

## CHAPTER 63 MONITORING, ANALYTICAL AND REPORTING REQUIREMENTS

**ITEM 1.** Reword 63.1(4) and add sentence concerning calibration of instrumentation.

**63.1(4)** All laboratories conducting analyses required by this chapter must be certified in accordance with 567—Chapter 83. ~~Routine except that routine~~, on-site monitoring for pH, temperature, dissolved oxygen, total residual chlorine, ~~and~~ other pollutants that must be analyzed immediately upon sample collection, settleable solids, physical measurements such as flow and cell depth, and operational monitoring tests specified in 63.3(4) are excluded from this requirement. All instrumentation used for conducting any analyses required by this chapter must be properly calibrated according to the manufacturer's instructions.

**ITEM 2.** Add additional language to 63.2(3).

**63.2(3)** The permittee shall retain for a minimum of three years ~~any~~ all paper and electronic records of monitoring activities and results including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records. This includes but is not limited to monitoring and calibration records from pH meters, dissolved oxygen meters, total residual chlorine meters, flow meters, and temperature readings from any composite samplers. The period of retention shall be considered to be extended during the course of any unresolved litigation or when requested by the director or the regional administrator.

**ITEM 3.** Add additional language to 63.3.

**567—63.3(455B) Minimum self-monitoring requirements in permits.**

**63.3(1)** *Monitoring by organic waste dischargers.* The minimum self-monitoring requirements to be incorporated in operation permits for facilities discharging organic wastes shall be the appropriate requirements in Tables I, II, ~~III~~ and ~~V~~ IV. Additional monitoring may be specified in the operation permit based on a case-by-case evaluation of the impact of the discharge on the receiving stream, toxic or deleterious effects of wastewaters, industrial contribution to the system, complexity of the treatment process, history of noncompliance or any other factor which requires strict operational control to meet the effluent limitations of the permit, as described in the Supporting Document for Permit Monitoring Frequency Determination, February X, 2008.

**63.3(2)** *Monitoring by inorganic waste dischargers.* The ~~minimum~~ self-monitoring requirements to be incorporated in the operation permit for facilities discharging inorganic wastes ~~an inorganic waste discharge~~ shall be determined by the appropriate requirement in Table V. ~~Additional monitoring may be specified in the operation permit based on~~ a case-by-case evaluation of the impact of the discharge on the receiving stream, toxic or deleterious effects of wastewaters, complexity of the treatment process, history of noncompliance or any other factor which requires strict control to meet the effluent limitations of the permit, as described in the Supporting Document for Permit Monitoring Frequency Determination, February X, 2008.

**63.3(3)** *Monitoring of significant industrial users* ~~industrial contributors to publicly owned treatment works.~~ Monitoring for significant industrial users ~~All major contributing industries~~ as defined in 567—60.2(455B) and ~~industrial contributors that are subject to national pretreatment standards shall be monitored in accordance with the requirements in Tables I, II and V, shall be determined as described in the Supporting Document for Permit Monitoring Frequency Determination, February X, 2008.~~ provided that the Results of such monitoring shall be submitted to the department in accordance with the reporting requirements in the operation permit. The monitoring program of a publicly owned treatment works with a pretreatment program approved by the department may be used in lieu of the Supporting Document tables. ~~The results of such monitoring shall be submitted to the department in accordance with the reporting requirements in the operation permit.~~

**63.3(4) Operational monitoring.** The minimum operational monitoring to be incorporated in permits shall be the appropriate requirements in Table IV H. These requirements reflect minimum indicators that any adequately run system must monitor. The department recognizes that most well-run facilities will be monitored more closely by the operator as appropriate to the particular system. However, the results of any monitoring beyond the requirements in Table IV ~~this monitoring~~ need not be reported to the department, but shall be maintained according to 63.2(3). ~~Operational monitoring requirements may be modified or reduced at the discretion of the director when adequate justification is presented by the permittee that the reduced or modified requirements will not adversely impact the operation of the facility.~~ Additional operational monitoring may be specified in the operation permit based on a case-by-case evaluation of the impact of the discharge on the receiving stream, toxic or deleterious effects of wastewaters, complexity of the treatment process, history of noncompliance or any other factor that requires strict control to meet the effluent limitations of the permit.

