

**Iowa Department of Inspections and Appeals  
Division of Administrative Hearings  
Wallace State Office Building  
Des Moines, Iowa 50319**

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<b>IN THE MATTER OF:</b>	)	<b>DIA NOS: 15DNR002,004</b>
	)	<b>DNR NO. 2015-WS-01</b>
<b>DUANE COVINGTON</b>	)	
	)	
<b>Operator Certification No. 2023</b>	)	<b>PROPOSED DECISION</b>

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This consolidated contested case concerns appeals filed by Duane Covington (Appellant) from the Notice of Intent to Revoke Operator Certification and the Notice of Intent to Deny Renewal of Operator Certification issued by the Department of Natural Resources (DNR). The hearing was held before the undersigned administrative law judge on July 11-July 14, 2016. The DNR was represented by DNR staff attorney John Crotty. Appellant was represented by attorney Daniel Rockhold. The hearing was closed to the public, at Appellant's request, pursuant to Iowa Code section 272C.6(1). Following the DNR's case-in-chief, Appellant's motion for directed verdict was denied. The record was held open until August 15, 2016 for the attorneys to submit their post hearing briefs and reply briefs, which were timely filed by both parties. Appellant's Attorney also filed a Motion to Strike, which was not resisted by the DNR. The Appellant's Motion to Strike the statements of new facts that were included in the DNR's brief is hereby GRANTED. Those additional facts were not considered in this Proposed Decision. No sanctions will be imposed.

**THE RECORD**

The record includes the Notice of Intent to Revoke Operator Certification No. 2023, issued 3/6/15; Notice of Appeal; Transmittal of Appeal to DIA; Notice of Hearing; Petition and Answer; Appellant's Continuance Request and Continuance Order; Appellant's 2<sup>nd</sup> Continuance Request; Notice of Intent to Deny Renewal of Operator Certification, issued 8/21/15; Order Continuing and Consolidating Hearings and Extending Discovery Deadlines; additional motion/orders continuing hearing and extending discovery deadlines; Notice of Appeal of Intent to Deny Certification Renewal; Petition and Answer; Department's Witness and Exhibit List; Appellant's Witness and Exhibit List; DNR's Notice of Substitution of Counsel and Motion to

Continue Hearing; Appellant Resistances; Order Continuing Consolidated Hearing; DNR Motion for Leave to Amend Exhibit List; and DNR Notice of Appearance of Counsel. The record also includes the testimony of Janet Gastineau; Larry Trout; John Whitaker; Duane Covington; Forrest Aldrich; DNR Exhibits 1, 12, 18-23, 25-26, 28-33; 35; 37-43; 45-47; 54-55 and Appellant Exhibits A-B, F-H, AD-AF, AO, BW, CN-CO, CQ-CR, CW-CX, CZ, DP, ED, and EG.<sup>1</sup> The record also includes the post hearing briefs and reply briefs submitted by the attorneys.

## FINDINGS OF FACT<sup>2</sup>

*Duane Covington Certification and Employment Background.* The DNR has certified Duane Covington as a Public Water System (PWS) grade 3 drinking water treatment operator and as a grade 4 drinking water distribution operator (certificate no. 2023).<sup>3</sup> Certificate no. 2023 was last renewed by the DNR with an expiration date of June 30, 2015. On March 6, 2015, the DNR issued its Notice of Intent to Revoke Mr. Covington's certifications as a water treatment operator and as a water distribution operator. On June 12, 2015, the DNR received Mr. Covington's timely application to renew these two certifications as well as his certification as a wastewater treatment operator. On August 25, 2015, the DNR filed its Notice of Intent to Deny Renewal of Mr. Covington's certifications as a water treatment and water distribution operator. (Notice of Intent to Revoke; Notice of Intent to Deny Renewal; Order Continuing and Consolidating Hearings; Petitions and Answers)

Duane Covington has been the designated "operator-in-charge" of the City of Chariton Water Works (CWW) water treatment plant and water distribution plant since October 7, 2013. An "operator-in-charge" is the person(s) in "direct responsible charge" for a plant or distribution system.<sup>4</sup> Mr. Covington is responsible for the management and operation of CWW's water treatment and water distribution systems. (Petitions, Answers, Gastineau and Appellant testimony)

CWW is a Public Water Supply (PWS) classified by the DNR as a Grade 3 water treatment system and a Grade 2 water distribution system that uses surface water as its

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<sup>1</sup> The parties has some of the same proposed exhibits and did not offer all of them into evidence. The DNR's brief cited to DNR exhibits 2 and 3, which were not offered into evidence, but these same documents (2 operation permits) were admitted as Appellant Exhibits H and G.

<sup>2</sup> The Findings of Fact also include citations to the DNR's relevant administrative rules.

<sup>3</sup> Pursuant to the DNR's rules, an operator who successfully completes both water treatment and water distribution certification is issued a Public Water Supply (PWS) certificate valid for both classifications. All renewal fees and CEUS are applied as one certification. See 567 IAC 81.2(6)

<sup>4</sup> 567 IAC 81.1.

source. Water is pumped to CWW from two reservoirs, Lake Morris and Lake Ellis, which are owned and controlled by the city. The water is initially treated at the raw water pump building with sodium permanganate, which is injected for taste and odor and for oxidation of the iron and manganese that naturally occurs in the water. The raw water is then pumped approximately 400 feet to the water treatment plant. Following all treatment, the finished water is pumped to the distribution system and on to a ground storage reservoir (GSR). From the GSR water is pumped to two 250,000 gallon elevated storage towers and one 150,000 gallon elevated storage tower. CWW provides water for approximately 4500 residents and for Hy-Vee's ice making plant. (Gastineau, Covington testimony; DNR Ex. 19, 20, 21)

Pursuant to the DNR's rules, the "operator-in-charge" must hold a certification of equal or higher grade than the grade designated for the treatment plant or distribution system.<sup>5</sup> In addition, the DNR's rules provide that any person who is under the supervision of the operator-in-charge and responsible for an operating shift or a major segment of the plant or distribution system must be certified at no less than Grade 2 for Grade 3 and 4 plants and distribution systems and no less than Grade 1 for Grade 1 and 2 plants and distribution systems.<sup>6</sup> (Petitions and Answers; Appellant Exhibit A; Gastineau; Appellant testimony)

Prior to receiving his certifications, Duane Covington completed approximately two years of relevant education at Kirkwood Community College. Mr. Covington's relevant work history includes:

- approximately two and a half years as the operator-in-charge of Humboldt's drinking water and wastewater treatment systems (4/28/09-10/12/11). Humboldt was a Grade 3 water treatment plant;
- eleven years as the operator-in-charge of Oskaloosa's drinking water treatment system (6/1/98-6/15/09). Oskaloosa was a Grade 3 water plant; and
- one and a half years as a contract operator in charge of Wellman's drinking water and wastewater treatment systems (1/3/08-6/1/09). Wellman was a Grade 1 water plant.

Humboldt and Wellman were groundwater plants. Oskaloosa was a "groundwater under the influence" plant, which was required to comply with the same operational

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<sup>5</sup> See 567 IAC 81.2(3).

<sup>6</sup> See 567 IAC 81.2(4).

rules as a “surface water” plant like Chariton.<sup>7</sup> (Petitions and Answers; Appellant Exhibit A; Appellant testimony)

Duane Covington testified that CWW was in poor condition and needed a lot of cleaning and maintenance when he was hired in October 2013, and he could find no historical operational records for the facility prior to 2007. There have been a number of staff turnovers, and maintaining adequate staffing with certified operators has been an issue during the time that Mr. Covington has been the operator-in-charge. When he was first hired, Mr. Covington worked 8:00 a.m.-4:30 p.m. Monday-Friday and as needed. He is currently working 2:00 a.m.-7:30 p.m. Monday-Friday and every other weekend. The water treatment plant is located three miles out of town, and his office is in Chariton. Mr. Covington travels back and forth between his office and the treatment plant, and he serves as a shift operator as needed. (Covington testimony)

***Janet Gastineau Educational and Employment Background.*** Janet Gastineau, who has a master’s degree in Environmental Studies, has been employed by the DNR as an Environmental Specialist since February 1991. In 1995, she was assigned to the DNR’s Field Office 5, which covers 18 counties in south central Iowa. In January 2011, Ms. Gastineau was promoted to Environmental Specialist Senior. She is the designated lead worker in the Water Supply program area and also has some scheduling and supervisory duties with respect to the other three Environmental Specialists assigned to the Field Office. At times, she is responsible for taking the afterhours emergency calls to the DNR’s “Spill Line.” Ms. Gastineau has had additional training while employed by the DNR, and she has participated as a facilitator in an eighteen month training process that is offered to surface water treatment operators in order to optimize their treatment process and procedures. She is the DNR employee who is most directly involved in the regulatory oversight for the CWW facility. (Gastineau testimony)

The four Environmental Specialists assigned to Field Office 5 are responsible for monitoring all of the public water supply systems and wastewater treatment systems in the 18 county area. At hearing, Janet Gastineau estimated that Field Office 5 is responsible for monitoring 185 public water supplies, including CWW. (Gastineau testimony)

***Overview of the Water Treatment and Water Distribution Systems at CWW.*** The record includes a simplified diagram of the water treatment and water distribution facilities at CWW, which was sketched by Janet Gastineau to illustrate some of the relevant features of the CWW water treatment process. (DNR Ex. 55) Gastineau’s

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<sup>7</sup> See 567 IAC 43.5(1).

diagram begins at the point where the raw lake water has passed through forced draft aeration and clarification and enters 4 individual gravity carbon/gravel/sand media filters (each marked with an "F" on the diagram). Each individual filter has a discharge line or "individual filter effluent" (marked on the diagram as "IFE.") Each of the 4 IFEs has an intake tube that allows a water sample to be pumped to an attached "turbidometer." (Gastineau, Covington testimony; DNR Ex. 19, p. 2 of 4/24/14/ sanitary survey)

A continuous analyzer is an instrument that has water samples continuously flowing through it. Continuous analyzers can measure the water's turbidity, chlorine, pH and temperature. The measurements taken by continuous analyzers are transmitted to a treatment plant's Supervisory Control and Data Acquisition (SCADA) computer system. This data can be viewed by the plant's operators on the SCADA screen in "real time" on the SCADA screen. The SCADA system is programmed to automatically record these measurements (readings) at an established frequency for reporting purposes. The established frequency for CWW was that data was recorded every 15 minutes. The SCADA's software also allows operators to view historical trend data (in the form of a graph). The historical trend data includes data points for all of the readings from the continuous analyzer, not just the 15 minute readings. A SCADA contractor programs the SCADA system to collect, transmit, and record the data. (Gastineau, Covington, Whitacre testimony)

A turbidometer is one type of continuous analyzer that monitors the water quality for turbidity. "Turbidity" is the cloudiness of the water. Too much turbidity in the water increases the risk of pathogens. Chlorine is the most common additive for disinfection, and too much turbidity interferes with chlorine's ability to disinfect the water. The water treatment goal is to minimize the turbidity so that the chlorine can do its work, thereby reducing the risk of disease causing organisms in the water. (Gastineau testimony)

At all times relevant to this case, CWW's SCADA system was programmed to record turbidity readings at 15 minute intervals for reporting and compliance purposes. At the end of the day, the SCADA system reports: the total number of 15 minutes readings taken while the plant was in operation, the number of those 15 minutes readings that were greater than 0.3 NTU, and the highest daily reading of those 15 minute readings. An operator manually records those turbidity readings on an "End of the Day" sheet. (Gastineau, Covington, and Whitacre testimony; DNR Ex. 37-43; 45-47; 54)

The four individual filter effluent (IFE) lines at CWW's treatment plant combine into a single line, which is referred to as the combined filter effluent or "CFE." This line has another intake that pumps water to another turbidometer. Chlorine ( $\text{Cl}_2$ ) is then injected into the treatment system (see " $\text{Cl}_2$ " on the diagram) (Gastineau, Covington testimony; DNR Ex. 55)

The water then flows into the "clearwell" tank, which is shown on the diagram as a large rectangle. The clearwell contains baffles (shown as three horizontal lines on the diagram). The baffles are affixed to the floor of the clearwell, and they direct the flow of water through the clearwell and to the high service pumps. The purpose of the baffles is to extend the time that the water spends in the tank, thereby increasing the length of time that the water is exposed to the chlorine. (Gastineau testimony; DNR Ex. 55; Appellant Ex. EG)

During most of the time relevant to this proposed decision, the clearwell had an intake at the location marked "midpoint" on the diagram. This intake pumped water to a continuous chlorine analyzer. The chlorine analyzer allows the operator to determine if operational changes need to be made at that point and to determine how much ammonia will need to be added later in the treatment process. (Gastineau, Covington testimony; DNR Ex. 55)

There is a second baffled area within CWW's clearwell (shown on the diagram as a smaller rectangle), which has been referred to as the "high service pump chamber." During the plant's operational hours, high pressure pumps inside this chamber send water out of the clearwell and into the distribution system. There are additional intakes inside the high service pump chamber (marked with small circles on the diagram), which pump water to three continuous analyzers: a pH and temperature meter, a chlorine analyzer, and another turbidometer. This allows the water quality to be monitored before the water is discharged to the distribution system. (Gastineau, Covington testimony; DNR Exhibit 55)

After the water is discharged out of the clearwell, ammonia ( $\text{NH}_3$ ) and chlorine ( $\text{Cl}_2$ ) are fed into the water to achieve the desired level of disinfection. The water is then distributed out into the community by a transmission line. This transmission line has a designated sampling point, which is referred to as the source entry point (SEP). There is yet another continuous chlorine analyzer at the SEP. The operator is able to take a sample of the "finished" water (e.g., the final product after all of the treatment processes have been completed) at the SEP, which should be representative of the water that is going out into the community. (Gastineau testimony; DNR Ex. 55)

