

Issued: July 10, 2009  
Supercedes All Previous Issues  
Based on OAC 3745-83-01 effective 10/1/2006  
Based on OAC 3745-81-23 effective 08/1/2005  
Based on OAC 3745-81-70 effective 01/01/2004

INSTRUCTIONS FOR COMPLETING THE "WATER PLANT / DISTRIBUTION SYSTEM"  
MONTHLY OPERATING REPORT  
EPA FORM 5002

GENERAL

Ohio Administrative Code (OAC), section 3745-83-01 (G), requires the following types of public water systems (PWS) to perform operational analyses:

- Community PWS's
- Non-Transient PWS's (that provide treatment)
- Transient PWS's that serve at least 1,000 people

The specific operational monitoring that has to be performed is identified in OAC 3745-83-01 (G)(1) thru (G)(11). Public water systems that feed disinfectants are also required to monitor for inorganic disinfection byproducts and disinfection residuals per OAC 3745-81-23 (L) and (M) and 3745-81-70 (E)(1) and (F).

The monitoring requirements referenced above are summarized on two sheets which are entitled: "Minimum Required Operational Analysis for Community, Non-Transient and Transient (serving  $\geq$  1,000 people) Public Water Systems as required by Ohio Administrative Code 3745-83-01 (G)" and "Inorganic Disinfection Byproducts and Disinfectant Residuals Monitoring required by Ohio Administrative Code 3745-81-23 and 3745-81-70."

Analyses beyond those identified on the two sheets mentioned above may be necessary for good operational control.

All analyses are to be performed by Ohio EPA certified analysts in Ohio EPA approved labs. However public water systems performing only chlorine residual and/or iron/manganese\* do not need to utilize certified analysts so long as an acceptable test kit is used (OAC 3745-81-27 (C)(1)(a) defines the criteria for a chlorine test kit; OAC 3745-83-01 (G)(9)(b)(i); (G)(10)(b)(i) defines the criteria for an iron/manganese test kit). Chlorine test kits are to be calibrated in accordance with the manufacture's recommendations or every three months, whichever is more frequent.

\*Iron/Manganese analysis with a test kit requires a monthly sample at an Ohio EPA certified lab, refer to item (r2) and (s2) in these instructions. Also refer to OAC 3745-83-01 (G)(9) and (G)(10).

OAC 3745-83-01 (I) requires those public water systems affected by the before mentioned rules to submit a report for each month of operation. Submission of Ohio EPA Form 5002 will satisfy this reporting requirement. The report is to be submitted to your local Ohio EPA District Office by the 10<sup>th</sup> day of the following month. Addresses of the District Offices are provided on the last page of these instructions.

## INSTRUCTIONS

### 1. Public Water System Information

- Print or type the PWS Name and the STU Name.
- Print or type the PWS ID # and the STU #.

### 2. Laboratory Information

- For the Reporting Period enter the Month and Year (i.e., July 2008)
- Enter the Analytical Lab ID number
  - if both a commercial lab and the WTP lab is utilized then identify the commercial lab number in the header and enter the WTP lab number (or additional commercial lab numbers) in the comment section.
  - if a chlorine test kit is being used and it is the only analysis being performed then provide the following notation: "NA"
  - if an iron/manganese test kit is being used then enter the ID number of the lab that performs the monthly Fe/Mn analysis.
- Enter the Analytical Lab Name
  - if both the WTP lab and an outside lab is utilized then identify the commercial lab name in the header and enter the WTP lab name (or additional commercial lab names) in the comment section.
  - if a chlorine test kit is being used and it is the only analysis being performed, then provide the following notation: "Test Kit"
  - if an iron/manganese test kit is being used then enter the name of the lab that performs the monthly Fe/Mn analysis

### 3. Analytical Information

- Any analytical results that are below the detection limit should be reported at the detection limit (<0.1 would be reported as 0.1).
  - Report the data to the accuracy requested in these instructions. If rounding is necessary then round up if the digit to be truncated is '5' or greater (for example, if the data is to be reported to one decimal place, 1.24 becomes 1.2; 1.25 becomes 1.3).
- (a) Plant Production
- Enter the day's quantity of water produced.
  - Report in millions of gallons per day -MGD (report in MGD even for low productions; a production of 1,500 gallons/day would be reported as 0.0015 MGD)
  - On days when no water is produced, report a zero.
  - Water systems which purchase water should report their daily water use if that information is available; otherwise, report an estimate of the daily water use based upon monthly or quarterly master readings.

