

**I&E Committee Meeting Notes**  
**March 19, 2015**

**Present at the meeting:**

Wayne Jones, Acting Chairman  
Tim Bannister  
Cory Brantley  
Toney Jacobs  
Harold Kelly  
David Lindbo  
Shankar Mistry

Wayne Jones read the statement of conduct

Committee voted to approve minutes from the December 2, 2014 meeting

Committee approved the agenda for the March 19, 2015 meeting corrected to indicate Wayne Jones as the acting Chair.

The Committee agreed to address new business before old business due to the delayed arrival of the Presby subcommittee chair, David Lindbo.

**New Business**

Infiltrator Systems, Inc. (ISI)

*Dave Lentz, Woody Woodward, Jessica Kautz*

- Consolidate existing Innovative Approvals IWWS-1993-02-R14, IWWS-1997-02-R11, IWWS-2010-01-R2, and IWWS-2011-1-R1 under one Innovative Approval. Currently the Quick 4 approvals and the ARC approvals are separate documents. The company desires to merge the Quick 4 and ARC approvals to:
  - o reduce the number of chamber approvals
  - o improve the efficiency in managing approvals
  - o allow for uniform material usage
- Merge IWWS-2011-1-R1 into IWWS-2010-01-R2, and retire IWWS-2011-1-R1
- Merge IWWS-1997-02-R11 into IWWS-1993-02-R14, and retire IWWS-1997-02-R11
- Add polypropylene option to ARC and Biodifuser
  - o ARC originally approved as polyethylene
  - o Infiltrator wants to use the Quick 4 polypropylene blend in the ARC chambers
  - o No design change in the ARC chambers

Infiltrator submitted structural testing to the OSWP Branch. Trish Angoli indicated that the information submitted met the standards that all chamber have met in the past.

Wayne Jones asked if the material passed both testing. Dave Lentz said yes. Tim Bannister asked if one material rebounded or gave more than the other. Dave Lentz acknowledged that there were some differences due to temperature, but not the level of temperatures you would see in the field. Cory Brantley stated that he thought that polyethylene was more flexible and polypropylene was more rigid. Dave Lentz reiterated that you would not see a difference in the field.

Wayne Jones then asked if the company was still selling legacy products in North Carolina. Dave Lentz deferred to Woody Woodard (Infiltrator) who answered no. Wayne Jones then asked if the legacy products could be removed to clean up the approval some more. Trish Angoli replied that the suggestion had been raised and it was decided to best leave the legacy products in the approval for chamber substitution. Dave Lentz agreed that it was good to have the legacy products in the approval. Harold Kelly inquired if Trish Angoli was happy with the consolidated approvals. She stated that she was since it was a smaller document. She also said that a good job was done consolidating the approvals and Branch staff was given the opportunity to review it and make comments. Dave Lentz added that the specifications were essentially the same.

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Motion was made by Toney Jacobs to allow revisions made by the Branch staff to be accepted by the Committee and seconded by Shankar Mistry. The motion carried.

**Old Business**

Presby Advanced Enviro-Septic (AES) Systems

*Michael D. McCulley, Jr.*

David Lindbo indicated that the subcommittee met and that a copy of the approval as amended by the subcommittee was voted to be forwarded to the Committee for consideration of acceptance.

Wayne Jones asked if the subcommittee has received outside comments. David Lindbo answered that the comments had been adequately addressed.

Michael McCulley, representing Presby Environmental Inc. (PEI), asked to address the Committee. He introduced the other persons representing the company, David Presby, Lee Rashkin, and Bill Evans. Tim Bannister asked what soils could be used for sizing. Michael McCulley responded that it was straight from 15A NCAC 18A .1970. Steven Berkowitz indicated that there were two proposals in Section III.A.1. for NSF-40 and Section III.A.2. for TS-I treatment standards. He also indicated that the draft approval piggybacked on the peat systems allowance for 50% reduction.

Wayne Jones asked if there were any more comments. David Lindbo stated that Section III.C. was added.

