IN THE IOWA DISTRICT COURT FOR WOODBURY COUNTY

STATE OF IOWA, ex rel., IOWA DEPARTMENT OF NATURAL RESOURCES (99AG23542), Plaintiff, vs. CITY OF SIOUX CITY, Defendant.	)	NO. EQCV200902 **PETITION IN EQUITY**

COMES NOW Plaintiff State of Iowa, ex rel., Iowa Department of Natural Resources ("IDNR") and for its claim against Defendant City of Sioux City, states as follows:

INTRODUCTION

1. The State of Iowa seeks the assessment of civil penalties and injunctive relief against Defendant City of Sioux City for discharging wastewater into a water of the State in violation of Iowa's water quality rules and Sioux City's National Pollutant Discharge Elimination System ("NPDES") permit.

PARTIES

2. The State of Iowa is a sovereign state of the United States of America.

3. The Iowa Department of Natural Resources ("IDNR") is a duly constituted agency of the State of Iowa pursuant to Iowa Code section 455A.2.

4. Defendant City of Sioux City ("City") is a duly organized city under the laws of the State of Iowa. The city is a "person" as defined in Iowa Code section 455B.171(20)(a).

DEFINITIONS

5. A "disposal system" means a system for disposing of sewage, industrial waste, or

other wastes" and includes sewer systems, treatment works, point sources, dispersal systems, and any systems designed for the usage or disposal of sewage sludge." Iowa Code § 455B.171(5).

6. "Effluent standard" means "any restriction or prohibition on quantities, rates, and concentrations of chemical, physical, biological, radiological, and other constituents which are discharged from point sources into any water of the state including an effluent limitation, a water quality related effluent limitation, a standard of performance for a new source, a toxic effluent standard, or other limitation." Iowa Code § 455B.171(6).

7. "NPDES permit" means "an operation permit, issued after the department has obtained approval of its National Pollutant Discharge Elimination System (NPDES) program from the administrator, that authorizes the discharge of any pollutant into a navigable water." 567 Iowa Admin. Code 60.2.

8. "Point source" means "any discernable, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit . . . from which pollutants are or may be discharged." Iowa Code § 455B.171(21).

9. "Pollutant" means "sewage, industrial waste, or other waste." Iowa Code § 455B.171(22).

10. "Treatment works" means "any plant, disposal field, lagoon, holding or flow-regulating basin, pumping station, or other works installed for the purpose of treating, stabilizing, or disposing of sewage, industrial waste, or other wastes." Iowa Code § 455B.171(39).

11. "Water of the state" means "any stream, lake, pond, marsh, watercourse, waterway, well, spring, reservoir, aquifer, irrigation system, drainage system, and any other body or accumulation of water, surface or underground, natural or artificial, public or private, which are contained within, flow through or border upon the state or any portion thereof." Iowa Code §

455B.171(41).

12. "Water pollution" means "the contamination or alteration of the physical, chemical, biological, or radiological integrity of any water of the state by a source resulting in whole or in part from the activities of humans, which is harmful, detrimental, or injurious to public health, safety, or welfare, to domestic, commercial, industrial, agricultural, or recreational use or to livestock, wild animals, birds, fish, or other aquatic life." Iowa Code § 455B.171(42).

JURISDICTION

13. The IDNR is the agency of the state responsible for the prevention, abatement, or control of water pollution. Iowa Code § 455B.172(1). The IDNR maintains jurisdiction over and regulates the direct discharge of pollutants to a water of the state. Iowa Code § 455B.172(5).

14. The Iowa Environmental Protection Commission ("EPC") has authority to establish water quality standards, pretreatment standards, and effluent standards; adopt rules relating to the location, construction, operation, maintenance, or modification of disposal systems, or for the discharge of any pollutant; and inspection, monitoring, record keeping, and reporting requirements for owners and operators of disposal systems. Iowa Code §§ 455A.6(6)(a) and 455B.173(2), (3) and (6). The EPC's rules implementing these provisions are contained in 567 Iowa Admin. Code 60-69.

15. The dumping, depositing, or discharging of pollutants into any water of the state is prohibited, except adequately treated sewage, industrial waste, or other waste pursuant to a permit issued by the IDNR. Iowa Code § 455B.186(1).