Lake water contains a variety of constituents, e.g. iron, manganese, ammonia, and organic carbons, which create a demand on the chlorine that is injected into the treatment system. "Free chlorine" is measured inside the clearwell, and it is the amount of chlorine that is still left to disinfect the water. "Free available chlorine" is part of "total residual chlorine" and it must be measured to ensure that the disinfection "treatment technique" is achieved. The "total residual chlorine" is measured at the SEP and also out in the distribution system. The total residual chlorine protects and disinfects the distribution system from outside sources or regrowth and must also be properly monitored. (Gastineau testimony; 567 IAC 43.5(2))

With a few exceptions not relevant here, the DNR's rules require public water supplies, including the CWW facility, to complete monthly operating reports (MORs) on forms provided by the DNR or on similar forms. The MOR must be signed by the certified operator in charge and maintained at the facility for inspection by the department for a period of five years.<sup>8</sup> In addition, all public water supplies using surface water or influenced groundwater as its water source must report its operational self-monitoring results to the DNR within ten days after the end of the month.<sup>9</sup>

The MOR is typically submitted on a spreadsheet that is available for download from the DNR's website. The MOR reports the facility's operational self-monitoring results that were generated over the prior month in association with the water treatment and distribution system. The DNR's regulations and the operational permit both specify what information must be included in the MOR. Although other qualified operators may enter data on the MOR, it must be signed by the operator-in-charge. The signature line for the operator-in-charge is preceded by the following statement: "I certify that I am familiar with the information contained in this report and that the information is true, complete, and accurate." (Gastineau, Covington, Trout testimony; See e.g. Exhibit 37) At the time of hearing, Duane Covington testified that he did not always review the data reported on the MOR before he attached his electronic signature and submitted it to the DNR Field Office. (Covington testimony)

Operators of surface water treatment plants must report turbidity measurements from the combined filter effluent (CFE) compliance point on their MORs. The CWW water treatment plant has two turbidimeters that measure turbidity in the combined filter effluent, the intake for one of these turbidimeters is located prior to the clearwell and the intake for the second turbidimeter is located inside the high service pump chamber

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<sup>8</sup> 567 IAC 42.4(3). All public water supplies using a surface water or influenced groundwater source must also comply with the applicable record keeping requirements found in 567 IAC 43.5, 43.9, and 43.10. *Id.*

<sup>9</sup> 567 IAC 42.4(3)"c."

inside the clearwell. CWW is required to designate which of these turbidometer locations will serve as its CFE compliance point for reporting purposes. (Gastineau testimony)

A public water system that uses continuous analyzers (as opposed to grab samples from sample taps) in order to monitor and report turbidity must have an approved turbidity protocol that describes the frequency of the measurements that will be recorded and reported for compliance purposes and that includes a method for regularly validating the accuracy of those readings. The calibration protocol must be approved by the department, and it is audited for compliance during sanitary surveys. Major elements of the protocol shall include, but are not limited to: the method and frequency of calibration, the calibration standards, documentation, and data collection and reporting.<sup>10</sup> The protocol also identifies the CFE compliance point that the system is using to measure and record turbidity. The DNR expects the facility to maintain a copy of its turbidity protocol on file and to follow it. (Gastineau testimony)

CWW facility was continuously monitoring turbidity before Duane Covington was hired as the operator-in-charge in October 2013. CWW had an approved turbidity protocol that was submitted to the DNR by a prior operator on May 7, 2008. Prior to this particular protocol, CWW had designated the turbidometer intake that was located prior to the clearwell as its CFE compliance point. The May 7, 2008 protocol established the turbidometer intake inside the clearwell, which had been recently installed, as CWW's new CFE compliance point. (Gastineau, Covington testimony; Appellant Ex. AO)

As will be discussed later in this decision, Duane Covington did not find the approved turbidity protocol in the plant's records and did not review that protocol until late June or July 2014 when he had been the operator-in-charge for more than 9 months. Until that time, Mr. Covington and the operators who worked under his supervision were confused about the location of the CFE compliance point. Mr. Covington was operating under the assumption that the CFE compliance point was the turbidometer prior to the clearwell. (Gastineau, Covington testimony)

There are operation permits for CWW in this record that date back to April 1, 2014. Each of the permits state that monitoring for CFE Turbidity would be "every 4 hours" and recorded "every 4 hours of operation." The same permits stated that IFE Turbidity would be measured "continuously" and recorded every 15 minutes of operation. When Janet Gastineau was asked why CWW's permits did not specify that CFE turbidity was

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<sup>10</sup> See 567 IAC 43.5(4)"b"(1)(1).

continuously monitored and recorded every 15 minutes, she responded that none of the permits issued by DNR specified continuous monitoring for CFE turbidity but that the plant is bound by its turbidity protocol. Appellant pointed out, however, that Rathbun Regional Water Association's permit, which was issued on November 25, 2013, specified "continuous" monitoring for both CFE and IFE turbidity. Ms. Gastineau thought that might be due to the size of Rathbun's system. (Gastineau testimony; Appellant Ex. G, H, J; DNR Ex. 1)

The turbidity data pages on all of CWW's MOR forms state that "if continuous monitoring of turbidity is provided, measurements must be recorded at equal time intervals at least once every four hours (every 15 minutes for Chariton WW)." Mr. Covington's certification statement and signature appear directly below this statement. (DNR Ex. 39-43, 45-47) Despite the inconsistencies between the statements in the operation permits and the statements on the MORs concerning CFE monitoring, it is clear that Duane Covington always knew that CWW was continuously monitoring turbidity for reporting and compliance purposes. Mr. Covington knew that the SCADA system was programmed to record and report turbidity compliance readings every 15 minutes. (Covington, Whitacre testimony)

The Environmental Protection Agency (EPA) has established enforceable maximum contaminant levels (MCLs) for a variety of contaminants that could be present in drinking water. The DNR's administrative rules also establish enforceable "treatment technique requirements" for public water systems using surface water. The purpose of the required treatment techniques is to inactivate or reduce the adverse health effects associated with pathogens in the water. A treatment technique violation means that the facility was demonstrating that it did not have control over the contaminant. (Gastineau testimony)

One of the required "treatment techniques" for chlorine relates to chlorine contact time. Chlorine Contact Time (CT) is the product of the chlorine concentration at the end of the disinfection segment and the amount of time it took the water to move through that disinfection segment. Chlorine concentration multiplied by the time is the "obtained CT." CT tables establish the "required CT" under specific pH, temperature, and chlorine concentration conditions. The administrative rules require the ratio of the CT obtained/CT required to be calculated every day that a surface water treatment plant is in operation.<sup>11</sup> In order to achieve the required treatment technique, the CT ratio must be 1.0 or greater. Anytime the CT drops below 1.0, the facility must report the violation on their MOR. (Gastineau testimony)

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<sup>11</sup> 567 IAC 43.5(2)"a."

There is also a treatment technique violation if the residual disinfectant concentration in the water entering the distribution system is less than 0.3 mg/L free residual chlorine or 1.5 mg/L total residual chlorine for more than four hours.<sup>12</sup> The water system must notify the DNR as soon as possible but not later than the end of the next business day any time the residual falls below 0.3 mg/L free residual chlorine or 1.5 mg/L total residual chlorine in the water entering the distribution system.<sup>13</sup> (Gastineau testimony).

Finally, two treatment technique requirements relate to turbidity: (1) The CFE turbidity must never exceed 1.0 NTU<sup>14</sup> at any time; and (2) the Combined Filter Effluent (CFE) turbidity in 95% of the samples taken each month must be less than or equal to 0.3 NTU (sometimes referred to as the 95% rule). If only 94% (or fewer) of the samples are less than 0.3 NTU, it is a treatment technique violation.<sup>15</sup> (Gastineau testimony)

### *DNR's 36 Allegations in Support of Revocation/Non-Renewal of Appellant's Operator Certifications*

The DNR alleges that during the time that Duane Covington has been the operator-in-charge of the CWW facility, he has been responsible for 36 incidents that constitute violations of the DNR's rules, violations of the operating permit, careless operation or reporting, false or misleading reporting, or an overall lack of knowledge or competency with respect to the legal requirements governing the CWW's operations and permit. Based on Mr. Covington's admission at hearing that he does not always review the data reported in the MORs prior to their submission, the DNR further alleges that Mr. Covington has submitted false certification statements with his MORs.

1) On October 28, 2013, the total residual chlorine at the SEP (the finished water) fell below the required minimum level of 1.5 mg/L. Duane Covington called the DNR's Field Office on November 6, 2013 to report this low reading. Pursuant to the DNR's rules, Mr. Covington should have called DNR as soon as possible but no later than the end of the next business day (October 29<sup>th</sup>) after the low reading.<sup>16</sup> The call to the DNR is important so that DNR staff can promptly discuss with the operator what happened, what corrections were made, and what will be done going forward to prevent a reoccurrence. (Gastineau testimony)

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<sup>12</sup> 567 IAC 43.5(2)"c."

<sup>13</sup> 567 IAC 42.4(3)"c"(2)(2).

<sup>14</sup> NTU refers to nephelometric turbidity units. See 567 IAC 43.5(3)"b."

<sup>15</sup> 567 IAC 43.5(3)"b"; 43.10(4)"a"(2).

<sup>16</sup> 567 IAC 42.4(3)"c"(2)2.

The low total residual chlorine reading occurred just three weeks after Duane Covington was hired as the operator-in-charge. Mr. Covington was unable to recall this particular incident, and he did not recall reporting it to the DNR. (Covington testimony)

2) On December 10, 2013, the CWW facility failed to achieve an inactivation ratio for chlorine disinfection contact time (CT) that was equal to or greater than 1.0. The CT ratio on that day was 0.9. On January 22, 2014, the DNR issued the facility a Treatment Technique Violation and required CWW to issue a public notification to the customers served by its water system.<sup>17</sup> The public notification was provided by Duane Covington on February 4, 2014 through publication in the local newspaper and by posting the notice at the water office, at city hall, and on Facebook. (State Exhibit 18; Gastineau testimony)

3) On March 20, 2014, Duane Covington called the Field Office to report that the facility had failed to achieve the required CT ratio. Janet Gastineau advised Mr. Covington that failure to achieve the CT ratio did not require a call to the DNR's Field Office, although he was required to report this failure on the MOR. (Gastineau testimony)

On March 25, 2014, Duane Covington called the Field Office to report a CFE (compliance point turbidity) reading greater than 1 NTU. Mr. Covington was required to call in a CFE reading greater than 1 NTU to the Field Office and to report it on the MOR. When Janet Gastineau reviewed the facility's March 2014 MOR, however, neither incident (the March 20<sup>th</sup> CT ratio < 1 or the March 25<sup>th</sup> CFE reading > 1 NTU) had been reported by Mr. Covington on the MOR. When Ms. Gastineau contacted Mr. Covington to ask him for a revised MOR, he told her that his operators had mistakenly given him the chlorine time for the IFEs rather than for the CFE and that when he got the correct information from his operators, the CT ratio for March 20<sup>th</sup> was sufficient. Mr. Covington also told Ms. Gastineau that when he called to report a turbidity reading greater than 1 NTU on March 25<sup>th</sup>, it was from the turbidometer on an IFE and not from the CFE. An NTU higher than 1.0 on an IFE does not need to be called in to the DNR; it only needs to be reported on the MOR. (DNR Exhibit 37; Gastineau testimony)

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<sup>17</sup> 567 IAC 43.5(2)"a," 42.1(3). (567 IAC 42.1 requires each owner or operator of a public water system to give notice for all violations of public drinking water rules and for other situations listed in the subrule. The term "violations" includes violations of, or failure to comply with, the maximum contaminant level (MCL), maximum residual disinfection level (MRDL), treatment technique, monitoring requirements, and testing procedures in 567-Chapters 40 through 43.)

In Ms. Gastineau's opinion, these types of errors constitute a failure to exercise reasonable care by Mr. Covington. These types of errors require her to spend additional time scrutinizing the MORs that Mr. Covington submits to ensure that they are accurate and consistent with what has been reported to her by Mr. Covington. Ms. Gastineau estimated that she receives over 2000 MORs from operators in a year. She estimated that only about 1% of the MORs have an error or other problem that requires her to contact the operator. She testified that Mr. Covington's error rate on his MORs has been approximately 50 times higher than that of other operators within Region 5. (Gastineau testimony)

4) Every MOR for a surface water plant has a Turbidity Data page that contains turbidity data for the CFE and for the IFE. One of the columns on this page is for "Number of Readings > 0.3 NTU. The March 2014 MOR that was submitted by Duane Covington on April 7, 2014 had all zeros in this column for each day in the month of March. Another column on this page is for "Highest Daily Reading (NTU)." The daily entries in this column included 3 readings that were higher than 0.3 NTU (.307 on 3/17; .392 on 3/19; and .390 on 3/31). The zeros entered in the "Number of Readings > 0.3 column were inconsistent with highest daily readings column. (DNR Exhibit 37; Gastineau testimony)

When Janet Gastineau asked Mr. Covington about this discrepancy, he described it as an oversight. In Ms. Gastineau's opinion, this was unacceptable and careless reporting because she cannot determine compliance with the 95% rule without an accurate report of the number of readings above 0.3 NTU. On June 17, 2014, Mr. Covington submitted a revised MOR for March 2014 which had the necessary corrections to the "Number of Readings > 0.3 NTU" column. (DNR Exhibit 37; Gastineau testimony)

At hearing, Duane Covington testified that although his electronic signature is on all MORs when they are submitted to the Field Office, he does not separately sign hard copies of the MORs for the file maintained at the plant. Mr. Covington keeps the plant's copies of the MORs on his computer or on disc. Mr. Covington further testified that while he "generally" reviews the data on the MORs before they are submitted, he does not review the data on the MORs if he is too busy and does not have the time to do so. (Covington testimony)

5) On April 24, 2014, Janet Gastineau conducted a sanitary survey (inspection) of the CWW facility. The last sanitary survey had been conducted in October 2011. During this survey, Ms. Gastineau discovered that only one facility employee (Steve Putts) was calculating the CT ratio. CT was not being calculated when

Mr. Putts was not working, even though both the DNR's rules,<sup>18</sup> and the operating permit required CT to be calculated daily. (DNR Exhibit 19; Appellant Exhibit G, page 5 of 7; Gastineau testimony)

