

IOWA DEPARTMENT OF NATURAL RESOURCES

ADMINISTRATIVE CONSENT ORDER

<p>IN THE MATTER OF:</p> <p>WATER BOARD, CORNING MUNICIPAL UTILITIES</p> <p>Public Water Supply Facility No. 0220075</p>	<p>ADMINISTRATIVE CONSENT ORDER</p> <p>NO. 2016-WS- 08</p>
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**TO: Board Members, Water Board
Corning Municipal Utilities
501 Benton Avenue
Corning, Iowa 50841**

I. SUMMARY

This administrative consent order (order) is entered into between the Water Board, Corning Municipal Utilities (Water Board), and the Iowa Department of Natural Resources (Department) concerning the public water supply (PWS) system serving the City of Corning (City)) and the Southern Iowa Rural Water Association (SIRWA). In the interest of avoiding litigation, the parties have agreed to the provisions set forth in this order. The Water Board agrees to:

1. Maintain the services of a direct responsible operator in charge who is a properly certified grade III water treatment and grade II water distribution operator and qualified water treatment, water distribution and on-call staff. All certified operation personnel, including the operator in charge, are required to have knowledge and experience in surface water plant operation and maintenance and experience in troubleshooting surface water treatment plant problems. A minimum of a grade II water treatment operator must be at the water treatment plant when it is in operation;

2. Prepare an accurate calibration protocol for all online instrumentation that includes, but is not limited to, method of calibration, calibration frequency, calibration standards, calibration log (documentation), data collection, and data reporting to meet the requirements of 567 IAC 43.5(4)“b”(1)1. Submit this protocol to Field Office No. 4 (FO 4) within 30 days of receipt of the order signed by the Director. Prepare any revisions to

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the calibration protocol for all online instrumentation within 30 days of each request for revision;

3. Submit monthly operation reports (MORs) to FO 4 by the 10th of the month following the reporting month. The reports are required to be complete and accurate and contain all required information. Submit all required additional information to FO 4 as requested by FO 4 to document the information on the submitted MORs and to confirm any of the information reported on the MOR within the timeframe requested by FO 4;

4. Conduct monitoring in accordance with the water supply operation permit (permit) issued for this facility and any revised permit. A revised permit will be issued which includes daily monitoring at the source/entry point and at sites representative of the distribution system for total chlorine, monochloramine, and free available ammonia and increased nitrite monitoring in the distribution system; and

5. A viability assessment was completed and submitted to the Department's Water Supply Engineering Section (WSES). Comply with all requirements resulting from the review of this assessment.

6. Pay a penalty as set forth in this order.

Any questions regarding this order should be directed to:

Relating to technical requirements:

Keith Wilkens
Environmental Specialist Senior
IDNR Field Office No. 4
1401 Sunnyside Lane
Atlantic, Iowa 50022
Ph: 712/243-1934

Relating to legal issues:

Diana Hansen
Attorney at Law
Iowa Department of Natural Resources
502 East 9th Street
Des Moines, Iowa 50319-0034
Ph: 515/725-8248

Mail payment of penalty to:

Iowa Department of Natural Resources
502 East 9th Street
Des Moines, Iowa 50319-0034

II. JURISDICTION

This order is issued pursuant to Iowa Code section 455B.175(1), which authorizes the Director to issue any order necessary to secure compliance with or prevent a violation of Iowa Code chapter 455B, Division III, Part 1, and the rules promulgated or permits issued

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pursuant thereto, and Iowa Code section 455B.109 and 567 Iowa Administrative Code (IAC) 10(455B), which authorize the Director to assess administrative penalties.

III. STATEMENT OF FACTS

Facility Description

1. The Water Board operates a PWS serving a population of approximately 1,793. Leadership of this PWS is provided by a three member board and a general manager. The Water Board also provides water to the SIRWA in addition to the residents of Corning, Iowa. Water for this PWS is obtained from Lake Binder, the City Reservoir, and Lake Icaria. Treatment consists of the addition of potassium permanganate before an in-line mixing chamber, aluminum polychloride as a coagulant is added in the mixing chamber, the addition of a polymer, and chlorine dioxide after the in-line mixing chamber but prior to a chemical mixing chamber, passage through a vacuum chamber, clarification in two "superpulsator" clarifiers, filtration through a sand and granular activated carbon (GAC) medium, the addition of caustic soda and fluoride prior to the contact time (CT) tank, and chloramination (formed by mixing sodium hypochlorite and ammonium sulfate) after the CT tank. Plant storage is provided by a 372,000 gallon CT tank, a 628,000 gallon ground storage tank, and a 45,000 gallon clearwell. Distribution storage and pressure are provided by a 750,000 gallon standpipe and a 275,000 gallon standpipe at Blue Grass Park, an industrial park located on the south edge of town.

2. The PWS facility serving the City and SIRWA provides piped water to the public for human consumption and meets the definition of a PWS system since it regularly serves at least 25 persons. This system is classified as a community public water system and is open all year. This system serves a population of approximately 1,635 persons based on the 2010 census.

Water Supply Operation Permit

3. On July 7, 2014, the Department's Water Supply Operations Section (WSOS) issued a renewed water supply operation permit (permit). A revised operation permit will be issued which will include daily monitoring at the source/entry point and at sites representative of the distribution system for total chlorine, monochloramine, and free available ammonia and increased nitrite monitoring in the distribution system.

Facility History

4. On December 5, 2013, FO 4 received a phone call from Mr. Goldsmith, the operator in charge of this facility. Mr. Goldsmith noted that the water plant had no chlorine or CT values for four days at the end of November due to a leak in the tubing for the chlorine analyzer. Mr. Goldsmith noted that he was working with a computer technician to retrieve the data from the grab samples and use that information to complete the MORs.

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Mr. Goldsmith was advised by FO 4 to submit the MOR late after all of the data has been entered.

5. On January 21, 2014, the Department's WSOS issued a Notice of Violation (NOV) for a monitoring violation for failure to collect and/or report total trihalomethanes and haloacetic acids sampling in November 2013. The NOV required that public notice be given for this monitoring violation. Public Notice was received for this violation in June 2014.

6. On March 5, 2014, FO 4 issued an inspection report to the Water Board concerning the February 13, 2014 sanitary survey inspection of this PWS. The report required the Water Board to revise the bacteria sampling plan. The report required the Water Board to attach a proper label to the polymer day tank. The report required the Water Board to properly construct the bulk water loading station. The report required the Water Board to properly construct and screen the end of the overflow pipes for the CT and ground storage reservoir tanks. The report required accurate and complete MORs to be submitted to FO 4 within 10 days of the end of each month.

