

I&E Committee Meeting Notes December 2, 2014

Present at the meeting:

Edwin Stott, Chairman
Tim Bannister
Cory Brantley
Toney Jacobs
Wayne Jones
Harold Kelly
David Lindbo

Edwin Stott read the statement of conduct

Committee voted to approve minutes from the October 7, 2014 meeting

Committee approved the agenda for the December 2, 2014 meeting

Old Business

Off-Site/Remote Systems Tom Konsler (LHD Liaison)

Kevin Neal indicated that the subcommittee met three times (twice via conference call, once in person)

- After reviewing the proposal and much discussion, the subcommittee reached a general consensus
- One issue addressed was pipe ownership

Tom Konsler expressed that there was a delicate balance between being too restrictive and being wide-open.

- Need to recognize what has worked in the past and what hasn't worked
- Also a need to work within constraints
- Further refined the proposal
 - o Pre-construction conference when it needs to occur
 - o As-built maps of supply line network – not necessary to submit to the Register of Deeds
 - o All-weather access – does need to be maintained and reported on by the operator
- Incorporated Owner Association
 - o Responsible for the gang of supply line pipes
 - o Contract with operator
 - o Provisions to affect repairs
- Streamlined proposal document

The discussion included the following:

- The term “authorized design individual” (Section C., Responsibilities and Permitting Procedures, Item 7.d.) was intended to mimic the term “authorized designer”, will be reworded to reflect that intent, and will be added to the definitions
- The term “as-built diagram” (Section C., Responsibilities and Permitting Procedures, Item 7.d. ii.) was clarified as meaning drawings generated by the engineer, designer, or LHD as the system is installed. It was then suggested that at a minimum a statement should be added to indicate designer responsibility for the as-built diagrams.
- Written documentation of proper installation of the system should be provided and the operation permit (OP) can serve as confirmation of the certification of proper installation
- The supply line networks design would not be done by the LHD, no matter the complexity.

David Lindbo inquired as to the recommendation of the subcommittee. Tony Jacobs indicated that the proposal was ready to be voted on by the full I&E Committee, which was reiterated by Kevin Neal. Motion was made and seconded to accept the proposal as written and submitted. Edwin Stott asked for questions.

Dave Lentz asked that prior to Committee vote that the accepted system sizing be incorporated into the sizing section of the proposed approval.

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Steven Berkowitz raised the issue of who could design the systems. Edwin Stott stated that the LHD would be allowed to engineer a system up to a certain threshold. David Lindbo indicated that it should be done by the appropriate professional.

There was much discussion regarding whether or not any additional field reduction would be granted from what would be designed for a conventional rock and pipe system if a dual alternating field in conjunction with an Accepted Approval system is utilized. The Branch's position is that no additional reduction of dispersal field sizing will be allowed.

Edwin Stott noted that there was a motion on the floor that had been seconded to accept the off-site proposal as an innovative system and would need a motion to amend the proposal to incorporate accepted system status of Infiltrator products of which there was two parts.

Harold Kelly made a motion to grant another 25% reduction for innovation systems by Rule when installed together. The motion was not accepted without a second, hence the motion was not considered.

David Lindbo called the question to vote on the original motion of acceptance of the presented innovative approval. Another discussion commenced about long term acceptance rates (LTARs) and Rule .1969 in regard to the proposal. David Lindbo withdrew the call for question.

The discussion continued until a motion was made by Toney Jacobs and seconded by Harold Kelly to add verbiage (under the Section D., System Sizing and Design Criteria, Item 4.) that the nitrification field shall be sized as determined in 15A NCAC 18A.1955, .1956, .1957, and .1969 and to delete the Long Term Acceptance Rate (LTAR) reference.

After further discussion, Edwin Stott reiterated that a motion had been made and seconded to amend the proposed innovative approval by adding Rule .1969 to Item 4(a). The Committee voted as follows: Aye – Cory Brantley, Toney Jacobs; Nay – Edwin Stott, Wayne Jones, Tim Bannister, David Lindbo, Harold Kelly; The motion did not carry.

