall be one of the required conditions of system approval. <u>For systems that have the same required maintenance as that of a conventional drainfield, this section shall not apply.</u>

Rationale
Passive combined treatment and dispersal systems currently available in Florida (and whose manufacturers are seeking approval in Florida) do not require maintenance typically expected of traditional ATUs, since there are no replacement parts, moving parts, chemical processes, or electrical connections required to ensure effective treatment and dispersal of effluent. To require these types of systems to undergo maintenance processes that were designed for a completely different type of treatment product is unnecessarily burdensome and represents a significant investment on the part of the system owner. FL DOH should rely on the manufacturer-recommended maintenance practices, which have also been adopted by other jurisdictions and have been deemed acceptable for other wastewater systems in Florida like chambers, namely pumping the septic tank on an as-needed basis.

Comment 15: 64E-6.012(2)(m)

Current language
64E-6.012(2)(m) A copy of the signed maintenance agreement between the property owner or property lessee and an approved maintenance entity shall be provided to the DOH county health department by the maintenance entity. The maintenance agreement shall:

1. Initially be for a period of at least 2 years and subsequent maintenance agreement renewals shall be for at least 1 year periods for the life of the system.

2. Provide that a maintenance entity which desires to discontinue the provision of maintenance services, notify in writing, the property owners and lessees and the DOH county health department at least 30 days prior to discontinuance of service.

3. Provide that, if a private maintenance entity discontinues business, property owners who have previously contracted with the discontinued maintenance service shall, within 30 days of the service termination date, contract with an approved maintenance service and provide the DOH county health department a copy of the newly signed maintenance agreement.

4. Provide that each aerobic unit is inspected by an approved maintenance entity at least two times each year. Aerobic treatment units serving commercial establishments shall be inspected four times per year. The maintenance entity shall furnish to the DOH county health department a listing of all aerobic units inspected or serviced during the respective reporting period. As a minimum, reports shall indicate the system owner or building lessee, the street address of the system, the date of system inspection or service and a statement as to the maintenance or service performed. The maintenance entity shall also include a list of the owners who have refused to renew their maintenance agreement.

Suggested revised language in ~~strike~~/add format

64E-6.012(2)(m) A copy of the signed maintenance agreement between the property owner or property lessee and an approved maintenance entity shall be provided to the DOH county health department by the maintenance entity. For systems that have the same required maintenance as that of a conventional drainfield, this section shall not apply. The maintenance agreement shall:

1. Initially be for a period of at least 2 years and subsequent maintenance agreement renewals shall be for at least 1 year periods for the life of the system.

2. Provide that a maintenance entity which desires to discontinue the provision of maintenance services, notify in writing, the property owners and lessees and the DOH county health department at least 30 days prior to discontinuance of service.

3. Provide that, if a private maintenance entity discontinues business, property owners who have previously contracted with the discontinued maintenance service shall, within 30 days of the service termination date, contract with an approved maintenance service and provide the DOH county health department a copy of the newly signed maintenance agreement.

4. Provide that each aerobic unit is inspected by an approved maintenance entity at least two times each year. Aerobic treatment units serving commercial establishments shall be inspected four times per year. The maintenance entity shall furnish to the DOH county health department a listing of all aerobic units inspected or serviced during the respective reporting period. As a minimum, reports shall indicate the system owner or building lessee, the street address of the system, the date of system inspection or service and a statement as to the maintenance or service performed. The maintenance entity shall also include a list of the owners who have refused to renew their maintenance agreement.

Rationale

Passive combined treatment and dispersal systems currently available in Florida(and whose manufacturers are seeking approval in Florida) do not require maintenance typically expected of traditional ATUs, since there are no replacement parts, moving parts, chemical processes, or electrical connections required to ensure effective treatment and dispersal of effluent. To require these types of

systems to undergo maintenance processes that were designed for a completely different type of treatment product is unnecessarily burdensome and represents a significant investment on the part of the system owner. FL DOH should rely on the manufacturer-recommended maintenance practices, which have also been adopted by other jurisdictions and have been deemed acceptable for other wastewater systems in Florida like chambers, namely pumping the septic tank on an as-needed basis.

