

Virginia Department of Health
Office of Environmental Health Services
Technical Services – Wastewater Engineering

To: Marcia Degen, Ph.D., P.E. – Technical Services Manager, OEHS
From: C. Kemper Loyd, P.E. – Technical Services Engineer, OEHS
Date: July 31, 2014
RE: E-Z Treat Company
Approval of E-Z Treat Treatment Units for “Evaluation Completed” Listing under GMP 147
Cc: Dwayne Roadcap – OEHS

E-Z Treat Company has completed their GMP 147 testing in accordance with their December 3, 2013 Memorandum of Understanding and Agreement. The treatment units for which GMP 147 approval is being requested are the Model 600 and the Model 1200, with the latter being approved for a design flow of less than or equal to 1,000 gpd.

The submittal was reviewed to determine if the test data supported the request to list the E-Z Treat treatment units as “Evaluation Completed” under GMP 147. The results of the statistical analyses performed by this reviewer are provided in the table below.

Effluent Parameter	Results of Statistical Evaluation Using Protocol Specified in December 3, 2013 MOU*	Results of Statistical Evaluation Using Protocol Proposed for New Systems**
BOD ₅ (mg/L)	8.49	7.31
TSS (mg/L)	6.64	5.06

* Log-transformed upper 99th-percentile confidence interval converted back to native units. Site data averaged before log transformation, 2-Tailed T-test, and N degrees of freedom.

** Log-transformed upper 99th-percentile confidence interval converted back to native units. Site data log-transformed before averaging, 1-Tailed T-test, and N-1 degrees of freedom. VDH is currently revising GMP 147 and has tentatively identified this statistical protocol for future evaluations. The E-Z Treat data meets the TL-3 criteria using both the statistical protocol specified in their MOU and the proposed statistical protocol.

Note that the applicant's submittal reported BOD₅ and TSS results of 8.33 mg/L and 6.45 mg/L, respectively. The post-cleanup data used by the applicant for his evaluation was not included in the submitted Excel spreadsheet; therefore, the derivation of his results could not be determined.

In light of the above, this reviewer believes that the specified E-Z Treat Company E-Z Treat treatment units have met the GMP 147 requirements for listing as “Evaluation Completed” and should be considered ‘Generally Approved’ as a TL-3 treatment unit under 12VAC5-613.