7. The March 5, 2014 inspection report stated the following regarding the MORs submitted to FO 4:

- This PWS had a disinfectant contact time (CT) violation on December 17, 2013. The CT was reported as zero (0). Mr. Goldsmith stated that this is a data entry error and that he would correct the error and resubmit the MOR to FO 4.
- Erratic chemical usages (significant differences in daily quantity used) were reported on MORs for this PWS. Mr. Goldsmith and another operator, Mr. Drake, stated that this resulted from the valve on the line from the bulk tank to the day tank being left open. The report stated that this defeated the purpose of using a day tank and can potentially result in a significant chemical overfeed in the event of a pump malfunction as well as result in inaccurate usage records. The report required that all valves on chemical transfer lines be kept closed when not actively transferring chemicals to the day tank.
- MORs were submitted to FO 4 late four (4) times in 2013 and eleven (11) times in 2012. In 2012 August was the only month received on time. A Letter of Noncompliance for late MOR submittal was issued on April 29, 2013. Since that letter, the MOR had been received late only once which was a marked improvement.
- No hydrochloric acid (HCL) usage has been reported on MORs since mid-May 2013. Mr. Goldsmith stated that the scale was broken and that the parts to repair the scale had just been received. The report stated that this was an unacceptable delay in repairing the scale that resulted in a failure to meet the monitoring and reporting requirements contained in the permit and

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Department rules. The report required that responsible officials must ensure that repair parts are kept on-hand or are readily accessible so that such prolonged failures to report are avoided.

- The June 3 and 4, 2013 maximum combined filter effluent (CFE) turbidity readings were reported as 0.39 NTU but no incidences of >0.3 NTU were listed on the MOR for those dates. When Mr. Goldsmith was previously notified of this, he stated that he would check with the computer programmer for an explanation but no further information has been received by FO 4. Mr. Goldsmith informed FO 4 that he had not checked with the programmer yet but would do so. The report required that FO 4 be provided an explanation once the programmer has been contacted.
- The December 2012 MOR did not have any values listed for daily chlorine dioxide or chlorite. Mr. Goldsmith was notified of this on January 23, 2013. A corrected copy of the MOR was submitted.
- The April 2012 MRDL value was changed on the May and June 2012 MORs. Mr. Goldsmith was notified of this. He submitted corrected MORs to FO 4.
- The March 2012 MOR was missing chlorite monitoring data. Mr. Goldsmith was notified and the data was submitted to FO 4.
- The October 2011 MRDL value changed on subsequent MORs. Mr. Goldsmith was notified of this. He then sent corrected MORs to FO 4.

8. The March 5, 2014 inspection report found that with the exception of the scale repair and leaving the transfer valve open, all of the above issues could have been avoided by responsible officials more closely reviewing the MORs for accuracy and completeness before they were submitted to FO 4. The inspection report noted that this was not the first sanitary survey during which these matters had been discussed. The report stated that it was vital that accurate records be maintained and submitted to the Department. The report noted that FO 4 had worked patiently with the Water Board's water treatment plant personnel to correct this problem and yet it persisted. The report required that every effort must be made to eliminate such errors of oversight.

9. On March 14, 2014, FO 4 received a letter from the Corning Municipal Utilities dated March 13, 2014 in response to the March 5, 2014 inspection report for the sanitary survey. The response was signed by Tim Larsen, the Corning Municipal Utilities General Manager. Regarding the MORs, the written response stated, "I appreciated the opportunity to discuss the lack of detail by the water department, and your willingness to include me on all correspondence. I have stressed the importance of conforming and will find a resolution. I have scheduled MOR to follow end of month meter reading to have another operator proof read the MOR, and to replace all analyzer reagents on a twenty day rotation".

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10. Between August 4, 2014 and August 22, 2014, FO 4 internal e-mail communication summarized the response by FO 4 to low chlorine residuals observed in both the Water Board's system and SIRWA's system. It was determined that the low chlorine residuals were the result of nitrification within the distribution system. The Water Board switched from chloramines to free chlorine to address the nitrification.

11. By a letter dated September 12, 2014, the Department's Water Supply Operations Section (WSOS) informed the Water Board of Positive Total Coliform Bacteria Results from sampling in the PWS system on September 10, 2014. The WSOS letter required that three repeat samples be collected and tested for coliform bacteria within 24 hours of notification by the Department. The WSOS letter also required that five routine samples be collected and tested for coliform bacteria in October 2014.

12. On September 12, 2014, FO 4 discussed the total coliform bacteria sampling results with Mr. Goldsmith, the operator in charge. Mr. Goldsmith believed that one of two new employees had dirty hands during the sampling event. It was also discovered by FO 4 in the conversation that this PWS collects bacteria samples in plastic bottles, drives them back to its laboratory, and subsequently transfers the water into proper bacteria bottles. Mr. Goldsmith was advised that this sampling technique must cease immediately.

13. On September 15, 2014, FO 4 issued an NOV for an overdue response to the recent sanitary survey report. A written response had been requested for one group of deficiencies by March 31, 2015 and for a second group of deficiencies by April 15, 2015. FO 4 requested a written response by September 29, 2014. On September 22, 2014, FO 4 issued a letter rescinding the September 15, 2014 NOV to the Water Board. The letter noted that FO 4 located a copy of the Water Board's submittal dated March 13, 2014. However, the letter also noted that FO 4 has not received notification that the new chemical placards were in use, that the bulk water loading station has been modified, or that the CT and Ground Storage Reservoir overflow pipe has been constructed properly.

14. On September 25, 2014, Keith Wilken, FO 4 had a telephone conversation with Mike Goldsmith, the Water Board operator in charge. Mr. Goldsmith confirmed that a new employee had collected the positive bacteria sample. FO 4 inquired as to why Mike Goldsmith was listed as the sample collector rather than the new employee. It was determined that the new employee collected water from the bacteria sampling site in a plastic container and transferred the container to the Water Board's laboratory. Mr. Goldsmith transferred that water into a proper bacteria bottle. FO 4 again instructed Mr. Goldsmith to stop this sampling technique.

15. During the September 25, 2014 telephone conversation, Keith Wilken, FO 4, informed Mr. Goldsmith that only total chlorine was reported on the repeat bacteria samples and inquired as to whether this facility had already switched back to chloramines. Mr. Goldsmith responded that the facility was still providing free chlorine. Mr. Wilken inquired as to why only total chlorine was reported. Mr. Goldsmith responded that Quentin, the Water Board employee, actually sampled for free chlorine while collecting the sample but nothing was reported on either the free or total chlorine spaces. This information was actually reported elsewhere on the form. Mr. Wilken inquired as to how

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Mr. Goldsmith knew that it was free chlorine, and why total chlorine was not analyzed. Mr. Goldsmith responded that the facility only samples for free chlorine when using free chlorine disinfection and has always done it that way. Mr. Wilken advised Mr. Goldsmith that free and total chlorine must be analyzed when they are using free chlorine disinfection.

16. During this same September 25, 2014 conversation, Mr. Wilken inquired as to who was reported as the sample collector. Mr. Goldsmith responded that he was named as the collector. Mr. Wilken reminded Mr. Goldsmith that he had just been informed that Quentin collected the sample. Mr. Wilken informed Mr. Goldsmith that this appeared to be falsified data. Mr. Goldsmith responded that this was a gray area and was not falsification.

