

## **THIS POLICY DOES NOT HAVE THE FORCE OF LAW**

### **Iron and Manganese Monitoring Policy**

Division: DDAGW  
Number: WQ-02-002  
Category: Water Quality – Policy  
Status: Final  
Issued: June 11, 2004

#### **I. PURPOSE:**

The purpose of this policy is to assure consistent application of the iron (Fe) and manganese (Mn) monitoring requirements for public water systems throughout the state, providing the operators of these systems with immediate and therefore more useful results of the level of these secondary contaminants, and allowing a cost savings for the public water systems due to reduced laboratory costs.

#### **II. BACKGROUND:**

Pursuant to rule 3745-82-03 of the Administrative Code public water systems (PWSs) are required to monitor for Fe and Mn as directed by the Director of Ohio EPA. This direction is provided by EPA form 5003 (Minimum Required Chemical Analysis of Water for Community and Major Noncommunity Water Systems). Community and major noncommunity PWSs that have Fe and Mn removal treatment are required to monitor for Fe and Mn weekly, except that noncommunity PWSs with a population of less than 1,000 people are not required to monitor for Fe and Mn.

Rule 3745-89-02 of the Administrative Code requires that analyses for compliance monitoring of Fe and Mn are to be performed by a certified laboratory. The analytical results should then be reported on monthly operating report (MOR) Form 5002 (Plant - Distribution Monthly Operating Report). Certified laboratories have up to three weeks to report monitoring results. Actual application of these monitoring requirements varies between Ohio EPA district offices due in part to population cut-off guidelines.

Ohio EPA completed field tests for iron using split sample monitoring that compared results obtained by test kits with results obtained by certified laboratories, in support of this policy.

#### **III. POLICY:**

A. A public water system may reduce the frequency of certified laboratory analyses for Fe and Mn to no less than once each month provided paragraphs 1 through 3 below are met:

1. The public water system monitors daily for Fe and Mn using an in-house test kit at the plant tap. The test kit must have a minimum detection level of 0.2 mg/L for Fe and 0.02 mg/L for Mn.
2. The public water system has one split sample analyzed monthly by an in-house

test kit and by a certified laboratory. The deviation between results shall be no greater than 0.2 mg/L for Fe and 0.04 mg/L for Mn. If the split sample results for either Fe or Mn vary by more than 0.2 mg/L for Fe and 0.04 mg/L for Mn, the public water system shall resume weekly monitoring using a certified laboratory. A public water system may return to a reduced frequency of certified laboratory analyses for Fe and Mn once the deviation between split sample results is within the accepted limits specified in this paragraph.

3. The public water system records all daily and monthly sample results on a monthly operating report.

B. This option applies to all community PWSs and major noncommunity PWSs (a population of greater than or equal to 1000 people) that have Fe and Mn removal equipment. This includes ion exchange softening if Fe and Mn sampling is specifically required as a condition of plan approval.

C. A community PWS with a population of less than 250 is eligible to monitor with one sample per month analyzed by a certified lab without monitoring daily using an in-house test kit.

#### **IV. PROCEDURE:**

A. Public water system monitoring and reporting for Fe and Mn:

1. The PWS enters the daily Fe and Mn levels in the appropriate columns on the MOR.

2. The public water system enters both split sample results from a test kit and a certified laboratory on the same line of the MOR and circles the certified laboratory sample result. All certified lab results must be circled.

3. Within 72 hours of notification of a split sample result that deviates from the specified acceptable limits for Fe and Mn, the public water system resumes weekly monitoring with samples analyzed at a certified laboratory.

4. The public water system continues weekly split sampling until the deviation between the split sample results from an in-house test kit and a certified laboratory is within acceptable limits.

B. Ohio EPA's response to deviations:

1. The appropriate Ohio EPA district office will send a letter to a PWS when a split sample result deviates from the acceptable limits specified by section III, paragraph (A) (2) of this guidance. The letter will describe the deviation and explain that weekly split sampling must continue until a split sample result with an in-house test kit reads within acceptable limits.

## **V. HISTORY:**

The Division of Drinking and Ground Waters initially issued this document as a guidance on July 1, 1997. It was reviewed on June 25, 2002 and reissued as a policy on June 11, 2004.