Duane Covington did not deny that the facility had not been calculating CT daily. He initially testified that he did not think that the DNR rule requiring daily calculation of CT time was in effect at that time. When the effective date of the rule was confirmed, Mr. Covington testified that he thought the rule was vague. Mr. Covington could not recall exactly when the facility began calculating CT daily but testified that it had been calculated for "well over a year." (Covington testimony)

6) During the sanitary survey of the facility on April 24, 2014, Duane Covington told Janet Gastineau that the turbidometer that is located prior to the clearwell was the facility's CFE compliance point for reporting turbidity. When Ms. Gastineau reviewed the data from this turbidometer, she noted that the data from that turbidometer did not match the CFE compliance point readings that had been reported on the March 2014 MOR. She asked Mr. Covington to submit a revised MOR. On June 17, 2014, Mr. Covington contacted Janet Gastineau and confirmed that the facility's CFE compliance point was actually the turbidometer inside the clearwell. Based on Mr. Covington's testimony at hearing, it appears that he confirmed this by unplugging the turbidometers one at a time and looking to see which turbidometer came up as "0" readings on the SCADA trend screens. (DNR Exhibit 19; Gastineau, Covington testimony)

It was disturbing to Janet Gastineau that Duane Covington had been operating the plant for almost nine months without knowing the location of the plant's CFE compliance point. Competent operators use turbidity data to make operational adjustments to ensure the safety of the water and ensure compliance. In her opinion, failure to understand where the turbidity data was coming from would severely inhibit an operator's ability to make intelligent operational adjustments. (Gastineau testimony)

Duane Covington testified that he was unable to find any documentation of the CFE compliance point location in the facility's records. He stated that he believed he had spoken to the "other operators" in November 2013 and had asked them where the CFE compliance point was located. (Covington testimony)

7) The DNR's rules provide that the residual disinfectant concentration in the water distribution system (measured as total chlorine, combined chlorine, or

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<sup>18</sup> 567 IAC 43.5(2)(a).

chlorine dioxide) cannot be undetectable in more than 5 percent of the samples each month for any two consecutive months that the system serves water to the public.<sup>19</sup> The rules include a formula that surface water plants must use to calculate the value "V" ( $V = [(C+D+E)/(A+B)] \times 100\%$ ). CWW's operating permit required the "V" value to be reported on each MOR. (Gastineau testimony; Appellant Ex. G p. 5 of 7)

Duane Covington submitted the facility's April 2014 MOR with the "V" section left blank. On May 12, 2014, Janet Gastineau emailed Mr. Covington asking him to "...resubmit summary page 1 of 2 for the calculated V. there are a couple of blanks there that need numbers. Thanks." Mr. Covington replied, "A little more specific please. On my MOR? V?" Although he had been the operator-in-charge for 7 months, it appeared to Ms. Gastineau that Mr. Covington did not know what "V" was. In her opinion, competent operators of surface water treatment plants would be familiar with the term "V." (DNR Ex. 38; Gastineau testimony)

Janet Gastineau sent an email on May 12, 2014 that explained exactly what was missing from the "V" calculation. On May 13<sup>th</sup>, Duane Covington resubmitted the MOR with the "V" section still left blank. Ms. Gastineau emailed him again on May 20<sup>th</sup>, and Mr. Covington submitted the MOR with the completed V calculation on May 21, 2014. (DNR Ex. 38; Gastineau testimony)

8) CWW's permit required a quarterly sample, taken at the SEP, to be tested for atrazine. (Appellant Ex. G, p. 2 of 7) On Friday, June 27, 2014, Duane Covington called the DNR's spill line to report that the facility's quarterly Atrazine sample had exceeded the maximum contaminant level (MCL). Mr. Covington did not need to call and report this information after hours, however, because there is only a violation if the "running annual average" of quarterly samples exceeds the MCL. (Gastineau testimony; DNR Ex. 21)

On June 30, 2014, Mr. Covington called to report that the atrazine sample had been mistakenly taken from the raw water (prior to any treatment) instead of from the finished water at the SEP. Since this was the last day of the quarter, Gastineau told him to take additional samples of both the raw and the finished water that same day. The additional samples showed no MCL violation for atrazine. (Gastineau testimony; DNR Ex. 21) At hearing, Duane Covington testified that one of his "newer operators," who had not received a lot of training in sample taking, had mistakenly taken the atrazine sample from the raw water instead of the finished water. (Covington testimony)

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<sup>19</sup> *Id.*

9) On June 29, 2014, Duane Covington called the DNR's "spill line" to report a CFE reading greater than 1.0 NTU (1.6 NTU). When Janet Gastineau spoke to Mr. Covington on the next business day, he told her that the sample with the high turbidity reading had been mistakenly taken from the turbidometer prior to the clearwell, even though he had informed her on June 17, 2014, Mr. Covington that the CFE compliance point was located inside the clearwell. Ms. Gastineau believed that Mr. Covington should have known that it was unnecessary to call the spill line if the high turbidity reading did not come from the CFE compliance point inside the clearwell. (Gastineau testimony)

Janet Gastineau followed up with the shift operator (Steve Putz) who was on duty when the high turbidity reading was observed. Mr. Putz reviewed the historical trend data for the clearwell turbidometer and discovered that the highest reading was 0.45 NTU. Two of the individual filter turbidometers had readings over 1.0 NTU but none of the 15 minute readings exceeded 1.0 NTU. The highest reading was 1.176 NTU, not 1.6. Ms. Gastineau testified that it required additional time and resources to follow up on the report of data that did not come from the CFE compliance point. (Gastineau testimony; DNR Ex. 21)

Because it appeared that Duane Covington was continuing to have difficulty identifying the accurate CFE compliance point, Janet Gastineau asked him to have the facility's turbidity protocol available for review. When he was unable to provide the approved protocol, Ms. Gastineau went through the DNR's records and found a copy of the approved turbidity protocol that had been submitted by CWW's prior water plant superintendent on May 7, 2008. As previously stated, this protocol identifies the turbidometer before the clearwell as the "new CFE reading point." (Gastineau testimony; Appellant Ex. AO)

**CWW's Approved CFE Turbidity Protocol.** The approved protocol specified that CFE compliance monitoring would occur at 15 minute intervals on the quarter hour, with the first reading being taken at the first quarter hour interval after plant start-up. CWW's approved protocol further provided:

- that at the end of the day, the SCADA system will provide a summary screen that quantifies the following: i) the total number of quarter hour measurements for the day; ii) the number of those quarter hour measurements that were above 0.3 NTU; iii) the highest daily reading from the quarter hour measurement;

- Each of the items from the summary screen will be transferred to the "Daily Reads" sheet. If there are any readings above 0.3 NTU, the operator will note the time of each event on the "Daily Reads" sheet. To determine the exact time of an event in excess of 0.3 NTU the operator will be required to review the historical trend. The quantities that are summarized and recorded daily will be used to complete the CFE component of the MOR. (App. Ex. AO, p. 228)

On CWW's SCADA screen, the readings from the turbidometer *before* the clearwell appear in red and are labelled as "Combined Filter Effluent Turbidity." The readings from the turbidometer *within* the clearwell appear in blue and are labelled as "Clearwell Turbidity." At hearing, Mr. Covington suggested that the way the turbidometer readings were labeled had been confusing to his operators and to him. He also testified that the operator who called to report the turbidity exceedance to him was not very easy to understand on the phone. (Covington, Gastineau testimony; See, e.g., DNR Ex. 54)

10) This incident relates to the requirements that: (a) CFE turbidity must be less than or equal to 0.3 NTU in 95% of the turbidity measurements taken each month; and (b) facilities must report the number of samples above 0.3 NTU and the total number of samples taken each month.<sup>20</sup> As previously stated, if the facility has a protocol approved by the DNR it may show compliance by taking continuous turbidity measurements instead of grab samples collected at least every 4 hours.<sup>21</sup>

Duane Covington timely submitted the June 2014 MOR on July 8, 2014, which was after he had reported that the CFE compliance point was inside the clearwell. This initial MOR report indicated that 99% of the 1442 15 minute turbidity readings were at or below 0.3 NTU. When Janet Gastineau reviewed the MOR, however, she suspected that some of the CFE readings reported on the MOR were from the turbidometer before the clearwell and not from the CFE compliance point inside the clearwell. When Gastineau asked Mr. Covington about this, he confirmed that the readings for the first half of the month were from the turbidometer prior to the clearwell. Ms. Gastineau then asked Covington to resubmit the June 2014 MOR using only the turbidity data from the CFE compliance point inside the clearwell. (DNR Exhibit 39; Gastineau testimony)

On July 11, 2014, Mr. Covington submitted the revised MOR using only the readings from inside the clearwell, which resulted in the plant having a violation of the 95% rule for June 2014. Only 74% of the 1442 readings from within the clearwell were at or

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<sup>20</sup> 567 IAC 43.10(4)"b"; 567 IAC 42.4(3)"c"(1), (2).

<sup>21</sup> 567-43.5(4)"b"(1)(1).

below 0.3 NTU. Mr. Covington further reported that the clear well was “dumped” on the 7<sup>th</sup>, 16<sup>th</sup>, 18<sup>th</sup>, 19<sup>th</sup>, 20<sup>th</sup>, and 21<sup>st</sup> due to a permanganate reaction in the clear well that caused turbidity and regeneration of carbon filter caps. Mr. Covington reported that the “CFE readings include pumping to waste time due to the fact the clearwell is pumped out and the CFE readings are registered as the high service pump runs” and that “[p]eak numbers are not necessarily representative of true SEP at those times.” (Gastineau, Covington testimony; DNR Ex. 39, p.8)

On July 15, 2014, the DNR issued a Treatment Technique Violation for Turbidity-Public Notice Required to the CWW facility because 26% of the turbidity readings for June 2014 exceeded 0.3 NTU. The required public notification was completed by Mr. Covington on August 13, 2014. (Gastineau testimony; DNR Ex. 39, 20)

Janet Gastineau believes that Duane Covington knowingly reported data from the incorrect turbidometer on the June 2014 MOR in order to avoid reporting a violation of the 95% rule. She believed that this was done intentionally because the confusion over the CFE compliance point had been discussed and resolved on June 17, 2014 and then the same issue had been revisited with Mr. Covington on June 30, 2014. In addition, the SCADA system records and reports the 15 minutes readings from the turbidometer inside the clearwell for CFE compliance purposes, and the SCADA system would not have recorded the CFE numbers from before the clearwell for CFE compliance. (Gastineau testimony)

In Ms. Gastineau’s opinion, the only way that Mr. Covington could have obtained the readings from prior to the clearwell in order to use them for CFE compliance would have been by getting those readings from the historical trend screens for turbidity that are stored in the SCADA system. The historical trend screen appears as a series of data points (representing all of the CFE readings taken by the continuous analyzer over a 24 hour period) on a graph (with the time of day appearing on the horizontal axis and the numerical CFE reading on the vertical axis). If an operator places the cursor mouse over a specific point on the graph, the CFE reading for that point will appear on the computer screen and could be recorded.<sup>22</sup> (Gastineau testimony)

Duane Covington denied that he intentionally obtained and included turbidity readings from the wrong CFE compliance point on the June 2014 MOR in order to conceal a violation of the 95% rule. Mr. Covington maintains that the readings from the turbidometer before the clearwell were recorded on the end of the day sheets during the

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<sup>22</sup> See Exhibit 54 for examples of how the historical trend appears on the SCADA screen. These examples show the historical trend for CFE readings from inside the clearwell.

time that he was still confused about the CFE compliance point. He did not explain why he did not ensure that the June 2014 MOR reported the turbidity data from the correct CFE compliance point before he signed and submitted it on July 8, 2014. (Covington testimony)

**11)** The operation permit requires the CWW facility to report daily flow (pumpage) on the MOR (Appellant Ex. G, p. 4 of 7). On July 8, 2014, Duane Covington submitted the facility's June 2014 MOR with the daily flow column ("pumpage") left entirely blank. Mr. Covington submitted a revised MOR, with the missing pumpage numbers included, on July 11, 2014. (DNR Ex. 39; Gastineau testimony)

**12)** The DNR's rules requires a facility to maintain its self-monitoring turbidity records (including recorder charts, logbooks, bench sheets, SCADA records and electronic files) on its premises or at a convenient location near its premises for at least 5 years.<sup>23</sup> On July 2, 2014, Janet Gastineau and Jennifer Bunton of the DNR's Water Supply Engineering Section visited the CWW facility. During this visit, they attempted to review stored data on the plant's SCADA system, but the file format did not allow Mr. Covington to access the data. Gastineau asked Mr. Covington to submit the facility's IFE turbidity data for the last 5 years by July 15, 2014. (DNR Ex 21, p. 2, 4<sup>th</sup> bullet)

On July 11, 2014, Mr. Covington informed Ms. Gastineau that the SCADA system was only storing 365 days of IFE and CFE data and that a licensing agreement with the software program prevented him from accessing even that data. The DNR issued a Notice of Violation to CWW on July 28, 2014 for failure to maintain the records required by 567 IAC 42.5. A Report of Investigation from the July 2, 2014 plant visit was attached to the Notice of Violation. The Notice of Violation required CWW to provide a written response addressing the requirements and recommendations included in the report by August 15, 2014. (DNR Exhibit 21; Gastineau testimony)

Janet Gastineau found it disturbing that Duane Covington appeared unaware that he did not have access to the historical turbidity data when he had been the operator-in-charge of this facility for nearly a year. In her opinion, a competent operator, especially one with turbidity issues, would have been reviewing this data to diagnose problems and make operational adjustments. (Gastineau testimony)

**13)** The DNR's rules provide that a minimum free available chlorine residual of 0.3mg/L or a total available chlorine residual of 1.5 mg/L must be continuously

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<sup>23</sup> 567 IAC 42.5(1)"g."

maintained throughout the water distribution system except for those points in the distribution system that terminate as dead ends or areas that represent very low use when compared to usage throughout the rest of the distribution system as determined by the department.<sup>24</sup> The CWW operating permit requires the distribution system residual to be measured daily and reported monthly on the MOR. (Appellant Ex. G, p. 5 of 7)

On August 6, 2014, Duane Covington timely submitted the July 2014 MOR, but the Disinfection/Oxidation Data Page of the MOR was missing three days (July 4-6) of distribution system residual sampling data. In Ms. Gastineau's opinion, a competent operator would have noticed that these entries were missing. On August 7, 2014, Gastineau sent Covington an email asking if there were three days in July when the disinfectant residual was not measured. He responded that he needed to back in and pull up the readings because they weren't written down but got sidetracked. He told her that he would add them (the readings) and revise the MOR. On August 7, 2014, Mr. Covington submitted a revised MOR with the highest measured total residual readings for July 4-6. (DNR Ex 40; Gastineau testimony)

When asked about this allegation at hearing, Duane Covington testified that he left these 3 days blank because the sample results had not been recorded on the "end of the day sheets. He further testified that the notebook where the results were originally recorded had gone missing and the handheld analyzer that took the sample no longer had the results stored in its memory. Mr. Covington was shown the revised MOR that he had submitted with the missing readings, and he was unable to explain where he obtained the data that he added to the MOR. (Covington testimony)

**14)** Like allegation #10, this allegation also concerns the requirement that 95% of the CFE readings must be less than or equal to 0.3 NTU.<sup>25</sup> The CFE turbidity readings included on the July 2014 MOR, which was submitted by Duane Covington on August 6, 2014, showed that CWW was in compliance with the 95% rule. When Janet Gastineau took a closer look at the report, she noted that there were 2803 CFE readings reported, which was an unusually large number. This was more than double the number of readings taken by CWW in the previous months. Because only 140 readings (4.99% of the total) were greater than 0.3 NTU, the MOR showed compliance with the 95% rule. (DNR Ex 40; Gastineau testimony)

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<sup>24</sup> 567 IAC 42.4(3)"b"(1)(3).