16. The discharge of any pollutant from a point source into a navigable water is prohibited unless authorized by an NPDES permit. 567 Iowa Admin. Code 62.1(1).

17. No person shall operate any wastewater disposal system or part thereof without,

or contrary to any condition of, an operation permit issued by the IDNR. 567 Iowa Admin. Code 64.3(1).

18. Any NPDES permittee who wishes to continue to discharge after the expiration date of the permit shall file an application for reissuance of the permit at least one hundred and eighty (180) days prior to the expiration of the permit. 567 Iowa Admin. Code 64.8(1)"a".

19. When a licensee has made timely and sufficient application for the renewal of a license or a new license with reference to any activity of a continuing nature, the existing license does not expire until the application has been finally determined by the agency. Iowa Code § 17A.18(2).

20. A person who violates any provision of Iowa Code chapter 455B, Division III, Part 1 or any permit, rule, or order issued thereunder shall be subject to a civil penalty not to exceed Five Thousand Dollars ($5,000.00) for each day of such violation. Iowa Code § 455B.191(2).

21. The Attorney General is authorized, at the request of the IDNR director with approval of the EPC, to initiate any legal proceedings, including an action for injunction or temporary injunction, necessary to enforce the penalty provisions of said statutes and any rules promulgated or any provision of any permit issued thereunder. Iowa Code § 455B.191(5).

PAST ENFORCEMENT ACTIONS

22. In 1986, the IDNR issued Administrative Order No. 86-WW-11 to the City for its repeated failure to properly implement its pretreatment program for wastewater at the wastewater treatment facility ("WWTF"), and assessed the City a $1,000.00 administrative penalty.

23. In 1990, the IDNR issued Administrative Order No. 90-WW-12 to the City for its repeated failure to properly enforce its pretreatment program for wastewater at the WWTF, and

assessed the City a $1,000.00 administrative penalty.

24. In 2005, the IDNR issued Administrative Order No. 2005-SW-11 to the City for its repeated failure to maintain proper litter control at one of the City's landfills, and assessed the City a $7,000.00 administrative penalty.

25. In 2012, the IDNR issued four (4) Administrative Consent Orders to the City for violations of various environmental laws, and each Order assessed a separate $10,000.00 administrative penalty, for a total of $40,000.00 in administrative penalties:

a. Administrative Consent Order No. 2012-AQ-11 addressed the City's failure to properly dispose of a building containing asbestos;

b. Administrative Consent Order No. 2012-WW-07 addressed the City's failure to obtain the necessary wastewater construction permits from the IDNR;

c. Administrative Consent Order No. 2012-WW-08 addressed the City's failure to properly develop, implement and enforce a storm water management program as required by federal and state law; and

d. Administrative Consent Order No. 2012-WS-03 addressed the City's failure to obtain the necessary water supply construction permits from the IDNR.

FACTS

NPDES Permit

26. The City operates a WWTF located at 3100 South Lewis Boulevard, Sioux City, Iowa, near what is now the intersection of Highway 29 and U.S. Route 20. The WWTF receives domestic and industrial wastewater from the following communities: Sioux City, Iowa; Sergeant Bluff, Iowa; North Sioux City, South Dakota; Dakota Dunes, South Dakota; and South Sioux City, Nebraska.

27. The WWTF is designed so that it would discharge its final treated product ("effluent") into the Missouri River, a water of the state, by means of a pipe known as "Outfall No. 001." The Missouri River is a "Class A1" water, which is a primary contact recreational use

water in which recreational or other uses may result in prolonged and direct contact with water, including swimming, diving, waterskiing and water contact recreational canoeing. In 2012, the IDNR also classified the segment of the Missouri River near Outfall No. 001 as an "impaired water" because of pollution.

28. In light of the heavy recreational use of the Missouri River, proper disinfection is a critical part of the WWTF's treatment process. Proper disinfection of a WWTF's effluent helps to ensure a healthy aquatic and recreational environment in the receiving waterway. If insufficiently disinfected, a WWTF's effluent may expose recreational users of the waterway to various pathogens, including bacteria, viruses, and protozoa.

29. In order to discharge its effluent, a WWTF must comply with the requirements of a NPDES permit. On April 1, 2015, the IDNR issued an NPDES Permit No. 9778001 to the City, a copy of which is attached, marked as Exhibit A and incorporated by reference.

