



Operational Monitoring Recommendations for NPDES Permittees

NPDES permits specify the minimum monitoring that must be performed by a facility. The monitoring includes raw waste, final effluent, and operational performance monitoring and is based on the minimum self-monitoring requirements specified in the Iowa Administrative Code (IAC) at 567 IAC 63.3(455B).

Effective May 18, 2016, operational performance monitoring is no longer detailed in the rule. Rather, 567 IAC 63.3(4) states, "Operational performance monitoring for treatment unit process control shall be conducted to ensure that the facility is properly operated in accordance with its design." Therefore, operational monitoring must be conducted, but the specific monitoring and the frequency at which it is conducted will not be detailed in NPDES permits issued after May 18, 2016.

However, if operational monitoring requirements are specified in an NPDES permit, then the monitoring must be conducted and results reported in accordance with those requirements.

With the specific operational performance monitoring requirements no longer being detailed in NPDES permits issued after May 18, 2016, questions have been raised regarding what monitoring needs to be conducted for certain treatment units. The specific monitoring and frequency at which it is conducted should follow recommendations established in the facility design and operation documents. In the absence of prescribed monitoring recommendations, DNR provides the following guidance:

Treatment Unit	Monitoring Parameter	Monitoring Location	Sample Type
Aerated Lagoon	Dissolved Oxygen	Cell Contents	Grab
Trickling Filter	Recirculation Flow	-----	Measurement
Activated Sludge	MLSS	Aeration Basin Contents	Grab
Activated Sludge	Dissolved Oxygen	Aeration Basin Contents	Grab
Activated Sludge	Temperature	Aeration Basin Contents	Grab
Activated Sludge	30-Minute Settleability	Aeration Basin Contents	Grab
Anaerobic Digester	Temperature	Digester Contents	Grab
Anaerobic Digester	pH	Digester Contents	Grab
Anaerobic Digester	Alkalinity	Digester Contents	Grab
Anaerobic Digester	Volatile Acids	Digester Contents	Grab
Aerobic Digester	Dissolved Oxygen	Digester Contents	Grab
Sequencing Batch Reactor	Total Suspended Solids	Aeration Basin Effluent	Grab
Final Clarifier	Settleable Solids	Effluent after final clarifier	Grab

The frequency of monitoring necessary to understand and control the operational performance of the treatment unit will be dependent on the size and complexity of the treatment system. It is recommended that the monitoring specified above be conducted at least once per week, unless less frequent monitoring is justified by consistent operation of the facility. More frequent monitoring may be appropriate to ensure efficient operation of the facility. If insufficient information is available to properly operate the facility, then more frequent monitoring is justified.

Operational performance monitoring records must be maintained at the facility. Rule 567 IAC 63.3(4) states "the results of any operational performance monitoring need not be reported to the department, but shall be maintained in accordance with rule 567 IAC 63.2(455B)". Rule 567 IAC 63.2(455B) requires permittees to retain paper and electronic records of all monitoring activities for a minimum of three years.