



COMMONWEALTH of VIRGINIA

Department of Health
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M. Norman Oliver, MD, MA
State Health Commissioner

November 28, 2018

Ty Hunter, President, CEO
ty@clearstreamsystems.com
Clearstream Wastewater Systems, Inc.
PO Box 7568
Beaumont TX 77726

VIA ELECTRONIC AND REGULAR MAIL

RE: Treatment Level 3 Approval of Clearstream Model D Treatment Units

Dear Mr. Hunter:

We have completed our review of your request for listing of Clearstream's Model D wastewater treatment units as "Generally Approved" under the Virginia Department of Health's (VDH's) Guidance, Memorandum, and Policy (GMP) 2016-03 and in accordance with the Treatment Level 3 (TL-3) general approval requirements in the *Regulations for Alternative Onsite Sewage Systems* (12 VAC5-613, *AOSS Regulations*).

The complete submittal for review consists of the following:

1. Application Checklist (revised), dated October 25, 2017
2. Memorandum of Understanding and Agreement, signed and dated October 25, 2017
3. Owner's Manual and Technical Plan sheets for the approved units
4. Quality Assurance and Quality Control Plan from Gulf Coast Testing, LLC
5. Contract between Clearstream Wastewater Systems, Inc. and Gulf Coast Testing, LLC, dated October 25, 2017
6. Engineer's Operation and Maintenance Certification Statement by Joel Pinnix, PE, dated February 24, 2016
7. Engineer's Treatment Level 3 Certification Statement by Joel Pinnix, PE, dated February 24, 2016
8. Final Report with cover letter revised November 26, 2018 which includes an excel spreadsheet with individual site information and relevant data entered into the VDH data analytical spreadsheet
9. Supplemental Report from Gulf Coast Testing for Model D (Scale up analysis) dated November 27, 2018

Based on our review, VDH approves the Clearstream D wastewater treatment units for listing as "Generally Approved" under GMP 2016-03 and as "Generally Approved" for TL-3 effluent treatment under the AOSS Regulations. The effluent testing results indicate a predicted BOD₅ of 7.4 mg/l and TSS of 6.7 mg/l using the protocol established in GMP 2016-01.

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The specific units included in this approval are below.

| Rated Treatment Capacity (gallons per day) | Model |
|---|---|
| 500 | 500: D, DC, DS, DSC, DST, DT, DC2, DC3 |
| 600 | 600: D, DC, DT, DC2, DC3 |
| 750 | 750: D, DC, DT, DC2 |
| 800 | 800: D, DC, DT, DC2 |
| 1000 | 1000: D, DC, DD ⁶ , DCD, DTD |

Model descriptor definitions:

- D – fiberglass treatment tank
- DS – shorter, wider fiberglass treatment tank
- DT – fiberglass treatment tank with tapered design
- DC – concrete tank
- DST – shorter, wider fiberglass treatment tank with tapered design
- DSC – shorter, wider, concrete tank
- DC2 – 2 compartment concrete tank with pretreatment and treatment tank in one
- DC3 – 3 compartment concrete with pretreatment, treatment and pump tank all in one
- DD – has two treatment units in one fiberglass tank to achieve design treatment flow
- DCD – has two treatment units in one concrete tank to achieve design treatment flow
- DTD – has two treatment units in one tapered fiberglass tank to achieve design flow

The Clearstream D listing for 50% nitrogen reduction in GMP 2013-01 will be modified to reflect the TL-3 General Approval Status.

You are reminded that the TL-3 General Approval for the Clearstream N series of wastewater treatment units will expire on December 7, 2018. VDH will send you separate notice of the expiration.

Please feel free to call me at (804) 387-1883 or contact me by email at Marcia.Degen@vdh.virginia.gov if you have any questions.

Sincerely,



Marcia J. Degen, Ph.D., P.E.
Technical Services Administrator
Division of Onsite Sewage, Water Services,
Environmental Engineering & Marina Programs

Cc: Lance Gregory, Division Director