

# MOR compliance: Improving common problems

- Do Not Handwrite
  - Illegible
  - Error prone
- Use Microsoft Excel
  - Calculations are completed automatically
  - Errors easily identified and corrected
- Computer access is available to everyone
  - Administrative offices
  - Public Libraries
- Create redundancy in training
  - Valuable experience and knowledge is lost if a system fails to train replacements before staff leave
  - Ensure multiple individuals are trained to complete compliance obligations
  - If responsible party is absent, retires, or unexpectedly leaves, there should always be another individual trained and readily available to complete required duties



# MOR compliance: Improving common problems

Enter the report date as the relevant monitoring period for the data as MM/YYYY, not the current month (if submitting in March, the monitoring period would be February)

Revised 01/04/07

## MONTHLY OPERATIONS REPORT (MOR) FOR ALL WATER SYSTEMS

MONTH & YEAR (mm/yyyy)

Indicate one with "X"

- SURFACE WATER
- GROUNDWATER
- PURCHASE/DISTRIBUTE ONLY

Always enter the PWSID as KY followed by the 7 digit ID number  
**KY1234567**

PWS ID:

PLANT ID:

PLANT NAME:

PWS NAME:

PLANT CLASS:

DIST. CLASS:

CY INTEREST (AI):

SOURCE NAME:

Water producers enter plant ID as A, B, C, etc.  
If only one plant enter A

OPERATOR(S) RESP:

CERTIFICATION NUMBER

WTP SHIFT 1:

WTP SHIFT 2:

WTP SHIFT 3:

DISTRIBUTION:

THIS REPORT MUST BE RECEIVED BY THE DIVISION OF WATER AND APPLICABLE FIELD OFFICE  
NO LATER THAN 10 DAYS AFTER THE END OF THE MONTH.

### TREATMENT PLANTS COMPLETE:

1. DESIGN CAPACITY (gpm):

2. TYPE OF FILTRATION USED:



# MOR Compliance

## MOR page 5 Water Quality Plant Tap/Entry Point Chlorine Residuals

All water producers must report the lowest amount of chlorine leaving the plant and entering the distribution system everyday of plant operation

Please answer Y/N question below this chart. PAGE 5 OF 11

| DAY | FLUORIDE |     | WATER   |
|-----|----------|-----|---|
|     | RAW      | TAP |   |
| 1   |          |     |   |
| 2   |          |     |   |
| 3   |          |     |   |
| 4   |          |     |   |
| 5   |          |     |   |
| 6   |          |     |   |
| 7   |          |     |   |
| 8   |          |     |   |
| 9   |          |     |   |
| 10  |          |     |   |
| 11  |          |     |   |
| 12  |          |     |   |
| 13  |          |     |   |
| 14  |          |     |   |
| 15  |          |     |   |
| 16  |          |     |   |
| 17  |          |     |   |
| 18  |          |     |   |
| 19  |          |     |   |
| 20  |          |     |   |
| 21  |          |     |   |
| 22  |          |     |   |
| 23  |          |     |   |
| 24  |          |     |   |
| 25  |          |     |   |
| 26  |          |     |   |
| 27  |          |     |   |
|     |          |     | Lowest Daily Chlorine Residual Plant Tap On-Line Chlorine Analyzer FREE / TOTAL |
|     |          |     | Monthly Minimum   |
|     |          |     | Total Rainfall  |
|     |          |     | Number of readings  |
|     |          |     | For Free Chlorine, # less than 0.2 mg/L   |
|     |          |     | For Chloramines, # less than 0.5 mg/L   |

Use either an online chlorine analyzer OR a grab sample

Report free chlorine for all disinfectants except chloramine. For chloramine report total chlorine

Enter the lowest sample reported each day. Enter only one value per line. Do not enter zero for no production days, either leave blank or write closed

Ensure the summary numbers are complete and accurate

If your system uses chloramines enter Y. Otherwise enter N

Disinfectant Chloramines? (Y/N)

# MOR Compliance

**Transfer MOR page 5 data to plant summary**  
 Compliance is primarily determined based on the summary pages.  
 It is imperative that the summary pages are complete and accurate