<sup>25</sup> 567 IAC 43.10(4)"a."

When Janet Gastineau asked Duane Covington to explain the large number of readings reported on the July 2014 MOR, he described how he (or other operators) had obtained the supplemental readings (those in addition to the 15 minute readings that are automatically recorded on the SCADA summary screen). Mr. Covington told Gastineau that whenever he or another staff member happened to be in the computer room and had a spare moment, they would glance at the SCADA computer screen and write down the reading that flashed on the screen in real time. He told her that he was recording these extra readings in order to get a better understanding of the plant's operations. He indicated that this was done randomly without regard to what the CFE reading was. When asked why he then submitted the extra readings on the MOR for compliance purposes, Mr. Covington replied that nothing in the rules prevented him from doing so. When asked why he did not inform Ms. Gastineau that he was using a different method to report CFE turbidity when she was on site on July 2<sup>nd</sup> to discuss turbidity reporting procedures, Mr. Covington responded that the rules did not require him to report it to her. (Gastineau testimony)

Duane Covington provided scratch paper from an "Auto Glass Center" note pad, which he said was used to record the supplemental CFE readings. None of the additional readings that were written on the scratch paper showed readings above 0.30, and there was no pattern to the intervals at which the readings were recorded. In the opinion of Janet Gastineau, Mr. Covington deliberately recorded additional readings that were under 0.30 in order to dilute the 15 minute readings that were above 0.30 and to show compliance with the 95% rule. At hearing, Mr. Covington was asked how he was able to observe readings below 0.3 on July 11 and 12, when the continuous monitoring trend line for the clearwell turbidity never went below 0.3 for those days. He responded that it was still unclear to him at that time which set of readings on the SCADA were for the CFE compliance point. This was not credible. (Gastineau, Covington testimony; DNR Exhibit 54)

Janet Gastineau reminded Mr. Covington that CWW's approved protocol for turbidity readings required him to report only the 15 minute readings for CFE compliance purposes. Ms. Gastineau instructed Mr. Covington to submit a revised MOR for July 2014 that included only the 15 minute readings. When the revised MOR was submitted on September 3, 2014, it showed a violation of the 95% rule because 10% of those readings exceeded 0.3 NTU. On September 8, 2014, the DNR issued a Treatment Technique Violation for Turbidity- Public Notice Required. Duane Covington provided the public notification on October 7, 2014. (Gastineau testimony; Ex. 22, 40)

15) The CWW facility operates under the direction of a five member Water Board that is appointed by the Chariton City Council. (Petition and Answer) Duane Covington reports to the Water Board. (Covington testimony) On August 21, 2014, Janet Gastineau and Duane Covington attended a compliance meeting with the Water Board. At that meeting, Mr. Covington reported that it was likely that the CWW facility would be in compliance with the 95% rule for the month of August. (Gastineau testimony)

On September 8, 2014, Duane Covington submitted the August 2014 MOR, which showed a violation of the 95% rule. Only 85% of the CFE turbidity readings were equal to or less than 0.3 NTU. When Ms. Gastineau reviewed the report, she observed that as of August 21, 2014 (the date of the Water Board meeting), 19% of the facility's readings were above 0.3 NTU. Given the plant's normal operating hours, it would have been impossible for the plant to achieve compliance with the 95% rule by the end of the month. In Gastineau's opinion, Duane Covington intentionally misrepresented the compliance outlook for August during the Water Board meeting. If not intentional, she felt that his statements at the meeting demonstrated that he was not exercising reasonable care in his monitoring of the operational conditions and water quality at the plant. (Gastineau testimony; DNR Exhibit 41)

On September 15, 2014, the DNR issued a Treatment Technique Violation for Turbidity with public notification required for the month of August 2014. (DNR Ex. 23, 41; Gastineau testimony)

**High Turbidity Investigation by Veenstra & Kimm.** The record includes a December 15, 2014 letter from Forrest Aldrich, P.E. to Ann Lyman, who is an Environmental Specialist Senior in the DNR's Water Supply Section located in Des Moines. The letter refers to attachments and figures not included with this exhibit. This letter reported on an evaluation that the engineering consulting firm Veenstra & Kimm performed at the request of the DNR in order to determine the cause of the high CFE turbidity results in June, July, and August 2014. Mr. Aldrich's letter states that "we visited the treatment facility, discussed the results with the operator, Duane Covington, and reviewed the monthly operating reports." (Appellant Exhibit BW; Aldrich testimony)

Mr. Aldrich attached the CFE turbidity sampling protocol established in May 2008 and noted that the "sample is drawn with a pump located above the clear well with a vertical suction pipe extending to 2-feet above the bottom of the clear well." Veenstra & Kimm reviewed the MORs from January 2012 through November 2014 and noted no instances where the turbidity exceeded 1.0 NTU. There were some instances where the

turbidity exceeded 0.3 NTU, and the highest readings were in June (0.894), July (0.891) and August (0.963) of 2014. 1,000-2,000 samples were taken each month. The number of samples with readings less than 0.30 met the 95% rule in all months except June-August 2014. (Appellant Ex. BW)

Mr. Aldrich's letter also states that "in discussing the results with the Utility staff, there was an operational change made during these three months. The amount of potassium permanganate fed prior to filters was reduced in an attempt to save money and chemical waste." The letter further stated that this resulted in not all of the manganese getting oxidized prior to the filters and filtered out, and it was believed that some of the manganese made its way through the filters and was oxidized by the chlorine that was added prior to the water entering the clearwell. The letter states "we believe that the manganese oxide precipitate formed post-filtration was the cause of the high turbidities during June, July and August 2014. The letter reports that "the potassium permanganate feed rate has since been increased back to the correct levels and the turbidity readings have been dramatically lower. The turbidity has been below 0.30 NTU greater than 99% of the time since August 2014. (Appellant Ex. BW; Aldrich testimony).

At the end of this letter, Mr. Aldrich wrote: "In addition to ensuring that the proper potassium permanganate chemical feed rate be maintained, we recommend the sample pipe in the wet well be raised to 4-feet above the floor to provide for a more representative sample location. We also recommend the clear well be cleaned to remove any remaining manganese oxide precipitate." (Appellant Exhibit BW; Aldrich testimony)

At hearing, Mr. Aldrich testified that he did review any documentation from Duane Covington concerning the amount of potassium permanganate used before and after the summer of 2014. He also testified that he was not consulted prior to this operational change being made by Mr. Covington. (Aldrich testimony)

**16)** Duane Covington submitted the September 2014 MOR on October 9, 2014. This MOR showed 7 days in September when the total chlorine residual dropped below 1.5 mg/L, but none of these events were reported by Mr. Covington to the DNR. Ms. Gastineau re-reviewed the MORs filed in June, July, and August 2014 and discovered that there were dozens of days during these months where the total chlorine residual fell below 1.5. No notifications were made to DNR, and Mr. Covington conceded he did not call DNR to report these results. (Gastineau testimony; DNR Ex. 42)

Janet Gastineau noted that between January 2013 and June 2014, the lowest TRC number that had been reported was a 1.4 in October 2013. Janet Gastineau asked Mr. Covington what was going on to cause this drop in residual chlorine levels at the SEP. He responded that on 40-45 days he had mistakenly reported free residual chlorine totals rather than total residual chlorine. This response was disturbing to Ms. Gastineau, because she would have expected that "alarm bells" would go off for Mr. Covington when he saw that he had this many days with total residual chlorine under 1.5, which was required to be reported to DNR. She would have expected a competent operator who was exercising reasonable care to have discovered this error before the MOR was submitted. (Gastineau testimony; DNR Ex. 42)

At hearing, Duane Covington testified that the numbers for free residual chlorine (in the clearwell system) were "pretty close" to the total residual chlorine numbers (at the SEP) and that both sets of numbers are on the SCADA system. He could not explain why these numbers had been reversed on the end of day sheets but thought that it was probably during the training of a new operator. (Covington testimony)

17) The September 2014 MOR was submitted on October 9, 2014, but it was missing the required "V" calculation. This is the same error that had been brought to Mr. Covington's attention after the April 2014 MOR was filed (See Allegation #7). Ms. Gastineau contacted Mr. Covington and asked him to submit a revised MOR with the "V" calculation, which he submitted on October 14, 2014. (DNR Ex. 42; Gastineau testimony)

18) The October 2014 MOR was submitted on November 10, 2014. For the third time and the second month in a row, the MOR was missing the "V" calculation. Ms. Gastineau contacted Mr. Covington and asked him to submit a revised MOR, which he did on November 20, 2014. (DNR Exhibit Ex. 42; Gastineau testimony)

19) On January 7, 2015, Duane Covington submitted the December 2014 MOR, which reported total chlorine residuals at less than 1.5 mg/L on December 2, 3, and 10. Mr. Covington had not called in to report any of these low residual chlorine results as the rules required. On January 14, 2015, Ms. Gastineau emailed Mr. Covington and pointed out that the low total residual values were not reported to the DNR and that Section 1 of Summary Page 1 of 2 was not filled in to account for these low levels. She further inquired whether the plant was shut down or whether staff took some action to remedy these low levels. She stated that a Treatment Technique Violation would be issued for both of these violations. (DNR Ex. 43; Gastineau testimony)

Duane Covington responded to Ms. Gastineau by email that day. With respect to the total residual chlorine, Mr. Covington told Gastineau that the numbers were entered in the wrong area and that they were actually free chlorine numbers, not total residual chlorine. This was the same error and the same explanation that Covington had offered with respect to the September 2014 MOR (See Allegation #16). Mr. Covington submitted a revised MOR on January 15, 2015. (DNR Ex. 43; Gastineau testimony)

At hearing, Mr. Covington offered a completely different explanation for the total residual chlorine numbers on the December 2014 MOR. He testified that the plant had made an operational switch to free chlorine in December 2014 and that all of the residual concentrations on the MOR that month were free chlorine, not total chlorine. One of the columns under the Chlorine Residual heading for the SEP requires the operator to enter an "F" for free or a "T" for total next to each reported value for lowest measured residual. On the initial MOR for December 2014 and on all of his revisions to the report, Duane Covington entered a "T" for total and not an "F" for free. The MORs were submitted with inaccurate information. (Covington testimony; DNR Ex. 43)

**20)** The CWW operating permit required the facility's monthly MOR to include a calculation of the monthly average MRDL (maximum residual disinfectant level). (Appellant Ex. H, p. 6 of 8) In addition, the facility was required to calculate a running annual average (RAA) at the end of each calendar quarter that included the previous 12 months. The RAA must be less than 4.0 mg/L. The MOR that Duane Covington submitted for December 2014 had an inaccurate calculation of 2.19 for MRDL RAA at Summary p. 1 of 2. The spread sheet should automatically perform the calculation for the user. When Ms. Gastineau looked at the RAA that Duane Covington had submitted on the MOR, she could immediately see that it was in error. She recalculated the RAA as a 2.59. Although the RAA was in compliance, Ms. Gastineau believed that Duane Covington had to have manually entered the incorrect 2.19 result on the MOR form. (Gastineau testimony; DNR Ex. 43) Duane Covington denied manually entering the MRDL RAA calculation and maintains that the spreadsheet malfunctioned. (Covington testimony)

**21)** This allegation is related to the required chlorine contact time inactivation ratio (CT) that was reported by Duane Covington in the December 2014 MOR. As previously referenced, the DNR's rules require the daily CT ratio to be greater than 1.0.<sup>26</sup> On December 2, 2014, Mr. Covington reported a daily CT ratio of 0.5 to the DNR. Janet Gastineau emailed Mr. Covington on January 14, 2015 and told him that she would be issuing a Treatment Technique Violation for this low CT ratio. In an initial

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<sup>26</sup> 567 IAC 43.5(2)"a."

response to Ms. Gastineau on January 14th, Mr. Covington admitted the CT ratio violation. (DNR Ex. 43; Gastineau testimony)

On January 15, 2015, Mr. Covington submitted a revised MOR that reported a CT ratio of 1.2 on December 2, 2014. Mr. Covington's explanation for this change was that the original contact time ratio mistakenly included data taken when the plant was not operating and that the lowest chlorine should have been 1.26 mg/L instead of 0.51 mg/L. This change increased the minimum CT obtained by enough to yield a ratio of 1.2. During a visit to the plant on January 20, 2015, Ms. Gastineau asked Mr. Covington to explain where the revised value of 1.26 mg/L came from, but he was unable to do so. Ms. Gastineau reviewed the historical trend data for the plant's operation that day. She determined that the plant began operating at around 4:30 p.m. and that the clearwell chlorine level was as low as 0.350 while the high service pumps were in operation. Based on the available data, the ratio of minimum CT obtained to required CT was closer to 0.39. (Gastineau testimony; DNR Exhibits 43, 25)