30. The City's prior NPDES Permit was issued by the IDNR on October 26, 2006. The NPDES Permit was set to expire on October 24, 2011. The City filed a timely application for renewal of the NPDES Permit on April 25, 2011, and the City's NPDES Permit was then automatically extended until the new Permit was issued on April 1, 2015. The prior NPDES Permit contained many of the same requirements as the 2006 NPDES Permit, with the exception of an additional "Special Monitoring Requirement" (*see* Paragraph 34 of this Petition) in the 2015 Permit and slightly different effluent limitations for when the City was authorized to discharge.

31. The 2015 NPDES Permit established new effluent limitations for when the City was authorized to discharge into the Missouri River. The effluent limitations included, but were not limited to, the following: both a thirty (30) day average and daily maximum for concentration

(strength) for total residual chlorine ("TRC") of 0.402 and 0.432 milligrams per Liter ("mg/L"), respectively; both a thirty (30) day average and daily maximum for mass (weight) for TRC of 56.840 and 63.381 pounds per day ("lbs/day"), respectively; both a thirty (30) day average and daily maximum for the concentration (strength) and mass(weight) of NH3-N (ammonia nitrogen, hereinafter referred to as "ammonia"), with limits that fluctuate each month of the year; and a Geometric Mean for fecal coliform ("E.coli") of 126 MPN/100 mL (most probable number of coliform per 100 mL).

32. The testing for E. coli allows the City to monitor its effluent for the presence of "fecal coliform." E. coli is a species of fecal coliform bacteria that is specific to fecal material from humans and other warm-blooded animals; its presence tends to indicate fecal contamination of the water. Monitoring is typically for fecal coliform or E coli, as opposed to various individual pathogens of human disease, because there are many different pathogens; pathogens are more difficult to measure; the presence of one pathogen does not necessarily predict the presence of another pathogen; and a specific pathogen may not be present at the time of testing.

33. The effluent limitations for E. coli apply only during the disinfection season, which runs from March 15 through November 15 of each year, and the City is required to obtain at least five (5) samples during each three-month period (March-May, June-August, and September-November) of the disinfection season to establish the Geometric Mean. During this "disinfection season," the Missouri River is warmer, and the level of the public's recreational use of the Missouri River is higher.

34. The most recent NPDES Permit included a "Special Monitoring Requirement" for E. coli, which requires the City to operate its disinfection system to comply with the E. coli limit during the entire disinfection season whenever wastewater is being discharged from Outfall 001.

(Special Monitoring Requirements, E. coli, p. 10).

35. On August 6, 2020, the IDNR issued a new NPDES Permit No. 9778001 ("NPDES Permit") to the City, a copy of which is attached, marked as Exhibit B and incorporated by reference. The current NPDES Permit contains many of the same requirements as the 2015 NPDES Permit, including additional "Special Monitoring Requirement" (*see* Paragraph 35 of this Petition) in the 2015 Permit, and more stringent effluent limitations for TRC and ammonia, which go into effect on 12/1/23 and 4/1/25, respectively.

36. While there are many different technologies by which a WWTF may disinfect its wastewater, the City's WWTF utilizes a sodium hypochlorite solution ("chlorine") disinfection system.

37. Because chlorine is toxic to fish and other aquatic life, and dangerous to recreational users, proper disinfection practices require the subsequent addition of sodium bisulfite into the wastewater stream to reduce the TRC in the WWTF's effluent. Sodium bisulfate neutralizes chlorine after the chlorine destroys any pathogens.

38. The IDNR trusts municipalities to tell the truth and not to conceal problems at WWTFs. The IDNR largely relies on self-reported results to determine whether a municipality is operating its WWTF in compliance with its NPDES permit. The accuracy of this information is paramount, because the effectiveness and integrity of protecting Iowa's waterways is dependent upon truthful and accurate self-reporting.