KENTUCKY DIVISION OF WATER / DRINKING WATER BRANCH  
 WATER TREATMENT PLANT - MONTHLY OPERATING REPORT

APPLICABLE TO ALL PLANTS

PLEASE ANSWER Y/N QUESTION BEFORE THIS SHEET

REPORT MONTH/YEAR: \_\_\_\_\_

PAGE: \_\_\_\_\_ OF: \_\_\_\_\_

| DAY | MON | TUE | WED | THUR | FRI | SAT | SUN | TOTAL | REMARKS |
|-----|-----|-----|-----|------|-----|-----|-----|-------|---------|
| 1   |     |     |     |      |     |     |     |       |         |
| 2   |     |     |     |      |     |     |     |       |         |
| 3   |     |     |     |      |     |     |     |       |         |
| 4   |     |     |     |      |     |     |     |       |         |
| 5   |     |     |     |      |     |     |     |       |         |
| 6   |     |     |     |      |     |     |     |       |         |
| 7   |     |     |     |      |     |     |     |       |         |
| 8   |     |     |     |      |     |     |     |       |         |
| 9   |     |     |     |      |     |     |     |       |         |
| 10  |     |     |     |      |     |     |     |       |         |
| 11  |     |     |     |      |     |     |     |       |         |
| 12  |     |     |     |      |     |     |     |       |         |
| 13  |     |     |     |      |     |     |     |       |         |
| 14  |     |     |     |      |     |     |     |       |         |
| 15  |     |     |     |      |     |     |     |       |         |
| 16  |     |     |     |      |     |     |     |       |         |
| 17  |     |     |     |      |     |     |     |       |         |
| 18  |     |     |     |      |     |     |     |       |         |
| 19  |     |     |     |      |     |     |     |       |         |
| 20  |     |     |     |      |     |     |     |       |         |
| 21  |     |     |     |      |     |     |     |       |         |
| 22  |     |     |     |      |     |     |     |       |         |
| 23  |     |     |     |      |     |     |     |       |         |
| 24  |     |     |     |      |     |     |     |       |         |
| 25  |     |     |     |      |     |     |     |       |         |
| 26  |     |     |     |      |     |     |     |       |         |
| 27  |     |     |     |      |     |     |     |       |         |
| 28  |     |     |     |      |     |     |     |       |         |
| 29  |     |     |     |      |     |     |     |       |         |
| 30  |     |     |     |      |     |     |     |       |         |
| 31  |     |     |     |      |     |     |     |       |         |

Disinfectant: Chloramine 7.00MG

|   | Monthly Minimum |
|---|-----------------|
| Number of readings                      |                 |
| For Free Chlorine, # less than 0.2 mg/L |                 |
| For Chloramines, # less than 0.5 mg/L   |                 |

Ensure that the data corresponds between plant tap/entry point minimum chlorine residuals and the summary page

**ENTRY POINT RESIDUAL DISINFECTANT CONCENTRATION**  
 APPLICABLE TO ALL PLANTS

ANALYTE CODE 0999

Number of days of plant operation \_\_\_\_\_

Were samples taken each day of operation? (Y/N)

Number of lowest chlorine samples recorded \_\_\_\_\_

Lowest single chlorine reading \_\_\_\_\_

If less than required: \_\_\_\_\_

Was residual restored within 4 hours of plant operation? (Y/N)

**Free Chlorine** (for all disinfectants except chloramine):

Number of samples under 0.2 mg/L \_\_\_\_\_

**Total Chlorine** (when disinfectant is Chloramine):

Number of samples under 0.5 mg/L \_\_\_\_\_

KENTUCKY DIVISION OF WATER / DRINKING WATER BRANCH  
 MONTHLY OPERATING REPORT (MOR) PLANT SUMMARY FORM

NOTE: COMPLETE ALL APPLICABLE FIELDS! NOT ALL OF THE FIELDS ARE PRE-POPULATED FOR YOU!!