On January 28, 2015, Mr. Covington submitted a 2<sup>nd</sup> revised MOR for December 2014 that continued to list the CT ratio for December 2<sup>nd</sup> as 1.2. Mr. Covington now reported that the 1.26 mg/L result was a manual CL2 sample and that there were problems with the CL 17 (continuous) analyzer. Ms. Gastineau visited the plant again on January 29, 2015 and further reviewed the SCADA trending and daily logs. At that time, she was able to confirm that the 1.26 mg/L reading was taken from the SCADA system and not from a grab or manual sample. There was no documentation on the operator's log that there was any problem with the chlorine analyzer. (Gastineau testimony; DNR Exhibits 43, 25)

On January 30, 2015, Mr. Covington submitted a 3<sup>rd</sup> revised MOR for December 2014 that showed a contact inactivation time of .2 for December 2, 2014. On February 2, 2015, the facility was issued a Treatment Technique Violation with Tier 2 Public Notice Requirement for failing to meet the required chlorine contact time. Mr. Covington certified that he completed the public notification requirements on February 24, 2015 and February 26, 2015. (Gastineau testimony; DNR Ex. 26)

At hearing, Duane Covington did not deny that there were CT inactivation ratio violations at the CWW facility in December 2013 (Allegation #2) and again in December 2014. Rather, he and Larry Trout (his expert witness) contended that these violations were beyond his control because the clearwell, which is the treatment module for achieving CT, was so small that there is little room for error. According to Mr. Covington, there have been no additional CT ratio violations after he increased the

volume of water in the clearwell by increasing its operational depth. (Covington, Trout testimony)

**22)** The facility's operation permit requires several parameters to be monitored at the source entry point (SEP). (Appellant Exhibit H, pp. 2, 4, and 5 of 8). During Janet Gastineau's January 20, 2015 visit to the plant, Duane Covington and his staff incorrectly identified the "mop sink" as the sample location for the SEP. In fact, the samples that they had been collecting from the mop sink were not finished water because the mop sink was plumbed into the house water prior to the ammonia and supplemental chlorine injection. It was unknown how long this error had been perpetuated. At the time of this visit, there were two new operators: Mr. Ammons and Mr. Dickhoff, who had worked at the plant for nine months and two months, respectively. Mr. Covington had been the operator-in-charge for almost 16 months. It was later determined that the SEP was located in another building. (Gastineau testimony; DNR Exhibit 25)

On January 30, 2015, the facility was issued a Notice of Violation of the Self-Monitoring and Disinfection Treatment Criteria for failing to properly monitor the SEP, as required by the operation permit. (Gastineau testimony; DNR Exhibit 25) At hearing, Duane Covington claimed that previous operators had sampled from the mop sink as well and that no one at the plant knew that the mop sink was not the proper sampling location for the SEP. (Covington testimony)

**23)** During her January 20, 2015 visit to CWW, Janet Gastineau discovered that CT had not been calculated for 20 days. Ms. Gastineau was informed that since Mr. Putz was no longer employed at the plant, Mr. Ammons was now responsible for the CT ratio calculation. She was also told that there were some format delays in the Excel spreadsheet. The January 30, 2015 Notice of Violation also addressed this violation and required the facility to calculate the disinfection inactivation ratio each day that the treatment plant was in operation. (DNR Ex. 25; Gastineau testimony)

**24)** On March 9, 2015, Duane Covington contacted Janet Gastineau to report a turbidity spike >1 NTU in the historical trend data for the CFE compliance point. Ms. Gastineau went to the plant the following day and reviewed the historical trend data, which included all of the turbidity readings recorded by the turbidometer, not just the 15 minute readings that are recorded for CFE compliance purposes. At that time, Ms. Gastineau observed turbidity spikes that had been occurring as far back as February 11<sup>th</sup>, which were not being recorded by the SCADA system as 15 minutes readings and were not setting off any alarms at the plant. Mr. Covington had not called in these

turbidity spikes to the DNR. At hearing, Ms. Gastineau testified that the DNR's rules require the facility to notify the field office within 24 hours any time the turbidity exceeds 1 NTU.<sup>27</sup> (Gastineau testimony; DNR Ex. 28)

On April 1, 2015, the facility was issued a Treatment Technique Violation-Public Notice Required for Residual Disinfectant and Reporting Requirements. This Treatment Technique Violation addressed two different incidents: a failure to obtain minimal residual disinfectant concentration entering the distribution system on March 26 & 27, 2015,<sup>28</sup> and the turbidity spikes going back to February 11, 2015. With respect to the latter incident, the Treatment Technique Violation states that CWW failed to notify the DNR in a timely manner when finished turbidity levels exceeded 1 NTU and failed to adequately document compliance with turbidity monitoring requirements. It further states: "[b]ecause the raw turbidity data could not be accessed to compare periods of high turbidity to the 15-minute read times, this system cannot document compliance with subparagraph 43.10(4)"a"(3). (Gastineau testimony; DNR Ex. 28)

At hearing, Appellant submitted several documents (emails, letters to CWW) in support of the proposition that turbidity spikes that occur between the 15 minutes readings should not constitute a Treatment Technique Violation. All of these documents, with dates ranging from November 7, 2007 to March 12, 2015, include statements from DNR representatives indicating that turbidity spikes above 1.0 NTU that occur *between* the 15 minute readings used for CFE compliance purposes are not reportable to the DNR. (Appellant Ex. AD, AE, AF) Based on the rule's reference to "representative samples" and the exhibits produced by Appellant, it does not appear that turbidity spikes between the 15 minute recorded readings should have been counted as separate treatment technique violations by the DNR. The record does support the issuance of the treatment technique violation on April 1, 2015, however, for failure to accurately

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<sup>27</sup> See 567 IAC 43.10(6)"a"(2)(1) (The rule states, in relevant part: "If at any time the turbidity in representative samples of filtered water exceeds the maximum level set by the department under paragraph 43.10(4)"c,"...the system must consult with the department as soon as practical, but no later than 24 hours after the exceedance is known,...)(emphasis supplied)

<sup>28</sup> After the April 1, 2015 Treatment Technique Violation was issued, consulting engineer Forrest Aldrich sent two letters to the DNR that related to the allegation that the total residual disinfection concentration had been less than 1.5 mg/L for more than four hours on March 26 & 27, 2015. Mr. Aldrich pointed out that 567 IAC 43.5(2)"c" pertains to "water entering the distribution system." He included a screen shot from the SCADA system to show that the plant was shut down and only sent water to the distribution system for 20 minutes on March 26 and 27, 2015 while the level was less than 1.5 mg/L. This violation was not relied upon by the DNR to support its proposed disciplinary action against Appellant, and it may have been resolved through the issuance of an Administrative Order. Neither party submitted the AO. (Aldrich, Gastineau testimony; DNR Ex. 28; Appellant Ex. CQ, CR)

document turbidity compliance due to the deficiencies in the plant's SCADA software system.

The Treatment Technique Violation issued by DNR required CWW to investigate the cause of the turbidity spikes, to take corrective action to prevent them, and to submit a written report of its findings by April 22, 2015. Forrest Aldrich, PE, who is an engineer employed by Veenstra & Kimm, conducted an investigation and sent a letter to the DNR's Central Office on April 16, 2015. In his letter, Mr. Aldrich reported that the turbidity spikes in February and March 2015 lasted less than 20 seconds and occurred at random intervals. He further reported that it was suspected that the reason for the spikes was related to the turbidity sensor equipment. A replacement sensor was calibrated by the supplier and installed by utility staff on March 31, 2015. Mr. Aldrich further reported that as of April 16, 2015, utility staff had not observed any further turbidity spikes. (Appellant Ex. DP; DNR Ex. 28; Aldrich testimony)

At hearing, Forrest Aldrich explained that his conclusion that the turbidity spikes were due to a faulty sensor was based on information provided to him by Duane Covington. Mr. Aldrich did not personally examine the sensor, and he had no prior experience with a faulty sensor randomly recording turbidity spikes. (Aldrich testimony)

25) Duane Covington submitted the May 2015 MOR on June 8, 2015. For the fourth time, the "V" section on the MOR was left blank by Mr. Covington. (Gastineau testimony; DNR Ex. 45)

26) Janet Gastineau and another staff member from Field Office #5 visited the CWW facility on May 8, 2015 to review current compliance and conditions at the plant. A report of investigation was prepared and issued on May 19, 2015. As noted in this report, the facility had three online/continuous analyzers (described as Hach CL 17 analyzers). Ms. Gastineau's May 19, 2015 report states, in relevant part, that "...the clearwell monitoring location was raised from approximately two feet off the floor to approximately 4.5 feet off the floor and moved from the northeast corner of the clear well to a location described as more representative of the clear well content." Ms. Gastineau did not personally view the new location for the sampling line. Based on her conversations with Duane Covington on May 8, 2015 and on June 18, 2015, Ms. Gastineau believed that the analyzer that had been located in the high service pump chamber was now plumbed at the same location as the analyzer that was located at the "midpoint" of the clearwell. She also understood that the plan was for the analyzer to monitor total residual chlorine. Ms. Gastineau documented all of this in her May 19<sup>th</sup> written report. (Gastineau testimony; DNR Ex. 29)

Janet Gastineau made additional site visits on June 9, 2015 and on June 18, 2015 and prepared a second Report of Investigation after these visits. In this second report, Ms. Gastineau reiterated the finding from the prior report that the "clear well sample location for chlorine, turbidity, pH, and temperature had been relocated to a location described as more representative of the clear well content." Her report further states that "[o]n June 18, 2015, Mr. Covington confirmed that it was the location previously known as the midpoint within the clearwell." (DNR Ex. 30; Gastineau testimony)

On June 26, 2015, Field Office #5 issued a Notice of Violation, which included Gastineau's Report of Investigation. The Notice of Violation required CWW to relocate the free available chlorine monitoring point to the end of the disinfectant segment of the clearwell. The Report of Investigation explained that the "free chlorine residual must be measured after all the contact time has been applied; this would be at the outlet of the clearwell or suction side of the high service pumps or anywhere after that but prior to the ammonia and high pressure sodium hypochlorite feeds." Citing 567 IAC 43.10(3), the Report of Investigation also states that the facility should have sought Department approval before instituting changes to its disinfection practices. (DNR Ex. 30; Gastineau testimony)

On July 22, 2015, Field Office #5 issued the CWW facility a Treatment Technique Violation for Contact Time (CT)-Public Notice Required. One of the stated reasons for the treatment technique violation was the failure to properly monitor disinfection treatment during May, June, and the first half of July 2015 due to the relocation of the chlorine monitoring point in April 2015 to a less representative location in the clear well. The document states that as a result of this relocation, the data collected during this time was not accurate to confirm that the disinfection treatment was sufficient to ensure that the system achieved the necessary inactivation and removal. The document further states that on July 16, 2015, the water system operator reported that the chlorine monitoring point had been returned to its original location at the end of the clearwell. (DNR Ex. 31; Gastineau testimony)

At hearing, Duane Covington testified that Janet Gastineau was mistaken about the change that he made to the location of the chlorine analyzer's sampling point. He testified that the sampling point was never moved outside the high service pump chamber at the end of the clear well and that he only raised it vertically and out of the corner of the high service pump chamber. He further testified that he also moved the sampling point for the midpoint analyzer up into the middle of the channel, although the midpoint sampler has since been cut and disconnected. He testified that the changes were made at the recommendation of the facility's consulting engineer, Forrest

Aldrich. (Covington testimony) Mr. Covington's testimony is consistent, at least in part, with the statement made by Mr. Aldrich in a December 15, 2014 letter to the DNR's Central Office that he had recommended raising the "sample pipe" in the wet well 4 feet above the floor to provide a more representative sample location. (Appellant Ex. BW)

567 IAC 43.10(6)"d" requires a system to report to obtain DNR approval before implementing any significant change in its disinfection practice. At hearing, Mr. Covington did not explain why he did not tell Janet Gastineau that he was moving the sampling points at the time those changes were made except to say that he was "not aware that if I do something in my plant I must notify DNR." He was asked why, if Janet Gastineau had misunderstood his explanation of the new sampling location, he did not try to correct her misunderstanding after he received and reviewed the Reports of Investigation that she issued in May and June 2015. Mr. Covington testified that he couldn't recall if he ever tried to correct Ms. Gastineau. He stated that he sees a lot of mistakes in the reports and that trying to tell Ms. Gastineau that she was mistaken "doesn't get you very far." He further testified that he already had plans to move the sampling point back. (Covington testimony)

When the Notice of Violation was issued, Duane Covington already had contractors scheduled to come to clean the clearwell. He directed the contractors to move the sampling intake as directed in the Notice of Violation. The sampling location in the high service pump chamber was moved over about a foot, but it was not put back into the corner of the clearwell where it had been located initially. (Covington testimony)

27) During a plant visit on June 18, 2015, Janet Gastineau discovered that the chlorine contact time (CT) had not been calculated since June 15, 2015. On June 26, 2015, Ms. Gastineau issued a Notice of Violation for failure to calculate CT daily as required by 567 IAC 43.5(2)"a." CWW was previously cited for this same violation on January 30, 2015 (see Allegation #23). (Gastineau testimony; DNR Ex. 30)

At hearing, Mr. Covington testified that he has now added a place on the end of day sheets for an operator to calculate CT. On cross-examination, however, he testified that he could not say for sure that CT had been calculated every day since June 2015. He also denied that the CT ratio is helpful in making operational adjustments. (Covington testimony)

28) Pursuant to the DNR's rules [567 IAC 81.2(4)], shift operators must be certified at no less than one grade below the plant's classification. Because CWW is a

Grade 3 treatment plant, the shift operators at the treatment plant must be Grade 2 or higher. Subrule 81.2(11) allows an exception if an operator has a compliance plan on file with DNR that describes how and when that operator will achieve the required grade.

