

Jon Niermann, *Chairman*
Bobby Janecka, *Commissioner*
Catarina R. Gonzales, *Commissioner*
Kelly Keel, *Executive Director*



TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

December 31, 2024

Mr. Ethan W. Cruse
PolyPure Systems, Inc.
5610 North US Highway 287
Alvord, TX 76225

Re: Approval of proprietary OSSF treatment systems for:
PolyPure Systems, Inc.
Product Line Approvals: C-650, C-720, C-850, C-960, C-1100, and C-1350

Dear Ethan W. Cruse:

We have received your request for a Texas Commission on Environmental Quality (TCEQ) review of the above-referenced proprietary system, with supporting documentation, on November 11, 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 PolyPure Systems models C-650, C-720, C-850, C-960, C-1100, and C-1350 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 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 (SPE517) for Model P600ONE covering models C-650, C-720, C-850, C-960, C-1100, and C-1350, dated September 1, 2024, details how the P600ONE gallon-per-day system, previously approved by TCEQ, is scaled up to a 650, 720, 850, 960, 1100, and 1350 gallon-per-day system and states that these products meet the 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 Polypure Systems, Inc. P-600ONE residential wastewater treatment system pursuant to the guidelines established by Standard 40 and certified the P-600ONE to meet the criteria established in Section 8.5 of Standard 40. Gulf Coast Testing, LLC currently lists the P-600ONE on GCT's website as approved to Standard 40 - 2023.
- The material used to construct the P-600ONE was polypropylene while the proposed Model C-650, Model C-720, Model C-850, Model C-960, Model C-1100, and Model C-1350 wastewater treatment systems are constructed of concrete. The concrete has a 5000-psi minimum compressive strength as tested over a 28- day period and meets or exceeds the welded wire reinforcement required by ASTM-A185. The construction of the proposed models and will meet the requirements of Section 4 of Standard 40. Additionally, the construction process, design, and compartment volumes of the tested P-600ONE are proportionally equivalent to the proposed models or, in the case of the pretreatment compartments, will satisfy the requirements of Standard 40.
- The aerators shown in Table 3 were tested pursuant to the requirements of Section 5.11 of standard 40. The aerators shown as approved will meet the requirements of Standard 40.

- The Model C-650, Model C-720, Model C-850, Model C-960, Model C-1100, and Model C-1350 will meet the requirements of Section 8.5 of Standard 40 and are approved pursuant to Section 1.3 and 1.4 of Standard 40.

The Polypure Systems, Inc. Model Purewater P-600ONE aerobic treatment system tested in this evaluation is constructed of polyethylene. There are four essential compartments to this aerobic treatment system. The influent flows into the pretreatment tank, the aeration chamber, the clarification chamber, and finally into the pump tank. The flow design for Models C-650, C-720, C-850, and C-960 is equivalent to the tested system. The Models C-1100 and C-1350 consist of an aeration tank and a clarifier. The pretreatment tank will be a separate tank for the C-1100 and C-1350 systems. Tables 1 and 2 illustrate the compartment volume specifications from the information provided in the GCT supplemental report and Installation Manual provided by the manufacturer. This approval also notes that the subject units include pump chambers. All pump tanks are subject to the requirements specified in 30 TAC §285.34(b).

Model Name	Rated Capacity (gallons/day)	Combined Unit (included or separate trash and pump chambers)
P-600ONE	600	Included
C-650	650	Included
C-720	720	Included
C-850	850	Included
C-960	960	Included
C-1100	1100	Separate trash chamber
C-1350	1350	Separate trash and pump chambers

Table 1. Rated capacity comparison, as cited in the 2024 Polypure Systems, Inc., Installation & Owner's Manual covering models C-650, C-720, C-850, C-960, C-1100, and C-1350

	P-600ONE	C-650	C-720	C-850	C-960	C-1100	C-1350
	600 GPD	650 GPD	720 GPD	850 GPD	960 GPD	1100 GPD	1350 GPD
Compartment	Volume (Gallons)	Volume (Gallons)	Volume (Gallons)	Volume (Gallons)	Volume (Gallons)	Volume (Gallons)	Volume (Gallons)
Pretreatment	515	400	415	400	650	550-1225	675-1500
Aeration	400	560	580	694	700	858	1083
Clarification	170	188	198	262	280	297	367

Table 2. Compartment Volume comparison, as cited in the Gulf Coast Testing (GCT) Supplemental Report for Model P600ONE covering models C-650, C-720, C-850, C-960, C-1100, and C-1350, September 1, 2024

Ethan W. Cruse
Page 3,
December 31, 2024

Model	Flow Rate (gpd)	Required Airflow cfm	Fuji Mac 80RIIA cfm	Fuji Mac 100RIIA cfm	Fuji Mac 120RII cfm	Fuji Mac 150RII cfm	Fuji Mac 200RII cfm
P-6000ONE	600	2.8	Yes				
C-650	650	3.9		Yes			
C-720	720	4.1		Yes			
C-850	850	4.9			Yes		
C-960	960	4.9			Yes		
C-1100	1100	6.0				Yes	
C-1350	1350	7.6					Yes

Table 3. Approved Fuji Mac Aerators, as cited in the Gulf Coast Testing (GCT) Supplemental Report for Supplemental Report for Model P6000ONE covering models C-650, C-720, C-850, C-960, C-1100, and C-1350, September 1, 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) 239-5146 or via e-mail at Cindy.Annicchiarico@tceq.texas.gov.

Sincerely,

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

JLH/CRA