17. On August 8, 2014, Jerry Jordison from FO 4 visited this PWS. The purpose of the visit was to collect water samples from several locations to try and better understand the low chlorine residual conditions that were occurring within both the Water Board's and SIRWA's systems. Samples were collected at various locations and analyzed for ammonia-nitrogen, nitrate, and nitrite. It was determined that the ammonium sulfate that was added to create chloramines was being overfed and was reacting with the chlorine disinfectant in the distribution system thus reducing the chlorine residual. In addition, nitrification was taking place in both distribution systems causing nitrites to form. Consequently it was decided that the Water Board would switch to free chlorine for a short period of time in order to eliminate the nitrifying bacteria in the distribution systems.

18. On September 30, 2014, FO 4 received a letter from the Water Board. The Water Board's letter indicated that new placards were installed. The letter also included invoices for the work performed on the bulk water loading station and the ground water storage overflow pipe.

19. On October 2, 2014, Mike Goldsmith, the Water Board operator in charge, had a telephone communication with Jerry Jordison, FO 4. Mr. Goldsmith informed FO 4 that the Water Board switched from free chlorine to chloramines on September 29, 2014. Mr. Jordison inquired as to whether Mr. Goldsmith had adjusted the rate of ammonia feed before returning to chloramination. Mr. Goldsmith responded that he had not. Mr. Jordison e-mailed desirable free ammonia levels to Mr. Goldsmith and advised him that the ammonia feed rate must be reduced.

20. On October 2, 2014, FO 4 was notified of low chlorine residuals at the Northwest Adams Pump Station in the SIRWA system. Keith Wilken, FO 4 visited the Water Board's treatment plant and met with Mike Goldsmith, the operator in charge. Samples were collected at the source entry point (SEP), at the north tower, and at the Cenex Station. Samples were analyzed in-house at the Water Board's treatment plant as well as shipped to the State Hygienic Laboratory (SHL). It was observed that Mr. Goldsmith was performing the monochloramine and free ammonia analysis incorrectly. It was recommended that the ammonia feed rate be reduced. It was recommended that the 1,000,000 gallon ground storage reservoir be lowered overnight by discharging water to

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waste. It was recommended that water from the 750,000 gallon standpipe be pumped to waste the following day after the ground storage reservoir was refilled.

21. On October 3, 2014, FO 4 learned that the ground storage reservoir was lowered overnight by allowing the water to enter the distribution system instead of pumping it to waste. It was learned that Mr. Goldsmith, the operator in charge, left the valve between the ammonium sulfate bulk tank and day tank open. It was learned that the Water Board did not follow the protocol provided to switch from free chlorine to chloramines. On October 4, 2014, the ammonium sulfate feed rate was further reduced at the Water Board's treatment plant.

22. On October 8, 2014, Department staff members Keith Wilken and Thad Nanfito, FO 4, and Julie Sievers, Field Office 3 (FO 3) visited the Water Board's treatment plant. Department staff met with Tim Larsen, the Water Board's General Manager; Mike Goldsmith, the Water Board's operator in charge; Dan McIntosh, SIRWA; Matt Schultz, SIRWA; Garry Miller, SIRWA; and Chad Mahan, SIRWA. Julie Sievers gave a presentation to Water Board and SIRWA staff titled "Chloramination". During this visit, it was learned that the turbidimeters within the Water Board's treatment plant were last calibrated in March, 2014. The Department informed the Water Board that the amount of chemicals used must be measured on a daily basis. During this visit, Department staff verbally informed Mr. Larsen that the facility is submitting questionable data on this system's MORs. Department staff advised Mr. Larsen that additional investigation would be forthcoming.

23. From October 9, 2014 through October 13, 2014, Keith Wilken, FO 4, communicated by e-mail with Tim Larsen, the Water Board General Manager. FO 4 provided Mr. Larsen with the document titled "Guidelines for Distribution Transition from Chloramines to Free Chlorine" that was previously sent to Mr. Goldsmith, Water Board operator in charge, on August 12, 2014. The last page of the document outlined the actions that should have been taken during the switch from free chlorine to chloramines. After a response from Mr. Larsen, FO 4 noted that the Water Board was welcome to hire a consulting engineer to work through these issues. It was the understanding of FO 4 that the Water Board requested technical assistance from FO 4.

24. On October 9, 2014, Keith Wilken, FO 4, communicated by e-mail with Mike Goldsmith, the Water Board operator in charge. Mr. Wilken indicated in his e-mail that during the October 8, 2014 site visit to the water treatment plant, it was unknown as to the last time the turbidimeters within the treatment plant were calibrated. It was indicated that they were possibly calibrated last March. Mr. Wilken advised Mr. Goldsmith that all turbidimeters must be calibrated and maintained as per the manufacturer's specifications. Mr. Wilken stated that Hach 1720D turbidimeters were to be calibrated every three months. He also indicated that routine calibration and a calibration log must be begun immediately. Mr. Wilken's email note required that all turbidimeters were to be calibrated by October 10, 2014. Mr. Goldsmith responded that same day reporting that the turbidimeters had been calibrated that morning.

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25. On October 10, 2014, Jerry Jordison, FO 4, had a telephone communication with Mike Goldsmith, Water Works operator in charge, concerning calculating the monthly MRDL. Mr. Goldsmith inquired as to how many sample results he is to use in calculating the monthly MRDL. Mr. Jordison advised him that he was to use the total number of chlorine residuals measured with each routine bacterial sample plus those collected in conjunction with any repeat samples for the month. The average of the total number of results was to be used as the MRDL for the month.

26. On October 17, 2014, the Water Board lowered the ammonium sulfate feed rate again. Free ammonia entering the system was still in the 0.4 mg/L range. On October 29, 2014, the SEP yielded 2.54 mg/L total chlorine, 2.37 mg/L monochloramine, and 0.02 mg/L of free ammonia. On November 3, 2014, Keith Wilken, FO 4, prepared a Memorandum summarizing the investigation at the Water Board's water treatment plant from October 2, 2014 through October 29, 2014 regarding low chlorine residuals.

27. On May 27, 2015, Keith Wilken and Thad Nanfito, FO 4, conducted an investigation at the Water Board's water treatment plant. FO 4 staff met with Mike Goldsmith, the Water Board operator in charge, Tim Larsen, the Water Board General Manger, and Quintin Wilcoxson, the Water Board water operator, during the investigation. On June 9, 2015, FO 4 issued an NOV as a result of the investigation.

28. On May 28, 2015, FO 4 discussed with the Water Board General Manager staffing at the water treatment plant. FO 4 advised the General Manager that as a Grade III treatment facility, the Water Board cannot contract with an operator by affidavit. FO 4 advised the General Manager that the Water Board must contract with an operator in charge if it chose to go that route.