**63.3(5) Modification of operational monitoring requirements.** Operational monitoring requirements may be modified or reduced at the discretion of the director when adequate justification is presented by the permittee that the reduced or modified requirements will accurately reflect actual wastewater characteristics and will not adversely impact the operation of the facility. Requests for modification or reduction of monitoring requirements in an existing permit are considered variance requests and must follow the procedures in 60.4(2)"b". All reductions or modifications of monitoring incorporated into an operation or NPDES permit by amendment or upon reissuance of the permit are only effective until the expiration date of that permit.

**63.3(6) Impairment monitoring.** If a wastewater treatment facility is located in the watershed of an impaired waterbody that is listed on Iowa's most recent Section 303 d list (as described in 40 CFR 130.7), additional monitoring for parameters that are contributing to the impairment may be included in the facilities' operation or NPDES permit on a case-by-case basis.

**ITEM 4.** Add language to 63.5(2).

**567—63.5(455B) Self-monitoring and reporting for animal feeding operations.**

**63.5(2)** Reports of the self-monitoring results shall be submitted to the appropriate regional field office of the department quarterly. The quarterly reports shall cover the periods January through March, April through June, July through September and October through December. The quarterly report for each period shall be submitted by the 10th day of the month following the quarter being reported.

**ITEM 5.** Replace language in 63.6(445B)

**567—63.6(455B) Report of bypass.**

**63.6(1)** ~~Except for bypasses that occur as a result of mechanical failure or acts beyond the control of the owner, owners of waste disposal systems shall obtain written permission from the department prior to any bypassing of any sewage or wastes from the waste disposal system.~~

**63.6(2)** ~~In the event that bypassing of sewage or waste occurs as a result of mechanical failure or acts beyond the control of the owner (other than rain or other precipitation), said owner shall notify the department by telephone of the bypassing within 12 hours of the time of the discovery of the bypassing. Notification shall include the reasons for the bypass and expected duration. The owner shall comply with the instructions of the department calculated to minimize the effect of the bypassing on the receiving water of the state.~~

**63.6(3)** ~~Bypasses other than those described in this rule shall be reported in the records of operation.~~

**567—63.6(455B) Bypasses, Sanitary Sewer Overflows (SSO) and Upsets.**

**63.6(1) Prohibition.** Bypasses from any portion of a treatment facility and sanitary sewer overflows (SSO) from a sanitary sewer collection system designed to carry only sewage are prohibited. The

department may not assess a civil penalty against a permittee for a bypass if the permittee has complied with all of the following:

- a. The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
- b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
- c. The permittee submitted the information required in 63.6(2), 63.6(3), and 63.6(5).

**63.6(2) Request for anticipated bypass.** Except for bypasses that occur as a result of mechanical failure or acts beyond the control of the owner or operator of a waste disposal systems (unanticipated bypasses), the owner or operator shall obtain written permission from the department prior to any discharge of sewage or wastes from a waste disposal system not authorized by a discharge permit. The Director may approve an anticipated bypass after considering its adverse effects if the Director determines that it will meet the conditions in 63.6(1).

- a. The request for a bypass shall be submitted to the appropriate regional field office of the department at least two weeks prior to the expected date of the event.
- b. The request shall be submitted in writing and shall include all of the following:
  - (1) The reason for the bypass;
  - (2) The date and time the bypass will begin;
  - (3) The expected duration of the bypass;
  - (4) An estimate of the amount of untreated or partially treated sewage or wastewater that will be discharged;
  - (5) The location of the bypass;
  - (6) The name of any body of surface water that will be affected by the bypass; and
  - (7) Any actions the owner or operator proposes to take to mitigate the affects of the bypass upon the receiving stream or other surface water.
- c. The owner or operator shall provide any additional information requested by the department.

