

## Holcomb, Dale

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**From:** Roeder, Eberhard  
**Sent:** Friday, September 10, 2010 2:27 PM  
**To:** Briggs, Gerald R; Holcomb, Dale  
**Subject:** FW: comments TRAP issues #10-11 and #08-09

**Attachments:** Orenco track changes 64E-6.0295 .doc; Orenco underline\_strikethrough 64E-6.0295.doc; ATT5288978.txt



Orenco track



Orenco



ATT5288978.txt

changes 64E-6.0295.doc; underline\_strikethrough (66 B)

-----Original Message-----

From: Jason Churchill [mailto:jchurchill@orenco.com]  
Sent: Friday, September 10, 2010 2:13 PM  
To: Roeder, Eberhard  
Subject: comments TRAP issues #10-11 and #08-09

Eb--

Please accept this email as Orenco Systems' comments and forward to the TRAP for consideration at the upcoming meeting.

I have attached proposed changes to the language at 64E-6.0295 regarding Innovative Systems Reclassification (Issue #10-11).

The changes are based on the version you presented to the TRAP at the July 15 meeting. The changes are shown in Word "Track Changes" format--you can easily "Accept All" the changes to see what the final wording would look like if my suggested language is adopted. (The Track Changes format also allows you to see a few questions/ suggestions I inserted as Word "Comments" inserted in the margins.)

I have also attached the same proposed language changes in underline/ strikethrough format if you prefer that.

My suggested changes to your proposed language are shown in underline/ strikethrough format.

Although your proposed language seems to reflect a sincere effort to address some of the concerns I have expressed in the past, I found it confusing and hard to understand, and there were some notable deficiencies. I have tried to address those deficiencies and make the language more clear and understandable in my suggested changes.

Specifically . . .

The Department has informed us that per Florida Statute section 381.0065(2)(g) an advanced treatment system technology MUST be considered "innovative" until it has been successfully field tested in Florida. Moreover, section 381.0065 (3)(e), F.S., requires that the Department limit the number of innovative systems that may be installed until "there is compelling evidence that the system will function properly and reliably to meet the requirements of this section and rules adopted under this section." Compelling evidence of satisfactory performance based on in-state field-testing is lacking for many of the systems that have been "grandfathered in" as non-Innovative systems since the adoption of the Innovative testing program--yet the Department has not acted to limit the number of permitted installations.

The language currently under consideration by the TRAP apparently would allow some technologies currently "grandfathered-in" to maintain their non-Innovative status based on section (3)(c) test results alone. There seems to be no absolute requirement that they

undergo Innovative field-testing in Florida as the statute demands.

Nor does the current language include any requirement that performance be fully demonstrated by independent 3rd party field- testing at actual residences, in Florida, or anywhere else for that matter. As you know, the performance capabilities of advanced wastewater treatment systems cannot be fully validated without a sufficient body of real-world test data--that is, test results from actual residential installations, where the sample collection and evaluation is under the oversight of an independent 3rd party agency.

In my proposed changes, I have incorporated a requirement at (3)(d) that manufacturers submit performance testing data from a minimum of four (4) Florida residences sampled quarterly for a period of not less than one year. Additionally, I have incorporated a requirement at (3)(e) that manufacturers submit 3rd party field testing data from a minimum of twenty (20) residences (located either in Florida or in other states), with samples collected quarterly for a period of not less than one year.

Also, at (4)(b), I have incorporated a provision requiring that PBTS that cannot produce meeting those minimum field testing requirements in (3)(d) and (e) would be reclassified as Innovative, pending completion of further testing to satisfy those requirements.

I also recommend that the proposed language for Innovative Systems (Issue #08-09, also under consideration by the TRAP) be modified to make it consistent with my suggested changes for Innovative Systems Reclassification at 64E-6.0295. The language for Issue # 08-09 should reflect my suggestion that Innovative testing must include a minimum of four (4) Florida residences tested quarterly for a period of not less than one year.

Thanks for your assistance in bringing my recommendations to the TRAP's attention.

Best Regards,

Jason Churchill  
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BEGIN-ANTISPAM-VOTING-LINKS

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END-ANTISPAM-VOTING-LINKS

**64E-6.0295 Innovative System Reclassification**

[Sections (1) and (2) not shown.]

