Technical Review Panel
Environmental Public Health Division
Indiana Department of Health
Meeting Minutes of July 25, 2025
10:00am – 12:00pm, Yoho Conference Room, IDOH and via Teams

Panel Members Present:

In Person:

Kelly MacKinnon, IDOH, OLA
Amanda Lahners, LaPorte County Health Department
John Hack II, OSS Contractor
Jason Ravenscroft, academia
Brian Neilson, PE, ACEC

Via Teams:

Dick Blazer, IBA

Others Present:

In Person: Mike Mettler, Denise Wright, Erin Elam, IDOH

Via Teams: Alice Quinn, IDOH
Jessica Rutschilling, Adams County Health Department
Chad Schofield, Norweco
Jim Bell, BioMicrobics
Karl Holt, Aero-Stream
Daniel Westrich, BioMicrobics
Scott Rexroth, Watermark Engineered Products, distributor of BioMicrobics RetroFAST
Greta Sanderson, IDOH

MacKinnon advised that this was a public meeting and, in accordance with the open door law, it is being livestreamed to the public and recorded. The recording will be archived and available to the public for no less than 90 days. By attending and participating in this meeting attendees acknowledge and consent to the livestreaming and recording including voice, image, and any contributions made. This is a law change that took effect 7/1/25. Anyone online who would like to speak should raise their hand and be acknowledged.

<u>Minutes May 9</u>

The revised minutes of the May 9, 2025 meeting were reviewed. At the last meeting it was determined that the meeting notes were not sufficiently thorough or clear. Ravenscroft made a motion to approve the minutes. Lahners seconded.

Ayes: Ravenscroft, Blazer, Lahners, Neilson (Hack was not present for this vote.)

Nays:

Motion passed.

Minutes June 27

The minutes of the June 27, 2025 meeting were reviewed. Ravenscroft made a motion to approve the minutes. Lahners seconded.

Ayes: Ravenscroft, Blazer, Lahners (Hack was not present for this vote.)

Nays:

Neilson was not present for this meeting and abstained from voting.

Resolution 2025-01

This is a resolution for TRP considerations. The resolution is for transparency for the process for submitting and approving TNI so that the panel has a better idea of the process and in order to meet the statutory deadlines. There is a 30 day time limit to acknowledge that the application has been received. With TRP meeting frequency, delegation of review to the department helps meet that deadline. There is also a 90 day deadline for notifying the applicant if the application is complete and for getting an answer to the applicant.

Blazer asked how close this protocol is to the process used for the last approval. What has changed since the SludgeHammer was approved. MacKinnon stated that the process had not changed, but the resolution was to formalize what the process is and so everyone understands how it works and for transparency. Blazer said it was helpful to have it in writing.

MacKinnon said that if anything is contested or questioned early in the process the department would bring the application to the TRP for awareness, similar to how it was handled with ordinances. Neilson stated that the wording of the resolution stated that the 30 days was to determine if the application was complete, not that it was just received. Mettler indicated that this was being checked into. Elam stated that Mettler had made changes to the draft resolution, but that draft had somehow been deleted. Mettler stated that the "and whether the application is complete" needs to be removed. Hack asked if it could remain as it is written; MacKinnon stated no as that was not what the law said. MacKinnon confirmed that "and whether the application is complete" needs to be removed from the second whereas. Then Elam stated that the version presented is correct. The law states that the TRP has 30 days to let the applicant know that the application has been

received and if it is complete, but there is still only 90 days to reply to the applicant with an answer. Neilson asked if the application is not complete, is there still a 90 day period to let the applicant know if it is approved or not approved. Elam stated yes; regardless of whether the application is complete or not, there is still a 90 day period to let them know if it is approved or not. If the application is not complete, the TRP could tell them it is not approved because the application was not complete. Neilson questioned whether the 90 day deadline was after a complete application was submitted. MacKinnon stated that is not how the law reads.

Hack asked if the resolution contained anything about whether they have a warranty for the product or not. Mettler stated that would be included in the review of the product. The warranty is not in the list; Mettler said it could be added. It was discussed that most of them have warranties. Hack said if a warranty is available, it should be included. Mettler stated that a request for warranty information can be added to the resolution as another letter and then it would be re-lettered accordingly. MacKinnon said this amendment would be included in any motion made to approve the resolution today.

Ravenscroft moved to approve the resolution as amended with the warranty information. Hack seconded the motion.

Ayes: Ravenscroft, Blazer, Lahners, Neilson, Hack
Nays:

Resolution 2025-01, as amended, was approved.