**63.6(3) Notification of unanticipated bypass, SSO, or upset and public notices.** In the event that a bypass, SSO, or upset occurs without prior notice having been provided pursuant to 63.6(2) or as a result of mechanical failure or acts beyond the control of the owner or operator (other than rain or precipitation), said owner or operator shall notify the department by telephone as soon as possible but not later than twelve (12) hours after the onset or discovery.

- a. Notification shall be made by contacting the appropriate field office during normal business hours (8 a.m. to 4:30 p.m.) or by calling the department at (515) 281-8694 after normal business hours.
- b. Notification by voicemail is not acceptable; every attempt should be made to speak directly to department staff.
- c. Notification shall include information on as many items listed in subparagraph "e" (1) through (6) below as available information will allow.
- d. When the department has been notified of an unanticipated bypass or SSO, the department shall determine if a public notice is necessary. If the department determines that public notification is necessary, the owner or operator of the treatment facility or the collection system shall prepare a public notice.
- e. Bypasses and SSOs other than those described in this rule shall be reported with the monthly operation report, as a separate attachment, that includes:
  - (1) The reason for the bypass or SSO, including the amount and duration of any rainfall event that may have contributed to the bypass or SSO;
  - (2) The date and time of onset or discovery of the bypass or SSO;
  - (3) The duration of the bypass or SSO;
  - (4) An estimate of the amount of untreated or partially treated sewage or wastewater that was discharged;

- (5) The location of the bypass or SSO; and
- (6) The name of any body of surface water that was affected by the bypass or SSO.

**63.6(4) *Monitoring, disinfection, and cleanup.*** The owner or operator of the treatment facility or collection system shall perform any additional monitoring, sampling, or analysis requested by the regional field office of the department and shall comply with the instructions of the department intended to minimize the effect of a bypass, SSO, or upset on the receiving water of the state. The following requirements for disinfection and cleanup apply to all bypasses and SSOs:

- a. The department may require temporary disinfection depending on the volume and duration of the bypass or SSO, the classification of the stream affected by the bypass or SSO, and the time of year during which the bypass or SSO occurs; and
- b. The department may require cleanup of any debris and waste materials deposited in the area affected by the bypass or SSO. In conjunction with the cleanup, the department may require lime application to the ground surface or disinfection of the area with chlorine solution.

**63.6(5) *Reporting of subsequent findings and additional information requested by the department.*** All subsequent findings and laboratory results concerning a bypass or SSO shall be reported and submitted in writing to the appropriate regional field office of the department as soon as they become available. Any additional information concerning a bypass or SSO requested by the department shall be submitted within 30 days of the request.

**63.6(6) *Upset.*** An upset is an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

- a. An upset constitutes an affirmative defense to the assessment of a civil penalty for noncompliance with technology based effluent limitations if the requirements of paragraph “b” of this rule are met.
- b. A permittee who wishes to establish an affirmative defense of upset shall demonstrate, through properly signed operation logs or other relevant evidence, that:
  - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
  - (2) The permitted facility was at the time being properly operated;
  - (3) The permittee submitted notice of upset in accordance with 63.6(3); and
  - (4) The permittee completed any remedial measures required by the department; including but not limited to monitoring, sampling, or analysis requested by the department and any instructions from the department calculated to minimize the effect of the upset on the receiving water of the state.
- c. In any enforcement action proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

**ITEM 6.** Add language to 63.7

**567—63.7(455B) Submission of records of operation.** Except as provided in subrule 63.3(4) and 63.5(1), records ~~Records~~ of operation shall be submitted to the appropriate regional field office of the department within 15 days following the close of the reporting period specified in 63.8(455B) and in accordance with monitoring requirements derived from this chapter and incorporated in the operation permit. The permittee shall report all instances of noncompliance not reported under 63.12 at the time monitoring reports are submitted. If a permittee becomes aware that it failed to submit any relevant facts in any report to the director, it shall promptly submit such facts or information.