(3) The Bureau of Onsite Sewage Programs shall compile data obtained for treatment components during innovative system testing and other testing and publish characteristics of performance. These characteristics shall include:

- (a) system description
- (b) pollutant monitored
- (c) ~~average~~ third-party performance evaluation results of full-scale systems when tested where influent and effluent conditions are monitored over a period of at least five months and at least ten influent and effluent data points are available in separate weeks. The characteristics will be flow, influent, effluent and fraction removed. Where multiple such tests are available, the simple average of the tests shall be reported, unless hydraulic residence times varied by a factor of two or more.
- (d) ~~first-, second-, or third-party~~ field testing data from single-family residential installations in Florida, collected within the previous 15 years, representing quarterly sampling at each residence for a period of not less than one year. The data set shall represent sampling from a minimum of four individual Florida residences, as available. The data shall be characterized by average, median, 75<sup>th</sup> and 90<sup>th</sup> percentile. Where both influent and effluent were measured at the same system at the same time, an average removal effectiveness shall be estimated.
- (e) ~~first- and second-~~ third-party field testing data ~~in Florida~~ from single-family residential installations, collected within the previous 15 years as electronically available, representing quarterly sampling at each residence for a period of not less than one year. The data set shall represent sampling from a minimum of 20 individual residences, including Florida residences per section (3)(d), or residences located in states other than Florida. The data shall be characterized by average, median, 75<sup>th</sup> and 90<sup>th</sup> percentile. Where both influent and effluent were measured at the same system at the same time, an average removal effectiveness shall be estimated.

**Comment [JC1] :** What is a "full-scale system"? How is that term defined? Is this referring to standardized testing under controlled conditions, in contrast to field-testing at actual residences?

**Comment [JC2] :** When publishing this data, the DOH should indicate in each case whether the data was collected by a first-, second-, or third-party agent.

(4) innovative and performance-based treatment systems currently in use shall be reclassified by September 30, 2011. The Department shall review the data submitted for each system according to section (3), and determine whether the system is eligible for reclassification as a non-innovative performance based treatment system. The determination will be made based on, and the data reported according to section (3) screened according to the following criteria.

- (a) data for 3(c) that were not gathered over a period of at least five months with at least ten influent and effluent data points available in separate weeks within the previous 15 years will not be considered.
- (b) ~~innovative and performance-based treatment systems that have data satisfying the minimum data requirements of 3(d) and (e) to be considered after subsection (a) has been implemented and at least 30 data points combined in (3)(d) and (e), or that have at least 50 data points combined in (3)(d) and (e);~~ shall be eligible for reclassification as non-innovative performance based treatment systems. Systems that lack sufficient data to satisfy the minimum requirements of (3)(d) and (e) shall be reclassified as innovative systems, provided that there is an entity willing to provide the required information pending completion of further testing necessary to satisfy those requirements.

(c) information required by section (1) ~~must be~~ is-on file with the Bureau of Onsite Sewage Programs.

(5) by September 30, 2011, the Bureau of Onsite Sewage Programs shall propose rule language for performance-based treatment systems that addresses differences between results from testing with controlled and uncontrolled flows for the review of performance-based treatment systems and design safety factors. The bureau of Onsite Sewage Programs shall proposed rule language to address consideration of nitrogen removal in the soil, provided that the final report of the Phase II of study required by HB5001 of the 2010 Florida legislature is completed. In the interim the following review standards shall apply in evaluating proposed performance of treatment components.

- (a) for cBOD5, and TSS, average effluent concentrations ~~of~~ results from (3)(c), subject to (4), or from combined results of 3(d) and (e), shall meet the average annual treatment performance standard proposed. Soil treatment effectiveness shall not be considered.
- (b) for fecal coliform, average geometric mean effluent concentration ~~from~~ results from (3)(c), subject to (4), and provided that the geometric mean of the influent concentrations~~er~~ over the evaluation period exceeds 1,000,000 colony forming units per 100 mL, or from combined (3)(d) and (e), shall meet the average annual treatment performance standard proposed. Soil treatment effectiveness may be considered up to advanced secondary treatment standards if the site-specific design includes monitoring to verify performance.
- (c) for total nitrogen, average removal effectiveness ~~from~~ results from (3)(c), subject to (4), or ~~from at least 20 data points~~ combined results from (3)(d) and (e), shall meet the average annual treatment performance standard of the system. For the purposes of this section, this standard shall be 50% for advanced secondary, 62% for Florida Keys, and 90% for advanced wastewater treatment standards. Where average removal effectiveness cannot be determined, average effluent concentrations from combined results of (3)(d) and (e) shall meet the average annual treatment performance standards proposed. Soil treatment effectiveness shall not be considered.
- (d) for total phosphorus, systems treating all domestic sewage or fractions of the greywater of an establishment in at least one treatment receptacle may be deemed to comply with the average effluent concentrations for advanced secondary treatment performance standards. For other systems, average effluent concentration ~~from~~ results ~~results~~ from (3)(c), subject to (4), or from combined results of (3)(d) and (e), shall meet the average annual treatment performance standard proposed, or the design engineer may provide data showing that the influent concentration meets the average annual treatment performance standard proposed. Soil treatment effectiveness shall not be considered.