Comment 16: 64E-6.012(2)(n)

Current language
64E-6.012(2)(n) The DOH county health department shall, at least annually, inspect the maintenance and performance of aerobic treatment units. The DOH county health department shall also inspect each authorized maintenance entity, including review of their service records and maintenance agreements.

Suggested revised language in ~~strike~~/add format
64E-6.012(2)(n) The DOH county health department shall, at least annually, inspect the maintenance and performance of aerobic treatment units. The DOH county health department shall also inspect each authorized maintenance entity, including review of their service records and maintenance agreements. For systems that have the same required maintenance as that of a conventional drainfield, this section shall not apply.

Rationale
Passive combined treatment and dispersal systems currently available in Florida (and whose manufacturers are seeking approval in Florida) do not require maintenance typically expected of traditional ATUs, since there are no replacement parts, moving parts, chemical processes, or electrical connections required to ensure effective treatment and dispersal of effluent. To require these types of systems to undergo maintenance processes that were designed for a completely different type of treatment product is unnecessarily burdensome and represents a significant investment on the part of the system owner. FL DOH should rely on the manufacturer-recommended maintenance practices, which have also been adopted by other jurisdictions and have been deemed acceptable for other wastewater systems in Florida like chambers, namely pumping the septic tank on an as-needed basis.

Comment 17: 64E-6.012(4)

Current language
64E-6.012(4) No aerobic treatment unit shall be serviced or repaired by a person or entity engaged in an aerobic treatment unit maintenance service until the service entity has obtained an annual written permit issued on Form DH 4013 from the DOH county health department in the county where the service company is located. Each service entity shall employ at least one plumbing contractor licensed under Section 489.105(3)(m), F.S., septic tank contractor registered under Part III of Chapter 489, F.S., or a state-licensed wastewater treatment plant operator, who is responsible for maintenance and repair of all systems under contract. Application for a Maintenance Service Permit, Form DH 4066, 02/10, herein incorporated by reference, shall be made to the DOH county health department and shall contain the following information:

(a) Evidence that the maintenance entity possesses a manufacturer's maintenance and operations manual and has received training from the manufacturer in proper installation and service of the unit and has received written approval from the manufacturer to perform service on their units. The manual shall contain detailed instructions on proper operation and maintenance procedures, a replacement parts list

for all models being installed and maintained, a statement giving the capabilities of each unit, instructions on how to detect a malfunctioning unit and what to expect from a properly functioning unit.

(b) A signed statement from the applicant attesting that the applicant has adequate staff, possesses proper equipment and has sufficient spare structural and mechanical parts and components to perform routine system monitoring and servicing and is able to make a service response within 36 hours after notification of the need for emergency repairs.

(c) Payment of $25.00 to the DOH county health department per annum for the aerobic treatment unit maintenance service permit.

Suggested revised language in ~~strike~~/add format

64E-6.012(4) No aerobic treatment unit shall be serviced or repaired by a person or entity engaged in an aerobic treatment unit maintenance service until the service entity has obtained an annual written permit issued on Form DH 4013 from the DOH county health department in the county where the service company is located. Each service entity shall employ at least one plumbing contractor licensed under Section 489.105(3)(m), F.S., septic tank contractor registered under Part III of Chapter 489, F.S., or a state-licensed wastewater treatment plant operator, who is responsible for maintenance and repair of all systems under contract. For systems that have the same required maintenance as that of a conventional drainfield, this section shall not apply. Application for a Maintenance Service Permit, Form DH 4066, 02/10, herein incorporated by reference, shall be made to the DOH county health department and shall contain the following information:

[…]

Rationale

Passive combined treatment and dispersal systems currently available in Florida and whose manufacturers are seeking approval in Florida do not require maintenance typically expected of traditional ATUs, since there are no replacement parts, moving parts, chemical processes, or electrical connections required to ensure effective treatment and dispersal of effluent. To require these types of systems to undergo maintenance processes that were designed for a completely different type of treatment product is unnecessarily burdensome and represents a significant investment on the part of the system owner. FL DOH should rely on the manufacturer-recommended maintenance practices, which have also been adopted by other jurisdictions and have been deemed acceptable for other wastewater systems in Florida like chambers, namely pumping the septic tank on an as-needed basis.