39. Accordingly, the City's NPDES Permit included the following requirements:

a. The City must report the results of all monitoring of the WWTF on a periodic basis in Monthly Operating Reports ("MORs"), also known as Discharge Monitoring Reports ("DMRs"). Whenever the WWTF exceeds its effluent limits, the City must report such violations to the IDNR in its MORs. (Monitoring and Reporting Requirements, section (d), p. 6);

b. All samples and measurements taken "shall be representative of the volume and nature of the monitored water." (Monitoring and Reporting Requirements, section (a), p. 6);

c. The City must "take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment." (Standard Conditions § 5, p. 16);

d. "All facilities and control systems shall be operated as efficiently as possible and maintained in good working order. A sufficient number of staff, adequately trained and knowledgeable in the operation of your facility shall be retained at all times and adequate laboratory controls and appropriate quality assurance procedures shall be provided to maintain compliance with the conditions of this permit." (Standard Conditions § 8, p. 16); and

e. The City must "report any noncompliance that may endanger human health or the environment" orally to the IDNR within 24 hours and in writing within five (5) days of the occurrence. (Standard Conditions § 14, p. 17).

Noncompliant Operation of the City's Wastewater Treatment Facility

Hidden from the IDNR from 2012-April 2015

40. As described in more detail below, no later than about 2012, the City's WWTF management and other City Officials discovered that the WWTF did not work properly and could not consistently disinfect the millions of gallons of wastewater that the WWTF was discharging into the Missouri River each day. Rather than alert the IDNR to this serious problem, the WWTF employed a fraudulent testing procedure that ensured that the WWTF would always pass its effluent tests for fecal coliform, E. coli and TRC.

41. At the same time the fraudulent testing procedure was utilized, the City was touting the effectiveness of the WWTF's system to the IDNR in an attempt to convince the IDNR to re-rate the WWTF to increase its treatment capacity, which would allow the City to recruit more business and industry with high-strength wastewater. Cheating on required environmental tests gave the City an unfair advantage in this competition to attract business and industry among other municipalities.

42. In contrast to the WWTF's statements to the IDNR that its disinfection process was a success, and requests to the IDNR that the WWTF's rated capacity should be increased, significant problems with disinfection became apparent shortly after its disinfection process came online in 2011. The WWTF concealed this fundamental problem with the process from the IDNR because exposure of the WWTF's disinfection problems would halt the City's efforts to re-rate the capacity of WWTF absent significant capital investment.

43. No later than May 1, 2012, however, the WWTF notified the engineering firm that the City had hired to oversee construction at the WWTF about the City's disinfection problems, stating the chlorine dosing pumps maxed out and they are still not meeting E. coli kill levels for their effluent permit.

44. By September 2012, the engineering firm had determined that waste from heavy industrial users was inhibiting the WWTF's disinfection process. Although the engineering firm wrote a memorandum to the WWTF and a City official requesting that the City conduct additional testing and send it to the firm, the City never provided all of the data requested. Nor did the City contract with the engineering firm to construct a fix to the problem—either an entirely new disinfection system or a temporary, ammonia feed system. Those options would require significant expense and IDNR approval, which would expose that the City had not been truthful to the IDNR and jeopardize the WWTF's capacity re-rating in order to accept more load and flow from significant industrial users.

45. In March 2013, the engineering firm prepared a draft of the Master Plan ("2013 Draft Master Plan") contemplated under its $1 million "Phase 3" contract with the City. The firm sent the 2013 Draft Master Plan directly to the WWTF Supervisor and another City official in an email. Section 5 of the Master Plan discussed the disinfection problems at the WWTF at length, and concluded the current process could not provide adequate disinfection of the WWTF's influent given

the apparently high nitrites present in its significant industrial users' effluent. The 2013 Draft Master Plan also included some potential recommendations for additional sampling and possible alternatives to the current disinfection process.

46. The City did not conduct the recommended additional sampling or follow the recommendations in the 2013 Draft Master Plan. Instead, the City instructed the engineering firm to not finalize the 2013 Draft Master Plan into a Final Master Plan, and eventually began using a different engineering firm for the City's "Phase 3" WWTF project.

DNR Discovery of Noncompliance April 2015

47. On April 21, 2015, the IDNR received an anonymous written complaint that the City's disinfection system at the WWTF was not being run properly. The IDNR later learned that the complaint came from the Pretreatment Manager of the WWTF.