The vote on the motion to accept the proposal innovative approval as submitted occurred next. The Committee voted as follows: Aye – David Lindbo, Tim Bannister, Wayne Jones, Toney Jacobs; Nay – Edwin Stott, Cory Brantley; Abstention – Harold Kelly. The motion carried.

Toney Jacobs proposed that off-site systems be treated the same way as on-site systems from the perspective of system sizing. The Committee agreed.

New Business

E-Z Treat, Inc. *Carl Perry, Mike Stidham*

Trish Angoli indicated that the 8' x 8' unit currently with Innovative Approval (TS-I) and Controlled Demonstration Approval (TS-II) would be identified from now on as the 1200 Model, whereas the smaller 4' x 8' unit, to be known as the 600 Model, is what the company has submitted application for approval of innovative status for TS-I and controlled demonstration for TS-II.

In regard to the draft approvals submitted by the company for the 600 Model, the following was noted:

- There have been some changes in tank sizing;
- NSF testing was conducted and a report is included in the submittal; and
- The company is asking for an increased loading rate (max = 1,200) in comparison to the 1200 Model (max = 650).
- Essentially a smaller unit with a higher loading rate

Mike Stidham asked if there were any questions about the information provided in the application submittal before the Committee.

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A question was asked about the status of the current Controlled Demonstration for the 1200 Model. Mike Stidham responded that the company had agreed to do the additional testing for nitrogen to continue controlled demonstration to gather more data to bring the proposal to move to Innovative Approval status back to the Committee for the 1200 Model. He also stated that based on the information the company currently has that the company is looking to upgrade the "value" of the 1200 Model in regard to sizing criteria based on domestic flows and pointed out that the Virginia approval was for 1,200 gallons. Anything other than domestic flows would have to be an engineered in size with computations and calculations that would support that information at this point for the 1200 Model.

Tim Bannister indicated two issues with the draft approvals in comparison with the existing approvals for the 1200 Model.

- tanks sizing volume dramatically decreased, the septic tank and recirculation tank have gone really small
- loading rate on surface area dramatically increased, it is over double anywhere from 6 to 10 gals/sf from your current Controlled Demonstration when you were analyzing had some issues on the labs coming back on that. Now we're going to an increased gals/sf on your new proposal going straight to innovative.

Carl Perry stated that the two models should not be in the same discussion. It is a totally different design other than using the same media. It is different in the way it drains, vents and the wastewater is dispersed. A lot of the changes improve the performance. He also stated they have the 1200 rating in Virginia and the company has NSF data for the 600 Model (600 gals/day, 5days/week), Virginia data, and Iowa data that supports what the system will do.

Tim Bannister asked that since the company did not want the Committee to look at the 1200 Model and use it as some comparison, would it not be more appropriate to start out at controlled demonstration for both instead of going straight to innovative?

Carl Perry part of the reason wanted to go straight there was in the Rules (Rule .1969(g)(2)) on "Fast Track" if you have NSF and the data from 15 systems in another state then it is acceptable to be here. We wanted to take advantage of that rule and we have plenty of data and we can get even more data.

David Lindbo made a motion to bring the two proposals to a subcommittee who looks at the data and gives the full Committee a recommendation. Wayne Jones seconded the motion.

The "Fast Track" stipulations referred to in Rule .1969(g)(2) were explained. Trish Angoli stated that although she assisted the company through the process, she had not had a chance to completely review the latest version of the proposals. Wayne Jones pointed out that the next Committee meeting would not fall within the "Fast Track" 120-day timeframe.

Ishwar Devkota asked if the data provided was TS-II compliant. Carl Perry answered no, that it was TS-I compliant. Mike Stidham restated that the company was seeking innovative approval for TS-I and controlled demonstration for TS-II.