Comment 18: 64E-6.012(5)

Current language

64E-6.012(5) Emergency service necessary to prevent or eliminate an imminent sanitary nuisance condition caused by failure of a mechanical component of any aerobic treatment unit shall be reported by the approved aerobic unit maintenance entity, in writing, to the DOH county health department no later than 5 working days after the date of the emergency service.

Suggested revised language in ~~strike~~/add format

64E-6.012(5) For systems employing mechanical components, e~~E~~mergency service necessary to prevent or eliminate an imminent sanitary nuisance condition caused by failure of a mechanical component of an~~y~~ aerobic treatment unit shall be reported by the approved aerobic unit maintenance entity, in writing, to the DOH county health department no later than 5 working days after the date of the emergency service.

Rationale

The current language does not contemplate that aerobic treatment units can be manufactured without the use of mechanical components. Systems that have combined treatment and dispersal components in the same footprint are examples of a class of aerobic treatment units that do not use mechanical components. Without the suggested edits above, 64E-6.012(5) is ignoring the realities of a segment of its regulated community. The suggested revised language signals the the Department has noted that for the some manufacturers the term “mechanical component” does not fit.

Holcomb, Dale

From: Holcomb, Dale
Sent: Tuesday, April 17, 2018 5:12 PM
To: 'Andrew Rutledge'
Cc: Cheryl Lambert (external)
Subject: RE: Definition of Failure to a OSTDS

The definition is in Rule 64E-6.002(23), FAC:

"(23) Failure – a condition existing within an onsite sewage treatment and disposal system which prohibits the system from functioning in a sanitary manner and which results in the discharge of untreated or partially treated wastewater onto ground surface, into surface water, into ground water, or which results in the failure of building plumbing to discharge properly."

Also useful might be the definition of "repair" in 64E-6.002(47):

"(47) Repair – replacement of or modifications or additions to a failing system which are necessary to allow the system to function in accordance with its design or must be made to eliminate a public health or pollution hazard. Servicing or replacing with like kind mechanical or electrical parts of an approved onsite sewage treatment and disposal system; or making minor structural corrections to a tank, or distribution box, does not constitute a repair. The use of any treatment method that is intended to improve the functioning of any part of the system, or to prolong or sustain the length of time the system functions, shall be considered a repair. The use of any non-prohibited additive by the system owner, through the building plumbing, shall not be considered a repair. Removal of the contents of any tank or the installation of an approved outlet filter device, where the drainfield is not disturbed, shall not be considered a repair. Replacement of a broken lid to any tank shall not be considered a repair. Splicing a drip emitter line where no emitter is eliminated shall not be considered a repair."

Dale
Dale Holcomb, MPH
Environmental Administrator
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Please tell us how we are doing . . .
CLICK HERE FOR CUSTOMER-SATISFACTION SURVEY DOH Mission: "To protect, promote & improve the health of all people in Florida through integrated state, county, & community efforts."

DOH Vision: "To be the Healthiest State in the Nation."

Please note: Florida has a very broad public records law. Most written communications to or from state officials regarding state business are public records available to the public and media upon request. Therefore, your e-mail communications may be subject to public disclosure.

-----Original Message-----
From: Andrew Rutledge [mailto:andrewr@floridarealtors.org]
Sent: Tuesday, April 17, 2018 4:29 PM
To: Holcomb, Dale <Dale.Holcomb@flhealth.gov>
Cc: Cheryl Lambert (external) <clambert5@tampabay.rr.com>
Subject: Definition of Failure to a OSTDS

Dale -

Thanks again for your time and knowledge at yesterday's rule hearing. We have a few members who have brought up what the exact definition of failure constitutes. I remember when we briefly spoke on the phone last week that there might not be an exact definition. I was wondering if you might be able to provide what you and your office would identify as a failure to a OSTDS.