**ITEM 7.** Correct rule reference in 63.8.

**567—63.8(455B) Frequency of submitting records of operation.** Except as provided in subrule 63.4(2) 63.3(4) and 63.5(1), records of operation required by these rules shall be submitted at monthly intervals. The department may vary the interval at which records of operation shall be submitted in certain cases. Variation from the monthly interval shall be made only under such conditions as the department may prescribe in writing to the person concerned.

**ITEM 8.** Add sentence to 63.11.

**567—63.11(455B) Certification and signatory requirements in the submission of records of operation.** All records of operation as required by these rules shall include certification which attests that all information contained therein is representative and accurate. Each record of operation shall contain the signature of a duly authorized representative of the corporation, partnership or sole proprietorship, municipality, or public facility which has proprietorship of the wastewater treatment or disposal system as specified in 567-64.3(8). For electronic submissions of records of operation, a signed copy of the record that was submitted electronically must be maintained at the facility for a minimum of three years.

**ITEM 9.** Add new rules 63.12 and 63.13(455B).

**567—63.12(455B) Twenty-four hour reporting.** All permittees shall report any permit noncompliance that may endanger human health or the environment, including, but not limited to, violations of maximum daily limits for any toxic pollutant (listed as toxic under 307(a)(1) of the Act) or hazardous substance (as designated in 40 CFR Part 116 pursuant to 311 of the Act) . Information shall be provided orally to the appropriate regional field office of the department within 24 hours from the time the permittee becomes aware of the circumstances. In addition, a written submission that includes a description of noncompliance and its cause; the period of noncompliance including exact dates and times; whether the noncompliance has been corrected or the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent a reoccurrence of the noncompliance must be provided to the regional field office within 5 days of the occurrence.

**567—63.13(455B) Planned changes.** The permittee shall give notice to the appropriate regional field office of the department as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

- a. Notice has not been given to any other section of the department;
- b. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as defined in 567 – Chapter 60.2;
- c. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices; or
- d. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in the permit.

**ITEM 10.** Remove Table I from Chapter 63 and replace with the following Table I.

**Table I Minimum Self-Monitoring in Permits for Organic Waste Discharge  
Controlled Discharge Wastewater Treatment Plants**

| Wastewater Parameter                      | Sampling <sup>5</sup> Location | Sample Type <sup>4</sup> | Frequency by P.E. <sup>1,6</sup>   |                                    |            |            |
|---|--------------------------------|--------------------------|------------------------------------|------------------------------------|------------|------------|
|   |                                |                          | <100                               | 101 - 500                          | 501-1,000  | > 1,001    |
| Flow <sup>2</sup>                         | Raw                            | 24-Hr Total              | 2/ Week                            | Daily                              | Daily      | Daily      |
|   | Final                          | Instantaneous            | Daily During Periods of Discharge  |                                    |            |            |
| BOD <sub>5</sub>                          | Raw                            | 24-Hr Composite          | -                                  | -                                  | -          | 1/3 Months |
| CBOD <sub>5</sub> <sup>3</sup>            | Final                          | Grab                     | Twice during drawdown <sup>5</sup> |                                    |            |            |
| Total Suspended Solids (TSS) <sup>3</sup> | Raw                            | 24-Hr Composite          | -                                  | -                                  | -          | 1/3 Months |
|   | Final                          | Grab                     | Twice during drawdown <sup>5</sup> |                                    |            |            |
| Ammonia Nitrogen                          | Final                          | Grab                     | 1/Month                            | Twice during drawdown <sup>5</sup> |            |            |
| Total Nitrogen <sup>7</sup>               | Final                          | Grab                     | 1/Month                            | 1/Month                            | 1/Month    | 1/Month    |
| Total Phosphorous                         | Final                          | Grab                     | 1/Month                            | 1/Month                            | 1/Month    | 1/Month    |
| E.coli                                    | Final                          | Grab                     | 1/Month                            | 1/ 2 Weeks                         | 1/ 2 Weeks | 1/ 2 Weeks |
| pH  | Raw                            | Grab                     | -                                  | -                                  | -          | 1/3 Months |
|   | Final                          | Grab                     | 1/Month                            | 1/2 Weeks                          | 1/ Week    | 1/ Week    |