David Lindbo asked for clarification as to whether a full application had been submitted to the Department. Trish Angoli responded that she did not know. Nancy Deal added that the application had not yet been deemed complete. David Lindbo proposed that the Committee still vote to create a subcommittee to review the proposal and then bring it back to the full Committee once the application has been deemed complete.

Nancy Deal asked Trish Angoli what exactly of the information that has been submitted does she need to look at and verify to bless the application complete. Angoli replied that she wanted to double check the submittal since her previous review, make sure all information required was included, and double check data points to ensure the minimum number specified was included. She also stated that she was 95% sure it was complete but did not want to say it was complete until she had a little more time to review. Nancy Deal asked Edwin Stott if that precluded convening a subcommittee to which he replied no. Trish affirmed that once she had deemed the application complete she would inform subcommittee members, disseminate the necessary information, and arrange meeting dates, times, and venues.

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Edwin Stott asked for volunteers for the subcommittee. David Lindbo volunteered, indicating that he served on the previous subcommittee. Cory Brantley volunteered, also indicating he would be on both. Harold Kelly also volunteered to serve on the subcommittee. Steven Berkowitz asked if Shankar Mistry was on the original subcommittee and David Lindbo confirmed that he was. Mr. Berkowitz suggested that Mr. Mistry may want to be asked to serve. Consensus was that it would be nice to have an engineer on the subcommittee.

Trish asked for confirmation that the subcommittee members were David Lindbo, Cory Brantley, Harold Kelly, and Shankar Mistry (if he agrees to serve). Edwin Stott emphasized the need for the Committee to be informed in regard to the application being deemed complete due to the time frame allocated by the "Fast Track" process.

Mike Stidham voiced his objection to David Lindbo serving on the subcommittee. David Lindbo stated he would withdraw and save his questions once the application comes back to the full committee in order to move the process forward. Nancy Deal pointed out to Mike Stidham that the selection of subcommittee members was not his choice. David Lindbo reiterated that he would withdraw weigh in with the full Committee review.

Edwin Stott asked Mike Stidham if he had a scientific reason for objecting to David Lindbo serving on the subcommittee. Mike Stidham stated that when they went through subcommittee the last time, they argued over and over again about facts. He also stated that the arguing was not about technical review but that it became about personality.

Subcommittee Members: Tim Bannister, Cory Brantley, Harold Kelly, and Shankar Mistry

Norweco, Inc. *Paul Cannon, Scott Hendrick (via telephone)*

Ishwar Devkota introduced Norweco's application for modification of their CDWS-2007-01 approval (TS-I and TS-II). The company wants to add a chamber with a hydro-kinetic filter.

Scott Hendrick spoke about the Bio-Film Reactor (stand-alone unit, attached growth)

- New filtration system Hydro-Kinetic FEU Model 600 that has passed two consecutive NSF tests (NSF/ANSI Standard 40 and 245) without performing routine maintenance for a full 12 months of testing
- Effluent results
 - o 2.1 mg/L CBOD (Carbonaceous Biochemical Oxygen Demand)
 - o 1.8 mg/L TSS (Total Suspended Solids), and
 - o 7.9 mg/L TN (Total Nitrogen)
- Available as plastic tank or a pre-cast concrete tank [0:30:20]
- Can be used behind any outside wastewater treatment system including the company's standard Singulair® 3-chamber tank
- Two tank set-up -- Singulair® TNT® and Bio-Film Reactor
- Installation between the treatment tank and final disposal field
- Will treat up to 800 gals/day
- Made of HDPE, same as the Singulair Green® tank - rotationally molded polyethylene, meets the structural requirements of IAPMO/ANSI Z1000
- Disinfection options are UV or a tablet feeder, but probably will not utilize a tablet feeder
- Install depth should be no deeper than 34.5" from the top of tank to grade
 - o Small service pump that can be inserted into the influent chamber so the contents of chamber can be pumped out just below the element (~150 gals). No need to pull elements out of the tank
- Data from unit installed behind a Singulair® tank (North American Testing)

Nancy Deal asked if they were proposing that the company's existing approval be revised to reflect that those units will only be used with this tacked onto the end of the treatment train. Paul Cannon stated that the statement was correct. Nancy Deal indicated that the Branch would want to see some additional information provided regarding the installation parameters references as well as the operation and maintenance (O&M) parameters.