On January 27, 2015, CWW reported to the DNR's Field Office that shift operator Ron Ammons had submitted his resignation effective February 13, 2015 and that Mark Savage, who was a Grade 1 treatment operator, would be moved from distribution to the treatment plant to ensure shift coverage. On January 30, 2015, the DNR's Field Office sent CWW a Notice of Violation and Report of Investigation following Janet Gastineau's site visits on January 20 and January 29, 2015. The Report of Investigation, page 4, noted in bold that:

**The enclosed operator certification compliance plan must be submitted for documenting plans for Mr. Savage to obtain his grade 2 water treatment certification. When the compliance plan is complete and submitted, Mr. Savage is able to operate a shift under the supervision of the operator in charge [567 IAC 81.2(4)]. Water system management is reminded that, in accordance with the general conditions of the operation permit, there must be a sufficient number of adequately trained and knowledgeable staff to operate the facility.**

(DNR Ex. 30)

On May 19, 2015, CWW was sent another Notice of Violation and Report of Investigation. Page 2 of the Report of Investigation noted that the plant was operated by Mr. Linville<sup>29</sup> and Mr. Savage with reported daily oversight by Duane Covington. It was further noted that the CWW had not submitted the operator certification compliance plan for Mr. Savage, as required by the Report of Investigation that was transmitted on January 31, 2015. Mr. Covington was reminded that Mr. Savage must not be responsible for an operating shift at the treatment plant until he was certified as a grade 2 operator. (DNR Ex. 29; Gastineau testimony)

On June 23, 2015, Janet Gastineau spoke to Mark Savage by phone and discovered that he was the only operator at the plant at that time. On June 26, 2015, CWW was issued a Notice of Violation for an Operator Certification Violation. The attached Report of Investigation also noted that Mike Dickhoff had been hired earlier in 2015 and that his operator certification compliance plan indicated that he should have tested for a grade 1

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<sup>29</sup> Dennis Linville is a certified grade 2 treatment operator. (DNR Ex. 19; Covington testimony)

water treatment or distribution certification by May 20, 2015. This was not done and the system was in violation of the compliance plan. (DNR Ex. 30; Gastineau testimony)

Duane Covington testified that he had to bring Mark Savage over to the treatment plant from the distribution plant because they were short staffed and he had to get the water out to the community. When he did this, Mr. Covington thought that it was permissible for Mr. Savage to be the only operator at the treatment plant, as long as he did not make any operational changes. Mr. Covington testified that he rarely left the treatment plant when Mark Savage was working and when he did leave he was always available by phone and could be at the plant within 5 minutes from anywhere in Chariton. (Covington testimony)

**29)** In the June 2015 MOR, Duane Covington reported an unusually large number of CFE readings (1806), as he had previously done in July 2014. 95.4% of the reported readings on the June 2015 MOR were less than or equal to 0.3 NTU. When she reviewed the MOR, Ms. Gastineau noticed that number of readings started to increase on June 23. On June 23, the MOR reported 91 readings, which was more than the expected 15 minute readings for a plant that does not typically operate for 24 continuous hours. On June 28, the MOR reported 168 readings. Janet Gastineau believed that Mr. Covington increased the number of reported readings so that he could report compliance with the 95% rule on the MOR. Once again, she believed that Mr. Covington obtained the additional readings by moving the mouse cursor over the historical trend turbidity data and selecting only those readings that were less than 0.3 NTU. (Gastineau testimony; Appellant Exhibit CW)

Janet Gastineau required Mr. Covington to resubmit the June 2015 MOR with only the 15 minute turbidity readings, as required by the plant's approved turbidity protocol. When he did so, the MOR showed a violation of the 95% rule. Approximately 93% of the turbidity measurement readings were less than or equal to 0.3 NTU. The DNR Field Office issued CWW a Treatment Technique Violation for Turbidity-Public Notice Required for this violation on August 18, 2015. (DNR Exhibit CW; DNR Exhibit 32; Appellant Exhibit AO)

At hearing, Duane Covington denied that he obtained the extra readings that he reported on the June 2015 MOR from the SCADA's historical trend data. Mr. Covington testified that these additional readings were from grab samples that a staff member in training was taking from the clearwell. Mr. Covington's testimony about the details of the grab sampling was vague. He couldn't say how many grab samples were taken each day but thought they were taken at specific times, possibly every 5

minutes. He testified that the grab samples were taken at the direction of CWW's attorney due to turbidity issues, but he could not recall the circumstances that led to the request to take grab samples. He was not sure when the grab sampling started but agreed that from the end of day reads and the MOR numbers that it looked like it started on June 23. Mr. Covington admitted that he never notified Ms. Gastineau that they were taking these additional grab samples, but testified that he assumed she knew about it because CWW's attorney was in discussions with the DNR's attorney. Mr. Covington did not know if these discussions took place before or after the extra samples were taken, however. Mr. Covington provided no satisfactory explanation for why he believed that these grab samples could be reported on the MOR for compliance with the 95% rule. (Covington testimony; Appellant Ex. CX)

The preponderance of the evidence supports the conclusion that Duane Covington intentionally reported extra turbidity readings (over and above the 15 minute readings) in June 2015 in order to show compliance with the 95% rule. At this point in time, Mr. Covington had known about the approved turbidity protocol for more than a year and he had been required to revise a previous MOR that incorrectly included extra turbidity readings over and above the 15 minute readings. Even if Mr. Covington had been legitimately confused about the reporting requirements in July 2014, he clearly knew by June 2015 that only the 15 minute turbidity readings could be reported for showing compliance with the 95% rule. Any claim that he thought he was permitted to include these extra readings on the MOR was implausible and lacked credibility. He made no notations on the MOR to indicate that he had included extra readings on the MOR or his justification for doing so.

In addition, even assuming that the extra readings came from grab samples as reported by Mr. Covington, the preponderance of the evidence supports the conclusion that he likely selectively chose to report grab sample turbidity readings lower than 0.3 NTU in order to show compliance with the 95% rule. Appellant Exhibit CX includes "end of the day" reads for the weeks of June 3 and June 17, 2015, but Mr. Covington did not produce any documentation of the actual grab sample readings or how many were taken. As pointed out in the DNR's Post Hearing Brief, there was a dramatic improvement in the turbidity readings during the week of the reported grab sample results. The turbidity readings reported on the initial MOR for June 2015 show that as of June 22, 2015, only 92% of the 15 minute turbidity readings (908 out of 987) were less than 0.3 NTU. However, from June 23-June 30 when Mr. Covington was reporting extra readings, 97% of the reported turbidity readings (815 out of 819) were less than 0.3 NTU. The additional readings raised the overall percentage of readings that were less than 0.3 NTU to 95.41%. (DNR Ex. 32; Appellant Ex. CW)

**30)** On July 3, 2015, Duane Covington called the DNR's Field Office to report a chlorine residual less than 1.5 at the SEP. When the July 2015 MOR was submitted on August 10, 2015, however, the lowest daily reading reported for July 3 was 2.17 mg/L and the lowest reading reported during that month was 1.9. On August 11, 2015, Ms. Gastineau sent Mr. Covington an email asking about this discrepancy and other issues. Mr. Covington responded by email on August 12, 2015 and attached a revised MOR for July 2015. The revised MOR had different numerical entries for all of lowest measured residual entries for the month. It reported that the lowest measured residual on July 3 was 1.14. Mr. Covington never really explained why the chlorine residuals were initially reported incorrectly. (DNR Ex. 46; Gastineau testimony)

**31)** The DNR's rules require all data used to comply with self-monitoring requirements to be kept at the facility, in a form that allows easy retrieval and interpretation, for at least five years.<sup>30</sup> When Duane Covington submitted the July 2015 MOR, it showed no CFE measurements >1 NTU. When Janet Gastineau inspected CWW's "Monthly Turbidity/C12 Report," however, she noticed highest daily CFE readings greater than 1 NTU on July 2, 4, and 16. Ms. Gastineau then asked Mr. Covington to provide a report showing the individual 15 minute CFE readings used for compliance for the month, but he was not able to access this data from the SCADA system. On August 21, 2015, the DNR Field Office issued a Treatment Technique Violation for Record Keeping-Public Notice Required for a violation of 567 - 42.5(1). (DNR Ex. 33, 46; Gastineau testimony)

There had been a previous Treatment Technique Violation for the same deficiency in July 2014. (See Allegation # 12). At this point, Mr. Covington had been the operator-in-charge of CWW for 22 months, but he had not resolved this problem. In the opinion of Janet Gastineau, a competent operator, especially one who had a history of turbidity problems, would have been using this data to diagnose problems and make operational adjustments. (Gastineau testimony)

In response to Allegations #12 and #31, Duane Covington pointed out that the problem with the SCADA system existed prior to his hire date. This was confirmed by John Whitacre, who is the president of JETCO, Inc., which is a company that provides systems integration and controls instrumentation for the municipal water and wastewater industry in Iowa and other Midwestern states. Mr. Whitacre has been in this industry since 1993 and has been the systems integrator for the CWW facility since about 2005. (Covington, Whitacre testimony)

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<sup>30</sup> 567-42.5(1).

As explained by Mr. Whitacre, all of the continuous analyzers at the plant have a process signal that feeds into a control panel with a programmable logic controller (PLC). The PLC controls the mechanical components of the treatment process. The SCADA software is the operator's tool for viewing information, changing setpoints, and monitoring the system. The SCADA software interfaces with the PLC to pull the data out. The PLC monitors and stores the daily high value for turbidity and it records the 15 minute turbidity readings that were used for compliance purposes. The SCADA system also displays historical trend graphs that reflect all of the turbidity readings and not just the 15 minutes readings that are used for compliance purposes. (Whitacre testimony; DNR Ex. 30, p. 4 of Report of Investigation)

In late May or early June 2015, Mr. Whitacre installed a new SCADA computer at the CWW facility. The new SCADA system was in place during Ms. Gastineau's site visits in June 2015. Mr. Whitacre upgraded the SCADA software to allow database monitoring and logging of all of the values that are available from the SCADA monitor from the facility's analyzers, flow meters, etc. He added the historian database and the historian client, which is the Excel reporting tool that is used to extract the data for reporting purposes. According to Mr. Whitacre, the new SCADA system can easily store 10-15 years of information, but he was unable to pull any of the old data into the new software. The SCADA system allows constant monitoring of the turbidity signal but also allows the daily highest reading, from the 15 minute readings, to be monitored and recorded. (Whitacre testimony; DNR Ex. 30, p. 4 of Report of Investigation) Based on Mr. Whitacre's testimony concerning the timing of the upgrade, it appears that Mr. Covington should have been able to access the turbidity data that Ms. Gastineau requested from July 2015.

The CWW's prior SCADA system used a native logging system that could not store years of data and made it difficult to retrieve more than a day or two of data at a time. This was typical of some of the older systems used in Iowa. At the time of the hearing, Mr. Whitacre had just recently updated Boone's SCADA system, and he suspected that there were other SCADA systems still in use in Iowa that are not able to store 5 years of required data. (Whitacre testimony)

32) On August 13 and 14, 2015, Duane Covington called the field office to report chlorine residual of less than 1.5 at the SEP because of a leak in the chlorine line. When he submitted the August 2015 MOR, however, it showed that the lowest daily residual for both of these days was greater than 1.5 mg/L. When Ms. Gastineau asked Mr. Covington to explain this discrepancy, he submitted a revised MOR with the correct lowest daily residuals reported for August 13 and August 14. His email stated that

“[t]he chlorine on the 13-14 was not filled in and lab sheets were used. Corrections have been made and those days trend sheets are enclosed with the updated MOR.” This was the second month in a row that the MOR had a discrepancy between what had been called in to the Field Office and what appeared on the MOR. (See Allegation #30) (Gastineau testimony; DNR Ex. 47)

**33)** Duane Covington submitted the August 2015 MOR without completing the “V” section, and Janet Gastineau had to ask him to submit a revision. This was the 5<sup>th</sup> time since May 2014 that Mr. Covington submitted a MOR without completing the V section. (DNR Ex. 47; Gastineau testimony)

**34)** Haloacetic Acids (HAA5) is a by-product that forms when chlorine combines with total organic carbons. The DNR’s rules have established a maximum contaminant level for HAA5.<sup>31</sup> The CWW facility violated the running annual average MCL for HAA5s for the third quarter of 2015. Long term exposure to HAA5s can cause an increased risk for cancer. (Gastineau testimony)

The DNR did not submit documentation relating to this violation or any corrective action that was taken in response to it. Mr. Covington admitted the violation at hearing, however. Mr. Covington testified that the violation was the result of the facility’s ammonia flow meter breaking down without warning in November 2014, which caused an overfeed of ammonia into the treatment system and caused an exceedance of the HAA5 MCL in December 2014. The facility was unable to get a new flow meter because the company had gone out of business, and the facility switched from a “chloramine” system to a “free chlorine” system. When they received the HAA5 violation, they had not had a recent high reading but were in violation because the violation is based on a running annual average. (Covington testimony)

Duane Covington and his expert witness, Larry Trout, both reasonably and persuasively testified that this violation should not be held against Mr. Covington because there was no way to anticipate that the ammonia flow meter was about to fail. The equipment failure and inability to immediately replace the equipment was beyond Mr. Covington’s control. (Covington, Trout testimony)

**35)** The CWW’s operation permit that went into effect on September 18, 2015 requires the facility to take 1 nitrite sample every month from the distribution system and to confirm the accuracy of the test results by splitting the sample and sending a portion to an outside lab for analysis once a quarter. This ensures that an outside lab

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<sup>31</sup> 567-41.6(1)“b”(1).

has confirmed the accuracy of the in-house analysis that CWW's operators have performed using bench top instruments. Nitrite sampling is important because it can cause negative health impacts for consumers. (Gastineau testimony; DNR Ex. 1, pp. 2, 4 of 9)

In December 2015, Duane Covington failed to properly sample for nitrite. Rather than taking a single sample and splitting it, a sample was taken from two different locations, which defeated the purpose of having an outside lab verify the results. The Field Office issued CWW a Notice of Violation of Operation Permit Requirements for this violation. (Gastineau testimony; DNR Ex. 35)