- (b) Calculated Fluoride Dosage
- Reporting of the calculated fluoride dosage is not required by OAC 3745-83-01(G) however OAC 3745-82-03(C)(2) requires that this information be recorded daily (i.e., bench sheets have to be kept).
  - If reported then report the calculated fluoride level at the plant tap.
  - If reported then report to two decimal places.
- (c) Fluoride Raw
- Report the fluoride content of the water prior to the application of such.
  - Report to two decimal places.
  - If more than one sample is collected in any one day from the same source then report the average.
- (d) Fluoride Plant Tap
- Report the fluoride content of the water collected at the plant tap.
  - Report to two decimal places.
  - If more than one sample is collected in any one day then report the average. However, if any sample is outside of the 0.8 - 1.3 mg/L range then report these sample(s) in the comment section.
- (e) Fluoride Distribution
- Reporting of the fluoride level in the distribution system is not required by OAC 3745-83-01(G) however if it is reported on this MOR then utilize the following guidelines:
- Report to two decimal places.
  - If more than one sample is collected in any one day then report the highest.
- (f) Highest Fluoride Result of the Month
- Report the highest fluoride result collected at the plant tap.
  - Report to two decimal places.
- (g) Date of Highest Fluoride Result of the Month
- Report the date of the highest fluoride result collected at the plant tap.
- (h) Fluoride Compound Applied:
- Sodium Fluoride – NaF
  - Sodium Silicofluoride –  $\text{Na}_2\text{SiF}_6$
  - Sodium Hydrofluosilicic Acid -  $\text{H}_2\text{SiF}_6$
- (i) Fluoride Quality Control Check Sample Date
- Report the date on which the fluoride quality control check sample was performed.
- (j) Fluoride Quality Control Check Sample (P/F)
- Report the result of the fluoride quality control check sample as either Pass (P) or Fail (F).

Additional Fluoride Information:

*(excerpts from the Ohio EPA Fluoride Policy, WQ-11-001)*

For all public water systems that add fluoride, compliance with the primary MCL of 4.0 mg/L and the secondary MCL of 2.0 mg/L will be determined based on a running annual average of the daily plant tap results as reported on Ohio EPA form #5002, as specified in OAC 3745-81-23 (H)(2). If the monthly plant tap average exceeds either the primary or secondary fluoride MCLs, then the annual average will be calculated by adding together the current monthly plant tap average with the 11 previous monthly plant tap averages and dividing by 12. A public water system is out of compliance if this annual average exceeds either the primary or secondary MCLs.

*In accordance with OAC 3745-82-03 (C)(1)(c), public water systems that add fluoride shall maintain a range of 0.8 - 1.3 mg/L in the finished water (plant tap / entry point) and shall notify Ohio EPA within 48 hours of any instance in which the range is not maintained. A public water system will incur a violation if it has four or more days during a month in which the daily average (as reported in the 'plant tap' column on Ohio EPA form #5002) is outside the range.*

*In accordance with OAC 3745-82-03 (C)(3), public water systems that lose their capability to accurately determine the fluoride content of their finished water due to laboratory equipment failure or malfunction, shall cease feeding all fluoride compounds and notify the Ohio EPA within 48 hours with a tentative schedule for re-establishing laboratory capabilities.*

