



# COMMONWEALTH of VIRGINIA

## Department of Health

### Memorandum of Understanding and Agreement

This Memorandum of Understanding and Agreement, made this 3rd day of December, 2013, is by and between the Commissioner of Health and E-Z Treat Company, the "Manufacturer."

The Manufacturer agrees to test and evaluate the efficacy of E-Z Treat, also known as the "Treatment Device or Unit", in accordance with the evaluation protocol set forth below and in Guidance, Memoranda and Policy #147 or successor policy. The Manufacturer and the Division agree to:

1. Complete an evaluation (as described in this Agreement and GMP #147 or its successor) of a minimum of 20 Treatment Units located and installed in the Commonwealth of Virginia within three years of the date this Agreement is executed. The Manufacturer must conclude the evaluation on or before December 3, 2016. The Treatment Units will be jointly selected and agreed upon by the Manufacturer and Division.
  - i. Each of the 20 Treatment Units selected for evaluation must be designed and used for a single-family residential dwelling with a design flow less than or equal to 1,000 GPD, used as expected for a permanently occupied home for 12 months.
  - ii. No evaluation or testing will be accepted for seasonal occupancy or seasonal rental use.
  - iii. The Manufacturer will contact the Division when a viable Treatment Unit for evaluation is installed or identified. Upon notice by the Manufacturer, the Division will confirm whether the Treatment Unit will be selected for testing.
  - iv. The Manufacturer will maintain an electronic database of Treatment Units selected for evaluation and report the database, along with associated influent and effluent results quarterly, as described in paragraph v., to the Division. The Manufacturer will retain copies of the Chain of Custody forms for sample collection, transport, and measurements and provide them to the Division within five days of submitting the quarterly database report.
  - v. The Manufacturer will hire and use a third party, as described in this section and accepted by the Division, to collect a minimum of four consecutive quarterly influent and effluent samples for 12 months from each of the 20 Treatment Units. Quarters shall run from January 1 to March 31, April 1 to June 30, July 1 to September 30, and October 1 to December 31. All procedures to collect, transport, and measure samples, with proper chain of custody, must be conducted under the supervision of a suitable third party such as a faculty member in an appropriate program of an accredited college or university, a licensed professional engineer experienced in the field of environmental engineering, or by a testing firm acceptable to and pre-approved by the Division.

- vi. Failure of the manufacturer to report in accordance with section iv above or failure of the manufacturer to make progress toward the goal as evidenced by the installation and monitoring of the units, may result in the termination of this Agreement.
2. The Manufacturer will provide a copy of the contract with the third party to the Division. The contract must describe the duties to be performed by both the third party and the Manufacturer. A Quality Assurance and Quality Control (QA/QC) plan must also be provided to the Division drafted jointly by the Manufacturer and the third party. The QA/QC plan will include information on the collection, transport, and handling of samples and must be satisfactory to the Division.

The contract must specify when sample measurements will be sent to the Division and that all persons used to collect, transport, or test samples will be properly trained to perform the corresponding tasks. The contract must be provided at the time this Agreement is completed and must be acceptable to the Division. The contract becomes an addendum to this Agreement.

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- i. The third party is: Engineering & Design, 6411 Rigsby Road, Richmond, Va.  
Contact information: John Ritter, P.E., (804) 285-2176
- ii. If requested by the Division, the Manufacturer agrees the third party will provide at least 72 hours notice before collecting samples and allow for joint collection with the Division upon request.
- iii. The Manufacturer agrees to place and assure that at least two inspection and sampling ports are available to allow the third party to adequately sample influent and effluent. Each inspection and sampling port must be located to accurately characterize the influent and effluent generated during expected residential use.
- iv. The Manufacturer agrees to test and report influent and effluent results as described above for pH, temperature, BOD<sub>5</sub> and TSS.

On occasion, influent data that reflects the wastewater characteristics produced by the residential dwelling is not practical to collect. In such case, the Manufacturer will report influent from the recirculation tank.

If the influent does not reflect the average or normal values for residential wastewater, then the Division may require additional testing or eliminate that specific residence from consideration as part of the evaluation.

3. Hire and use a lab accepted by the Division to perform measurements using the *Standard Methods for the Examination of Water and Wastewater* for influent and effluent, in accordance with 40 CFR 136. Composite or grab samples for TSS and BOD<sub>5</sub> may be used.

The certified lab(s) are: Joiner Labs, 77 W. Lee Street, Warrenton, Va., 20186

Contact information: Richard Joiner, (540) 347-7212

4. Maintain an electronic database or spreadsheet of all system installations, and report the database to the Division Director by the 15<sup>th</sup> day of January, April, July, and October of each year the evaluation continues. The spreadsheet report will include the following information:
  - i. Sample results for influent and effluent.
  - ii. Interim observations about the Treatment Unit's performance with respect to the pass/fail criteria.
  - iii. For each treatment unit included in the performance evaluation that is installed after the execution date of this Agreement, the level of effluent treatment (Septic Tank Effluent, TL-2 or TL-3) required for that installation shall be reported. Treatment units included in the performance evaluation that were installed prior to the execution date of this Agreement are exempt from this requirement.
5. The pass/fail criteria for effluent will be as follows as described in GMP 147:

	Log-Transformed Upper 99% Confidence Interval Converted Back to Native Units
BOD <sub>5</sub> (mg/l)	Less than or equal to 10 mg/l
TSS (mg/l)	Less than or equal to 10 mg/l

Each of the four quarterly samples for each treatment device shall be averaged before applying the statistical manipulation.

6. In return for the above considerations, the Division agrees to maintain a list of Treatment Units installed in Virginia and their sampling results. Upon conclusion of the testing and evaluation in accordance with this Agreement, the Division will render a case decision regarding whether the Treatment Unit has met the effluent performance expectations.
7. This Agreement may be amended by mutual consent of the parties. The Agreement may be terminated by either party.
8. The undersigned agree to the Conditions of this Agreement.

  
 Marissa Levine, MD, MPH  
 Interim State Commissioner

2/27/14

  
 Carl Perry, E-Z Treat Company  
 Manufacturer