29. Between May 28, 2015 and June 1, 2015, FO 4 communicated by e-mail with Tim Larsen, Water Board General Manager, concerning calibration of the benchtop turbidimeter. Mr. Larsen reported to FO 4 that the benchtop turbidimeter had been calibrated. The Water Board was waiting for Hach to return its call regarding the calibration of all turbidimeters within the plant. FO 4 staff clarified that a third party must calibrate all turbidimeters including the benchtop unit by June 5, 2015. FO 4 informed Mr. Larsen that if the calibration could not be completed by June 5, 2015, the Water Board needed to provide the earliest date that a third party could complete the calibration.

30. Between May 30, 2015 and June 2, 2015, FO 4 communicated by e-mail with Mike Goldsmith, the Water Board operator in charge. Mr. Goldsmith reported that the fluoride scale was fixed but that there was a problem with the chlorite scale. FO 4 inquired as to how chlorite usage was being reported. Mr. Goldsmith responded that the scales measured in lbs. but the usage appeared to be too low. FO 4 inquired as to how long the scale had been reporting inadequate usage. Mr. Goldsmith responded with "This month I believe". FO 4 requested that a more solid date be provided of when the chlorite scale ceased providing accurate usage information. Mr. Goldsmith responded with April 22, 2015. FO 4 requested an explanation of how chlorite usage was determined and reported for the time period from April 22, 2015 through June 1, 2015. Mr. Goldsmith responded

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that the SCADA system puts numbers in the report for the MOR. FO 4 inquired as to whether numbers reported by the SCADA system on the MORs were inaccurate. Mr. Goldsmith confirmed that the numbers were inaccurate.

31. Between June 3, 2015 and June 5, 2015, FO 4 and Tim Larson, the Water Board General Manager, communicated by e-mail. These e-mails discussed the Water Board's communication with Hach to get the turbidimeters calibrated. It was agreed that all turbidimeters within the treatment plant would be calibrated by a third party by June 10, 2015.

32. Between June 5, 2015 and June 9, 2015, FO 4 communicated by e-mail with Tim Larsen from the Water Board. Water Board staff noted that the 88 lbs. of fluoride reported on May 30th was incorrect. The load cell was changed that day. FO 4 noted that regardless of whether the day tank was refilled on the 30th, the amount of fluoride used must be monitored and reported accurately. FO 4 also noted that the quantity of fluoride used on the May MOR was adjusted for most days. FO 4 inquired as to how the Water Board went back and adjusted the fluoride data if the scale was not working in May. The Water Board responded with a long e-mail. The e-mail discussion included, but was not limited to, the following: Mr. Goldsmith did not input any numbers on the MOR for chemical used; Mr. Goldsmith did not know how to override or change those numbers; if a person moved a tank or worked on valves or fittings, the weights of the day tank would be recorded incorrectly for a day; it was easy to measure how much chemical was used each day but the number had to be inserted by hand and Mr. Goldsmith did not know how to input those numbers into the database.

33. On June 6, 2015, Jessica Montana, Keith Wilken, and Thad Nanfito, FO 4, had a telephone conversation with Dan McIntosh and Matt Schultz, SIRWA. FO 4 staff provided a brief explanation of the FO 4 May 27, 2015 investigation at the Water Board's treatment plant. There was some discussion regarding operator certification issues at the Water Board. SIRWA expressed some concerns with the upcoming warmer weather and potential nitrification issues. FO 4 noted that the Water Board continues to monitor total chlorine, monochloramine, and free ammonia. FO 4 requested that SIRWA notify FO 4 immediately if issues were observed within its distribution system.

34. On June 9, 2015, FO 4 issued an NOV to the Water Board as a result of the May 27, 2015 investigation. The NOV cited the following violations; 567 IAC 42.5(1)"g" Self-Monitoring Requirements Records, 567 IAC 42, Appendix B (455B) Self-Monitoring Requirements, 567 IAC 42.4(3)"a"(2)5 Daily Monitoring and Reporting Fluoride and Chlorite, 567 IAC 43.5(4)"b"(1) Routine Turbidity Monitoring Requirements, 567 IAC 43.9(4)"a" Monitoring Requirements for Systems Using Filtration Treatment, 567 IAC 43.6(2)"b"(1) Routine Monitoring for Total Organic Carbon, 567 IAC 43.6(3) Treatment Technique for Control of Disinfection Byproduct Precursors, and 567 IAC 81.2(4) Shift Operator Certification. The May 27, 2015 investigation by FO 4 documented falsification of data. The Water Board was required to contract with a third party to calibrate all turbidimeters. The Water Board was required to address all operator certification issues and submit an Operator Compliance Plan. The Water Board was required to contract

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with a third party to address the inaccurate turbidity values being reported by the SCADA system and the lack of historic SCADA data. The Water Board was required to repair or replace the chlorite scale. The Water Board was required to submit a viability assessment to the Department's WSES.

35. On June 9, 2015, FO 4 communicated by e-mail with Tim Larsen, Water Board General Manager. Jessica Montana, FO 4 Supervisor, responded to questions concerning operator compliance plan requirements and staffing at the water treatment plant. The email also discussed how to respond to emergency situations where turbidity or chlorine readings were not being collected by the SCADA system and indicated that the water treatment plant should contact FO 4 for guidance in such situations.

36. On June 12, 2015, the Water Board sent an e-mail to FO 4 and submitted a Hach Field Service Report. On June 15, 2015, the Water Board sent an email to FO 4. The Water Board reported that the chlorite scale was fixed on June 1, 2015. On July 13, 2015, the Water Board submitted a response to the June 9, 2015 NOV issued by FO 4.

37. On July 15, 2015, Jessica Montana, Keith Wilken, and Thad Nanfito, FO 4 conducted an investigation at the Water Board's water treatment plant. FO 4 met with Mike Goldsmith, the Water Board operator in charge; Tim Larsen, the Water Board's General Manger; Quintin Wilcoxson, a Water Board operator; and Don Kenworthy, Water Board Member, during the investigation. FO 4 issued an NOV on July 28, 2015 as a result of the investigation. Also on July 15, 2015, Keith Wilken, FO 4 had a telephone conversation with Tim Larsen, the Water Board General Manager. Mr. Larsen inquired as to what sort of contract terms he should be looking at for bringing in a contract operator. Mr. Wilken recommended that the contract be based on the Water Board's long term plans. Mr. Larsen was advised that the Water Board must maintain a properly certified operator at all times. Mr. Larsen also was advised that the Water Board cannot contract with an operator by affidavit but rather must contract with an operator in charge.

38. On July 16, 2015, Keith Wilken, FO 4, received a text message from Mike Goldsmith, the Water Board operator in charge. The text message stated, "Good morning Keith. This is Mike from Corning. I would like to invite you and Thad down to watch me do tests and show you the plant. I would like to build trust and have a good working relationship. I feel we got off to a bad start and want to start a new. Have a good day".

39. On July 17, 2015, FO 4 received an e-mail from the Water Board. The Water Board planned to schedule for the replacement of turbidimeters during the last week of the month. The Water Board also was replacing the granular activated carbon in filters #2 and #3 on July 27 and 28, 2015. The email from the Water Board stated that the Water Board planned to call a special meeting to decide on the direction the Water Board wished to move and Mike Goldsmith's status as an employee. The Water Board also proposed a meeting with FO 4 staff in Atlantic. FO 4 staff agreed to meet with the Water Board.