*In accordance with OAC 3745-82-03 (C)(4), public water systems that lose their capability to feed fluoride shall notify Ohio EPA within 48 hours and provide a tentative schedule for resumption of acceptable fluoridation.*

*In accordance with OAC 3745-82-03 (C)(2), public water systems that add supplemental fluoride shall keep a daily record of the amount of fluoride compound added, the quantity of water fluoridated, the calculated fluoride dosage, and the fluoride content of the water as delivered to their customers.*

*The theoretical fluoride level at the plant tap on any given day is equal to the calculated dosage plus the raw water concentration. The theoretical and actual plant tap fluoride concentrations should agree within 0.15 mg/L.*

*In the event of an overfeed (plant tap or a distribution sample > 1.3 mg/L), the following recommendations from the Center for Disease Control and Prevention and Ohio EPA should be used:*

<b>Fluoride Content (mg/L), as measured at the entry point (plant tap)*</b>	<b>Recommended Actions</b>
1.4 to 2.0	<ol style="list-style-type: none"> <li>1. Leave the fluoridation system on.</li> <li>2. Determine malfunction and repair.</li> <li>3. Notify supervisor and report the incident to the Ohio EPA and to the appropriate county health department</li> </ol>
2.1 to 4.0	<ol style="list-style-type: none"> <li>1. Determine malfunction and immediately try to repair.</li> <li>2. If the problem is not found and corrected quickly, turn off the fluoridation system.</li> <li>3. Notify supervisor and report the incident to the Ohio EPA and to the appropriate county health department.</li> <li>4. If fluoridation system was turned off then determine malfunction, repair and restart.</li> </ol>
4.1 to 10.0	<ol style="list-style-type: none"> <li>1. Determine malfunction and immediately try to repair.</li> <li>2. If the problem is not found and corrected quickly, turn off the fluoridation system.</li> <li>3. Notify supervisor and report the incident to the Ohio EPA and to the appropriate county health department.</li> <li>4. Take water samples at several points in the distribution system and test the fluoride content. Flush and retest if results are high.</li> <li>5. Determine malfunction and repair. Then, with supervisors permission and Ohio EPA's permission, restart the fluoridation system.</li> </ol>
10.1 or higher	<ol style="list-style-type: none"> <li>1. Turn off the fluoridation system immediately.</li> <li>2. Notify supervisor and report the incident to the Ohio EPA and to the appropriate county health department.</li> <li>3. Issue a no use advisory to the public.**</li> <li>4. Take water samples at several points in the distribution system and test the fluoride content. Flush and retest if results are high.</li> <li>5. Determine malfunction and repair. Then, with supervisors permission and Ohio EPA's permission, restart the fluoridation system.</li> <li>6. Notify the public once the problem has been fixed.</li> </ol>

*\*The data shall be rounded to one decimal place. Round up if the digit to be truncated is '5' or greater (for example, 0.74 becomes 0.7; 1.35 becomes 1.4).*

*\*\*Compliance with the fluoride MCL and SMCL is determined based on a running annual average of the daily plant tap results. Under most circumstances, one or two days of fluoride over the SMCL or MCL will not cause the annual average to exceed either standard, and does not pose an immediate or long term threat to public health. The no use advisory at 10.1 mg/L or higher is a precautionary measure recommended by the CDC for those rare overfeed events that result in fluoride concentrations greater than 10 mg/L.*

Formulae to determine fluoride dosage-

For Sodium Fluoride (NaF): 
$$\frac{\text{Gallons saturated solution} \times 0.018}{\text{MGD water treated}} = \text{mg/L fluoride}$$

For Sodium Silicofluoride ( $\text{Na}_2\text{SiF}_6$ ): 
$$\frac{\text{lbs. Na}_2\text{SiF}_6}{\text{MGD water treated} \times 13.95} = \text{mg/L fluoride}$$

For Hydrofluosilicic Acid ( $\text{H}_2\text{SiF}_6$ ): 
$$\frac{\text{lbs. H}_2\text{SiF}_6 \text{ used} \times \% \text{ H}_2\text{SiF}_6 \text{ (from supplier)}}{\text{MGD water treated} \times 10.56} = \text{mg/L fluoride}$$

(k) pH

Report pH if it is adjusted for an Ohio EPA approved corrosion control recommendation/study or if it is being adjusted for stability or if lime softening is performed.