John Barkley stated that there is a legal issue raised by Infiltrator Systems, Inc. (ISI) via Steve Levitas. John Barkley indicated that he had put together a written response to Steve Levitas' issues.

Three primary questions:

- What is requirements for approval in accordance with 15A NCAC 18A .1969 as an advanced treatment system and a drainfield product?
- Has the submitted information demonstrated compliance with 15A NCAC 18A .1969?
- Has a comparable evaluation been conducted?

Regarding a comparable evaluation and whether it has been done or not, John Barkley stated that he thought the subcommittee and Committee makes that determination.

Steve Levitas responded that he agreed with John Barkley and Michael McCulley about the issues. He went on to say that the Committee has to determine if there has been a comparable evaluation meeting controlled demonstration or experimental performed in another state. He also stated:

- Bureau de Normalisation du Québec (BNQ) is not a comparable evaluation;
- Evaluation was not done at the soil interface, but in-pipe;
- Ohio study may or may not be a comparable evaluation; and
- His reading does not show the product to be equal or superior to conventional treatment.

Steve Levitas requested, prior to the Committee making a decision:

- Verification that a comparable evaluation had been conducted;
- State the comparable evaluation; and
- Findings of the comparable evaluation.

Michael McCulley responded for the company.

- No specific finding were made by the subcommittee
- Aware of the rules and standards before making decisions
- ISI reduction based on hydraulic performance
- Presby reduction based on treatment and hydraulic performance
- ISI says Presby has to prove hydraulic performance

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- 2008 – 2010 Ohio study (Van Wert County) found no issues with hydraulic performance
- Type A and Presby AES are very similar in regard that you need to hit the treatment mark when the effluent hits the native soil
- Presby AES System works
- Overall, you cannot compare Type A systems and Presby AES because that is like comparing apples to oranges
- Basic objection is that Presby has not done a North Carolina study
- Presby position is that ISI argument has no merit

Steve Levitas agreed with John Barkley opined that a comparable evaluation is needed. He asked the Committee what would be required in this instance. He also stated that there was significant incidence of ponding in the Ohio study. Dave Lentz stated that out of 24 systems, 12 had ponding. He quoted a 2009 Indiana training update "...saturated conditions are detrimental to its function". He also indicated that the historical requirement should be looked at.

In response to Dave Lentz's statement, Wayne Jones asked out of the drainfield products, how many had zero ponding. Dave Lentz asked if they wanted the sand saturated. Wayne Jones responded that the argument was about hydraulics to which Dave Lentz repeated his quote from the 2009 Indiana Training Update.

Steven Berkowitz expressed that the current Rules criteria is that controlled demonstration is sufficient to get to innovative.

- Will it perform hydraulically?
- Is it likely to perform up to performance standards?
- BNQ is looked at like a third party.
- If it backs up will it perform?
- Van Wert study – no more than 5" of ponding
- Study was of systems installed in conditions of higher loading rates and finer texture soils that need to be taken into account in regard to ponding
- No evidence of ponding around the systems which would meet North Carolina's standard of failing
- What would be the criteria for failure? How much ponding?

David Lindbo said if you go way back, other states require observation ports to view ponding. North Carolina does not. He asked if anyone even looked at the infiltrative surface for ponding on peat systems.

Steve Barry asked how the Ohio data was collected that was presented to be part of controlled demonstration and if it was from samples on perimeter drains. Steven Berkowitz responded that there were samples collected at the soil/sand interface. Steve Barry questioned whether sand or filtration media was utilized. Steven Berkowitz answered that samples were collected at the soil/sand interface. Steve Barry concluded that the sand was used as filtration media.

David Lindbo questioned if still getting treatment, what does that say about the hydraulics? Someone stated that fecal coliform was not impacted by the configuration.