APPLICABLE TO ALL PLANTS

ANALYTE CODE 0999

Number of days of plant operation \_\_\_\_\_

Were samples taken every 4 hours of plant operation? (Y/N)

Number of lowest chlorine samples recorded \_\_\_\_\_

Lowest single chlorine reading \_\_\_\_\_

If less than required: \_\_\_\_\_

Was residual restored within 4 hours of plant operation? (Y/N)

**Free Chlorine** (for all disinfectants except chloramine):

Number of samples under 0.2 mg/L \_\_\_\_\_

**Total Chlorine** (when disinfectant is Chloramine):

Number of samples under 0.5 mg/L \_\_\_\_\_

Means total number of minimum chlorine samples **NOT** how many samples were at the lowest value. To be in compliance, this number should be equal to the number of days of plant operation

If using excel, cells will auto-populate from preceding data pages, **except** Y/N questions



# MOR Compliance

## MOR page 7 Distribution

### Distribution System Chlorine Residuals

Community Systems: Must report at least one chlorine residual **everyday**

\*Non-Community Systems: Must report at least one chlorine residual **everyday the system is open** and serving water to the public

A system with multiple plants will have the same distribution chlorine residuals for both plants' MORs

If a system purchases both chlorine and chloramine within the same month,

report total chlorine for all samples  
 Ensure the summary numbers are complete and accurate

| DAY     | CHEMICALS ADDED  |                  | DISTRIBUTION SYSTEM OPERATION                  |   |       |   |      |   |      |   |   |   |   |   |
|---------|------------------|------------------|--|---|-------|---|------|---|------|---|---|---|---|---|
|         | CHLORINE BOOSTER | CHLORINE BOOSTER | TEST RESULTS                                   |   |       |   |      |   |      |   |   |   |   |   |
|         | LBS              | LBS              | TOTAL (T) AND FREE (F) CHLORINE RESIDUAL (ppm) |   |       |   |      |   |      |   |   |   |   |   |
|         |                  |                  | NORTH  |   | SOUTH |   | EAST |   | WEST |   |   |   |   |   |
|         |                  |                  | T  | F | T     | F | T    | F | T    | F | T | F | T | F |
| 1       |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 2       |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 3       |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 4       |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 5       |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 6       |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 7       |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 8       |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| ...     |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 23      |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 24      |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 25      |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 26      |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 27      |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 28      |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 29      |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 30      |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| 31      |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| AVERAGE |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |
| TOTAL   |                  |                  |  |   |       |   |      |   |      |   |   |   |   |   |

Free chlorine must be reported for all disinfectants except chloramine. For chloramine report total chlorine

Enter at least one chlorine sample everyday.\* Reporting multiple daily samples will ensure full coverage and help avoid instances of missing data. Skipping a day will result in a violation

For months with less than 31 days, write NA

If your system uses chloramines enter Y. Otherwise enter N

|  |                                |
|--|--------------------------------|
| Total # Chlorine Samples # Less than 0.2 mg/L @ 5 mg/L | Minimum Monthly Free Residual  |
| Number of Free Residuals                               | Minimum Monthly Total Residual |
| Number of Total Residuals                              |                                |
| Total # Less than 0.2 mg/L                             |                                |
| Total # Less than 0.5 mg/L                             |                                |

|                                 |                              |
|---------------------------------|------------------------------|
| Disinfectant Chloramines? (Y/N) | Number of days of operation? |
|---------------------------------|------------------------------|

Community: Total days of distribution must equal the number of days in the month  
Non-Community: Total days system was open and serving water to the public

# MOR Compliance

**Transfer MOR page 7 data to distribution summary**  
Compliance is primarily determined based on the summary pages. It is imperative that the summary pages are complete and accurate

PWS ID: \_\_\_\_\_  
STATE: \_\_\_\_\_  
REPORT MONTH/YEAR: \_\_\_\_\_  
PAGE: 7 OF 11

| DAILY LOG |      | TOTAL CHLORINE DISINFECTANT CONCENTRATION |       |
|-----------|------|---|-------|
| DATE      | TIME | FREE                                      | TOTAL |
| 1         |      |   |       |
| 2         |      |   |       |
| 3         |      |   |       |
| 4         |      |   |       |
| 5         |      |   |       |
| 6         |      |   |       |
| 7         |      |   |       |
| 8         |      |   |       |
| 9         |      |   |       |
| 10        |      |   |       |
| 11        |      |   |       |
| 12        |      |   |       |
| 13        |      |   |       |
| 14        |      |   |       |
| 15        |      |   |       |
| 16        |      |   |       |
| 17        |      |   |       |
| 18        |      |   |       |
| 19        |      |   |       |
| 20        |      |   |       |
| 21        |      |   |       |
| 22        |      |   |       |
| 23        |      |   |       |
| 24        |      |   |       |
| 25        |      |   |       |
| 26        |      |   |       |
| 27        |      |   |       |
| 28        |      |   |       |
| 29        |      |   |       |
| 30        |      |   |       |

