

Appendix C: Applying TN Limits for Large AOSSs

The TN limits in 90.D apply to construction permits received on or after December 7, 2013, and any system with an operation permit that renews on or after that date. Section 90.B. requires all large AOSSs statewide to comply with a 5 mg/l TN limit at the project boundary. The limit protects drinking water supplies. Dilution may be used to demonstrate compliance with this limit. Each large AOSS must be evaluated for compliance with 90.D. and 90.B. The most limiting case will be used to set the actual limit on the system.

1. *Large AOSSs up to 10,000 gallons per day.*

Section 90.D. 2 provides two options for compliance: (a) demonstrated effluent quality of 20 mg/l TN, or (b) compliance with 20 mg/l TN within 24 inches of the point of effluent application in the soil. The designer must demonstrate how the design will comply with one of the two options above. If in situ testing is proposed, then the method for collecting the in situ sample must be described and an interim compliance point set. An interim compliance point is typically set at the end of all treatment prior to entering the soil and is used in case the in situ sample cannot be collected at some point. The value (limit) for the interim compliance is typically based on reasonable assumptions for TN losses in the drainfield. For example, if shallow drip is used, it is reasonable to assume a 50 percent loss of the applied effluent. With the required endpoint being 20 mg/l in situ, then the effluent applied could be 40 mg/l. Dilution cannot be used to demonstrate compliance with this limit.

2. *Large AOSSs with flows greater than 10,000 gallons per day.*

Section 90.D.3 provides two options for compliance for this size facility: (a) demonstrated effluent quality of 8 mg/l TN or (b) compliance with 5 mg/l TN within 24 inches of the point of effluent application in the soil.

The designer must demonstrate how the design will comply with the selected option. If in situ testing is proposed, then the method for collecting the in situ sample must be described and an interim compliance point set. An interim compliance point is typically set at the end of all treatment prior to entering the soil and is used in case the in situ sample cannot be collected at some point. The value (limit) for the interim compliance is typically based on reasonable assumptions for TN losses in the drainfield. For example, if shallow drip is used, it is reasonable to assume a 50 percent loss of the applied effluent. With the required endpoint being 5 mg/l in situ, then it is reasonable to say, in this case, that the effluent applied could be 10 mg/l.