



RICK SNYDER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
GRAND RAPIDS DISTRICT OFFICE



C. HEIDI GRETHOR  
DIRECTOR

August 9, 2018

Mr. Darwin Watson  
City of Benton Harbor  
200 Wall Street  
Benton Harbor, Michigan 49022

WSSN: 00600

Dear Mr. Watson:

SUBJECT: Enhanced Coagulation Step 2 Alternative Minimum Removal Request, Treatment Technique Violation for TOC Removal

The City of Benton Harbor (City) recently submitted information related to Step 2 jar testing, to study the removal of Total Organic Carbon (TOC), as required by the Safe Drinking Water Act 1976 PA 399, as amended (Act 399); Rule 610c(2)(c). This requirement was triggered by non-compliance in the first quarter of 2018 (1Q2018), when alternative compliance criteria were no longer met, and Step 1 removal calculations were also not met. The Department of Environmental Quality (DEQ), Drinking Water and Municipal Assistance Division (DWMAD), agrees with the conclusion of the submittal from the City: **the results are inconclusive and cannot be used to support a request for an alternative minimum TOC removal requirement.** Please refer to the attached review checklist for more information.

Compliance with enhanced coagulation requirements is an important step in the effort to minimize the potential formation of disinfection byproducts, which are known carcinogens that can form in the water system when chlorine reacts with organic matter in the source water. In an effort to assist in the City's compliance, we strongly encourage you do the following:

1. Construct a coagulant feed system to the existing rapid mix that is not being used. This will likely result in better pretreatment and higher organic removal efficiency.
2. Closely follow the EPA's Guidance Manual for future jar tests (see below).
3. Collect monthly samples for Specific Ultraviolet Absorption (SUVA). This is an excellent indicator of humic organics as well as a potential alternative compliance criteria. *Contact our office prior to selecting a laboratory for SUVA testing.*

#### 2Q2018 Compliance

Based on the attached compliance spreadsheet, **the City remains in violation of Act 399 rule 610c and the Enhanced Coagulation requirements for 2Q2018.** The running annual average removal ratio is calculated to be 0.44, and the City does not meet any alternative compliance criteria. It is important to note, the samples not meeting thermal preservation requirements cannot be accepted for compliance, yet are included to show there may be a decreasing trend in the source water.

To return to compliance for the treatment technique violation, you must complete the following steps.

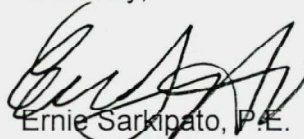
- Perform jar or pilot-scale testing to set an alternative TOC removal requirement, and report the results to the DEQ within three months from the date of noncompliance, by **October 1, 2018**.
- If the DEQ approves an alternative percent TOC removal requirement;
  - Submit a new monitoring plan to the DEQ.
  - Continue to collect samples on a monthly basis.
  - Perform jar testing at least once per quarter for one year (from date of approval) to examine seasonal changes in treatability.
  - This alternative TOC removal requirement will remain in effect until the DEQ approves a new value based on the results of new bench tests.

Compliance may also be achieved by complying with one of the alternative compliance criteria listed in the rule or by increasing removal of TOC and meeting the required removal ratio.

Administrative rule R 325.10403 requires that suppliers provide public notice not later than 30 days after learning of the violation by mail or direct delivery, and by any other means reasonably calculated to reach other persons regularly served by the system. Enclosed is a sample public notice. Please notify your consumers by **September 10, 2018**, and send this office a signed and dated copy of the notice that was issued within 10 days of distributing the public notice. This notice must be reissued every three months for the duration of the violation. Please note failure to issue the public notice for this violation within 30 days will result in a fine of at least \$400 per day of the violation up to a maximum of \$800. Additional violations are subject to fines of increasing amounts. This violation must also be included in your Consumer Confidence Reports (CCRs) due by July 1, 2019.

If you have any questions regarding this Violation Notice, please contact feel free to call the number below at your earliest convenience.

Sincerely,



Ernie Sarkipato, P.E.  
Surface Water Treatment Specialist  
Grand Rapids District Office  
Drinking Water and Municipal Assistance Division  
616-307-0261

ES:kw

Enclosure

cc: Mr. Mike O'Malley, Water Superintendent, City of Benton Harbor  
Mr. Jon Bloemker, DEQ, Engineering Unit Supervisor (via email)