Thanks so much.

Andrew Rutledge

Florida Realtors

850-510-9904

Holcomb, Dale

From: Thomas Bruursema <tbruursema@watertomorrowconsulting.com>
Sent: Thursday, April 19, 2018 4:26 PM
To: Holcomb, Dale
Subject: Comments on proposed rules 64E-6.009 Alternative Systems
Attachments: WaterTomorrow Consulting LLC Comments_FL DOH 64E-6.009_04192018.pdf

Hi Dale,

It was a pleasure to meet you this week. I enjoyed the discussion at the public hearing, and the opportunity to meet with you privately.

Please find attached my written comments regarding the proposed rule changes to Chapter 64E-6.009.

If you have any questions, or need anything additional, please let me know.

Best regards,

Tom

Tom Bruursema
WaterTomorrow Consulting LLC
(734) 272-9132
tbruursema@watertomorrowconsulting.com

WATERTOMORROW CONSULTING LLC

April 19, 2018

Dale W. Holcomb, MPH, CHP
Environmental Administrator
Onsite Sewage Program
Bureau of Environmental Health
Division of Disease Control and Health Protection
4052 Bald Cypress Way, Bin-A08
Tallahassee, FL 32399-1710

Dear Mr. Holcomb,

I appreciate the opportunity to have participated in the Public Hearing of April 16, 2018 regarding the proposed rule changes to Chapter 64E-6.009 and 64E-6.012. As a follow-up to my verbal comments, I wish to also provide written comments. My comments are directed at the proposed addition in 64E-6.009, section (7) In-ground Nitrogen-reducing Biofilters (INRB).

My specific recommendation is that the complete section of INRB's be removed from the proposed rules, and alternatively that INRB's be evaluated to the same requirements as other treatment systems serving the same purpose of nitrogen reduction, and as already cited in the 64E-6 Florida Administrative Code. My recommendation is based on the following reasons:

1. Within Chapter 64E-6 there is reference to various American National Standards that are required to be met by product manufacturers where applicable. However, this is not the case for INRB's despite there being an applicable American National Standard, i.e. NSF/ANSI Standard 245 *Wastewater Treatment Systems – Nitrogen Reduction*. This Standard is already applied in Florida to approve treatment systems that provide for nitrogen reduction.

2. The testing used to determine performance of the INRB does not appear to have followed NSF/ANSI Standard 245. The noted differences include, for example, more defined and prescribed daily loading rates at the maximum rated capacity of the system, higher frequency of influent and effluent sampling, 24-hour composite sampling events, and specified stress events within Standard 245 that were not conducted during the INRB testing.

3. There are systems approved in the State of Florida for nitrogen reduction that are required to meet extensive, additional requirements beyond NSF/ANSI Standard 245, as defined in 64E-6.012 Standards for the Construction, Operation, and Maintenance of Aerobic Treatment Units. These same requirements are not included for the INRB.

Based on the above, the language as proposed creates two different approval processes for products designed to meet the same scope and purpose of nitrogen reduction, and with the INRB having significantly lower requirements compared to other systems.

The state of Florida, like many states in the country has utilized the available American national standards, the independent third-party comprehensive testing to those standards, and the significant requirements of certification that every listed product manufacturer must meet and maintain to remain

certified. This comprehensive structure of both product manufacturer and treatment system evaluations is available to the DOH at no cost and applied today by the DOH to other nitrogen reduction systems.

The benefit to the state of Florida, like other states, is a significantly reduced burden of DOH staff in technology reviews. It further reduces the burden of treatment system manufacturers when seeking state and national approvals, enhancing the number of alternative treatment technologies available to engineers, county health departments, and homeowners. It also provides for a more level playing field among system manufacturers. And finally, it provides comprehensive initial and ongoing assessments and measures of performance and compliance to meet environmental and public health protection goals.

