1.6 Treatment Train

The concept of using a treatment train to successfully treat drinking water is well known and appreciated. A treatment train is simply the treatment of water through several sequential technology stages to achieve a final water quality goal. The following three options are acceptable to evaluate a system that contains multiple, sequential treatment technologies for a performance claim under this standard:

a) Any single treatment technology stage within a system meeting the requirements of the appropriate technology DWTU standard shall be tested independently from the other treatment technologies present in the system in a manner equal to or more conservative than the technology’s application in the system. This shall qualify the entire system for that performance claim under the applied standard. This is the default method of evaluation within this standard;

b) A system using a treatment train shall be evaluated for a performance claim by evaluating the complete system for each of the technologies used within that system. The system shall be subject to the performance test method from each appropriate technology DWTU standard and shall meet all requirements to qualify for the performance claim; or

c) A system using a treatment train shall be evaluated for a performance claim by evaluating two or more sequential technology stages independently and combining the resulting reduction performance to achieve the requirements for the performance claim. The technology stages shall be evaluated in the same sequence that they provide treatment within the system using a sequential challenge in a manner equal to or more conservative than the technology stage’s application in the system. The resultant reduction performance, when combined, shall meet the requirements for that performance claim.

The sequential challenge is determined by testing the first technology stage in a treatment train under the appropriate technology DWTU standard test method. The maximum effluent concentration achieved during the test shall be used as the average target influent concentration for a following technology stage. Each technology stage is evaluated using the appropriate technology DWTU standard test method using the prior technology stage’s maximum effluent concentration. If the effluent concentrations for the last (or last evaluated) treatment technology stage meet all requirements, the system then shall meet the requirements for that performance claim.
3 Definitions

3.x treatment train: A sequential series of two or more contaminant reduction technologies applied within a system to achieve a final water quality goal.