TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

July 29, 2024

Mr. Tommy Dulworth
Aeris Aerobics, Inc.
5021 SE McKinney
Rice, Texas 75155

Re: Approval of proprietary OSSF system for:
Aeris Aerobics, Inc.
Aeris Aerobics, Model D-600C, D-750C, D-840C, and D-1100C

Dear Tommy Dulworth:

We have received your request for a Texas Commission on Environmental Quality (TCEQ) review of the above-referenced proprietary system, with supporting documentation, on May 31, 2024. Cindy Rojas Annicchiarico of the TCEQ Technical Programs Team conducted the review, as required by 30 Texas Administrative Code (TAC) §285.5(b)(3). After reviewing your request and supporting documentation, TCEQ has determined that the Model D-600C, D-750C, D-840C, and D-1100C models treatment products meet the applicable technical requirements. **This letter serves as notification of approval for use in the State of Texas as an approved proprietary system.** Please be advised, the review of individual On-Site Sewage Facility (OSSF) applications is a separate action and this letter is not an authorization to install an individual OSSF.

The Gulf Coast Testing (GCT) Supplemental Report for Model D-500-500PT covering models D-600C, D-750C, D-840C, and D-1100C, March 18, 2024, details how the Aeris Aerobics 500 gallon-per-day system, previously approved by TCEQ, is scaled up to a 600, 750, 840, and 1100 gallon-per-day system. The proposed D-600C, D-750C, D-840C, and D-1100C models are proportionally equivalent to the tested unit, constructed of the same material, and have an equivalent flow system. This approval for the D-600C, D-750C, D-840C, and D-1100C product models is based on the GCT authorization, which states that their performance conforms with NSF Standard 40 for Class I residential wastewater effluent. Important conclusions from the provided GCT report are as follows:

- Gulf Coast Testing, LLC fully evaluated the Aeris Aerobics Model D-500-500PT residential wastewater treatment system pursuant to the guidelines established by Standard 40 and certified the Model D-500-500PT to meet the criteria established in Section 8.5 of Standard 40. Gulf Coast Testing, LLC currently lists the Model D-500-500PT on GCT's website as approved to Standard 40.
- The material used to construct the Model D-500-500PT is identical to the material in the proposed tanks (D-600C, D-750C, D-840C, and D-1100C) and will meet the requirements of Section 4 of Standard 40.

- The construction process, design, and compartment volumes of the tested Model D-500-500PT are proportionally equivalent to the proposed models.
- The aerators shown approved in Table 2 and Table 3 will allow the proposed models to meet the requirements of Section 5.11 of Standard 40.
- The Model D-600C, D-750C, D-840C, and D-1100C will meet the requirements of Section 8.5 of Standard 40 and is approved pursuant to Section 1.3 and 1.4 of Standard 40.

The flow design of the tested system utilizes hydraulic displacement. The influent flows into the pretreatment tank, then into the aeration chamber, next into the clarification chamber, and finally into the pump tank. The design of the tested model precludes alternative flow paths and prevents the discharge of wastewater from an opening external to the designated flow path. The flow design for Model D-600C, Model D-750C, Model D-840C, and Model D-1100C is equivalent to the tested system.

	D-500-500PT		D-600C		D-750C		D-840C		D-1100C	
	500 gallons/day		600 gallons/day		750 gallons/day		840 gallons/day		1100 gallons/day	
Compartment	Volume (Gallons)	HRT (Hours)	Volume (Gallons)	HRT (Hours)	Volume (Gallons)	HRT (Hours)	Volume (Gallons)	HRT (Hours)	Volume (Gallons)	HRT (Hours)
Pretreatment	341	16.4	346	13.8	357	11.4	428	12.2	579	12.6
Aeration	350	16.8	561	22.4	579	18.5	694	19.8	980	21.4
Clarification	129	6.2	178	7.1	188	5.9	222	6.3	273	6

Table 1. Compartment Volume comparison, as cited in the Gulf Coat Testing (GCT) Supplemental Report for Model D-500-500PT covering models D-600C, D-750C, D-840C, and D-1100C, March 18, 2024

Model	Flow Rate (gpd)	Required Airflow cfm	Hiblow HP40 cfm	Hiblow HP60 cfm	Hiblow HP80 cfm	Hiblow HP100 cfm	Hiblow HP120 cfm	Hiblow HP120LL cfm
D-500-500PT	500	1.5	Yes					
D-600C	600	2.5		Yes	Yes			
D-750C	750	2.6		Yes	Yes			
D-840C	840	3			Yes	Yes		
D-1100C	1100	4.3					Yes	Yes

Table 2. Approved HiBlow Aerators, as cited in the Gulf Coat Testing (GCT) Supplemental Report for Model D-500-500PT covering models D-600C, D-750C, D-840C, and D-1100C, March 18, 2024

Model	Flow Rate (gpd)	Required Airflow cfm	Secoh JDK-40 cfm	Secoh JDK-60 cfm	Secoh JDK-80 cfm	Secoh JDK-100 cfm	Secoh JDK-120 cfm
D-500-500PT	500	1.5	Yes				
D-600C	600	2.5		Yes			
D-750C	750	2.6		Yes			
D-840C	840	3		Yes	Yes		
D-1100C	1100	4.3				Yes	Yes

Table 3. Approved Secoh Aerators, as cited in the Gulf Coat Testing (GCT) Supplemental Report for Model D-500-500PT covering models D-600C, D-750C, D-840C, and D-1100C, March 18, 2024

If you have any questions, or if we may be of assistance to you, please contact Cindy Rojas Annicchiarico in the TCEQ Technical Programs Team at (512) 239-4156 or via e-mail at Cindy.Annicchiarico@tceq.texas.gov.

Sincerely,

Joseph L. Hopkins

Joseph L. Hopkins, P.G.
Technical Programs Team Leader
Texas Commission on Environmental Quality

JLH/CRA