<u>BioMicrobics RetroFast</u>

Daniel Westrich and Jim Bell were given the floor to discuss the product. Daniel Westrich shared a presentation outlining how the system works, how it is used, and how it is installed. He stated that the installation was not presented clearly at the last meeting. When sewage is surfacing it could be due to a change in the use or habits. Over time, gravel gets clogged with biomat and untreated sewage can pond to the surface.

There are 3 RetroFast product sizes – treatment for 150 gpd, 250, gpd, and 375 gpd. The product was tested under the ETV protocol because NSF has testing limitations that are 500 gpd to 1500 gpd. The ETV is the third party testing because that is the only testing they could do.

The components that come with the RetroFAST unit were listed as the lid, a blower, air line gasket, 6” O/V gasket, RetroFAST manual, blower housing, 3” outlet gasket, line and blower piping and screws. Media is also included.

To install the unit, the media and the air lift can be removed and the liner installed by smashing it down into the existing septic tank, the effluent pipe and line are attached via long flaps on the side. It is usually installed through the riser on a concrete tank. They encourage not cutting an opening in a concrete tank without a structural engineer ensuring that it is structurally sound and safe. Slides showed an actual installation site.

These can be used in new construction as well for 1-2 occupants in a home. It can be used very successfully for rejuvenation. The whole unit can be disassembled and reassembled in the existing tank. Service manuals and intervals are provided along with instructions for installation.

The FAST product is already approved in Indiana. For inspection, the blower needs to be kept running; the air filter must be cleaned; that blower must be splashing over the media, the growth and water level need to be checked; the effluent needs to be looked at; and the sludge pumped. A Sludge Judge needs to be used to evaluate sludge levels. It must be pumped based upon their formula. Anyone can contact BioMicrobics directly or their rep, Scott Rexroth, who is on the call today, with questions or concerns.

Hack asked if it could be installed in a single compartment tank. Westrich said it can be and should be shifted closest to the effluent side to get settling in the tank. Hack asked if a second tank could be installed after the first tank and put the unit in the second tank. Westrich said yes, they prefer a two compartment tank to get settling and better effluent quality as far as TSS. The unit sends out highly oxygenated water which starves the biomat, and that is how it works. Biomat is an anerobic bacteria that is growing and taking over, and the oxygen starves off the biomat quickly.

Hack stated all models shown are for less than a 3 bedroom home. Can this only be installed on 1-2 bedroom homes? Jim Bell stated that the flow rates are based upon actual flows from homes, and the typical actual flow from a 3 bedroom home fits into the 375 gpd category. An assessment of the home by the installer is used to determine if it will work.

Wright stated that is what IDOH does with commercial systems; the sizing of the system is based upon the actual flow being 60% of the design daily flow. She said that it is for rejuvenation, and new construction would not be sized that way.

Scott Rexroth stated that with secondary treatment and third party testing with NSF the secondary treatment is required to get down to 30/30 limits for actual flows. With

rejuvenation, they are not required to go to the 30/30 level or to meet a standard 40 level; they are just trying to turn the biology around. It is just a rejuvenation product.
Blazer asked if there would need to be an operating permit with this unit? Mettler said that the county could require an operating permit. Blazer asked if the manufacturer required an operating permit. Wright and Mettler said that condition #10 required that the product be inspected twice a year or more frequently to ensure proper operation and maintenance of the product and the soil absorption field. Mettler stated that the last product approved, the SludgeHammer, required this, and this is similar to an operating permit. The permit would be issued by the local health department, and they could also issue an operating permit if they wanted to.

Westrich has maintenance providers for the product, and they require service at least twice a year. Blazer asked if that information went to the manufacturer as well as the county. Rexroth said that they typically send it to the county for their file. Rexroth keeps it on file too in case of an audit and they would need all of the records.

Wright asked if the manufacturer's rep provides the training, and because they already have an approved product in Indiana, how long will it take to have an operation and maintenance program up and running for these products. Rexroth stated the maintenance is the same as for the FAST unit, so operation and maintenance providers are ready to go now for the RetroFAST.

Hack stated they discussed three models and asked if they were approving three models or just one. Wright stated it is one product with 3 sizes. Primarily in Indiana the 375 model will likely be used. Wright does not know how they would handle a 6 bedroom home; they have not discussed that yet. Wright said that the 375 model could be used on a 3 or 4 bedroom home with use at about 60% of design daily flow.