Duane Covington testified that this was a new permit, that this was the first time that CWW was testing for nitrites, and that one of his operators did not understand that the sample had to be split rather than taken from two locations. As the operator-in-charge, however, Mr. Covington is responsible for supervising his operators and ensuring they understand the tasks assigned to them. (Covington, Gastineau testimony)

36) The CWW facility's operation permit requires the facility to report the pH in the finished water at the SEP. (DNR Ex. 1, p. 5 of 9) When Janet Gastineau reviewed the February 2016 MOR, she thought that the reported pH numbers seemed unusually low. When Ms. Gastineau asked Mr. Covington about this, he explained that he had reported the pH in the clear well and not the pH from the finished water as the permit requires. In fact, Mr. Covington had consistently reported the pH numbers from the clear well rather than the finished water. Ms. Gastineau did not catch this error until February 2016 when the pH numbers appeared unusually low. (Gastineau testimony)

#### *Expert Testimony on Behalf of Appellant*

Larry Trout testified on behalf of Duane Covington as an expert witness. Mr. Trout has been a certified grade 3 water treatment, water distribution, and wastewater treatment operator since 1979. Over the years he has served as the operator-in-charge of the water and wastewater treatment plants at Springville, Iowa (1979-1981); the water treatment plant and water distribution plants at Marion, Iowa (2001-2003); and the water treatment, water distribution, and wastewater treatment plants at Reinbeck, Iowa (since 2012). Mr. Trout's working experience as an operator is limited to groundwater plants. (Trout testimony; Appellant Ex. B)

Larry Trout has also developed and has taught water treatment, water distribution, and wastewater treatment classes for operators at Kirkwood Community College over a

period of 17 years. Mr. Trout was one of Duane Covington's three teachers when he attended Kirkwood. While at Kirkwood, Mr. Trout developed and operated a functional water treatment plant and wastewater treatment plant as a training module for his students. At the current time, Larry Trout is partially retired. In addition to his work with the city of Reinbeck, he also provides water treatment and water distribution training across the state, including training for operators on water and wastewater treatment techniques and mechanical maintenance. (Trout, Covington testimony; Appellant Ex. B)

Larry Trout visited the CWW water treatment and water distribution plant on one occasion in either January or February 2016. He spent approximately 4-5 hours at the plant at that time and believes that he was able to get a good understanding of how the plant operates. Mr. Trout has also had several phone conversations with Duane Covington and has met with Mr. Covington and his attorney prior to his deposition. Larry Trout concedes that Duane Covington has made some mistakes in his operation of CWW. Mr. Trout believes, however, that Mr. Covington has done the best he could while working with an old plant that was in need of upgrades, that had an older SCADA system, and that had a lot of personnel turnover. In Mr. Trout's opinion, a reasonable operator who is new to a plant will review the available records and continue to operate the plant as it has been operated in the past. With respect to the turbidity protocol, Mr. Trout conceded that he would have looked for an approved protocol in the treatment plant's records when he started to operate the plant. If he was unable to find an approved protocol in the existing records, Mr. Trout would have contacted the Field Office to tell them it was missing and would have asked if they had a copy. (Trout testimony)

Mr. Trout has submitted MORs as the operator-in-charge at the Springville, Marion, and Reinbeck facilities. He agrees that even if another operator prepares the MOR, it must be signed by the operator-in-charge, and it is the OIC's "license on the line." Mr. Trout signs and keeps a hard copy of all of the MORs that he electronically submits to the DNR. Mr. Trout testified that he has made some mistakes on MORs. Although he has caught some of these mistakes before the MOR was submitted, there were times when the Field Office caught the error and contacted him. In Mr. Trout's opinion, an operator's certification should not be revoked by the DNR unless the operator has falsified or fabricated the data provided on an MOR. (Trout testimony)

## CONCLUSIONS OF LAW

### *I. Statutes and Rules Authorizing the DNR to Certify and Discipline Water Treatment Operators and Water Distribution Operators*

*Duty to classify water treatment plants and water distribution systems.* The director of the DNR is required to classify all water treatment plants, water distribution systems, and waste water treatment plants affecting the public welfare. The classification is made “with regard to the size, type, character of water and waste water to be treated and other physical conditions affecting such treatment plants and distribution systems, and according to the skill, knowledge, and experience that an operator must have to supervise the operation of the facilities to protect the public health and prevent pollution.”<sup>32</sup>

*Duty to establish operator certification programs and to certify qualified operators.* The legislature has also authorized the DNR’s director to establish water treatment and water distribution certification programs and to issue certificates attesting to the competency of the applicant as an operator.<sup>33</sup> It is unlawful for any person, firm, corporation, municipal corporation, or other governmental subdivision or agency, to operate a water treatment plant, water distribution plant, or wastewater treatment plant unless the competency of the operator to operate such plant or system is duly certified to by the director under the provisions of Iowa Code chapter 455B, Division III, part 2.<sup>34</sup>

*Relevant definitions.* “Water treatment plant” means that portion of the water supply system which in some way alters the physical, chemical, or bacteriological quality of the water.<sup>35</sup> “Water distribution system” means that portion of the water supply system in which water is conveyed from the water treatment plant or other supply point to the premises of the consumer.<sup>36</sup> “Operator” means a person who has direct responsibility for the operation of a water treatment plant, water distribution system, or waste water treatment plant.<sup>37</sup> “Certificate” means the certificate of competence issued by the director stating that the operator has met the requirements for the specified operator classification of the certification program.<sup>38</sup>

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<sup>32</sup> Iowa Code section 455B.212 (2015) (the citations are to the 2015 Code, but the same provisions have been in effect since 2013).

<sup>33</sup> Iowa Code sections 455B.212, 455B.213(1), 455B.217, and 272C.1(6)“x.”

<sup>34</sup> Iowa Code section 455B.223.

<sup>35</sup> Iowa Code section 455B.211(6).

<sup>36</sup> Iowa Code section 455B.211(4).

<sup>37</sup> Iowa Code section 455B.211(2).

<sup>38</sup> Iowa Code section 455B.211(1).

The DNR's rules define "*Operator-in-charge*" as the person(s) in "direct responsible charge" for a plant or distribution system. A city manager, superintendent of public works, city clerk, council member, business manager, or other administrative official shall not be deemed to be the operator-in-charge of a plant or distribution system unless this person's duties include the active, daily on-site operation of the plant or distribution system. On-site operation may not necessarily mean full-time attendance at the plant or distribution system.<sup>39</sup> "*Direct responsible charge (DRC)*" means, where shift operation is not required, accountability for and performance of active, daily on-site operation of the plant or distribution system, or of a major segment of the plant or distribution system...<sup>40</sup>

***Authority to discipline certified operators.*** The legislature has authorized the DNR's director to suspend or revoke an operator's certificate, following a hearing, when the operator is guilty of the following acts or offenses:

- ...
- 2. Professional incompetency.
- 3. Knowingly making misleading, deceptive, untrue or fraudulent representations in the practice of the operator's profession or engaging in unethical conduct or practice harmful or detrimental to the public. Proof of actual injury need not be established.
- ...
- 8. Willful or repeated violation of division III of this chapter.<sup>41</sup>

The legislature has further authorized the DNR to establish criteria for taking disciplinary actions and to establish a range of sanctions that may be imposed, including but not limited to suspension or revocation, a period of probation, additional professional education or training, and civil penalties.<sup>42</sup>

Pursuant to its rule making authority, the Environmental Protection Commission (Commission) has adopted the rules found at 567 IAC chapter 81, which establish the education, experience, and examination qualifications for operators and which authorize disciplinary actions to be taken against certified operators. The rules provide that all certificates expire on June 30 of odd-numbered years and must be renewed every two years in order to maintain certification.<sup>43</sup>

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<sup>39</sup> 567 IAC 81.1.

<sup>40</sup> *Id.*

<sup>41</sup> Iowa Code section 455B.219.

<sup>42</sup> Iowa Code sections 455B.219, 272C.3, and 272C.10.

<sup>43</sup> 567 IAC 81.13(1).

567 IAC 81.17 provides, in relevant part:

**81.17(1) *Reasons for disciplinary actions.*** Disciplinary actions may be taken against a certified operator on any of the grounds specified in Iowa Code section 455B.219 and chapter 272C<sup>44</sup> and the following more specific grounds.

*a.* Failure to use reasonable care or judgment or to apply knowledge or ability in performing the duties of a certified operator.

...

(2) Water treatment and distribution operator duties. Examples of a water treatment or distribution operator's duties are specified in ...; and 567-Chapters 40 through 43 and 83, Iowa Administrative Code.

*b.* Failure to submit required records of operation or other reports required under applicable permits or rules of the department, including failure to submit complete records or reports.

*c.* Knowingly making any false statement, representation, or certification on any application, record, report or document required to be maintained or submitted under any applicable permit or rule of the department.

...

*e.* Professional incompetence.

*f.* Knowingly making misleading, deceptive, untrue or fraudulent representations in the practice of the operator's profession or engaging in unethical conduct or practice harmful or detrimental to the public. Proof of actual injury need not be established.

...

*k.* Willful or repeated violations of the provisions of Iowa Code chapter 272C or 455B, division III.

567 IAC 81.17(2) provides that disciplinary sanctions may include those specified in Iowa Code section 272C.3(2) and the following:

*a. Revocation of a certificate.* Revocation may be permanent without chance of recertification or for a specified period of time.

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<sup>44</sup> Iowa Code chapter 272C is entitled "Regulation of Licensed Professionals and Occupations" and its provisions apply to designated licensing boards in the state of Iowa. Iowa Code section 272C.1(6)"x" defines "licensing board" to include the director of the department of natural resources in certifying water treatment operators as provided in sections 455B.211 through 455B.224.

*b. Partial revocation or suspension.* Revocation or suspension of the practice of a particular aspect of the operation of a plant or distribution system, including the restriction of operation to a particular plant or distribution system, or a particular type of plant or distribution system.

*c. Probation.* Probation under specified conditions relevant to the specific grounds for disciplinary action.

*d. Additional education, training, and examination requirements.* Additional education, training, and reexamination may be required as a condition of reinstatement.

*e. Penalties.* Civil penalties not to exceed \$1,000 may be assessed for causes identified in 81.17(1).

The DNR's staff initiates a disciplinary action against a certified operator by conducting such lawful investigation as is necessary to establish a legal and factual basis for the action. A disciplinary action is initiated by a notice of intended action, in accordance with 561 IAC 7.16.<sup>45</sup> The certified operator may appeal the intended action and request a hearing, within 30 days of receipt of the notice of intended action. If an appeal is filed, further contested case procedures, in accordance with 561 IAC chapter 7, apply.<sup>46</sup>

## **II. Burden and Standard of Proof.**

As Appellant points out in his brief, the DNR's statutes and rules do not specify the standard of proof in disciplinary cases against certified water treatment operators. Citing Iowa Code section 17A.19, Appellant asserts that the burden of proof is on the DNR to prove its case by a "preponderance of evidence that is supported by substantial evidence." On a petition for judicial review, a reviewing court will apply a "substantial evidence" test when reviewing fact findings made by the agency.<sup>47</sup> In a certification disciplinary proceeding at the agency level, however, the DNR must establish the necessary facts by a preponderance of the evidence.<sup>48</sup>

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<sup>45</sup> 567 IAC 81.17(3)"a."

<sup>46</sup> 567 IAC 81.17(3)"b."

<sup>47</sup> Iowa Code section 17A.19(10)(f)(2015).

<sup>48</sup> See *Boswell v. Iowa Board of Veterinary Medicine*, 477 NW2d 366, 369 (Iowa 1991) (holding that the appropriate standard of proof to discipline a veterinarian is the "preponderance of evidence" standard); *Eaves v. Board of Medical Examiners*, 467 NW 2d 234, 237 (Iowa 1991)(holding that the appropriate standard of proof to discipline a physician is the "preponderance of evidence" standard.) Disciplinary proceedings against veterinarians and physicians, like this disciplinary proceeding against a water treatment operator, are held pursuant to Iowa Code section 272C. See also *Organic Technologies Corp v. State ex rel. Iowa Dept. of Natural Resources*, 609 NW2d 809, 818 (Iowa 2000) (the Court agreed with the district court's

***III. Statutes and Rules Pertaining to Operational, Monitoring, Recordkeeping, and Reporting Requirements Applicable to Surface Water Systems.***

All references and citations to relevant statutes and rules, as set out in the Findings of Fact, are hereby incorporated as though fully set forth in the Conclusions of Law.

***IV. Analysis***

The DNR essentially contends that based on his actions as the operator-in-charge at CWW since October 2013, Duane Covington cannot continue to be certified as a water treatment operator or water distribution operator in the state of Iowa. The DNR contends that the evidence in the record establishes that Duane Covington has willfully or repeatedly violated the rules applicable to CWW's operations, has failed to use reasonable care or judgment, has failed to apply knowledge or ability in performing the duties of a certified operator, and has failed to submit complete or accurate reports, in violation of Iowa Code section 455B.219(2), (8) and 567 IAC 81.17(1)"a,""b," and "e." The DNR also asserts that Mr. Covington has knowingly made misleading, deceptive, or untrue representations in the practice of his profession, in violation of Iowa Code section 455B.219(3) and 567 IAC 81.17(1)"c," and "f."

Appellant initially asserts that the DNR may not rely on any allegation as grounds for revocation unless the DNR took contemporaneous corrective action by issuing a Notice of Violation or Treatment Technique Violation. Appellant further asserts that none of the corrective actions that were taken by DNR should be presumed valid for the purposes of this disciplinary action because there was no formal appeal process for Notices of Violation or Treatment Technique Violations.

Iowa Code section 455B.175(1) states that if there has been substantial evidence that any person has violated or is violating any provision of chapter 455B, Division III or any rule or standard established or permit issued pursuant thereto, then:

- a. The director **may** issue an order directing the person to desist in the practice which constitutes the violation or take such corrective action as may be necessary to ensure that the violation will cease. The person to whom such order is issued may cause to be commenced a contested case within the meaning of the Iowa administrative procedure Act, chapter

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determination to uphold the ALJ's finding that a preponderance of the evidence supported the DNR's findings of violation).