- Report to one decimal place.
- If more than one sample is collected in any one day then report the average.

If pH is being reported in regard to an Ohio EPA approved corrosion control recommendation/study then report on either this form (#5002) or form #5108 as follows:

- Community and Non-Transient public water systems that serve less than 50,000 people and have to report pH per an Ohio EPA approved lead/copper corrosion control recommendation should utilize this MOR (form #5002) for this reporting requirement.
- Community public water systems that serve 50,000 people or more and have to report pH per an Ohio EPA Director's Letter for an approved lead/copper corrosion control recommendation/study should not utilize this MOR (form #5002) but instead report on Ohio EPA form #5108, Water Quality Parameter Monitoring Report, every six months.
- Community and Non-Transient public water systems that are collecting initial water quality parameters (pH, temperature, alkalinity, calcium and conductivity) in response to an exceedance of the lead and/or copper action levels should not utilize this MOR (form #5002) but instead report on Ohio EPA form #5108, Water Quality Parameter Monitoring Report.

(l) Alkalinity Phenol

- If more than one sample is collected in any one day then report the average.
- This monitoring is not required by OAC 3745-83-01(G)(7) but precipitative softening plants should report this information here or on bench sheets.

(m) Alkalinity Total

- If more than one sample is collected in any one day then report the average unless alkalinity stability is also performed in which case only the corresponding total alkalinity value should be reported.

(n) Alkalinity Stability

- Enter the result of the Calcium Carbonate Stability (Marble) Test or the calculated pH Saturation Value (to one decimal place) when using Langelier's Index for calcium carbonate stability.

(o) Hardness

- Report Total Hardness as  $\text{CaCO}_3$ .
- If more than one sample is collected in any one day then report the average.

(p) Phosphate as Total P

- Report phosphate if fed for other than corrosion control (i.e., sequestration).
- Report as phosphorus (P).
- Report to one decimal place.
- If more than one sample is collected in any one day then report the highest.

(q) Orthophosphate as PO<sub>4</sub>

- Report orthophosphate if it is fed for corrosion control pursuant to an Ohio EPA approved corrosion control recommendation/study. Report on either this form (#5002) or form #5108 as follows:

Community and Non-Transient public water systems that serve less than 50,000 people and have to report orthophosphate per an Ohio EPA approved lead/copper corrosion control recommendation should utilize this MOR (form #5002) for this reporting requirement

Community public water systems that serve 50,000 people or more and have to report orthophosphate per an Ohio EPA Director's Letter for an approved lead/copper corrosion control recommendation/study should **not** utilize this MOR (form #5002) but instead report on Ohio EPA form #5108, Water Quality Parameter Monitoring Report, every six months.

- Report as phosphate (PO<sub>4</sub>).
- Report to one decimal place.
- If more than one sample is collected in any one day then report the lowest value in this column. Additionally report the highest value in the 'comment' column with the following notation: "Orthophosphate at entry point (high value) = \_\_\_\_\_ mg/L".

NOTE: WQP compliance is defined in OAC 3745-81-82(G) which allows 9 excursions in a six month monitoring period. Any days in-between sampling events are considered as excursions

(r1) Iron

- Report to one decimal place (0.34 becomes 0.3, 0.35 becomes 0.4 which exceeds the SMCL).
- If more than one sample is collected in any one day then report the highest.

(s1) Manganese

- Report to two decimal places (0.054 becomes 0.05. 0.055 becomes 0.06 which exceeds the SMCL).
- If more than one sample is collected in any one day then report the highest.