40. On July 23, 2015, Keith Wilken, FO 4 had a telephone conversation with Steve Guthrie, Certified Operator # 2770, PeopleService, Inc. Mr. Guthrie reported that he met with the Water Board's general manager and board members and they are serious about

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responding to the Department. Mr. Guthrie inquired as to how many visits per week would satisfy the Department. Mr. Guthrie was advised that CMU cannot contract with an operator by affidavit but must contract with an operator in charge with at least a Grade III treatment certification. It was also discussed that shift operators must possess at least a Grade II certification and must be trusted to perform all responsibilities by the operator in charge.

41. On July 28, 2015, FO 4 issued a NOV to the Water Board as a result of the July 15, 2015 investigation. The NOV cited the following violations; 567 IAC 42, Appendix B (455B) Self-Monitoring Requirements; 567 IAC 43.9(5) Filtration Reporting and Record-Keeping Requirements; 567 IAC 42.4(3)“a”(2)“5” Daily Monitoring and Reporting Fluoride; 567 IAC 43.6(2)“ b”(1) Routine Monitoring for Total Organic Carbon; and 567 IAC 43.6(3) Treatment Technique for Control of Disinfection Byproduct Precursors. The July 15, 2015 investigation documented additional falsification of data. The Water Board was required to revise and submit Operator Compliance Plans. The Water Board was required to properly adjust the output span of the turbidimeters on the SCADA system. FO 4 recommended that the Water Board contract with an Operator in Charge possessing at least a Grade III Water Treatment and Grade II Water Distribution certification.

42. On July 28, 2015, Keith Wilken, FO 4, had a telephone conversation with Chris Gutschow, PeopleService, Inc. Mr. Gutschow reported to Mr. Wilken that the Water Board was serious about complying with the Department’s regulations. Mr. Gutschow reported that PeopleService, Inc. was planning to sign a 30 day contract with the Water Board to be its operator in charge. They also discussed the special monochloramine, total chlorine, and free ammonia analysis that the Water Board has been instructed to perform due to a nitrification event last fall.

43. On August 3, 2015, Keith Wilken and Josh Chambers, FO 4, visited the Water Board’s water treatment plant and met with Mike Goldsmith, the Water Board operator in charge, and Quintin Wilcoxson, a Water Board water operator. FO 4 staff reviewed the Water Board’s bench sheets for total chlorine, monochloramine, and free ammonia data. It was observed that the data varied rather significantly.

44. On August 4, 2015, Keith Wilken, FO 4, communicated by e-mail with Mike Goldsmith, the Water Board operator in charge. Mr. Wilken advised Mr. Goldsmith that monochloramine and free ammonia analysis are dependent upon the water temperature and that the water temperature dictates the reaction time used during the analysis. Mr. Wilken requested that the Water Board begin taking the water temperature into account during the analysis.

45. On August 6, 2015, Jessica Montana, Keith Wilken, and Thad Nanfито, FO 4, met with Wendy Thibodeaux, Scott Akin, and Don Kenworthy, the Water Board Members, and Tim Larsen, Water Board General Manager, at the FO 4 office in Atlantic, Iowa. The Water Board presented FO 4 staff with a contract from PeopleService, Inc. that covered operator in charge responsibilities from August 10, 2015 through September 18, 2015. There were concerns with the language under the “Service Provided” section of the contract. The Water Board indicated that the short term contract would provide

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additional time to make a long term decision regarding operation of the PWS. It was reported that all turbidimeters within the treatment plant would be replaced with new units on August 10, 2015. It was reported that the output span of the turbidimeters on the SCADA system would be adjusted on the same date. There was discussion regarding the operator certification issues and managerial issues that may have contributed to the problems. FO 4 staff provided a general explanation of the Department's legal referral process.

46. On August 6, 2015, FO 4 was advised by email from the Water Board that PeopleService, Inc. would revise the contract language as was discussed during the meeting On August 6, 2016.

47. On August 11, 2015, Keith Wilken, FO 4, had a telephone conversation with Steve Guthrie, PeopleService, Inc. Mr. Guthrie reported that the contract details have been worked out and that PeopleService, Inc. would take over operation of the Water Board's treatment plant on a short term basis. Mr. Guthrie was preparing a cost estimate for long term operation of the treatment plant and inquired about staffing needs. Mr. Wilken advised Mr. Guthrie that there must be an operator in charge with at least a Grade III treatment and Grade II distribution certification. Mr. Guthrie was advised that all shift operators and on-call operators must have at least a Grade II treatment certification or have proven to the Department that the operator in charge was comfortable with the employee serving such a role.

48. On August 12, 2015, Keith Wilken, FO 4, drafted a Memorandum summarizing the August 6, 2015 meeting with the Board Members and the General Manager. The memorandum was sent to the Water Board members by e-mail. On August 12, 2015, Keith Wilken and Thad Nanfito, FO 4, visited the Water Board's water treatment plant and met with Steve Guthrie, PeopleService, Inc., Tim Larsen, the Water Board General Manager, and Quintin Wilcoxson, a Water Board operator. The Water Board provided revised Operator Compliance Plans during the visit. A copy of the contract with PeopleService, Inc. was provided to FO 4 during the visit. It was reported that the contract would be signed on August 13, 2015. Mr. Guthrie noted that the water treatment plant's SCADA trending was a work in progress and the alarms needed to be properly adjusted. Mr. Guthrie was to obtain the jar test settings from the WSES. Mr. Guthrie was to begin using the Optimization Assessment Software (OAS). PeopleService, Inc. staff was to calculate the chlorine contact time (CT) manually on a daily basis and provide FO 4 with the calculations used in the determination. FO 4 staff analyzed water from the water treatment plant's source entry point for monochloramine and free ammonia. The free ammonia sampling yielded 0.31 mg/L. It was recommended that the free ammonia concentrations leaving the treatment plant be maintained between 0.04 mg/L and 0.1 mg/L.

49. On August 13, 2015, Keith Wilken, FO 4, drafted a Memorandum for the August 12, 2015 site visit. This Memorandum was e-mailed to Tim Larsen, Water Board General Manager, and to Wendy Thibodeaux, Scott Akin, and Don Kenworthy, Water Board Members, on August 17, 2015.

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50. On August 13, 2015, the Water Board sent an e-mail to FO 4. The e-mail stated that the Water Board passed a motion to terminate Mike Goldsmith's employment. The Water Board signed a 30 day contract with PeopleService, Inc. to operate the facility until a permanent contract could be completed in the next three to four weeks. Steve Guthrie would be the operator in charge beginning on August 17, 2015.