Number of Free Residuals: \_\_\_\_\_  
 Number of Total Residuals: \_\_\_\_\_  
 Total # Less than 0.2 mg/L: \_\_\_\_\_  
 Total # Less than 0.5 mg/L: \_\_\_\_\_

|  |  |   |
|--|--|---|
| <p>Number of Free Residuals _____</p> <p>Number of Total Residuals _____</p> <p>Total # Less than 0.2 mg/L _____</p> <p>Total # Less than 0.5 mg/L _____</p> | <p>Minimum Monthly Free Residual _____</p> <p>Minimum Monthly Total Residual _____</p> | <p>Disinfectant Chloramines? (Y/N) <input type="checkbox"/></p> <p>Number of days of operation? _____</p> |
|--|--|---|

MONTHLY PERIOD (MM/YYYY)

NOTE: COMPLETE ALL APPLICABLE FIELDS! NOT ALL OF THE FIELDS ARE PRE-POPULATED FOR YOU!!!

| PURCHASED |                    | SOLD              |                    |
|-----------|--------------------|-------------------|--------------------|
| PWS ID    | HOW MUCH (gallons) | TO WHOM? (PWS ID) | HOW MUCH (gallons) |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |
|           |                    |                   |                    |

Ensure that the data corresponds between distribution chlorine residuals and the summary page

ANALYTE CODE: 0999

Number of days of operation: \_\_\_\_\_

Were samples taken each day of operation? (Y/N)

Number of samples taken: \_\_\_\_\_

FREE: \_\_\_\_\_

TOTAL: \_\_\_\_\_

Lowest single FREE chlorine reading: \_\_\_\_\_

Lowest single TOTAL chlorine reading: \_\_\_\_\_

Free Chlorine (for all disinfectants except chloramine): \_\_\_\_\_

Number of samples under 0.2 mg/L: \_\_\_\_\_

Total Chlorine (when disinfectant is chloramine): \_\_\_\_\_

Number of samples under 0.5 mg/L: \_\_\_\_\_

DISTRIBUTION RESIDUAL DISINFECTANT CONCENTRATION  
APPLICABLE TO ALL WATER SYSTEMS

ANALYTE CODE: 0999

Number of days of operation: \_\_\_\_\_

Were samples taken each day of operation? (Y/N)

Number of samples taken: \_\_\_\_\_

FREE: \_\_\_\_\_

TOTAL: \_\_\_\_\_

Lowest single FREE chlorine reading: \_\_\_\_\_

Lowest single TOTAL chlorine reading: \_\_\_\_\_

Free Chlorine (for all disinfectants except chloramine): \_\_\_\_\_

Number of samples under 0.2 mg/L: \_\_\_\_\_

Total Chlorine (when disinfectant is chloramine): \_\_\_\_\_

Number of samples under 0.5 mg/L: \_\_\_\_\_

If using excel, cells will auto-populate from preceding data pages, except Y/N questions



# MOR Compliance

## MOR page 8 Turbidity Report Plant Tap Turbidity Readings

All surface water producers and groundwater under the influence of surface water must report turbidity every 4 hours of plant operation

Record hours of plant operation everyday. If there is any plant downtime, adjust hours appropriately

Ensure the summary numbers are complete and accurate

Number of samples required is determined by the number of hours operated divided by 4, and rounded up to the next whole number

If total samples reported is less than 95% of total samples required a system will receive a violation