(r2) Iron Quality Control Laboratory Check Sample

PWS's with treatment to reduce iron and which serve 250 or more people and that elect to perform a daily analysis with a test kit must utilize an OEPA approved lab once per month. Report the lab analysis and date. The difference between the lab analysis and the corresponding test kit analysis should be no greater than 0.2 mg/L. If it is greater than 0.2 mg/L then re-instate weekly monitoring at an Ohio EPA approved lab per OAC 3745-83-01 (G)(9)(b)(ii) within 72 hours.

(s2) Manganese Quality Control Laboratory Check Sample

PWS's with treatment to reduce manganese and which serve 250 or more people and that elect to perform a daily analysis with a test kit must utilize an OEPA approved lab once per month. Report the lab analysis and date. The difference between the lab analysis and the corresponding test kit analysis should be no greater than 0.04 mg/L. If it is greater than 0.04 mg/L then re-instate weekly monitoring at an Ohio EPA approved lab per OAC 3745-83-01 (G)(10)(b)(ii) within 72 hours.

(t) Copper

- Report to one decimal place.
- If more than one sample is collected on any one day then report the highest.

(u) Chlorine Dioxide

- Report the level of chlorine dioxide collected at the entrance to the distribution system daily.
- Report to at least one decimal place.
- If more than one sample is collected in any one day then report the highest.

If any routine daily sample, taken at the entrance to the distribution system, exceeds the MRDL of 0.8 mg/L then place an 'x' in the adjacent column and take a *follow-up* three sample set for chlorine dioxide in the distribution system on the following day (proceed to instruction (cc) (dd)).

An **acute** MRDL violation occurs when:

Any daily sample taken at the entrance to the distribution system exceeds the MRDL, and on the following day one or more of the three samples taken in the distribution system exceeds the MRDL, or

Failure to conduct the *follow-up* monitoring in the distribution system (three sample set).

The public water system shall take immediate corrective action to lower the level of chlorine dioxide below the MRDL and shall notify the public according to the procedures for acute health risks in rule 3745-81-32 of the OAC.

The public water system must notify its Ohio EPA District Office within 24 hours of determining it has an acute MRDL violation.

A **non-acute** MRDL violation occurs when:

Any two consecutive daily samples taken at the entrance to the distribution system exceed the MRDL but all distribution system samples are below the MRDL, or

Failure to monitor at the entrance to the distribution system the day following an exceedance of the chlorine dioxide MRDL.

The public water system shall take corrective action to lower the level of chlorine dioxide below the MRDL at the point of sampling and shall notify the public according to the

procedures for non-acute health risks in rule 3745-81-32 of the OAC.

(v) Chlorite

- Report the level of chlorite collected at the entrance to the distribution system daily.
- Report to one decimal place.
- If more than one sample is collected in any one day then report the highest.

If any routine daily sample, taken at the entrance to the distribution system, exceeds the chlorite maximum contaminant level (MCL) of 1.0 mg/L then place an 'x' in the adjacent column and take a *follow-up*, three sample set for chlorite in the distribution system on the following day [proceed to instruction (cc)(dd)].

Compliance with the MCL for chlorite shall be based on an arithmetic average of each three-sample set taken in the distribution system. If the arithmetic average of any three-sample set exceeds the MCL, the system is in violation of the MCL and must notify the public according to rule 3745-81-32 of the OAC

(w) Chlorine Residual - Free (plant tap or entry point)

- Report to one decimal place.
- If more than one sample is collected in any one day and -
  - If free chlorine is utilized in the distribution system, report the lowest results.
  - If chloramines are utilized in the distribution system, report the free chlorine residual that is associated (paired) with the lowest combined chlorine residual.

Non-community, ground water systems that utilize chlorine solely for the oxidation of iron, manganese, hydrogen sulfide or arsenic and are not required to maintain any chlorine residual in the distribution system, do not have to perform this monitoring.

