

MONTHLY OPERATION REPORT FOR PWSs TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER

PWS Identification Number: _____ Plant Name: _____

III. Daily Data for the Month/Year of: _____

Means of Achieving Four-Log Virus Inactivation/Removal: * Free Chlorine Combined Chlorine (Chloramines) Chlorine Dioxide Ozone **Ultrafiltration**
Nanofiltration **Reverse Osmosis** **UV Light Disinfection** **Conventional Filtration, Including Lime Softening** Other (Describe): _____

Type of Disinfectant Residual Maintained in Distribution System: Free Chlorine Combined Chlorine (Chloramines) Chlorine Dioxide

Day of the Month	Days Plant Staffed or Visited by Operator (Place "X")	Hours Plant in Operation	Net Quantity of Finished Water Produced, gal	Compliance Monitoring for Systems Using Chemical Disinfection for Virus Inactivation*			Lowest Residual Disinfectant Concentration at Remote Point in Distribution System, mg/L	Emergency or Abnormal Operating Conditions; Repair or Maintenance Work that Involves Taking Water System Components Out of Operation
				Lowest Residual Disinfectant Concentration at End of Disinfection Segment 1, mg/L	Lowest Residual Disinfectant Concentration at End of Disinfection Segment 2, mg/L	Disinfection Segment 1		
1						<p>Disinfection Segment 1</p> <ul style="list-style-type: none"> • DEP-specified minimum residual disinfectant concentration at end of segment: _____ • Was the disinfectant residual concentration at the end of the segment ever < the DEP-specified minimum during the reporting month? _____ If yes, ... <ul style="list-style-type: none"> - Was it monitored at least every 4 hours until it returned to a value ≥ the DEP-specified minimum? _____ - Was it ever < the DEP-specified minimum for more than 4 consecutive hours? _____ If yes, ... <ul style="list-style-type: none"> - What was the date and duration of this treatment technique violation? _____ <p>Disinfection Segment 2</p> <ul style="list-style-type: none"> • DEP-specified minimum residual disinfectant concentration at end of segment: _____ • Was the disinfectant residual concentration at the end of the segment ever < the DEP-specified minimum during the reporting month? _____ If yes, ... <ul style="list-style-type: none"> - Was it monitored at least every 4 hours until it returned to a value ≥ the DEP-specified minimum? _____ - Was it ever < the DEP-specified minimum for more than 4 consecutive hours? _____ If yes, ... <ul style="list-style-type: none"> - What was the date and duration of this treatment technique violation? _____ <p>On-Line Disinfectant Analyzers</p> <ul style="list-style-type: none"> • Was continuous residual disinfectant monitoring equipment used during the reporting month? _____ If yes, ... <ul style="list-style-type: none"> - Was the calibration of the equipment verified during the month? _____ - Did the equipment fail during the month? _____ If yes, ... <ul style="list-style-type: none"> - Were grab samples collected every 4 hours until the equipment was returned to service? _____ - Date the equipment failed: _____ - Date the equipment was returned to service: _____ 		
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* Only plants providing DEP-approved 4-log virus treatment must provide this information.

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PWS Identification Number:	Plant Name:
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IV. Summary of Use of Polymer Containing Acrylamide, Polymer Containing Epichlorohydrin, and Iron or Manganese Sequestrant for the Year: *

A. Is any polymer containing the monomer acrylamide used at the water treatment plant? No Yes, and the polymer dose and the acrylamide level in the polymer are as follows:

Polymer Dose, ppm =	Acrylamide Level, % [†] =
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B. Is any polymer containing the monomer epichlorohydrin used at the water treatment plant? No Yes, and the polymer dose and the epichlorohydrin level in the polymer are as follows:

Polymer Dose, ppm =	Epichlorohydrin Level, % [†] =
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C. Is any iron or manganese sequestrant used at the water treatment plant? No Yes, and the type of sequestrant, sequestrant dose, etc., are as follows:

Type of Sequestrant (polyphosphate or sodium silicate):
Sequestrant Dose, mg/L of phosphate as PO ₄ or mg/L of silicate as SiO ₂ =
If sodium silicate is used, the amount of added plus naturally occurring silicate, in mg/L as SiO ₂ =

* Complete and submit Part IV of this report only with the monthly operation report for December of each year and only for water treatment plants using polymer containing acrylamide, polymer containing epichlorohydrin, and/or an iron and manganese sequestrant.

[†] Acrylamide and epichlorohydrin levels may be based on the polymer manufacturer's certification or on third-party certification.