PWS ID : 0  
PLANT ID : 0  
Report Period (MM/YYYY): 01/1900  
PAGE: 8 OF 11

**TURBIDITY REPORT**  
APPLICABLE TO ALL PLANTS WITH FILTRATION  
PWS Name: 0

| DAY          | Hours Plant Operated | # of Turbidity Samples Required* | Mid - 4 am | 4 am - 8 am | 8 am - Noon | Noon - 4 pm | 4 pm - 8 pm | 8 pm - Mid | Daily Maximum |
|--------------|----------------------|----------------------------------|------------|-------------|-------------|-------------|-------------|------------|---------------|
| 1            |                      |                                  |            |             |             |             |             |            |               |
| 2            |                      |                                  |            |             |             |             |             |            |               |
| 3            |                      |                                  |            |             |             |             |             |            |               |
| 4            |                      |                                  |            |             |             |             |             |            |               |
| 5            |                      |                                  |            |             |             |             |             |            |               |
| 6            |                      |                                  |            |             |             |             |             |            |               |
| 7            |                      |                                  |            |             |             |             |             |            |               |
| 8            |                      |                                  |            |             |             |             |             |            |               |
| 9            |                      |                                  |            |             |             |             |             |            |               |
| 10           |                      |                                  |            |             |             |             |             |            |               |
| 11           |                      |                                  |            |             |             |             |             |            |               |
| 12           |                      |                                  |            |             |             |             |             |            |               |
| 13           |                      |                                  |            |             |             |             |             |            |               |
| 14           |                      |                                  |            |             |             |             |             |            |               |
| 15           |                      |                                  |            |             |             |             |             |            |               |
| 16           |                      |                                  |            |             |             |             |             |            |               |
| 17           |                      |                                  |            |             |             |             |             |            |               |
| 18           |                      |                                  |            |             |             |             |             |            |               |
| 19           |                      |                                  |            |             |             |             |             |            |               |
| 20           |                      |                                  |            |             |             |             |             |            |               |
| 21           |                      |                                  |            |             |             |             |             |            |               |
| 22           |                      |                                  |            |             |             |             |             |            |               |
| 23           |                      |                                  |            |             |             |             |             |            |               |
| 24           |                      |                                  |            |             |             |             |             |            |               |
| 25           |                      |                                  |            |             |             |             |             |            |               |
| 26           |                      |                                  |            |             |             |             |             |            |               |
| 27           |                      |                                  |            |             |             |             |             |            |               |
| 28           |                      |                                  |            |             |             |             |             |            |               |
| 29           |                      |                                  |            |             |             |             |             |            |               |
| 30           |                      |                                  |            |             |             |             |             |            |               |
| 31           |                      |                                  |            |             |             |             |             |            |               |
| <b>Total</b> |                      |                                  |            |             |             |             |             |            |               |

ARE YOU USING EITHER CONVENTIONAL OR MEMBRANE FILTRATION?  
(Any type of filtration besides slow sand)

Number of samples exceeding 1 NTU \_\_\_\_\_ 5 NTU \_\_\_\_\_

For slow sand filtration, the number of samples exceeding ---> 1 NTU \_\_\_\_\_ 5 NTU \_\_\_\_\_

\*NOTE: The "Number of Turbidity Samples Required" is the number of hours the plant operated divided by 4 rounded up to the next whole number.

I certify that the above turbidity readings were taken every 4 hours during plant operation and in the time frames noted above.

Signature of Principal Executive Officer or Authorized Agent \_\_\_\_\_ Date \_\_\_\_\_

# MOR Compliance

**Transfer MOR page 8 data to plant summary**  
 Compliance is primarily determined based on the summary pages.  
 It is imperative that the summary pages are complete and accurate