Wright asked about the performance warranty and what kind of timeline do they expect to see from the product for a failed system. Westrich said that their Save Our Septic warranty offers refund of the product cost if it is not working within a year. They cannot give back the cost of the installation, just the cost of the product. They have never had to do that. Once the site evaluation has been done and the unit installed, there should be a visible difference in a few months and be completely rehabilitated in a year.

Mettler said that the key is to ensure that the site is a candidate for rejuvenation. Westrich states that they have a site evaluation form that the distributor would use to determine if the site is biologically failing and not failing for other reasons, such as compaction.

Bell stated that the report provided from the Massachusetts Tech Center where they tested the product on a failed drainfield would give an idea of the timeline of how quickly it responds. He referred to it being the Heufelder report.

Westrich referred to Rexroth stating that these products are already installed in Indiana and that Rexroth could attest that this product works. They were approved by local health departments. Rexroth stated that there are several installed, maybe 30, in Indiana already and every one has worked. An evaluation was done for each one. It must be a biomat failure and that needs to be confirmed. To fix a biomat, oxygen needs to get into the system and this product does that well. Most of them have used the middle sized unit. Good treatment is gotten from that unit and adds a lot of dissolved oxygen. The middle sized unit has done fantastic. Hack asked if the 30 were installed in Indiana as a trial. Mettler said that the counties had allowed them. Rexroth stated that they were last resort installations so that people would not be kicked out of the house.

Ravenscroft asked if the TerraLift is something that the TRP needed to review. Mettler stated that the department has always stayed neutral on the TerraLift, but it should not be used between the field and the drain. Ravenscroft stated that it is necessary to make sure these systems are candidates for rejuvenation, but the TerraLift did not really do much to investigate the system beforehand.

Wright stated that we have a dated literature review from Purdue University that discusses how to rejuvenate a biologically failed soil absorption field with dissolved oxygen. It is still critical to look at the entire system before this is just used without further investigation. Westrich says they require the site evaluation because they do not want people to spend money if this product was not going to be successful. Rexroth stated that there is a big difference between this product and TerraLift. The biomat is created because there is a lot of nutrients but not much oxygen and this product reverses the biology by introducing oxygen and by providing treatment. Reversing the biology will eat away at the biomat.

Lahners asked what part of the state these products were used in and if they were concentrated in a certain area. Rexroth stated that most installs are in a couple different counties locally in central Indiana, but some are in north and south Indiana.

Bell stated that the RetroFAST is also reducing the solids that are going out to the drainfield. Solids are being drastically reduced going to the field and a lot of oxygen is being added. Bell stated that in some cases, especially someone with low income who cannot afford

their electrical bill because of the blower, they have turned the blower off and used the media as an outlet filter and the system worked for years. If they have an event that causes biomat buildup again, they can turn the blower back on to reduce the biomat. The media acts just like an effluent filter when the aerator is not running.

Mettler stated there is a list of conditions, which are the same as was for the SludgeHammer. MacKinnon said that the approval would be with these conditions.

Wright stated that the last comment changes how the approval letter would be issued. If the unit was tested at ETV with the blower running, that is what the approval letter should require. If the blower is not running, it should be in an alarm state. The homeowner should be made aware of that. Our approval would be with the aerator running because that is how it was tested. Mettler said that if there was no failure or ponding, they would not need it; although our preference would be to just leave it on. Wright said what if they turned it off 2 weeks into it. Mettler stated that if it were in failure, they could not turn the aerator off. Wright said that the manual does not say that it has to be left off if there is still a failure. Mettler and MacKinnon stated that if it was still in failure, they would have to leave it on. Westrich stated that they would also prefer to keep it running. If there is a vacation home that may be pushed hard for a weekend and ponding occurs, they would tell them to leave it on until they come back to rejuvenate the field. Westrich stated that they can do an always on or a 12 hour on and 12 hour off method. They typically do not suggest to not run the aerator. It would have to be a special circumstance in order to consider turning the blower off. Bell said that these decisions would be made by Rexroth and the local health departments; the state would not need to get involved.

Hack made a motion to approve the BioMicrobics RetroFAST product based upon the conditions outlined. Ravenscroft seconded the motion.

Ayes: Ravenscroft, Blazer, Lahners, Neilson, Hack

Nays:

The BioMicrobics RetroFAST is approved.

Westrich asked if the conditions could be sent to him. Mettler said they would be in the approval letter and that he would send them to him right away as well.