Explanation of Superscripts

- 1- The P.E. shall be computed on the basis of the original engineering design criteria for the facility, and any modifications thereof. Where such design criteria are not available, the P.E. shall be computed using 0.167 pounds of BOD per capita per day.
- 2- Facilities serving a population equivalent less than 100 are not required to provide continuous flow measurement but are required to provide manual flow measurement at the specified frequency. Facilities serving a population equivalent greater than 100 are required to provide continuous flow measurement of the raw waste but need only provide manual flow measurement on the final effluent. Acceptable flow measurement and recording techniques shall be those described in the "Iowa Wastewater Facilities Design Standards," Chapter 14 (14.7.2).
- 3- In addition to the sampling required above, a grab sample of the lagoon cell contents collected at a point near the outlet structure shall be analyzed at least two weeks prior to an anticipated discharge to demonstrate that the wastewater is of such quality to meet the effluent limitations in the permit. The permittee must have the sample analyzed for 5-day carbonaceous biochemical oxygen demand (CBOD5) and total suspended solids (TSS). The results must be compared with the 30-day average effluent limits. If the results are less than the 30-day average limits, the permittee may isolate the final cell and draw down the lagoon cell. If the pre-discharge sample results exceed the 30-day average effluent limits for either CBOD5 or TSS, the permittee must contact the local DNR Field Office for guidance before beginning to discharge.
- 4- Sample types are defined as:  
 "Grab Sample" means a representative, discrete, portion of sewage, industrial waste, other waste, surface water or groundwater taken without regard to flow rate.  
 "24-Hour Composite" means:
  - a. For facilities where no significant industrial waste is present, a sample made by collecting a minimum of six grab samples taken four hours apart and combined in proportion to the flow rate at the time each grab sample was collected. (Generally, grab samples should be collected at 8 a.m., 12 a.m. (noon), 4 p.m., 8 p.m., 12 p.m. (midnight), and 4 a.m. on weekdays (Monday through Friday) unless local conditions indicate another more appropriate time for sample collection).
  - b. For facilities where significant industrial waste is present, a sample made by collecting a minimum of 12 grab samples taken two hours apart and combined in proportion to flow rate at the time each grab sample was collected. (Generally, grab samples should be collected at 8 a.m., 10 a.m., 12 a.m. (noon), 2 p.m., 4 p.m., 6 p.m., 8 p.m., 10 p.m., 12 p.m. (midnight), 2 a.m., 4 a.m., and 6 a.m. on weekdays (Monday through Friday) unless local conditions indicate another more appropriate time for sample collection).

- c. An automatic composite sampling device may also be used for collection of flow proportioned or time proportioned composite samples.
- 5- Raw wastewater samples shall be taken continuously (year-round) at the specified frequency. Final effluent wastewater samples shall be taken only during the drawdown period. The first final effluent sample shall be taken the third day after the drawdown begins, and subsequent samples shall be taken at the specified frequencies. For final effluent samples that are required to be taken twice during drawdown, the first sample shall be taken the third day after the drawdown begins and the second sample shall be taken between three (3) and five (5) days before the drawdown ends.
- 6- If a facility has a P.E. greater than 3000 or a significant industrial contributor, additional monitoring may be required.
- 7- Total nitrogen shall be determined by testing for Total Kjeldahl Nitrogen (TKN) and nitrate + nitrite nitrogen, and reporting the sum of the TKN and nitrate + nitrite results (nitrate + nitrite can be analyzed together or separately).

**ITEM 11.** Remove Table II, Minimum Self-Monitoring in Permits for Organic Waste Discharges Continuous Discharge Wastewater Treatment Plants, from Chapter 63 and replace with the following Tables II and III, and renumber subsequent tables.

