

Technical Advisory Panel
SSTS Product Registration

Meeting: Wednesday, June 14th, 2023

9:00 a.m. to 12:00 p.m.

Minnesota Pollution Control Agency

(Virtual via Teams)

Microsoft Teams meeting

Join on your computer, mobile app, or room device

[Click here to join the meeting](#)

Call in number: (651) 395-7448

Call in code: 967 087 906#

Meeting Agenda

9:00 am: Welcome; Review Agenda

9:05 am: Dec 15, 2022 TAP Meeting Notes – Review and Approve

9:10 am: Product introduction – Freya

9:15 am: Product presentation – Brian Koski

10:15 am: MPCA review checklist – Freya/Cody

10:20 am: Panel discussion/ Manufacturer Q&A - All

12:00 pm: Adjournment

Next TAP meeting: Thursday, August 17, 2023 – MPCA St. Paul, LL South and Virtual via Microsoft Teams

**Subsurface Sewage Treatment Systems (SSTS)
Technical Advisory Panel (TAP) for Product Registration**

Meeting Notes – June 14, 2023

Virtual via Microsoft Teams

Meeting Attendees:

Committee Members	Present on June 14, 2023	Guests	Present on June 14, 2023
Tom Espersen		Brian Koski	x
Mitch Johnson			
Pete Otterness			
Alex Pepin	x		
Ben Hoyt			
Sara Heger	x		
Jon Olson			
Bob Whitmyer	x		
Greg Halling			
Tyler Lampella			
Chad Viland			
Elizabeth Harbaugh	x	MPCA Staff	
Chris Priebe	x	Freya Linnett	x
Scott Robinson	x	Cody Robinson	x
		Aaron Jensen	
		Steve Oscarson	x
		Brandon Montgomery	x
		Corey Hower	x

9:00 am: Welcome; Review agenda - Freya

9:05 am: December 15, 2022 TAP Meeting Notes – Review and motion to approve

9:10 Introduction to Brian - Freya

9:15 am: Product presentation – Brian Koski

Brian Koski, owner of Wexco Environmental, gave a presentation to give some information around his proposed products. Brian introduced his design survey form and went over various engineering principles regarding his system. Much of Wexco’s intent revolves around these engineering principles, which takes into consideration influent/effluent parameters, wastewater temperature, media surface area loading rate (SALR) in g/BOD/m²/m³, tank geometry, tank diffuser design. Brian introduced the concept of designing based on percent removal in terms of anticipated BOD and how much media surface area is needed depending on what a designer’s effluent goals are. High removal rates are

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typically reserved for struggling systems to knock down the BOD ahead of it. Brian shared a chart that highlights SALR in g/BOD/m²/day and percent BOD removal and how it correlates to anticipated effluent that meets Treatment Level C for BOD. Brian shared information around the tank geometry requirements and how tank depth affects oxygen transfer. Brian talked about BOD removal and odor control and how it correlates with dissolved oxygen concentrations. Brian indicates his products can be designed with flexibility and are scalable up to 100,000 GPD. Brian went through configurations for each model type – the alpha maxx, the alpha flex, the alpha hydra, and alpha nitro.

10:15 am: MPCA review checklist – Freya/Cody

Freya began presenting the findings the MPCA came up with upon review of their product submittal.

10:20 am: Panel discussion/Manufacturer Q&A – All

There was a question in reference to Brian's engineering worksheet, wondering if that was put together by a PE, and if not, it should likely be stated as design parameters so as not to confuse folks around whether the product is being officially engineered or prescriptive as a Type IV. Another member expressed concern with the data that was provided was difficult to follow, where influent and effluent was provided without necessary detail. There was significant discussion around concerns with the HSW protocol in the requirement for daily flow measurements for 30 days prior to each sampling event, whether or not that data point is necessary for decision-making on products moving forward. Freya relayed a question from another member who had to leave the call early, regarding component and equipment reliability.

There was a lot of back and forth around ensuring there are prescriptive standards built into the registration for product selection.

Additional comments were made on the configurations and model table where we talk lbs/day BOD.

A question asking what was meant by 50% fill rate for the media, and Brian clarified that it pertains to media.

Brian indicates the Polylok 525 is installed on these systems, and a question came in on how often maintenance would need to be performed on these. Brian mentioned a couple times/year to clean these filters. Brian would have screening converted to inches so a multitude of choices are allowable.

Some concern was brought up around the Alpha Nitro and whether that is appropriate for registration for HSW as a Type IV. Brian agreed it may be most appropriate to separate that out from this registration and keep the Nitro models as a Type V.

Corey Hower expressed concern around drilling into existing septic tanks and ensuring there is appropriate accountability to ensure tanks aren't being compromised. Brian mentioned they use solid concrete blocks into poly tanks, and mentioned for concrete tanks, multiple products are secured to the floor of these tanks. Some components are heavy enough to forgo being secured, but most commonly they are drilling 1.5" screws to secure into concrete tanks. Corey talked about potential to compromise the rebar on older tanks that are 3" depth. There was further discussion around drilling components into bottoms of tanks. One potential solution would be to include language in the registration letter that states "components shall not be secured into tanks in a manner that compromises tank integrity or alters the registration of the tank."