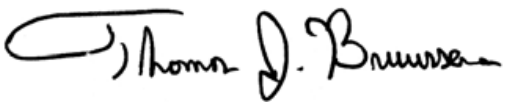
There are many existing companies in the U.S. today with certified treatment systems, and many distributing their systems nationwide including Florida. These companies are further represented by hundreds if not thousands of installers and maintenance providers across the country. Together they represent an entire industry with expertise and resources to provide treatment technologies with demonstrated performance, consistent manufacturing of products to required specifications, provide product warranties, routine service, maintenance and repair, and the financial resources and knowledge to develop further advanced and innovative treatment technologies.

The research performed in Florida on passive nitrogen reduction systems could presumably be used by existing or new treatment system manufacturers to develop new systems. These systems could then be evaluated to the same requirements as other systems that provide nitrogen reduction. There are for example systems that use peat, those that use sand, and others that use natural materials, as evaluated and certified to the NSF/ANSI Standards. In those cases, the listed product manufacturers set detailed product and material specifications to enable consistent, reliable performance from system to system, as evaluated and audited by the certification organization. They also commit to field assessments of every installed system, including service, maintenance and repair as needed.

Placing INRB type systems under the same requirements as other nitrogen reduction treatment systems, when presented for approval by a product manufacturer, allows for continued consistency in required compliance with well established, comprehensive standards and evaluations already applied in Florida, provides for a level playing field across the industry, supports a free market with already available and approved systems as manufactured and maintained by many small business owners, minimizes the need for additional DOH staff, and supports the DOH goals of environmental and public health protection.

Thank you for the opportunity to comment.

Sincerely,



Thomas J. Bruursema
WaterTomorrow Consulting LLC
(734) 272-9132
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Soil Lock (Water Clean) – Buffer Zone

What is Soil Lock?

Soil Lock-Buffer zone is a professional proven blend of USDA-certified Bio-based Biochar, sand, and premium organics designed to protect good soil, inhibit nutrient leaching, and restore damaged soil.

What is Biochar?

Biochar is not a fertilizer but a natural soil enhancement. Biochar contains long-lasting fixed carbon that remains in the soil for hundreds of years locking in water carried nutrients allowing the vegetation to receive many times the benefit normally seen in sandy soils.

Biochar's four most important benefits to soil:

- **First**, Biochar micropores are a super sponge to soak up water, and then very slowly release it back into soil. Thus, Biochar keeps soil wetter longer. Biochar expands any soil's water cycle capacity.
- **Second**, Biochar attracts and holds atoms with electric charge: ions. We know charcoal has strong adsorption potential to pull nutrient ions out of water. But in soil, nutrient ions can be good is available to the plant and bad if they wash into streams, lakes and rivers before the plants have access. Biochar adsorbs nutrients to capture these electric charges. Soil with any carbon—especially Biochar—has huge capacity to store electric charge, thus is ready to power plant growth.
- **Third**, Biochar is habitat for microbes. We don't eat our houses, and microbes don't eat Biochar. They live in it. Biochar is stable for 1500+ years, so microbes build symbiotic communities with complex infrastructures.
- **Fourth,** Biochar promotes michoriza growth. Look into soil where at least 2% or more carbon is present and you will see a webbing type white root system growing. Often confused with plant roots this is technically a fungus who's only connection to the surface and sunlight is a symbiotic relationship with the plant. Michoriza absorbs water and trades it to plants for sugar. But michoriza can only live where carbon levels are greater than 2%. Most carbon comes from decaying plant matter. Want michoriza to reach down to the average water table rebuild your carbon down to the water table.

Why use Soil Lock?

Pollution prevention and Stormwater

- Wastewater and Raw Sewage are highly toxic and pose a dangerous threat to our health when washed into the soil, damaging it. The fixed carbon Biochar in Soil Clean will trap nutrients, hydrocarbons, heavy metals, antibiotics, pesticides, and herbicides and hold them until the right fungus or bacteria arrives to transfer them to the plants which need them, or chelate them into a nonsoluble compound which remains out of the surface or ground water.
- Heavy inputs of rain caused by storm events can significantly wash away valuable nutrients from soil into aquifers and nearby bodies of water, causing pollution and eutrophication. Soil Clean is able to hold large inputs of water as well as nutrients, preventing washing out and further downstream pollution.