51. On August 17, 2015, Tim Larsen, Water Board General Manager, sent an email to FO 4. Submitted with the e-mail was a service report from ICS Healy-Ruff regarding the installation of new turbidimeters, pH and temperature probes, surface scatter, and the changes to the output span of the turbidimeters (0-2.5 NTU) and the clarifiers (0-50 NTU).

IV. CONCLUSIONS OF LAW

1. Iowa Code section 455B.172 makes this Department the agency of the state to conduct the public water supply program. Iowa Code section 455B.171 defines a PWS system as a system for the provision of piped water for human consumption, if the system has at least fifteen service connections or regularly serves at least twenty-five individuals. Iowa Code sections 455B.173(3), (5), and (6) authorize the Environmental Protection Commission (Commission) to promulgate rules relating to the operation of PWS systems, to adopt drinking water standards to assure compliance with federal standards adopted pursuant to the federal Safe Drinking Water Act, and to adopt rules relating to monitoring, record keeping, and reporting requirements for any PWS system. The Commission adopted such rules at 567 IAC chapters 40- 43.

2. Rule 567 IAC 40.2(455B), further defines the phrase "public water supply" by defining "community water system" as a PWS which has at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents, consistent with federal regulations. A "noncommunity water system" is any other PWS. This facility is a community water system (CWS).

3. Subrule 567 IAC 42.1(1) requires the owner or operator of a PWS system to give notice of all violations of public drinking water rules and for other situations as listed in the subrule. This includes violations or failure to comply with MCLs, treatment techniques, monitoring requirements, and testing procedures. The term "other situations" includes all situations determined by the Department to require a public notice such as failure to meet the terms of a compliance schedule, failure to comply with public notification requirements or consumer confidence requirements, failure to retain a certified operator in accordance with subrule 43.1(5), and failure to meet data and other reporting requirements.

4. Pursuant to subrule 567 IAC 42.1(1)"b", the PWS system must provide public notice to persons served by the water system in accordance with this rule. The notice is required to provide to the persons served by the water system a clear and readily understandable

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explanation of the violation including when the violation or situation occurred, any potential adverse health effects from the violation or situation, what the system is doing to correct the violation or situation, when the water system expects to return to compliance or resolve the situation and the name, business address, and telephone number of the owner, operator, or designee of the system as a source of additional information.

5. Subrule 567 IAC 42.4(1)"c", provides that the PWS shall submit a certification stating that it has fully complied with public notification rules and a representative copy of the public notice provided to the Department within ten days of completion of the notice.

6. Subrule 42.5(1) requires PWS systems to retain analytical records on its premises or at a convenient location near its premises. Self-monitoring data must also be maintained at the facility for inspection by the Department in a form that allows easy retrieval and interpretation of this data. Microbiological and turbidity analyses made pursuant to 567 IAC chapters 41 and 43 are required to be kept for not less than five years. See 42.5(1)"a"(2)1.

7. Department subrule 567 IAC 43.5(1)"a" provides in part as follows.

"These rules apply to all public water supply systems using surface water or ground water under the direct influence of surface water, in whole or in part, and establish criteria under which filtration is required as a treatment technique. In addition, these rules establish treatment technique requirements in lieu of maximum contaminat levels for *Giardia lamblia*, heterotrophic plate count bacteria, *Legionella*, viruses and turbidity. Each public water system with a surface water source or a groundwater source under the direct influence of surface water must provide treatment of that source water which complies with these treatment technique requirements. Systems which serve at least 10,000 persons must also comply with the requirements of 567—43.9(455B). Systems which serve fewer than 10,000 persons must also comply with the requirements of 567—43.10(455B). The treatment technique requirements consist of installing and properly operating water treatment processes which reliably achieve:

(1) At least 99.9 percent (3-log) removal or inactivation of *Giardia lamblia* cysts between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer."

8. Subrule 567 IAC 43.5(2) pertains to disinfection and subrule 567 IAC 43.5(2)"a" pertains to the disinfection system criteria. Subrules 567 IAC 43.5(2) and 567 IAC 43.5(2)"a" provide in part as follows:

43.5(2) *Disinfection*. All community and noncommunity public water supply systems using surface water or groundwater under the direct influence of surface water in whole or in part shall be required to provide disinfection in compliance with this subrule and

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filtration in compliance with 43.5(3). If the department has determined that filtration is required, the system must comply with any interim disinfection requirements the department deems necessary before filtration is installed. ... Failure to meet any requirement of this subrule after the applicable date specified in this subrule is a treatment technique violation. The disinfection requirements are as follows:

a. Disinfection treatment criteria. The disinfection treatment must be sufficient to ensure that the total treatment processes of that system achieve at least 99.9 percent (3-log) inactivation or removal of *Giardia lamblia* cysts and at least 99.99 percent (4-log) inactivation or removal of viruses, acceptable to the department. At least 0.5 log inactivation of *Giardia lamblia* cysts must be achieved through disinfection treatment even if the required inactivation or removal is met or exceeded through physical treatment processes. Each system is required to calculate the total inactivation ratio ($CT_{\text{calculated}}/CT_{\text{required}}$) each day the treatment plant is in operation. The system's total inactivation ratio must be equal to or greater than 1.0 in order to ensure that the minimum inactivation and removal requirements have been achieved.

9. Department subrule 567 IAC 43.5(2)“b” provides as follows:

b. Disinfection system. The disinfection system must include:

(1) Redundant components, including an auxiliary power supply with automatic start-up and alarm to ensure that disinfectant is maintained continuously while water is being delivered to the distribution system, or

(2) Automatic shutoff of delivery of water to the distribution system whenever there is less than 0.3 mg/L of residual disinfection concentration in the water. If the department determines that automatic shutoff would cause unreasonable risk or interfere with fire protection, the system must comply with 43.5(2)“b”(1).

10. Department subrule 567 IAC 43.5(2)“c” provides as follows:

c. Residual disinfectant entering system. The residual disinfectant concentration in the water entering the distribution system, measured as specified in 43.5(4)“a”(5) and 43.5(4)“b”(2), cannot be less than 0.3 mg/L free residual or 1.5 mg/L total residual chlorine for more than four hours.

11. Department subrule 43.5(4)“b”(1)- (2) provide monitoring requirements for PWS systems using a surface water source for turbidity and residual disinfection. This subrule provides in part as follows:

(1) Turbidity.

1. Routine turbidity monitoring requirements. Turbidity measurements as required by 43.5(3) must be performed on representative samples of the system's filtered water every four hours (or more frequently) that the system serves water to the public. A public water system may substitute continuous turbidity monitoring for grab sample monitoring if it validates the continuous measurement for accuracy on a regular basis using a calibration

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protocol approved by the department and audited for compliance during sanitary surveys. Major elements of the protocol shall include, but are not limited to: method of calibration, calibration frequency, calibration standards, documentation, data collection and data reporting. ...

(2) Residual disinfection.

1. Residual disinfection entering the system. The residual disinfectant concentration of the water entering the distribution system shall be monitored continuously, and the lowest value recorded each day, except if there is a failure of the continuous monitoring equipment, grab sampling every four hours may be conducted in lieu of continuous monitoring, but not to exceed five working days following the failure of the equipment.