(x) Chlorine Residual - Combined (plant tap or entry point)

- Report to one decimal place.
- If more than one sample is collected in any one day and -
  - If free chlorine is utilized in the distribution system, report the combined chlorine residual associated (paired) with the lowest free chlorine residual.
  - If chloramines are utilized in the distribution system, report the lowest result.

Non-community, ground water systems that utilize chlorine solely for the oxidation of iron, manganese, hydrogen sulfide or arsenic and are not required to maintain any chlorine residual in the distribution system, do not have to perform this monitoring.

(y) Chlorine Residual - Free (distribution system)

- Report to one decimal place.
- If more than one sample is collected in any one day and -
  - If free chlorine is utilized in the distribution system, report the lowest results.
  - If chloramines are utilized in the distribution system, report the free chlorine residual that is associated (paired) with the lowest combined chlorine residual.

Note: Total chlorine residual analysis is to be performed at the time that total coliform distribution samples are collected per OAC 3745-81-70 (E). If the free chlorine residual analysis was performed and the combined chlorine calculated, this data should be considered when reporting the minimum level for the day.

Non-community, ground water systems that utilize chlorine solely for the oxidation of iron, manganese, hydrogen sulfide or arsenic and are not required to maintain any chlorine residual in the distribution system, do not have to perform this monitoring.

(z) Chlorine Residual - Combined (distribution system)

- Report to one decimal place.
- If more than one sample is collected in any one day and -
  - If free chlorine is utilized in the distribution system, report the combined chlorine residual associated (paired) with the lowest free chlorine residual.
  - If chloramines are utilized in the distribution system, report the lowest result.

Note: Total chlorine residual analysis is to be performed at the time that total coliform distribution samples are collected per OAC 3745-81-70 (E). If the free chlorine residual analysis was performed and the combined chlorine calculated, this data should be considered when reporting the minimum level for the day.

Non-community, ground water systems that utilize chlorine solely for the oxidation of iron, manganese, hydrogen sulfide or arsenic and are not required to maintain any chlorine residual in the distribution system, do not have to perform this monitoring.

(aa) Chlorine Residual – Total; # of samples

Report how many tests for total chlorine residual were performed during the month (should be equal to the number of total coliform samples that were collected).

(bb) Chlorine Residual – Total; Average Value

- Report the average value of all the tests performed.
- Report to one decimal place.

(cc) Chlorite / Chlorine Dioxide

(dd) Public water systems that feed chlorine dioxide have to *routinely* monitor their distribution system for chlorite with a monthly three sample set. Additional, *follow-up*, three sample sets will have to be collected if the chlorite MCL is exceeded at the entry point.

Public water systems that feed chlorine dioxide have to monitor their distribution system for chlorine dioxide with a *follow-up*, three sample set if the MRDL is exceeded at the entry point.

Place a “X” in column (cc) or (dd) to identify whether chlorite or chlorine dioxide is being monitored. Proceed to instruction (ee)(ff).

NOTE: in the event that chlorite and chlorine dioxide monitoring occurs simultaneously then annotate the form as necessary to report both parameters (utilize the extra space provided in the comments section).

(ee) Routine / Follow-Up

(ff) Public water systems that feed chlorine dioxide have to collect routine monthly samples in the distribution system for chlorite. Additional, follow-up, samples may be required for chlorite or chlorine dioxide. Place an ‘x’ in the appropriate column to identify the type of sample being collected. Proceed to instruction (gg)(hh)(ii)(jj)(kk).

- (gg) First Customer (0 hours) [FC00x]
- (hh) First Customer (6 hours) [FC00x]
- (ii) First Customer (12 hours) [FC00x]
- (jj) Average Residence Time [AT00x]
- (kk) Maximum Residence Time [MT00x]

These columns are used to report either Chlorite or Chlorine Dioxide three sample sets that are collected in the distribution system. Sampling shall occur as follows:

Three sample set for chlorite:

Collect one sample near the first customer (sample monitoring point FC00x), enter result in column (gg).