17A, by filing with the director within thirty days a notice of appeal to the commission. On appeal the commission may affirm, modify or vacate the order of the director.

(emphasis supplied) Based on this statute, the director has the discretion to issue an (administrative) order to address any statutory or rule violation, but the director is not required to issue a formal administrative order. The issuance of an administrative order triggers the opportunity for a contested case hearing.

The issuance of a Notice of Violation or Treatment Technique Violation by the DNR's Field Office is not the same type of corrective action as the issuance of an administrative order under the director's signature. The Notices of Violation and Treatment Technique Violations in this record were issued by the Supervisor of Field Office #5 and identified Janet Gastineau as the DNR employee to be contacted with any questions or comments. The notices did not identify any formal appeal process. There was no evidence that CWW or Duane Covington ever requested a hearing on any of these violations. There was evidence, with respect to a few violations, that Mr. Covington or CWW's consulting engineer responded to the violations by providing provided additional information and/or arguments to DNR staff. It appears that on at least one occasion, these contacts resulted in the DNR withdrawing its requirement for a public notification.

Although there was no identified formal appeal process for the Notices of Violation and Treatment Technique Violations, Appellant was afforded the opportunity to be heard and to challenge the basis for those violations at this appeal hearing. The DNR has gone forward with the evidence supporting those notices of violation, and Appellant had the opportunity to cross examine the DNR's witness and present its own evidence. Appellant has been afforded due process with respect to these violations. Those Notices of Violation and Treatment Technique Violations that are supported by a preponderance of the evidence in this record may properly be considered in determining whether the DNR's proposed disciplinary actions are warranted.

Appellant's further contention that the DNR may not rely on any incident, such as incorrect or incomplete MORs, which did not result in the issuance of a Notice of Violation or Treatment Technique Violation was not persuasive. There is nothing in the statute (455B.211) or the DNR's rules (567 IAC 81.17) to support the conclusion that only incidents that resulted in these types of corrective action may be considered by the DNR when determining whether an individual operator should be disciplined. Once again, Appellant was given notice of the incidents relied on by the DNR and has been afforded

the opportunity to respond and present evidence concerning those incidents. Those incidents that were established by a preponderance of the evidence may properly be considered in deciding these appeals.

In reviewing the DNR's allegations in support of its disciplinary action, it was necessary to consider the relative weight to be given to the opinions provided by the DNR's witness, Janet Gastineau, and the opinions provided by Duane Covington and his expert witness, Larry Trout. Ms. Gastineau is well qualified, through her post graduate education and by years of experience, for her position as an Environmental Specialist Senior with the DNR. Although Ms. Gastineau is not a certified operator, she has had substantial professional experience with CWW's water treatment and water distribution plant and with its current and former operators. She has also had extensive experience with respect to other water plants in Region 5, which provides her a reasonable basis upon which to compare Mr. Covington's performance as the operator-in-charge with that of other operators. Her testimony over the better part of two days revealed an impressive depth of knowledge concerning the technical aspects of water plants and a very good understanding self-monitoring and reporting rules that apply to surface water plants. Most of her opinions were based on valid observations and accurate application of the statutes and rules. The exceptions to this have been identified in the Findings of Fact.

Duane Covington is a Grade 3 certified water treatment and water distribution operator with approximately 16 years of experience as an operator of various types of water plants. Mr. Covington appears to have substantial technical knowledge about water treatment and water distribution equipment. Nevertheless, Mr. Covington's actions as the operator-in-charge at CWW and his testimony at hearing revealed significant deficits in his understanding of the rather complex regulations that govern surface water plants. Moreover, his testimony indicated that he either does not accept or else does not understand that accurate self-monitoring and accurate and complete reporting of self-monitoring data is essential to the DNR's effective oversight of the operations of water treatment and water distribution plants.

Larry Trout is also a Grade 3 water treatment and water distribution operator. Although Mr. Trout has provided education and training for many water plant operators over the past 17 years, he has never operated a surface water treatment plant that provides water to the public. Mr. Trout appeared to have significantly less working knowledge and understanding of the rules governing surface water plants than Janet Gastineau. In addition, he had less knowledge of the operation of the CWW, having visited the plant on only one occasion over for a period of four or five hours.

For these reasons, Mr. Trout's opinions were generally given less weight than those of Ms. Gastineau. The exceptions to this have been noted in the Findings of Fact.

A few of the allegations made by DNR were not supported by a preponderance of the evidence in this record. For example, although Duane Covington admits moving the chlorine sampling point within the clearwell in May 2015 without first notifying the DNR, it does appear likely that the sampling point was only moved within the high service pump chamber. It is unclear whether this would constitute a "significant change" in the plant's disinfection practice, which would have required prior DNR approval.<sup>49</sup> Nevertheless, it is very troubling that Mr. Covington did not clear this up with the DNR when Ms. Gastineau issued her Reports of Investigation that clearly stated her belief that the sampling point had been moved to the midpoint of the clearwell. This is just one example of Mr. Covington's overall lack of attention to detail and follow through with respect to his review of essential documents relating to the plant's operations.

Duane Covington and Larry Trout persuasively established that the HAA5 violation for the third quarter of 2015, which was due to an ammonia flow meter that broke down without warning, was not an issue that could have been anticipated by Mr. Covington.

It was also established that there were deficiencies in CWW's SCADA system that were related to outdated equipment and software, that these problems existed prior to Mr. Covington's date of hire, that this issue is not unique to CWW, and that this has now been resolved through a SCADA system upgrade. Nevertheless, it was very troubling that Mr. Covington was unfamiliar with the record keeping and record retention requirements for surface water plant. In addition, Mr. Covington was unreasonably dismissive of the importance of reviewing these monitoring records in order to make necessary operational adjustments at the plant.

The vast majority of the 36 allegations cited by the DNR as the basis for its proposed disciplinary actions were supported by a preponderance of credible evidence in this record. These included numerous MORs that Mr. Covington certified as true, complete, and accurate, but which in fact were inaccurate or incomplete. Certainly clerical errors do occur and isolated errors on MORs should not result in disciplinary action against a water treatment operator. Mr. Covington's errors, however, were frequent and repeated in nature, and they greatly exceeded the number and types of errors committed by other operators in Region 5. They were not just clerical errors but indicated a lack of understanding of the underlying requirements and a lack of

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<sup>49</sup> 567 IAC 43.10(6)"d."

attention to the accuracy of the data reported. These errors required Ms. Gastineau to have repeated communications with Mr. Covington, month after month, to try to get accurate information. For some of these MORs, it remains unclear whether the data ultimately provided was in fact accurate.

The preponderance of the evidence established that for a significant period of time after Duane Covington became the operator-in-charge, he had not accurately identified the water treatment plant's SEP sampling point or its CFE compliance point. For the first fifteen months that he was the operator-in-charge at CWW, Mr. Covington believed that the SEP sampling point was the plant's mop sink, when in fact the mop sink was not finished water from the plant. Mr. Covington claimed that prior operators had also used the mop sink as the SEP sampling point, but he offered no corroborating evidence to support this claim.

Although CWW was clearly using continuous analyzers rather than grab samples to monitor turbidity during the entire time that Duane Covington has been operator-in-charge, Mr. Covington either did not know that the plant must have an approved turbidity protocol that identified the CFE compliance point or else he simply chose to rely on word of mouth reports rather than tracking down the protocol. His expert witness, Larry Trout, acknowledged that one of the first things he would have done upon becoming the operator-in-charge would have been to look in the plant's records for the approved protocol and to ask the DNR for it if it could not be found. Mr. Covington did not obtain a copy of the approved protocol until more than 8 months after he became the operator-in-charge. Even after he had the approved protocol, Mr. Covington continued to report data from the wrong compliance point.

During Mr. Covington's tenure as operator-in-charge, the CWW facility has had repeated violations related to excessive turbidity and failure to achieve the required chlorine contact time ratio. On repeated occasions, Mr. Covington also failed to ensure that the CT ratio was being calculated by his staff on daily basis, as required by the DNR's rules, and failed to ensure that he had an adequate number of sufficiently trained staff to make the required calculation. These types of violations raise potential public health and safety concerns for the quality of the drinking water produced at CWW. Based on this record, it does appear that these ongoing concerns were eventually addressed and hopefully resolved by increasing the potassium permanganate feed to the raw water back to prior levels, by increasing the operational depth of the clearwell, and by changing the procedures for the daily calculation and recording of the CT ratio.

The preponderance of the evidence established that Duane Covington allowed a Grade 1 operator to be function as the shift operator at the treatment plant. Based on Mr. Covington's admission at hearing, he erroneously believed that a Grade 1 operator could be left as the only operator on duty at the water treatment plant as long as the operator-in-charge was nearby and available by telephone.

Finally, the preponderance of the evidence established that Duane Covington provided incorrect, inaccurate or misleading turbidity data on three MORs (June 2014, July 2014, and June 2015). The June 2014 MOR was submitted on July 8, 2014. By that time the May 7, 2008 turbidity protocol had been found and the CFE compliance point within the clearwell had been identified. Nevertheless, Mr. Covington submitted the June 2014 MOR using turbidity data from the wrong CFE turbidometer (the one located prior to the clearwell) for the first half of the month. With this inaccurate data, the water plant appeared to be in compliance with the 95% rule. When the error was identified by Janet Gastineau and corrected by Mr. Covington, the water plant was in violation of the 95% rule and a Notice of Violation was issued. At best, this was a careless error by Mr. Covington and another example of his failure to adequately review the data he submitted on MORs. After the CFE compliance point was identified and verified in late June, he should have ensured that the June 2014 MOR reflected accurate turbidity data.

On August 6, 2014, Duane Covington submitted the July 2014 MOR that showed compliance with the 95% rule. This MOR reported numerous supplemental turbidity readings, over and above the 15 minute readings specified in the approved protocol for CFE compliance purposes. Without these supplemental readings, the data would have shown a violation of the 95% rule. Mr. Covington denied that he selectively reported supplemental readings that were under 0.3 NTU in order to show compliance with the 95% rule, but his explanations for how the additional readings were selected and recorded were not credible. Even assuming that he and his staff recorded these readings from the SCADA screen in real time, the preponderance of the evidence supports the conclusion that additional low turbidity values were selected to show compliance.

On August 21, 2014, Duane Gastineau reported to the CWW Water Board, in the presence of Janet Gastineau, that the plant would likely be in compliance with the 95% rule for the month of August. The turbidity data as of August 21<sup>st</sup> showed a clear violation of the 95% rule as of August 21, however. If this was not an intentional misrepresentation of the plant's operations as of that date, it was clear evidence of Mr. Covington's failure to use reasonable care in monitoring and reporting the plant's

operations, particularly when the plant had turbidity violations in the prior two months.

The June 2015 MOR submitted by Duane Covington once again included supplemental turbidity readings, in addition to the 15 minute readings that were reportable for compliance purposes under the turbidity protocol. This was nearly a year after Mr. Covington had been required to correct the prior MOR that included supplemental turbidity readings. Even assuming that the additional readings came from turbidity grab samples that were taken at the direction of the attorney for the CWW Water Board, the preponderance of the evidence supports the conclusion that the submission of the extra readings by Mr. Covington was deliberately misleading. Mr. Covington either knew or should have known that supplemental readings could not be reported on the MOR for compliance purposes. Based on his own testimony, it is likely that Mr. Covington did not submit all of the grab sample results but rather selectively chose to report those results with lower values.

### DECISION AND ORDER

Although the DNR failed to establish that Duane Covington submitted fabricated self-monitoring data on MORs, there is persuasive evidence that the turbidity data that he submitted on his June 2014 and June 2015 MORs was deliberately misleading, in violation of Iowa Code section 455B.219(3) and 567 IAC 81.7(1)"f." In addition, the record is replete with examples of Mr. Covington's failure to comply with the DNR's rules governing the operation of surface water treatment and distribution plants, his failure to exercise reasonable care and reasonable judgment as an operator-in-charge, and his failure to submit complete and accurate records of operation for CWW, in violation of 567 IAC 81.17(1)"a" and "b." In addition, the number and repeated nature of many of these violations support a finding of willful or repeated violations of DNR's rules, in violation of Iowa Code section 455B.219(8) and 567 IAC 8.17(1)"k."

The preponderance of the evidence supports the proposed revocation of Duane Covington's Grade 3 water treatment and water distribution certifications and the proposed denial of his pending application to renew those certifications. The DNR's Notice of Intent to Revoke proposed permanent revocation without opportunity for recertification, which is authorized under 567 IAC 81.17(2). Given that there have been no prior disciplinary actions against Mr. Covington, however, it is appropriate to allow him the opportunity to seek recertification in accordance with 567 IAC 81.17(3)"f." That rule allows Mr. Covington to reapply for certification as a water treatment operator or

water distribution operator after a period of two years, provided that he can meet all of the education, experience, and examination requirements required of a new applicant.

IT IS THEREFORE ORDERED that the Grade 3 water treatment certification and Grade water distribution certification issued to Duane Covington shall be REVOKED effective when this proposed decision becomes a final agency decision. IT IS FURTHER ORDERED that Mr. Covington will be permitted to reapply after two years from the date of revocation, in accordance with the terms established in 567 IAC 81.17(3)"f."

IT IS FURTHER ORDERED that the Notice of Intent to Deny Renewal of Duane Covington's Grade 3 water treatment certification and Grade 3 water distribution certification is hereby AFFIRMED.

Dated this 21st day of September, 2016.



Margaret LaMarche  
Administrative Law Judge  
Department of Inspections and Appeals  
Wallace State Office Building-Third Floor  
Des Moines, Iowa 50319

cc: Daniel R. Rockhold, 300 West Marion, P.O. Box 256, Corydon, Iowa 50060 (CERTIFIED); John Crotty, Legal Services Bureau, Iowa Department of Natural Resources, Wallace State Office Building-Third Floor, Des Moines, Iowa 50319 (CERTIFIED)

Either party may file an appeal with the director of the department of natural resources within 30 days after receipt of the proposed decision and order. The agency may also decide on its own to review a proposed decision, notwithstanding the absence of a timely appeal by a party. 561 IAC 7.17(5).