Bill Evans indicated that the biomat does the "heavy lifting". David Presby stated:

- The system never goes anaerobic
- Cycling the system to make it work
- Digging up systems 20 years old
  - o nothing there
  - o ecosystem
  - o air around filter wets and dries
  - o ideal environment for bacteria to grow
  - o chamber system putting contaminants in native soil, progressive failure
- Presby does not destroy native soil

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Steve Barry stated in regard to the treatment system

- Center portion with sludge
- Leftover material/stuff
- Sludge wasted off
- Science/??? Says build up will have to be removed, will have to dig up systems

David Presby asked at what point – 20 years, 15 years?

Lee Rashkin stated that the system has more surface area so you do not get build up.

David Lindbo stated that the subcommittee voted to forward the approval to the Committee for consideration to accept. He also pointed out that sand has bigger pores which allows for more oxygen transfer compared to clay.

Wayne Jones asked for the subcommittee members to identify themselves. Then he asked if the Committee wanted to accept the approval and forward it to the Branch. Since the subcommittee had forwarded the approval to the Committee, no second were necessary. The motion passed: aye – Tim Bannister, Toney Jacobs, Harold Kelly, David Lindbo, Shankar Mistry; abstain – Cory Brantley, Wayne Jones.

Tim Bannister expressed that the Off-Site/Remote subcommittee wants to be able to review and have input on any changes to the draft approval made by the Branch. Trish Angoli indicated the subcommittee will have a chance to see the draft approval again.

### **Status of Pending I and E Applications**

- EZ Treat, Inc.: Application for Controlled Demonstration approval of the 30 sq. ft. treatment unit at TS-I and TS-II treatment standards; Subcommittee has had one conference call
- Infiltrator Systems, Inc. (ISI): New application to manufacture polypropylene Arc & Arc 36 LP chambers and to consolidate existing Innovative Approvals IWWS-1993-02-R14, IWWS-1997-02-R11, IWWS-2010-01-R2, and IWWS-2011-1-R1
- Norweco, Inc.: Application for modification of CDWS-2007-01 (Norweco Singulair Bio-Kinetic TNT System); approval signed by Larry Michael (OSWP Section Chief) the second week of March, awaiting posting to the webpage and submittal to the list serve
- Off-Site/Remote Systems: Application for Innovative Approval for Off-Site/Remote Systems; Branch has received comments from Branch staff and Committee members, revised draft to be sent to Branch staff for review
- Orenco Systems, Inc.: Application for Innovative Approval for AdvanTex® wastewater system models AX20RT and AX25RT; Committee accepted approval and forwarded to the Branch, Branch staff is continuing to work with the company in regard to additional data
- Presby Environmental, Inc.: Application for Innovative Approval for Presby Advanced Enviro-Septic (AES) System; Subcommittee met

### **Announcements**

2015 I & E Committee Meetings Schedule - Upcoming meetings are scheduled to be held quarterly and on Thursdays for the 2015 year. The tentative scheduled meeting dates are:

June 18, 2015  
September 17, 2015  
December 17, 2015

Meeting Times: 10:00 am – 2:00 pm

2015 Meeting Location: Reaves Conference Room (Building 1, Room 1-1-C20), 5505 Six Forks Rd, Raleigh

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**Meeting Adjourned**

Non-Committee Members in Attendance at Meeting

Trish Angoli, OSWP  
Lorna Withrow, OSWP  
Michael D. McCulley, Jr., Attorney  
David Presby, Presby Environmental Inc. (PEI)  
Bill Evans, Presby Environmental Inc. (PEI)  
Lee Rashkin, Presby Environmental Inc. (PEI)  
Greg Barr, CromafFlow Inc.  
Teresa Davis, OSWP  
Steve Levitas, Kilpatrick Townsend  
Tom Ashton, American Manufacturing, Inc.  
Woody Woodward, Infiltrator Systems, Inc.  
David Lentz, Infiltrator Systems, Inc.  
Jessica Kautz, Infiltrator Systems, Inc.  
Ishwar Devkota, OSWP  
Damon Hunley, Advanced Drainage Systems  
Nancy Deal, OSWP  
Doug Lassiter, NC Septic Tank Association  
Steve Barry, AQWA  
Robert Rubin  
Paul Coble, Coble Consultants, LLC  
Steven Berkowitz, OSWP