Collect one sample at a location representative of average residence time (sample monitoring point AT00x), enter result in column (jj).

Collect one sample at a location representative of maximum residence time (sample monitoring point MT00x), enter result in column (kk).

Where "x" is a number associated with that sampling location, per your D/DBP sample monitoring plan.

Three sample set for chlorine dioxide.

If either chlorine dioxide or chloramines are used to maintain a disinfectant residual in the distribution system, or if chlorine is used to maintain a disinfectant residual in the distribution system and there are no additional points of chlorination beyond the entry point (i.e., no booster chlorination), the public water system shall take the three samples as close to the first customer as possible, at intervals of at least 6 hours. Utilize columns (gg), (hh) and (ii). Otherwise, the three sample set must be taken at the locations as described above for chlorite.

- (II) Comments  
Provide annotations as necessary.

### Bromate Monitoring:

Bromate is to be reported in the comment section on the day(s) that the sample(s) are collected. The following notation should be used "Bromate at entry point = \_\_\_\_ mg/L."

Water Plants that use ozone must conduct monthly bromate monitoring at the entry point. The sample shall be collected while the ozonation system is operating under normal conditions. During months in which more than one sample is collected, the monthly result shall be the average of all samples.

Compliance with the MCL for bromate shall be based on a running annual arithmetic average, computed quarterly, of monthly samples. If the MCL is exceeded then public notification is to occur in accordance with OAC 3745-81-32 and the Director is to be notified in accordance with OAC 3745-81-75.

If, during the first year of monitoring, any individual quarter's average will cause the running annual average to exceed the MCL, the public water system is in violation at the end of that quarter.

Failure to complete the required monitoring is a monitoring violation. The public water system will be in violation for the entire period covered by the running annual average. If a public water system fails to complete twelve consecutive months of monitoring, compliance with the MCL for the last four-quarter compliance period shall be based on an average of the available data.

Reduced monitoring: public water systems required to analyze for bromate may reduce monitoring from monthly to once per quarter, if the system demonstrates that the average source water bromide concentration is less than 0.05 mg/L, based upon representative monthly bromide measurements for one year. The public water system must continue bromide monitoring to remain on reduced bromate monitoring. The public water system may remain on reduced bromate monitoring until the running annual average source water bromide concentration, computed quarterly, is equal to or greater than 0.05 mg/L based upon representative monthly measurements. If the running annual average source water bromide concentration is equal to or greater than 0.05 mg/L, the public water system shall resume routine monitoring.

4. Signature and certification number of Operator of Record\*

The Operator of Record is to print their name and certification number followed by their signature and date.

\*NOTE: required by OAC 3745-83-01 (l) (2) and in accordance with the amendment in OAC 3745-7-02 (comment section)

The monthly operating report is to be submitted to your local Ohio EPA office by the tenth day of the following month. Send your report to your District Office as listed below.

Ohio EPA  
Northwest District Office  
347 North Dunbridge Road  
Bowling Green, OH 43402  
(419) 352-8461

Ohio EPA  
Northeast District Office  
2110 East Aurora Road  
Twinsburg, OH 44087  
(330) 963-1200

Ohio EPA  
Central District Office  
PO Box 1049  
Columbus, OH 43216-1049  
(614) 728-3778

Ohio EPA  
Southwest District Office  
401 East Fifth Street  
Dayton, OH 45402  
(937) 285-6357

Ohio EPA  
Southeast District Office  
2195 Front Street  
Logan, OH 43188  
(740) 385-8501





**Minimum Required Operational Analysis of Water for  
Community, Non-Transient (with treatment) and Transient (serving  $\geq 1,000$  people) Public Water Systems  
as required by Ohio Administrative Code 3745-83-01(G) (effective 10/1/2006)**