Table II Minimum Self-Monitoring in Permits for Organic Waste Dischargers  
Suspended Growth Wastewater Treatment Plants\*

| Wastewater Parameter         | Sampling Location | Sample Type <sup>3</sup> | Frequency by P.E. <sup>1,6</sup> |                       |                       |                       |                       |                        |                       |
|------------------------------|-------------------|--------------------------|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|-----------------------|
|                              |                   |                          | ≤100                             | 101 - 500             | 501-1,000             | 1,001-3,000           | 3,001-15,000          | 15,001 – 105,000       | > 105,000             |
| Flow <sup>2</sup>            | Raw or Final      | 24-Hr Total              | 2/ Week                          | Daily                 | Daily                 | Daily                 | Daily                 | Daily                  | Daily                 |
| BOD <sub>5</sub>             | Raw               | 24-Hr Comp.              | 1/ 6 Months                      | 1/3 Months            | 1/ Week               | 1/ Week               | 2/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
| CBOD <sub>5</sub>            | Final             | 24-Hr Comp.              | 1/ Month                         | 1/2 Weeks             | 1/ Week               | 1/ Week               | 2/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
| Total Suspended Solids (TSS) | Raw               | 24-Hr Comp.              | 1/ 6 Months                      | 1/3 Months            | 1/2 Weeks             | 1/ Week               | 2/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
|                              | Final             | 24-Hr Comp.              | 1/ Month                         | 1/2 Weeks             | 1/2 Weeks             | 1/ Week               | 2/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
| Ammonia Nitrogen             | Final             | 24-Hr Comp.              | 1/ Month                         | 1/2 Weeks             | 1/ Week               | 1/ Week               | 2/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
| TKN <sup>8</sup>             | Raw               | 24-Hr Comp.              | -                                | -                     | -                     | 1/ Month              | 1/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
| Total Nitrogen <sup>9</sup>  | Final             | 24-Hr Comp.              | 1/ 6 Months                      | 1/3 Months            | 1/3 Months            | 1/2 Months            | 1/2 Months            | 1/ Month               | 1/ Month              |
| Total Phosphorus             | Final             | 24-Hr Comp.              | 1/ 6 Months                      | 1/3 Months            | 1/3 Months            | 1/2 Months            | 1/2 Months            | 1/ Month               | 1/ Month              |
| pH                           | Raw               | Grab                     | -                                | -                     | 1/ Week               | 1/ Week               | 2/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
|                              | Final             | Grab                     | 1/ Month                         | 1/2 Weeks             | 1/ Week               | 1/ Week               | 2/ Week               | 5/ Week                | Daily                 |
| E.coli <sup>4, 7</sup>       | Final             | Grab                     | 5 samples, 1/3 Months            | 5 samples, 1/3 Months | 5 samples, 1/3 Months | 5 samples, 1/3 Months | 5 samples, 1/3 Months | 5 samples, 1/3 Months  | 5 samples, 1/3 Months |
| Temperature                  | Raw               | Grab                     | -                                | -                     | 1/ Week               | 1/ Week               | 2/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
|                              | Final             | Grab                     | 1/ Month                         | 1/2 Weeks             | 1/ Week               | 1/ Week               | 2/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |

#### Explanation of Superscripts

\*- Suspended growth wastewater treatment plants include, but are not limited to, activated sludge, sequencing batch reactor, and oxidation ditch facilities.

1- See Footnote #1, Table I.

2- See Footnote #2, Table I. Both raw and final flow monitoring may be required if the facility has a storm water equalization basin or splits the raw wastewater flows.

3- See Footnote #4, Table I.