...

12. Subrule 567 IAC 43.10(4)“a” addresses combined filter effluent turbidity requirements. This subrule provides in part as follows:

43.10(4) *Combined filter effluent turbidity requirements.* All systems using surface water or groundwater under the direct influence of surface water which serve fewer than 10,000 people must use filtration, and the turbidity limits that must be met depend upon the type of filtration used. ...

a. *Conventional filtration treatment or direct filtration.*

(1) Turbidity must be measured in the combined filter effluent as described in paragraphs 43.5(4)“a” and “b.”

(2) The turbidity in the combined filter effluent must be less than or equal to 0.3 NTU in 95 percent of the turbidity measurements taken each month.

(3) The turbidity in the combined filter effluent must never exceed 1 NTU at any time during the month.

(4) The monthly reporting requirements are listed in subrule 43.10(6).

13. Subrule 567 IAC 43.10(5) pertains to individual filter turbidity requirements. This subrule provides as follows:

43.10(5) *Individual filter turbidity requirements.* All systems utilizing conventional filtration or direct filtration must conduct continuous monitoring of turbidity for each individual filter. Records must be maintained according to subrule 43.10(7).

a. *Continuous turbidity monitoring requirements.* Following are the continuous turbidity monitoring requirements.

(1) Monitoring must be conducted using an approved method listed in paragraph 43.5(4)“a”;

(2) Calibration of turbidimeters must be conducted using procedures specified by the manufacturer;

(3) Results of turbidity monitoring must be recorded at least every 15 minutes;

(4) Monthly reporting must be completed according to subrule 43.10(6); and

(5) Records must be maintained according to 43.10(7).

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b. *Failure of continuous turbidity monitoring equipment.* If there is a failure in the continuous turbidity monitoring equipment, the system must conduct grab sampling every four hours in lieu of continuous monitoring until the turbidimeter is back on-line. A system has a maximum of 14 days after failure to repair the equipment, or else the system is in violation. The system must notify the department within 24 hours of both when the turbidimeter was taken off line and when it was returned on-line.

...

e. *Requirements triggered by the individual filter turbidity monitoring data.* Systems are required to conduct additional activities based upon their individual filter turbidity monitoring data, as listed in this paragraph.

(1) If the turbidity of an individual filter (or the turbidity of the combined filter effluent for a system with one or two filters, pursuant to 43.10(5)“c”) exceeds 1.0 NTU in two consecutive recordings taken 15 minutes apart, the system must report the following information in the monthly operation report to the department by the tenth of the following month:

1. The filter number(s);
2. Corresponding date(s);
3. Turbidity value(s) which exceeded 1.0 NTU; and
4. The cause of the exceedance(s), if known.

...

14. Subrule 43.10(6) provides the reporting requirements for combined filter effluent turbidity monitoring. Subrule 43.10(6)“a”(1) provides as follows:

a. *Combined filter effluent turbidity monitoring.*

(1) The following information must be reported in the monthly operation report to the department by the tenth day of the following month.

1. Total number of filtered water turbidity measurements taken during the month.
2. The number and percentage of filtered water turbidity measurements taken during the month which are less than or equal to the systems required 95th percentile limit.
3. The date and analytical result of any turbidity measurements taken during the month which exceeded the maximum turbidity limit for the system, in addition to the requirements of 43.10(6)“a”(2).

15. If there is an exceedance of the combined filter effluent maximum turbidity limit, the requirements of subrule 43.10(6)“a”(2) must be met. Subrule 43.10(6)“a”(2)1 provides as follows.

(2) For an exceedance of the combined filter effluent maximum turbidity limit, the following requirements must be met.

1. If at any time the turbidity exceeds 1 NTU in representative samples of filtered water in a system using conventional filtration treatment or direct filtration, the system must consult with the department as soon as practical, but no longer than 24 hours after

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the exceedance is known, in accordance with the public notification requirements under 567—subparagraph 42.1(3)“b”(3)

16. The Commission has adopted rules relating to certification requirements in 567 IAC Chapter 81. Subrule 43.1(5) provides that all community PWS systems must have a properly certified operator.

17. Subrule 567 IAC 43.1(5)“a”, authorizes the Department to require a community water supply system to obtain a certified operator to be in direct responsible charge. “All community and nontransient noncommunity public water supply systems must have a certified operator in direct responsible charge of the treatment and distribution systems, in accordance with 567 Chapters 40 through 44 and 81.”

18. Subrule 567 IAC 81.2(3) pertains to the operator in charge certification requirement. This subrule requires the operator in charge to hold a certificate of the same classification of the plant or water distribution system and of equal or higher grade than the grade designated for that plant or distribution system.

19. Paragraph 43.5(4)“a”, requires that the measurements for pH, temperature, turbidity, and residual disinfectant concentration must be conducted by a Grade II, III, or IV operator meeting the requirements of Chapter 81, any person under the supervision of a Grade II, III, or IV operator meeting the requirements of Chapter 81, or a certified laboratory.

20. Subrule 43.8(5)“a”(2), requires that existing PWS systems categorized as being in significant noncompliance by the Department due to their history of failure to comply with drinking water standards, are required to complete a viability assessment for the Department’s review and approval. “Significant noncompliance” means the failure to comply with any drinking water standard. See subrule 43.8(1). The viability assessment must address the areas of technical, financial, and managerial viability for a PWS system. The assessment must include evaluation of the following areas at a minimum. The PWS system may be required to include additional information as directed by the Department. The viability of a system should be forecast for a twenty year period.

a. Technical Viability

- (1) Supply sources and facilities,
- (2) Treatment, and
- (3) Infrastructure (examples: pumping, storage, and distribution).

b. Financial Viability.

- (1) Capital and operating costs
- (2) Revenue sources

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(3) Contingency plans.

c. Managerial Viability

- (1) Operation
- (2) Maintenance
- (3) Management
- (4) Administration

V. ORDER

THEREFORE, the Department hereby orders and the Water Board agrees to comply with the following:

1. Maintain the services of a direct responsible operator in charge who is a properly certified grade III water treatment and grade II water distribution operator and qualified water treatment and water distribution staff. All certified operation personnel, including the operator in charge, must have knowledge and experience in surface water treatment plant operation and maintenance and experience in trouble shooting surface water treatment plant problems. A minimum of a grade II water treatment operator must be at the water treatment plant when it is in operation.

2. Prepare an accurate calibration protocol for all online instrumentation that includes, but is not limited to method of calibration, calibration frequency, calibration standards, calibration log (documentation), data collection, and data reporting. Submit this protocol to FO 4 within 30 days of receipt of the order signed by the Director. Prepare any revisions to the calibration protocol for all online instrumentation as required by FO 4 staff within 30 days of each request for revision.