<u>Aero-Stream Remediator</u>

Karl Holt, founder and owner of Aero-Stream was asked to discuss this product. He discussed the history of the unit. Twenty two years ago they started with a remediation product and ultimately released an NSF Standard 40 product for new installation. He is a

mechanical engineer with 28 years of experience and most of his early career was in product design and development in the engines and power equipment industry.
In 2003, he faced a failure of his 13 year old system. He tried other methods of rejuvenation and frequent pumping or a $30,000 replacement cost was proposed. He converted his conventional system into an aerobic environment and reversed the failure. Shortly thereafter he had 10 trials underway and all of them were successful. He obtained his first patent in 2003 and obtained Wisconsin approval. Now there are thousands of these systems installed worldwide with a 98% success rate. The units are installed in nearly every soil type and climate. They do require it to be a good candidate for aerobic remediation and troubleshooting after the installation. They are customer service driven. They study the application from the owner and ask a lot of questions to confirm they are dealing with a biologic failure. They also look into use of the system and maintenance to properly size the system. The expectations are set with the installer and owner. It is not an overnight solution; it does take some time, but they continuously follow up. All aerobic units function pretty much the same, but he tried to design as simple as possible and for ease of installation.

Ravenscroft asked if there would be an Indiana specific manual. There are two configurations one of which includes a cesspool and drywell. Mettler stated that the department requires the manufacturer to have an Indiana specific manual, but this is what they have submitted at this time. The cesspool and drywell options will be removed in the Indiana manual.

Hack asked if there were any trial systems in Indiana. Holt said there are not any trials in Indiana. They used the NSF testing protocol in Massachusetts in 2010 and it is included on page 7 of the application.

Hack asked if he recommended an outlet filter with the system because with blowing air into the septic tank it might stir things up in the tank which is supposed to be a settling chamber. Holt said that there is a 12-14” quiescent zone because the diffuser sets on the bottom of the tank and the air comes out about 14” above the tank floor. Settling of sludge is in that area. There is a mixing zone about 12-14”, so some solids do go back into suspension. This creates an area for simultaneous nitrification and denitrification in that 2” zone. If there is access to the outlet baffle and an effluent filter can be installed, they recommend installing the effluent filter. Some tanks cannot accommodate the effluent filter, but one does come with the product.

Lahners asked about the difference between the Pro and LT models. Holt said that these systems are typically sized on number of occupants and number of bedrooms in the home is taken into consideration too. You cannot really oversize the system, so if only 2 people are living in the home, they could use the LT model. They could use also the Pro-line if they wanted to get even more oxygen into the system. They sell more Pro-line models than any other combined. The larger model typically is only $500-800 more.

Wright asked how long it would take to get an operation and maintenance group up and running in Indiana. Holt says that they have installers interested in it because they are also working on an NSF model too. It would probably be a month or two before they would have somebody up and running.

Ravenscroft made a motion to approve the AeroStream Remediator. Hack seconded the motion.

Ayes: Ravenscroft, Blazer, Lahners, Neilson, Hack
Nays:

The AeroStream Remediator is approved.

MacKinnon stated that the next meeting date is not set, but there is no pending TNI. Mettler said something could come up. The meeting date will be to be determined pending TNI submittals, and we will need to be working on the commercial rule update to get before the TRP. She said there is not an immediate meeting need for that, so they will be in contact for the next meeting date, most likely in August.

Ravenscroft asked for an update on where the residential rule is going for now. The State Budget Agency has to review and approve the Regulatory Analysis. There is no required timeframe for that review, but they are aware of our required timeline. They will give feedback on the regulatory analysis and depending upon what the feedback is, there will be some back and forth and they may comments on things that they request to be changed. Once approval from the State Budget Agency is given, there is the more official public phase of the process. A notice would be filed that starts the 30 day wait for a public hearing. A public hearing is held and if there are not substantive public comments made, then the TRP would be asked to officially approve the rule. Then it would go to the IDOH Executive Board for approval. They meet every 2 months. With the Executive Board approval, it would then go to the Office of the Attorney General for reform and legality and to the Governor's office for final review. The governor's office is aware of the timeline. If there are substantive comments at the public hearing, a second public comment period would be required for another 30 days.

Hack asked if the final draft of the rule is available for the TRP members. Mettler and MacKinnon said it is available in the format that is required for rule making.

MacKinnon stated that with an impact over a million dollars it would also have to go to the State Budget Committee and those are the legislators who meet quarterly. This makes it hard to get done in a year.

MacKinnon adjourned the meeting.

Respectfully submitted,
Alice Quinn