<b>Ref. ****</b>	<b>Water Analysis</b>	<b>Criteria:</b>	<b>Prior to Fluoridation</b>	<b>Entry Point</b>	<b>Dist. System</b>
(w)	Chlorine Residual Free	if water is treated with chlorine (surface water systems shall also conduct monitoring in accordance with OAC 3745-81-74)***	----	daily	daily
(x)	Chlorine Residual Combined	if water is treated with chlorine (surface water systems shall also conduct monitoring in accordance with OAC 3745-81-74)***	----	daily	daily
(c)	Fluoride	if fed	monthly	daily	----
(p)	Phosphate Total	if phosphate is fed	----	monthly	----
(q)	Orthophosphate	if phosphate is fed for Pb/Cu control	----	bi-weekly	----
(k)	pH	if adjusted for corrosion control if adjusted for stability if lime softening treatment is provided (surface water systems shall also conduct monitoring in accordance with OAC 3745-81-74)***	----	bi-weekly daily daily	----
(m)	Alkalinity Total	if adjusted for corrosion control (surface water systems shall also conduct monitoring in accordance with OAC 3745-81-77)***	----	bi-weekly	----
(n)	Alkalinity Stability	if lime softening treatment is provided	----	weekly	----
(o)	Hardness	if treatment consists of: - ) ion exchange or membrane softening; pop<250 - ) ion exchange or membrane softening; pop $\geq$ 250 - ) lime softening	----	monthly weekly daily	----
(r1) (r2)	Iron	if treatment consists of: - ) iron reduction; pop<250 - ) iron reduction; pop $\geq$ 250, or - ) iron reduction; pop $\geq$ 250	----	monthly weekly daily/monthly*	----
(s1) (s2)	Manganese	if treatment consists of: - ) manganese reduction; pop<250 - ) manganese reduction; pop $\geq$ 250, or - ) manganese reduction; pop $\geq$ 250	----	monthly weekly daily/monthly*	----
(t)	Copper	if a copper compound is applied to the surface water supply	----	weekly**	----

\*Daily in-house analysis (with an acceptable test kit) plus one Monthly analysis at a certified lab is alternative monitoring per OAC 3745-83-01 (G)(9)(b) and (G)(10)(b).

\*\*Monitoring is to continue for at least one month after the compound has been applied.

\*\*\*Report on the Surface Water Monthly Operating Report

Ohio EPA Monthly Operating Report entitled "Water Plant / Distribution System" (form #5002) is to be used for reporting with the exception of pH and orthophosphate for Pb/Cu CCR's for public water systems serving 50,000 or greater. Refer to the instructions for form #5002 for additional information.

\*\*\*\*Reference fields can be found in the Instructions for Completing the "Water Plant / Distribution System" Monthly Operating Report

**Inorganic Disinfection Byproducts and Disinfectant Residuals Monitoring required by-  
Ohio Administrative Code 3745-81-23 (effective 8/1/2005) and 3745-81-70 (effective 1/1/2004)**

Ref	Water Analysis	Criteria	Sample Location		Rule Reference
			Entry Point	Distribution System	
(SSR)	Bromate	if ozone is fed	Monthly	-----	OAC 3745-81-23 (L)
(v)	Chlorite	if chlorine dioxide is fed	Daily	monthly (three sample set)	OAC 3745-81-23 (M)
(cc)- (kk)				(additional three sample set(s) required if- the entry point sample > MCL)	
(u)	Chlorine Dioxide	if chlorine dioxide is fed	Daily	as required by the Director through detail plan approval.	OAC 3745-81-70 (F)
(cc)- (kk)				(three sample set(s) required if- the entry point sample > MRDL)	
(y)	Chlorine Residual Total	if a community or non-transient PWS and chlorine or chloramines are fed for the purpose of establishing a residual in the distribution system	-----	to be monitored concurrently with the collection of total coliform bacterial samples	OAC 3745-81-70 (E)(1)

Ohio EPA Monthly Operating Report entitled "Water Plant / Distribution System" (form #5002) is to be used for reporting the parameters identified above with the exception of bromate. Bromate is to be reported on the Chemical SSR