48. The complaint stated that the City's WWTF staff was only properly disinfecting the final effluent discharge from the facility on days that an E. coli sample was collected. The complaint further detailed the WWTF staff's practice as follows:

> Currently, in the morning on the day that an E. coli analysis is scheduled, the operations staff will turn up/turn on the sodium hypochlorite [(used to meet E. coli effluent limits)] dosing to a level that they are comfortable will pass the analysis. A hand held HACH colorimeter is used by the operator for in the field evaluation of TRC. Once the desired level of TRC is reached a sample is collected for E. coli, and the sodium hypochlorite dosing is turned down/turned off. The E. coli sample is then delivered to a Third Party lab for evaluation. The reportable sample for TRC is not delivered to the wastewater treatment plant laboratory until after the operations staff is comfortable that the sample will pass the reportable analysis for TRC, sometime in the afternoon.

49. The author of the complaint also provided two lab sample results, dated April 1 and April 15, 2015, of the City's wastewater discharge on days when E. coli was not being tested by the wastewater staff, and the results showed the City's wastewater discharge was high in E. coli.

50. The IDNR investigated the City based upon the complaint up through and including June 8, 2015, and determined that, for a number of years, the WWTF would: 1) adjust the chlorine disinfection rate higher on days when E. coli samples were taken; 2) the WWTF would then take a sample for E coli.; 3) the WWTF would then add sodium bisulfite into the wastewater stream to reduce the TRC; 4) the WWTF would then take a sample for TRC after the sodium bisulfate had reduced the TRC to below permit levels; and 5) the WWTF would significantly decrease the chlorine disinfection rate on days when samples were not being collected.

51. On June 8, 2015, the City's Assistant Manager and Director of Public Works called the IDNR and informed the agency that it had come to his attention that the City's WWTF staff had "a long standing practice of adjusting the chlorine disinfection feed rate up to approximately 90 gallons per hour on the days which bacteria samples are collected from the effluent. The practice has also been to decrease the feed rate, reportedly, to as low as 2 gallons per hour on days when samples are not being collected."

52. On June 9, 2015, the U.S. Environmental Protection Agency ("EPA") interviewed Jay Niday, the City's wastewater operator-in-charge at the WWTF, and Pat Schwarte, the City's shift operator at the WWTF, and the IDNR was present for those interviews.

53. Mr. Niday and Mr. Schwarte both admitted that the City only used a sufficient amount of chlorine on the days that E. coli samples were taken and submitted to the IDNR to satisfy the City's NPDES Permit reporting requirements. Both Mr. Niday and Mr. Schwarte admitted that this practice had been going on since at least 2012, and the schedule to turn up or down the chlorine and sodium bisulfite was written down in daily logs.

54. The IDNR reviewed some of the daily logs, which corroborated the admissions of

Mr. Niday and Mr. Schwarte concerning the City's longstanding practice of turning up or down the chlorine and sodium bisulfite on certain days depending upon whether the City was required to submit an E. coli sample to the IDNR.

55. At least four (4) additional City WWTF staff members were involved in turning up/down the chemicals and indicated they did so at the direction of Mr. Niday and Mr. Schwarte.

56. The operation manual for the disinfection system at the WWTF indicates that to properly disinfect and meet NPDES Permit limits for E. coli, approximately 16-17 gallons per hour of chlorine had to be used all day every day during the disinfection season.

57. In the week following the City's admission to the IDNR that the City's disinfection system had not been operated properly, the City notified the IDNR that it had conducted additional analysis of the proper chlorine feed rate for its disinfection system and determined that a feed rate of at least 20 gallons per hour of chlorine was necessary to ensure daily compliance for the entire disinfection system. The City further notified the IDNR that the City was going to begin monitoring E. coli samples from its wastewater discharge once per week for the remainder of the 2015 disinfection season.

58. On July 29, 2015, the IDNR issued a Notice of Violation ("NOV") to the City for the improper operation of the City's disinfection system in violation of its NPDES Permit.

59. On September 14, 2015, the IDNR issued Administrative Consent Order Nos. 2015-WW-21 and 2015-WW-22, permanently revoking Mr. Schwarte's and Mr. Niday's wastewater operator certifications, respectively.

60. On January 2, 2019, the United States Attorney for the Northern District of Iowa filed charges, alleging that Mr. Schwarte conspired to defraud the United States by tampering with, or rendering inaccurate a monitoring device and method required to be maintained under

the Clean Water Act (Count 1), and falsely tampering with, or rendering inaccurate a monitoring device and method required to be maintained under the Clean Water Act (Count 2). *See United States v. Patrick Schwarte*, Information Dkt # 2, No. 19-CR-4001 (N. D. Iowa) (January 2, 2019).