- 4- Analysis is required only when the facility discharges directly to a stream designated as Class A1, A2, or A3 or there is a reasonable potential for the discharge to affect a stream designated as Class A1, A2, or A3.
- 5- The frequency of sample collection and analysis shall be increased by 1/week according to the following: 15,001 to 30,000 – 2/week, 30,001 to 45,000 – 3/week, 45,001 to 75,000 – 4/week, 75,001 – 105,000 – 5/week.
- 6- The requirements for industrial contributors shall be that specified for final effluent monitoring.
- 7- Bacteria Monitoring. All facilities must collect and analyze a minimum of five *e.coli* samples in one calendar month during each three-month period (quarter) during the appropriate recreation season associated with the receiving stream designation as specified in IAC 61.3(3). For sampling required during the recreational season, March 15 to November 15, the three-month periods are March – May, June – August, and September – November. For year-round sampling, the three-month periods are January – March, April – June, July – September, and October - December. For each three-month period, the operator must take five samples during one calendar month, resulting in 15 samples in one year for sampling required during the recreation season, and 20 samples per year for sampling required year-round.

The following requirements apply to the individual samples collected in one calendar month:

- a. Samples must be spaced over one calendar month.
- b. No more than one sample can be collected on any one day.
- c. There must be a minimum of two days between each sample.
- d. No more than two samples may be collected in a period of seven consecutive days.

The geometric mean must be calculated using all valid sample results collected during a month. The geometric mean formula is as follows: Geometric Mean = (Sample one \* Sample two \* Sample three \* Sample four \* Sample five...Sample N)<sup>(1/N)</sup>, which is the N<sup>th</sup> root of the result of the multiplication of all of the sample results where N = the number of samples. If a sample result is a less than value, the value reported by the lab without the less than sign should be used in the geometric mean calculation.

- 8- Additional Total Kjeldahl Nitrogen (TKN) monitoring may be required if the facility has one or more significant industrial contributors or has effluent ammonia violations.
- 9- See Footnote #7, Table I.

Table III Minimum Self-Monitoring in Permits for Organic Waste Discharge  
Fixed Film and Aerated Lagoon Wastewater Treatment Plants \*

| Wastewater Parameter         | Sampling Location | Sample Type <sup>3,10</sup> | Frequency by P.E. <sup>1,6</sup> |                       |                       |                       |                       |                        |                       |
|------------------------------|-------------------|-----------------------------|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------|-----------------------|
|                              |                   |                             | ≤100                             | 101 - 500             | 501-1,000             | 1,001-3,000           | 3,001-15,000          | 15,001 – 105,000       | > 105,000             |
| Flow <sup>2</sup>            | Raw or Final      | 24-Hr Total                 | 2/ Week                          | Daily                 | Daily                 | Daily                 | Daily                 | Daily                  | Daily                 |
| BOD <sub>5</sub>             | Raw               | 24-Hr Comp.                 | 1/ 6 Months                      | 1/3 Months            | 1/ Week               | 1/ Week               | 2/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
| CBOD <sub>5</sub>            | Final             | 24-Hr Comp.                 | 1/ Month                         | 1/ Month              | 1/ Week               | 1/ Week               | 2/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
| Total Suspended Solids (TSS) | Raw               | 24-Hr Comp.                 | 1/ 6 Months                      | 1/3 Months            | 1/ Month              | 1/2 Weeks             | 1/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
|                              | Final             | 24-Hr Comp.                 | 1/ Month                         | 1/ Month              | 1/ Month              | 1/2 Weeks             | 1/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
| Ammonia Nitrogen             | Final             | 24-Hr Comp.                 | 1/ Month                         | 1/ Month              | 1/ Week               | 1/ Week               | 2/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
| TKN <sup>8</sup>             | Raw               | 24-Hr Comp.                 | -                                | -                     | -                     | 1/ Month              | 1/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
| Total Nitrogen <sup>9</sup>  | Final             | 24-Hr Comp.                 | 1/ 6 Months                      | 1/3 Months            | 1/3 Months            | 1/2 Months            | 1/2 Months            | 1/ Month               | 1/ Month              |
| Total Phosphorus             | Final             | 24-Hr Comp.                 | 1/ 6 Months                      | 1/3 Months            | 1/3 Months            | 1/2 Months            | 1/2 Months            | 1/ Month               | 1/ Month              |
| pH                           | Raw               | Grab                        | -                                | -                     | 1/ Week               | 1/ Week               | 2/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
|                              | Final             | Grab                        | 1/ Month                         | 1/ Month              | 1/ Week               | 1/ Week               | 2/ Week               | 5/ Week                | Daily                 |
| E.coli <sup>4, 7</sup>       | Final             | Grab                        | 5 samples, 1/3 Months            | 5 samples, 1/3 Months | 5 samples, 1/3 Months | 5 samples, 1/3 Months | 5 samples, 1/3 Months | 5 samples, 1/3 Months  | 5 samples, 1/3 Months |
| Temperature                  | Raw               | Grab                        | -                                | -                     | 1/ Week               | 1/ Week               | 2/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |
|                              | Final             | Grab                        | 1/ Month                         | 1/ Month              | 1/ Week               | 1/ Week               | 2/ Week               | 2-5/ Week <sup>5</sup> | Daily                 |