**TURBIDITY REPORT**  
 APPLICABLE TO ALL PLANTS WITH FILTRATION

PWS ID: 0  
 PLANT ID: 0  
 Report Period (MM/YYYY): 01/1900  
 PAGE 8 OF 11

| DAY   | Hours Plant Operated | # of Turbidity Samples Required | Mid - 4 am | 4 am - 8 am | 8 am - Noon | Noon - 4 pm | 4 pm - 8 pm | 8 pm - Mid | Total |
|-------|----------------------|---------------------------------|------------|-------------|-------------|-------------|-------------|------------|-------|
| 1     |                      |                                 |            |             |             |             |             |            |       |
| 2     |                      |                                 |            |             |             |             |             |            |       |
| 3     |                      |                                 |            |             |             |             |             |            |       |
| 4     |                      |                                 |            |             |             |             |             |            |       |
| 5     |                      |                                 |            |             |             |             |             |            |       |
| 6     |                      |                                 |            |             |             |             |             |            |       |
| 7     |                      |                                 |            |             |             |             |             |            |       |
| 8     |                      |                                 |            |             |             |             |             |            |       |
| 9     |                      |                                 |            |             |             |             |             |            |       |
| 10    |                      |                                 |            |             |             |             |             |            |       |
| 11    |                      |                                 |            |             |             |             |             |            |       |
| 12    |                      |                                 |            |             |             |             |             |            |       |
| 13    |                      |                                 |            |             |             |             |             |            |       |
| 14    |                      |                                 |            |             |             |             |             |            |       |
| 15    |                      |                                 |            |             |             |             |             |            |       |
| 16    |                      |                                 |            |             |             |             |             |            |       |
| 17    |                      |                                 |            |             |             |             |             |            |       |
| 18    |                      |                                 |            |             |             |             |             |            |       |
| 19    |                      |                                 |            |             |             |             |             |            |       |
| 20    |                      |                                 |            |             |             |             |             |            |       |
| 21    |                      |                                 |            |             |             |             |             |            |       |
| 22    |                      |                                 |            |             |             |             |             |            |       |
| 23    |                      |                                 |            |             |             |             |             |            |       |
| 24    |                      |                                 |            |             |             |             |             |            |       |
| 25    |                      |                                 |            |             |             |             |             |            |       |
| 26    |                      |                                 |            |             |             |             |             |            |       |
| 27    |                      |                                 |            |             |             |             |             |            |       |
| 28    |                      |                                 |            |             |             |             |             |            |       |
| 29    |                      |                                 |            |             |             |             |             |            |       |
| 30    |                      |                                 |            |             |             |             |             |            |       |
| 31    |                      |                                 |            |             |             |             |             |            |       |
| Total |                      |                                 |            |             |             |             |             |            |       |

ARE YOU USING EITHER CONVENTIONAL or DIRECT FILTRATION? (Y/N) \_\_\_\_\_  
 (Any type of filtration besides slow sand)

Number of samples exceeding 0.1 NTU \_\_\_\_\_ 0.3 NTU \_\_\_\_\_ 1 NTU \_\_\_\_\_  
 For slow sand filtration, the number of samples exceeding 1 NTU \_\_\_\_\_ 5 NTU \_\_\_\_\_

Ensure that the data corresponds between turbidity report and the summary page

**COMBINED FILTER EFFLUENT TURBIDITY**  
 APPLICABLE TO ALL PLANTS WITH FILTRATION

ANALYTE CODE 0100  
 Number of hours of plant operation \_\_\_\_\_  
 Were samples taken every 4 hours of plant operation? (Y/N)   
 Number of samples taken \_\_\_\_\_  
 Highest single turbidity reading \_\_\_\_\_  
 For all filtration except slow sand filtration:  
 Number of samples exceeded 0.1 NTU \_\_\_\_\_  
 Number of samples exceeded 0.3 NTU \_\_\_\_\_  
 Number of samples exceeded 1 NTU \_\_\_\_\_  
 When filtration is slow sand filtration:  
 Number of samples exceeded 1 NTU \_\_\_\_\_  
 Number of samples exceeded 5 NTU \_\_\_\_\_

KENTUCKY DIVISION OF WATER / DRINKING WATER BRANCH  
 MONTHLY OPERATING REPORT (MOR) PLANT SUMMARY FORM

PWS ID: \_\_\_\_\_ MONITORING PERIOD (MM/YYYY): \_\_\_\_\_

NOTE: COMPLETE ALL APPLICABLE FIELDS! NOT ALL OF THE FIELDS ARE FILLABLE FOR YOU!!

APPLICABLE TO ALL PLANTS WITH FILTRATION

ANALYTE CODE: 0100  
 Number of hours of plant operation: \_\_\_\_\_  
 Were samples taken every 4 hours of plant operation? (Y/N)   
 Number of samples taken: \_\_\_\_\_  
 Highest single turbidity reading: \_\_\_\_\_  
 For all filtration except slow sand filtration:  
 Number of samples exceeded 0.1 NTU: \_\_\_\_\_  
 Number of samples exceeded 0.3 NTU: \_\_\_\_\_  
 Number of samples exceeded 1 NTU: \_\_\_\_\_  
 When filtration is slow sand filtration:  
 Number of samples exceeded 1 NTU: \_\_\_\_\_  
 Number of samples exceeded 5 NTU: \_\_\_\_\_