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Scott Hendrick indicated at this time they choose to test the Singulair® TNT® system along with the Bio-Film Reactor. The Hydro-Kinetic® system has more processes involved but that's not what they choose to apply for here at this point, but hopefully at a later date.

Ishwar Devkota indicated that the Committee and the Branch would need the nitrogen reduction data to review in addition to the data submitted for BOD and TSS. Scott Hendricks stated that the company will provide the 245 data.

David Lindbo asked for clarification of what units were being proposed for use. Paul Cannon indicates that the same unit will be used for TS-I and TS-II. Scott Hendricks pointed out that for CDWS-2007-01 approval dated March 23, 2007 for the Singulair® TNT® system the submittal did include Nitrogen reduction data. The Bio-Film Reactor will not significantly increase Nitrogen reduction. The main reason for the unit is to significantly improve the effluent quality for CBOD and TSS.

Wayne Jones made a motion to create a subcommittee. David Lindbo seconded the motion.

Nancy Deal asked if a subcommittee was needed since the company is only proposing to add the Bio-Film Reactor to a system that already has an existing approval.

Wayne Jones withdrew the motion to form a subcommittee and made a new motion that the proposal go to the Section for review. The motion passed.

Status of Pending I and E Applications

- EZ Treat, Inc. – IWWS-2014-01 (60 sq. ft. treatment unit at TS-I treatment standard) and CDWS-2006-2-R3 (60 sq. ft. treatment unit at TS-II treatment standard); have been posted to list serves (10/07/2014) and the OSWP webpage
- Infiltrator Systems, Inc. (ISI):
 - Application for Innovative Approval for the Quick4 Plus Standard LP chamber (IWWS-2010-R1) - revised approval IWWS 2010-1-R2 (Coastal Plains counties) posted to list serves (11/03/2014) and the OSWP webpage; revised approval CDWS 2010-1-R2B (Piedmont counties) posted to list serves (11/03/2014) and the OSWP webpage
 - Credit for endcap footprint - IWWS 1993-02-R14, IWWS-1997-02-R11, and IWWS 2010-01-R1 posted to list serves (9/08/2014), awaiting posting to the webpage; AWWWS-2005-01-R3 and AWWWS-2008-01-R4 the Commission approved the changes, posted to list serves (11/03/2014) and the OSWP webpage
- Orenco Systems, Inc.: Application for Innovative Approval for AdvanTex® wastewater system models AX20RT and AX25RT; Subcommittee is continuing to work with the company as the company gathers additional data
- Presby Environmental, Inc.: Application for Innovative Approval for Presby Advanced Enviro-Septic (AES) System; Subcommittee to meet again

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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:

March 19, 2015
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

Meeting Adjourned

Non-Committee Members in Attendance at Meeting

Michael Halas, American Manufacturing Company, Inc.

Todd Harrell, AQWA

Steve Barry, AQWA

Michael Stidham, E-Z Treat

Carl Perry, E-Z Treat

Tim Wood, Infiltrator Systems, Inc.

David Lentz, Infiltrator Systems, Inc.

Nick Noble, Orenco Systems, Inc.

Mark Ritter, Orenco Systems, Inc.

Steve Levitas, Kilpatrick Townsend

Paul Cannon, Norweco, Inc. (via telephone)

Scott Hendrick, Norweco, Inc. (via telephone)

Scott Greene, Guilford County

Heath Ward, Guilford County

Tom Konsler

Tricia Angoli, OSWP

Steven Berkowitz, OSWP

Nancy Deal, OSWP

Ishwar Devkota, OSWP

Alan McKinney, OSWP

Sushama Pradhan, OSWP

Lorna Withrow, OSWP

Meeting recorded by Tricia Angoli, OSWP