Explanation of Superscripts

- \*- Fixed film wastewater treatment plants include, but are not limited to, trickling filter, sand filter, and media filter facilities.
- 1- See Footnote #1, Table I.
- 2- See Footnote #2, Table I.
- 3- See Footnote #4, Table I.
- 4- See Footnote #4, Table II.
- 5- See Footnote #5, Table II.
- 6- See Footnote #6, Table II.
- 7- See Footnote #7, Table II.
- 8- See Footnote #8, Table II.
- 9- See Footnote #7, Table I
- 10- For aerated lagoons, 24-hour composite samples are not required on the final effluent, grab samples are acceptable.

**ITEM 12.** Insert the following sections into Table in Chapter 63 titled Operational Monitoring Requirements (table was previously number III, but will be renumbered as IV), and change the superscripts for this table as noted.

Table IV Operational Monitoring Requirements in Permits

SEQUENCING BATCH REACTORS

|                               |                                |                          |                |                |                |                |                |                |                |
|-------------------------------|--------------------------------|--------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <u>Total Suspended Solids</u> | <u>Aeration Basin Effluent</u> | <u>Grab</u> <sup>3</sup> | <u>1/ Week</u> | <u>1/ Week</u> | <u>2/ Week</u> | <u>2/ Week</u> | <u>3/ Week</u> | <u>5/ Week</u> | <u>7/ Week</u> |
|-------------------------------|--------------------------------|--------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|

CLARIFIERS

|                          |                                       |             |                |                |                |                |                |                |                |
|--------------------------|---------------------------------------|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <u>Settleable Solids</u> | <u>Effluent after final clarifier</u> | <u>Grab</u> | <u>1/ Week</u> | <u>1/ Week</u> | <u>2/ Week</u> | <u>2/ Week</u> | <u>3/ Week</u> | <u>5/ Week</u> | <u>7/ Week</u> |
|--------------------------|---------------------------------------|-------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|

Explanation of Superscripts

- 1 - See Footnote #1, Table I.
- 2 - Alternative test methods for operational monitoring:
  - Dissolved Oxygen - Pao Titration
  - MLSS - Spectrophotometric, Centrifuge
  - pH - Colorimetric Comparator, Meter
  - 30-Minute Settleability - Standard Methods Test 213C
  - Alkalinity - Standard Methods Test 403
  - Volatile Acids - Standard Methods Test 504A
  - Residual Chlorine - Colorimetric Comparator, Meter
- 3 - The grab sample of the aeration basin effluent for TSS should be taken at the point of maximum effluent turbidity.

**ITEM 13.** Delete Table V, Minimum Self-Monitoring in Permits for Inorganic Waste Discharges, from Chapter 63.

**ITEM 14.** Add the following line to Table VI, Required Containers, Preservation Techniques, and Holding Times, in Chapter 63, and renumber subsequent tests appropriately.

Table VI Required Containers, Preservation Techniques, and Holding Times

|    |                                   |     |   |         |
|----|-----------------------------------|-----|---|---------|
| 2. | <i>Escherichia coli (E. coli)</i> | P,G | Cool, 4°C   | 6 hours |
|    |                                   |     | <u>0.008% Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub></u> <sup>4</sup> |         |