How does Soil Lock (Water Clean) Buffer Zone work?

Soil Lock (Water Clean) contains a mixture of professional quality enriched organic material, Sand, and Biochar fixed carbon.

The organic material promotes a porous soil structure for optimized root penetration; intensifies essential interactions between root hairs, soil fauna and microorganisms, improves buffering capacity which helps to maintain uniform reactions and conditions for better plant growth; promotes the degradation, reduction or immobilization of harmful substances like pesticides, POPs, heavy metals and phyto-toxic compounds; and provides microbial symbionts and beneficial soil organisms a habitat.

The sand additive provides addition filtration of larger particles. Sand Filtration is currently used all over the world for effective drinking water filtration.

Biochar has unique properties of water retention and nutrient/chemical adsorption. Under a microscope, the black carbon of the Biochar is riddled with tiny pores and indentations which help trap nutrients, adsorb contaminants, and provide an ideal environment for soil microbiota.

Holcomb, Dale

From: Tina Ward <tina@wilsonmgmt.com>
Sent: Thursday, April 19, 2018 2:44 PM
To: Holcomb, Dale
Cc: Kari Hebrank
Subject: Proposed Rule Amendment
Attachments: 04191803.PDF

Mr. Holcomb,

Please see the attached letter requesting the department amend the section of the proposed rule which addresses nitrogen-reducing media. Specifically, on page 3 of the proposed rule, in Section (7)(a)8, we request that the department add "biochar" to the list of acceptable lignocellulosic material.

Thank you for your consideration.

Tina Ward
Director of Client Services
Wilson & Associates LLC
113 East College Avenue, Suite 200
Tallahassee, FL 32301
850-514-5183

WILSON &
ASSOCIATES, LLC

April 19, 2018

Mr. Dale Holcomb
Environmental Administrator
Onsite Sewage Programs
4052 Bald Cypress Way, Bin #A08
Tallahassee, Florida 32399-1710

Dear Mr. Holcomb,

I enjoyed meeting you at the Department of Health, Division of Environmental Health rule hearing on Rule 64E-6.009, Alternative Systems. The purpose of this letter is to request that the department amend the section of the proposed rule which addresses nitrogen-reducing media. Specifically, on page 3 of the proposed rule, in Section (7)(a)8, we request that the department add "biochar" to the list of acceptable lignocellulosic material.

Biochar is a solid material obtained when organic matter is heated in an oxygen-limited environment. Biochar is a natural soil enhancement which is USDA-certified and designed to protect good soil, inhibit nutrient-leaching and restore damaged soil. Biochar has also been used as a reforestation tool by the United States Forest Service in our national forests. Moreover, biochar is an excellent choice as a filter for septic and water treatment facilities as the fixed carbon traps nutrients, hydrocarbons, heavy metals, antibiotics, pesticides and herbicides and holds them until the right fungus or bacteria arrives to transfer them to the plants that need them or chelate them into a non-soluble compound which remains out of the groundwater surface.

Biochar has unique properties of water retention and nutrient and chemical absorption. Under a microscope, the black carbon of biochar is riddled with tiny pores and indentations which help trap nutrients, absorb contaminants and provide an ideal environment for soil microbiota.

We will gladly provide research materials with third-party testing that demonstrate the benefits of biochar when used as a filter for removing pollutants from sewage, septic and graywater. For example, there has been extensive research in Sweden since 2012 comparing biochar filtration versus sand and bark filtration. The research demonstrated that biochar outperformed both sand and bark and was better at removing nitrogen and pharmaceuticals and confirmed microbial safety of recycling biochar-treated graywater for irrigation.

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We believe that adding biochar as an option for nitrogen-reducing media for alternative onsite systems would have great benefits to our state in helping to protect our groundwater. We thank you in advance for your consideration. Feel free to contact us should you desire additional information.

Kind regards,

Kari Hebrank
Wilson & Associates
113 East College Avenue, Suite 200
Tallahassee, Florida 32301
850-514-5183
850-566-7824

Cc: Don Murphy, Waste-to-Energy, Inc.