If using excel, cells will auto-populate from preceding data pages, except Y/N questions





# MOR Compliance

PWS ID \_\_\_\_\_ MONITORING PERIOD (MMYYYY) \_\_\_\_\_

**NOTE: COMPLETE ALL APPLICABLE FIELDS!!! NOT ALL OF THE FIELDS ARE PRE-POPULATED FOR YOU!!!**

|                                      |   |
|--------------------------------------|---|
| INFORMATION APPLICABLE TO ALL PLANTS |   |
| PLANT ID _____                       | TOTAL WATER TREATED (gallons) _____     |
| PLANT NAME _____                     | AVE. DAILY PRODUCTION (gallons) _____   |
| AGENCY INTEREST _____                | MAXIMUM PUMPAGE (gallons per day) _____ |

Plant ID must be A, B, C, etc.  
If only one plant, enter A

|   |                          |
|---|--------------------------|
| COMBINED FILTER EFFLUENT TURBIDITY APPLICABLE TO ALL PLANTS WITH FILTRATION             |                          |
| ANALYTE CODE <u>0100</u>  |                          |
| Was each filter monitored continuously? (Y/N) _____                                     | <input type="checkbox"/> |
| Were turbidity samples collected every four hours of operation? (Y/N) _____             | <input type="checkbox"/> |
| Were filters repaired within 5 working days? (Y/N) _____                                | <input type="checkbox"/> |
| Were there consecutive measurements? (Y/N) _____  | <input type="checkbox"/> |
| Were there consecutive measurements after on line for more than four hours? (Y/N) _____ | <input type="checkbox"/> |
| Were there consecutive measurements in three consecutive months? (Y/N) _____            | <input type="checkbox"/> |
| Were there consecutive measurements in two consecutive months? (Y/N) _____              | <input type="checkbox"/> |

SW and GUI systems must complete the turbidity boxes

If any of the last 4 boxes are YES, fill out the individual Filter Turbidity Sheet and submit with the MOR

|   |   |   |  |
|---|---|---|--|
| COMBINED FILTER EFFLUENT TURBIDITY APPLICABLE TO ALL PLANTS WITH FILTRATION         |   | ENTRY POINT RESIDUAL DISINFECTANT CONCENTRATION APPLICABLE TO ALL PLANTS                |  |
| ANALYTE CODE <u>0100</u>  | Number of hours of plant operation _____        | ANALYTE CODE <u>0999</u>  | Number of days of plant operation _____                  |
| Were samples taken every 4 hours of plant operation? (Y/N) <input type="checkbox"/> | Number of samples taken _____                   | Were samples taken each day of operation? (Y/N) <input type="checkbox"/>                | Number of lowest chlorine samples recorded _____         |
| Highest single turbidity reading _____  | For all filtration except slow sand filtration: | Lowest single chlorine reading _____  | If less than required:                                   |
| Number of samples exceeded 0.1 NTU _____  | Number of samples exceeded 0.3 NTU _____        | Was residual restored within 4 hours of plant operation? (Y/N) <input type="checkbox"/> | Free Chlorine (for all disinfectants except chloramine): |
| Number of samples exceeded 1 NTU _____  | When filtration is slow sand filtration:        | Number of samples under 0.2 mg/L _____  | Total Chlorine (when disinfectant is Chloramine):        |
| Number of samples exceeded 1 NTU _____  | Number of samples exceeded 5 NTU _____          | Number of samples under 0.5 mg/L _____  |  |

|   |  |   |  |
|---|--|---|--|
| CHLORINE DIOXIDE ENTRY POINT MONITORING APPLICABLE TO PLANTS UTILIZING CHLORINE DIOXIDE |  | CHLORITE ENTRY POINT MONITORING APPLICABLE TO PLANTS UTILIZING CHLORINE DIOXIDE |  |
| ANALYTE CODE <u>1008</u>  | Number of days of plant operation _____                    | ANALYTE CODE <u>1009</u>  | Number of days of plant operation _____          |
| Were samples taken each day of operation? (Y/N) <input type="checkbox"/>                | Number of samples taken _____                              | Were samples taken each day of operation? (Y/N) <input type="checkbox"/>        | Number of samples taken _____                    |
| Highest single chlorine dioxide reading _____   | Number of chlorine dioxide samples exceeded 0.8 mg/L _____ | Highest single chlorite reading _____   | Number of chlorite samples exceeded 1 mg/L _____ |