61. On January 23, 2019, Mr. Schwarte plead guilty to both Counts 1 and II. *See United States v. Patrick Schwarte*, Minute Entry Dkt # 7, No. 19-CR-4001 (N. D. Iowa) (January 23, 2019).

62. On November 9, 2020, Mr. Schwarte was sentenced to two years' probation and assed a $5,000.00 penalty. *See United States v. Patrick Schwarte*, Judgment in a Criminal Case Dkt # 44, No. 19-CR-4001 (N. D. Iowa) (November 9, 2020).

63. On September 17, 2020, the United States Attorney for the Northern District of Iowa filed charges, alleging that Mr. Niday conspired to defraud the United States by tampering with, or rendering inaccurate a monitoring device and method required to be maintained under the Clean Water Act (Count 1), and falsely tampering with, or rendering inaccurate a monitoring device and method required to be maintained under the Clean Water Act (Count 2). *See United States v. Jay Niday*, Information Dkt # 2, No. 20-CR-4081 (N. D. Iowa) (September 17, 2020).

64. On October 6, 2020, Mr. Niday plead guilty to both Counts 1 and II. *See United States v. Jay Niday*, Minute Entry Dkt # 7, No. 20-CR-4081 (N. D. Iowa) (October 6, 2020).

65. On April 2, 2021, Mr. Niday was sentenced to three months of prison, two years' probation and assed a $6,000.00 penalty. *See United States v. Jay Niday*, Judgment in a Criminal Case Dkt # 28, No. 19-CR-4001 (N. D. Iowa) (April 2, 2021).

66. The City received a substantial economic benefit by consistently reducing the feed rate for the chemicals necessary to adequately treat its wastewater discharges for a period of

years, while at the same time attracting additional industry, who discharged wastewater the City was required to treat, and delaying capital investment in wastewater treatment infrastructure.

Non-Compliance NPDES Effluent Limits

67. The City exceeded its 30-day average ammonia concentration limit in April 2018. The City exceeded its daily maximum ammonia concentration limit on several occasions, including April and May of 2018 and November and December of 2019. The City exceeded its daily maximum ammonia mass limit on several occasions, including April 2018 and November 2019. As a result of those violations, IDNR issued a compliance schedule as part of the current NPDES Permit, which requires the City meet more stringent ammonia effluent limits by April 1, 2025.

68. The City exceeded its daily maximum TRC concentration limit in May 2017, April 2018, and March, August and September 2019. The City also exceeded its daily maximum TRC mass limit May 2017, April 2018, and March, April, August and September 2019. As a result of those violations, IDNR issued a compliance schedule as part of the current NPDES Permit, which requires the City meet more stringent TRC effluent limits by December 1, 2023.

69. The City is still having difficulty meeting its current daily maximum TRC concentration and mass limits. The City exceeded its daily maximum TRC mass limit in March 2021, and also exceeded its daily maximum TRC concentration limit in March, May, and June 2021.

70. On August 9, 2021, the City notified the IDNR that the City had run out of sodium bisulfate and would not be able to adequately treat its wastewater to reduce the TRC to meet is effluent limit. On August 10, 2021, the City was able to obtain sufficient sodium bisulfate to bring the effluent back into compliance with the TRC limit.

VIOLATIONS

71. During the disinfection seasons from March 15, 2012 through June 8, 2015, the City discharged wastewater containing pollutants, including E. coli that had not been adequately disinfected as required by its NPDES Permit, into a water of the state in violation of Iowa Code section 455B.186(1), 567 Iowa Admin. Code 64.3(1), and Iowa NPDES Permit No. 9778001.

72. From April 1, 2015 through June 8, 2015, the City failed to operate its disinfection system to comply with its E. coli limit during the entire disinfection season whenever wastewater is being discharged from Outfall 001 in violation of 567 Iowa Admin. Code 64.3(1) and Iowa NPDES Permit No. 9778001 (Special Monitoring Requirements, E. coli, p. 10).