**Comment [JC3]:** What do you mean by the terms "controlled and uncontrolled flows"? Is the intended distinction between testing under controlled conditions at a research facility versus testing at actual residences?

## 64E-6.0295 Innovative System Reclassification

[Sections (1) and (2) not shown.]

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- (a) system description
- (b) pollutant monitored
- (c) ~~average~~ third-party performance evaluation results of full-scale systems when tested where influent and effluent conditions are monitored over a period of at least five months and at least ten influent and effluent data points are available in separate weeks. The characteristics will be flow, influent, effluent and fraction removed. Where multiple such tests are available, the simple average of the tests shall be reported, unless hydraulic residence times varied by a factor of two or more.
- (d) ~~first-, second-, or~~ third-party field testing data from single-family residential installations in Florida, collected within the previous 15 years, representing quarterly sampling at each residence for a period of not less than one year. The data set shall represent sampling from a minimum of four individual Florida residences, as available. The data shall be characterized by average, median, 75<sup>th</sup> and 90<sup>th</sup> percentile. Where both influent and effluent were measured at the same system at the same time, an average removal effectiveness shall be estimated.
- (e) ~~first, and second~~ third-party field testing data in Florida from single-family residential installations, collected within the previous 15 years as electronically available, representing quarterly sampling at each residence for a period of not less than one year. The data set shall represent sampling from a minimum of 20 individual residences, including Florida residences per section (3)(d), or residences located in states other than Florida. The data shall be characterized by average, median, 75<sup>th</sup> and 90<sup>th</sup> percentile. Where both influent and effluent were measured at the same system at the same time, an average removal effectiveness shall be estimated.

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- (b) ~~innovative and performance-based treatment systems that have data satisfying the minimum data requirements of 3(d) and (e) to be considered after subsection (a) has been implemented and at least 30 data points combined in (3)(d) and (e), or that have at least 50 data points combined in (3)(d) and (e), shall be eligible for reclassification as non-innovative performance based treatment systems. Systems that lack sufficient data to satisfy the minimum requirements of (3)(d) and (e) shall be reclassified as innovative systems, provided that there is an entity willing to provide the required information. pending completion of further testing necessary to satisfy those requirements.~~

(c) information required by section (1) must be is on file with the Bureau of Onsite Sewage Programs.

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- (b) for fecal coliform, geometric mean average effluent concentration ~~from~~ results from (3)(c), subject to (4), and provided that the geometric mean of the influent concentrations ~~or~~ over the evaluation period exceeds 1,000,000 colony forming units per 100 mL, or from combined (3)(d) and (e), shall meet the average annual treatment performance standard proposed. Soil treatment effectiveness may be considered up to advanced secondary treatment standards if the site-specific design includes monitoring to verify performance.
- (c) for total nitrogen, average removal effectiveness ~~from~~ results from (3)(c), subject to (4), or ~~from at least 20 data points~~ combined results from (3)(d) and (e), shall meet the average annual treatment performance standard of the system. For the purposes of this section, this standard shall be 50% for advanced secondary, 62% for Florida Keys, and 90% for advanced wastewater treatment standards. Where average removal effectiveness cannot be determined, average effluent concentrations from combined results of (3)(d) and (e) shall meet the average annual treatment performance standards proposed. Soil treatment effectiveness shall not be considered.
- (d) for total phosphorus, systems treating all domestic sewage or fractions of the greywater of an establishment in at least one treatment receptacle may be deemed to comply with the average effluent concentrations for advanced secondary treatment performance standards. For other systems, average effluent concentration ~~from~~ results ~~results~~ from (3)(c), subject to (4), or from combined results of (3)(d) and (e), shall meet the average annual treatment performance standard proposed, or the design engineer may provide data showing that the influent concentration meets the average annual treatment performance standard proposed. Soil treatment effectiveness shall not be considered.