3. MORs are required to be completed accurately and correctly with all required information and submitted to FO No. 4 by the 10th of the month following the reporting month. Submit all required additional information to FO 4 as requested by FO 4 to document the information on the submitted MORs and to confirm any of the information reported on the MOR within the timeframe requested by FO 4. All data generated at the facility to comply with the self-monitoring requirements must be maintained at the facility for inspection by the Department and must be in a form that allows easy retrieval and interpretation. Examples include, but are not limited to, recorder charts, log books, bench sheets, SCADA records, and electronic files as specified in 567 IAC 42.5(1)“g”.

4. Conduct monitoring in accordance with the permit issued to the Water Board for this facility and revised permits. A revised operation permit will be issued that will include daily monitoring at the source entry point and at sites representative of the distribution system for total chlorine, mono chloramines, and free available ammonia and increased nitrite monitoring in the distribution system.

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5. A Viability Assessment was completed and submitted to the WSES. You are required to comply with all requirements resulting from the review of the Viability Assessment as requested by WSES. This may include mandatory Water Board training.

6. The Water Board agrees to pay a \$10,000.00 administrative penalty. Payment is due within 60 days after the Director signs this order.

VI. PENALTY

1. Iowa Code section 455B.191 authorizes the assessment of civil penalties of up to \$5,000.00 per day of violation for the violations involved in this matter.

2. Iowa Code section 455B.109 authorizes the Commission to establish by rule a schedule of civil penalties up to \$10,000.00 that may be assessed administratively. The Commission has adopted this schedule with procedures and criteria for assessment of penalties in 567 IAC chapter 10. Pursuant to this chapter, the Department has determined that the most effective and efficient means of addressing the above-cited violations is the issuance of an order with an administrative penalty.

a. Economic Benefit. The Water Board achieved cost savings by not hiring experienced certified operators, by not properly maintaining the SCADA system, by not properly maintaining and calibrating the turbidimeters, and by not performing all of the self-monitoring requirements. However, the Water Board has already implemented some of these improvements and temporarily contracted with an operator in charge. The system was required to contract with a permanent operator in charge and ensure properly certified operators are available at the facility whenever it is operating. However, since the cap on the administrative penalty per order is \$10,000.00, no penalty will be assessed for this factor.

b. Gravity of the Violations. One of the factors to be considered in determining the gravity of the violations is the amount of penalty authorized by the Iowa Code for the types of violation. As indicated above, substantial civil penalties are authorized by statute. Despite the high penalties authorized, the Department has decided to handle the violations administratively at this time, as the most equitable and efficient means of resolving the matter.

The Department's drinking water program is intended to protect human health. Monitoring by the PWS and submittal of accurate monthly operation reports is intended to demonstrate and document that the PWS is providing safe drinking water to the citizens of the City and customers of SIRWA. During this investigation, the operator in charge admitted to falsifying data on two separate occasions. Furthermore, the system's turbidimeters were not properly maintained and calibrated. Although turbidity has no

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health affect itself, it acts as a reliable surrogate or indicator for the presence of microbial pathogens in drinking water. Turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms such as bacteria, viruses, protozoa, and parasites. These organisms can cause symptoms such as nausea, cramps, diarrhea, headaches, and can lead to death. This system's SCADA system did not have the ability to provide accurate and historic data which is the only way to assess the system's accuracy in reporting. In addition, this system was not monitoring and reporting the quantity of chemicals used accurately. The overfeeding of chemicals can threaten public health as was demonstrated during the nitrification issues that occurred in late 2014 partially due to the overfeeding of ammonium sulfate. Due to the public health importance of the public water supply program, \$5,000.00 is assessed for this factor.

c. Culpability. During this investigation, the operator in charge admitted to falsifying data on two separate occasions. The second admittance occurred after FO 4 staff explained the importance of falsified data and the potential repercussions associated with such. In addition, FO 4 staff verbally informed Tim Larsen, the Water Board General Manager, that this PWS was submitting questionable data on the MORs during an October 8, 2014 visit to the facility. The submittal of questionable data continued after this discussion. In addition, there has been a long history of reporting inaccurate chemical usage at this facility. Therefore, \$6,000.00 is assessed for this factor.

d. Mitigating or Aggravating Factors. The Water Board terminated Mr. Goldsmith's employment and contracted with PeopleService, Inc. to take over operation of the facility on a temporary basis. The Water Board later signed a five year contract with PeopleService, Inc. The Water Board has installed new turbidimeters throughout the treatment plant and has responded to all of the Department's requirements in a timely fashion. Therefore, a penalty reduction of \$1,000.00 is assessed for this factor. The total administrative penalty assessed by this order is \$10,000.00.

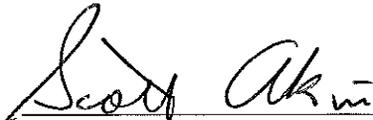
VII. WAIVER OF APPEAL RIGHTS

Iowa Code section 455B.175, and 561 IAC chapter 7 as adopted by reference by 567 IAC chapter 7, authorize a written notice of appeal to the Commission. This order is entered into knowingly by and with the consent of the Water Board. By signature to this order, all rights to appeal this order are waived.

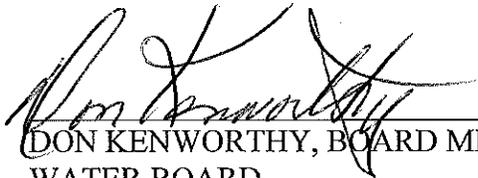
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VIII. NONCOMPLIANCE

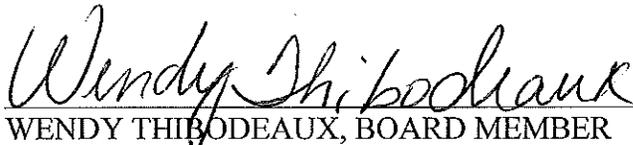
Failure to comply with this order may result in the imposition of further administrative penalties or referral to the Attorney General to obtain injunctive relief and civil penalties pursuant to Iowa Code section 455B.191. Compliance with this order constitutes full satisfaction of all requirements pertaining to the specific violations described in this order.


SCOTT AKEN, BOARD MEMBER
WATER BOARD
CORNING MUNICIPAL UTILITIES

Dated this 13 day of
October, 2016


DON KENWORTHY, BOARD MEMBER
WATER BOARD
CORNING MUNICIPAL UTILITIES

Dated this 13 day of
October, 2016


WENDY THIBODEAUX, BOARD MEMBER
WATER BOARD
CORNING MUNICIPAL UTILITIES

Dated this 13 day of
October, 2016


CHUCK GIPP
DIRECTOR
IOWA DEPARTMENT OF NATURAL RESOURCES

Dated this 17th day of
October, 2016

Water Board, Corning Municipal Utilities, Water Supply Facility No. 0220075, Jeff Vansteenburgh- Field Office No. 2, Keith Wilken and Jessica Montana- Field Office No. 4, Anne Lynam and Chris Spoelstra- Water Supply Operations Section, Diana Hansen- Legal Services Bureau, U.S.E.P.A. Region VII, II.B.2.a, II.B.2.d.