## Plant Summary

All water producers must complete the plant summary

If using excel, cells will auto-populate from preceding data pages, **except** Y/N questions

Once all data is complete and accurate, sign and date

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. Violations of 401 KAR Chapter 8 are subject to severe penalties prescribed in KRS 224.99-010, up to \$25,000 fine per day per violation and in some cases a violation may subject the violator to prison.



Signature of Principal Executive Officer or Authorized Agent

Date

# MOR Compliance

## Distribution Summary

All systems must complete the distribution summary  
Once all data is complete and accurate, sign and date

Ensure the summary data is complete and accurate, as previously described

PWS ID \_\_\_\_\_ MONITORING PERIOD (MMYYYY) \_\_\_\_\_  
AI \_\_\_\_\_

NOTE: COMPLETE ALL APPLICABLE FIELDS!!! NOT ALL OF THE FIELDS ARE PRE-POPULATED FOR YOU!!!

| PURCHASED                       |                     | SOLD              |                     |
|---------------------------------|---------------------|-------------------|---------------------|
| APPLICABLE TO ALL WATER SYSTEMS |                     |                   |                     |
| FROM WHOM? (PWS ID)             | HOW MUCH? (gallons) | TO WHOM? (PWS ID) | HOW MUCH? (gallons) |
|                                 |                     |                   |                     |
|                                 |                     |                   |                     |
|                                 |                     |                   |                     |
|                                 |                     |                   |                     |
|                                 |                     |                   |                     |
|                                 |                     |                   |                     |
|                                 |                     |                   |                     |
|                                 |                     |                   |                     |
|                                 |                     |                   |                     |
|                                 |                     |                   |                     |
|                                 |                     |                   |                     |
|                                 |                     |                   |                     |
|                                 |                     |                   |                     |
|                                 |                     |                   |                     |

Enter water transactions using the appropriate **PWSID** (KY, TN, WV, or OH followed by the 7 digit ID number KY1234567) **NOT** the system name

Enter the total gallons as 1,234,567 **NOT** 1.23 M.G.

| DISTRIBUTION RESIDUAL DISINFECTANT CONCENTRATION                         |   |
|--|---|
| APPLICABLE TO ALL WATER SYSTEMS  |   |
| ANALYTE CODE <u>0999</u>   |   |
| Number of days of operation _____  | Free Chlorine (for all disinfectants except chloramine) _____ |
| Were samples taken each day of operation? (Y/N) <input type="checkbox"/> | Number of samples under 0.2 mg/L _____                        |
| Number of samples taken: _____   | Total Chlorine (when disinfectant is chloramine) _____        |
| FREE _____   | Number of samples under 0.5 mg/L _____                        |
| TOTAL _____  |   |
| Lowest single FREE chlorine reading _____                                |   |
| Lowest single TOTAL chlorine reading _____                               |   |

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein. Based on my inquiry of those individuals immediately responsible for obtaining the information, the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. Violations of 401 KAR Chapter 8 are subject to severe penalties prescribed in KRS 224.99-010, up to \$25,000 fine per day per violation and in some cases a violation may subject the violator to prison.

\_\_\_\_\_  
Signature of Principal Executive Officer or Authorized Agent                  \_\_\_\_\_  
Date

# MOR Compliance: Final reminders

- Review all data before signing and dating the MOR
- Your signature acknowledges that all data within the MOR is true, accurate, and complete
- The MOR must arrive to the DOW within 10 days after the monitoring period
- Mail certified to guarantee delivery. A failure to submit violation will not be rescinded unless the water system has proof of delivery (certified mail receipt)
- Mail to:
  - Division of Water**
  - Drinking Water Branch 3<sup>rd</sup> Floor**
  - 300 Sower Blvd**
  - Frankfort, KY 40601**
  - Attn: MOR DWB**
- If any errors are found after submitting to the state, notify the compliance officer immediately and send a correction