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INSTRUCTIONS: This report shall be completed and submitted by all public water systems, except transient non-community water systems using only ground water and serving only businesses other than public food service establishments, that treat raw ground water or purchased finished water. **WITHIN TEN DAYS AFTER THE END OF EACH MONTH**, complete this report and submit it to the appropriate Department of Environmental Protection District Office or Approved County Health Department. All information provided in this report shall be typed or printed in ink. Complete and submit Parts I through III of this report every month; complete and submit Part IV of this report only with the monthly operation report for December of each year and only if using polymer containing acrylamide, polymer containing epichlorohydrin, and/or an iron and manganese sequestrant. **NOTE THAT A SEPARATE MONTHLY OPERATION REPORT IS REQUIRED FOR EACH PLANT TREATING RAW GROUND WATER OR PURCHASED FINISHED WATER.**

The following specific instructions are for Part II of this report.

Process performance records shall be kept for the following treatment processes: coagulation/flocculation, sedimentation, filtration, lime-soda ash softening, ion exchange softening, nanofiltration and reverse osmosis, and electrodialysis. Coagulation/flocculation records should include source water temperature, pH, turbidity, color, and alkalinity and process effluent pH and alkalinity in addition to chemical feed rates. Sedimentation records should include process effluent turbidity and sludge volume produced. Filtration records should include process effluent turbidity and color, number of filters in service, filtration rates, unit filter run volumes, head losses, length of filter runs, frequency of backwash, amount of backwash water used, duration of backwash, and backwash rates. Lime-soda ash softening records should include source water and process effluent hardness in addition to records for coagulation/flocculation, sedimentation, and filtration. Ion exchange softening records should include feed and bypass flows, blend rate, and salt and brine used. Nanofiltration and reverse osmosis records should include feed, product, and brine flows; feed pressure, temperature, pH, conductivity, and turbidity; product pH and conductivity; and brine pH and conductivity. Electrodialysis records should include polarity, feed temperature and total dissolved solids, product conductivity and total dissolved solids, dilute flow rate, brine make-up, pressures, and volts/amps.

The following specific instructions are for the table in Part III of this report.

DAYS PLANT STAFFED OR VISITED BY OPERATOR. Enter an "X" for each day the plant was staffed or visited by an appropriately licensed water treatment plant operator.

HOURS PLANT IN OPERATION. For each day the plant is in operation, enter the number of hours that the plant is in operation, or on-line, to serve water to the public.

NET QUANTITY OF FINISHED WATER PRODUCED. Enter the net quantity of finished water, excluding any filter backwash water, produced by the plant for each day the plant is in operation; compute and enter the total net quantity of finished water produced for the month; compute and enter the average daily net quantity of finished water produced for the month; and enter the maximum day net quantity of finished water produced for the month. If the plant is staffed during every hour it is in operation or if the plant has flow recording equipment, enter the net quantity of finished water produced between 12:00 midnight and 12:00 midnight for each day the plant is in operation. If the plant is not staffed during some hours it is in operation and if the plant does not have flow recording equipment, read the totalizing flow meter(s) (or the elapsed time clock[s]) at approximately the same time each day the plant is staffed or visited by a licensed operator and enter the net quantity of finished water produced since the meter(s) (or the elapsed time clock[s]) was(were) last read. For each reading that represents the net quantity of finished water produced during two or more calendar days, divide the reading evenly between those calendar days.

LOWEST RESIDUAL DISINFECTANT CONCENTRATION AT REMOTE POINT IN DISTRIBUTION SYSTEM. For each day a water system serving 3,300 or more persons serves water to the public or five days per week, whichever is less, enter the residual disinfectant concentration measured at a point in the distribution system reflecting maximum residence time after disinfectant addition. For each day a water system serving less than 3,300 persons serves water to the public or two days per week, whichever is less, enter the residual disinfectant concentration measured at a point in the distribution system reflecting maximum residence time after disinfectant addition.

EMERGENCY OR ABNORMAL OPERATING CONDITIONS; REPAIR OR MAINTENANCE WORK THAT INVOLVES TAKING WATER SYSTEM COMPONENTS OUT OF OPERATION. For each day there are emergency or abnormal operating conditions at the plant or in the distribution system served by the plant, describe the emergency or abnormal operating conditions (attach additional sheets as necessary). In addition, for each day plant or distribution components other than water service lines are taken out of operation for repair or maintenance, describe the repair or maintenance (attach additional sheets as necessary).