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Another member brought up questions around the inspection checklist and whether LGUs can enter into an existing tank to verify it has been secured to the tank bottom. Regarding design specifications it mentioned manufacturer services provides the services of an engineering representative. Brian said he would strike that language and refer to the requirement that each design is reviewed by the manufacturer's representative.

There was concern around validating these systems have been properly secured onto tank bottoms and whether there would be a need to enter into tanks. Brian said he wouldn't recommend entering any tank, and that their practice is to install components into these tanks themselves and not have installers conducting this work.

Another question came up regarding the clarifier and the airlift pump regarding the size and how clarifier tanks are sized to account for sluffing off of the media. How is the material getting into the clarifier to be removed. What does the maintenance look like on the clarifier/reactor. Brian stated there should never be any pumping required in the clarifier, due to the CFM air requirements to keep that material in suspension. Once you get above 5,000gpd system or the tank depth is too deep where the air lift cannot lift high enough, then one would use an electric pump.

Include something in the letter that states only approved and trained contractors work on these systems.

Include language that all components are secured by either dead-man or have manufacturer's engineer sign off that the methods to secure components have not compromised tank integrity or altered the registration of the tank.

The Minnesota manual should be revised to remove the Nitro and ensure the engineering language is removed.

Strength to volume of media

Motion to conditionally register the product on the basis that the MPCA works with the manufacturer to address concerns that were brought up in this meeting and provides a draft registration letter to the TAP before final publication. Seconded.

Motion to adjourn the meeting. Seconded. Meeting adjourned at 11:37am

Next TAP Meeting

Thursday, August 17, 2023 – St. Paul office LL South/Virtual

Technical Advisory Panel
SSTS Product Registration
Meeting: Thursday, December 7, 2023
10:00 a.m. to 3:00 p.m.
Minnesota Pollution Control Agency
520 Lafayette Road, St. Paul, Minnesota
Room LL South

Meeting Agenda

10:00 am: Welcome; Review agenda

- Introductions – Wendy Chirpich, MPCA

10:05 am: June 14, 2023 TAP Meeting Notes – Review and approve

10:30 am: Sludgehammer HSW – Ryan Zaremba and Will Stoddard

12:00 pm: Lunch

1:00 pm: Product Renewals - Cody

- Results from LGU and Service Provider surveys
- Product renewals

2:00 pm: O&M Concerns – Greg

3:00 pm: Adjournment

2024 TAP Meetings

Thursday, February 15, 2024

Thursday, April 18, 2024

Thursday, June 20, 2024

Thursday, August 15, 2024

Thursday, October 17, 2024

Thursday, December 12, 2024

**Subsurface Sewage Treatment Systems (SSTS)
Technical Advisory Panel (TAP) for Product Registration**

Meeting Notes – December 07, 2023

RM LL South – St. Paul

Meeting Attendees:

Committee Members	Present on December 7, 2023	Guests	Present on December 7, 2023
Tom Espersen		Ryan Zarembo (Virtual)	
Mitch Johnson	X	William Stoddard (Virtual)	X
Pete Otterness			
Alex Pepin			
Ben Hoyt	X		
Sara Heger			
Jon Olson	X		
Bob Whitmyer	X		
Greg Halling	X		
Tyler Lampella	X		
Chad Viland	X		
Elizabeth Harbaugh	X	MPCA Staff	
Chris Priebe		Wendy Chirpich	X
Scott Robinson	X	Cody Robinson	X
		Aaron Jensen	X
		Steve Oscarson	
		Brandon Montgomery	X
		Corey Hower	X

10:00 am: Welcome; Review agenda

- Introductions – Wendy Chirpich, MPCA
- Retirements – Greg Halling will be retiring and no longer serving on TAP

10:05 am: June 14, 2023 TAP Meeting Notes – Review and approve

We will do an email approval of the previous meeting notes – Cody will send the notes out to the committee.

10:30 am: Sludgehammer HSW – Will Stoddard

December 07, 2023: Technical Advisory Panel
Meeting Notes

Will joined the meeting virtually and gave a presentation outlining his product and its relation to high strength waste registration. 2lbs bod per S86 – Annual replacement of bio-inoculant for residential, variable for commercial. Requires an effluent filter on the clarifier (mfg list). Medusa filters? 42" tank liquid level height – preferred not required needs 4 to 6" liquid level over ABG. Tank pumping requirements? (8" of sludge).

Cody and Wendy will work with the manufacturer to collect the required materials for the HSW submittal and put together a full submission packet for TAP to review for the February meeting. No vote was held this meeting and is expected after further TAP consideration.

12:00 pm: Lunch

1:00 pm: Product Renewals - Cody

- Results from LGU and Service Provider surveys
- Product renewals

Motion to approve for full three year renewal - Anua (Puraflo), Biomicrobics (Microfast & RetroFast), Orenco (Advantex & Adantex HSW), F.R. Mahoney (Amphidrome)

Motion to approve for modified one year renewal – (Amphidrome HSW) will get a 1 year extension to provide testing and data from the company.

Not currently recommended for renewal - AquaPoint (Bioclere), Anua (Aerocell), Fujiclean (CE & CEN), Hoot,

2:00 pm: O&M Concerns – Greg

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