73. During the disinfection seasons from March 15, 2012 through June 8, 2015, the City failed to submit samples to the IDNR of the levels of E. coli and TRC in the City's wastewater discharge that were "representative of the volume and nature of the monitored water" in violation of 567 Iowa Admin. Code 64.3(1) and Iowa NPDES Permit No. 9778001 (Monitoring and Reporting Requirements, section (a), p. 6).

74. During the disinfection seasons from March 15, 2012 through June 8, 2015, the City failed to adequately disinfect its wastewater discharge for E. coli, and therefore, failed to "take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment" in violation of 567 Iowa Admin. Code 64.3(1) and Iowa NPDES Permit No. 9778001 (Standard Conditions § 5, p. 16).

75. During the disinfection seasons from March 15, 2012 through June 8, 2015, the City failed to adequately disinfect its wastewater discharge for E. coli, and therefore, failed to

ensure "adequate laboratory controls and appropriate quality assurance procedures [were] provided to maintain compliance with the conditions of this permit" in violation of 567 Iowa Admin. Code 64.3(1) and Iowa NPDES Permit No. 9778001 (Standard Conditions § 8, p. 16).

76. During the disinfection seasons from March 15, 2012 through June 8, 2015, the City failed to report that it was not properly disinfecting its wastewater discharge for E. coli, which may endanger human health or the environment, to the IDNR in violation of 567 Iowa Admin. Code 64.3(1) and Iowa NPDES Permit No. 9778001 (Standard Conditions § 14, p. 17).

77. The City exceeded its 30-day average ammonia concentration limit in April 2018, its daily maximum ammonia concentration limit on in April and May of 2018 and November and December of 2019, and its daily maximum ammonia mass limit in April 2018 and November 2019, in violation of Iowa Code section 455B.186(1), 567 Iowa Admin. Code 64.3(1), and Iowa NPDES Permit No. 9778001.

78. The City exceeded its daily maximum TRC concentration limit in May 2017, April 2018, March, August and September 2019, and March, May, June and August 2021, and its daily maximum TRC mass limit May 2017, April 2018, March, April, August and September 2019, March and August 2021, in violation of Iowa Code section 455B.186(1), 567 Iowa Admin. Code 64.3(1), and Iowa NPDES Permit No. 9778001.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff State of Iowa, ex rel., Iowa Department of Natural Resources requests that the Court:

a. assess a civil penalty against Defendant City of Sioux City, pursuant to Iowa Code section 455B.191(2) for each day of violation of Iowa Code section 455B.186(1), 567 Iowa Admin. Code 64.3(1), and Iowa NPDES Permit No. 9778001, not to exceed Five Thousand Dollars ($5,000.00) for each day of such violation;

b. issue a permanent injunction, pursuant to Iowa Code section 455B.191(5), enjoining Defendant City of Sioux City from any violation of Iowa Code section 455B.186(1), 567 Iowa Admin. Code 64.3(1), and Iowa NPDES Permit No. 9778001; and

c. issue a permanent injunction requiring Defendant City of Sioux City to comply with the compliance schedule requirements set forth in Iowa NPDES Permit No. 9778001.

Plaintiff further requests that the Court tax the costs of this action to the Defendant City of Sioux City and provide such other relief as the Court may deem just and proper.

Respectfully submitted,

THOMAS J. MILLER
Attorney General of Iowa

/s/ Jacob J. Larson

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IOWA DEPARTMENT OF NATURAL RESOURCES

National Pollutant Discharge Elimination System (NPDES) Permit

OWNER NAME & ADDRESS

CITY OF SIOUX CITY
CITY HALL, PO BOX 447
SIOUX CITY, IA 51102-0447

FACILITY NAME & ADDRESS

SIOUX CITY, CITY OF STP
3100 SOUTH LEWIS BLVD, RR 6
SIOUX CITY, IA 51106

Section 12, T88N, R48W
Woodbury County

IOWA NPDES PERMIT NUMBER: 9778001
DATE OF ISSUANCE: 04/01/2015
DATE OF EXPIRATION: 03/31/2020

YOU ARE REQUIRED TO FILE FOR RENEWAL OF THIS PERMIT BY: 10/03/2019
EPA NUMBER: IA0043095

This permit is issued pursuant to the authority of section 402(b) of the Clean Water Act (33 U.S.C 1342(b)), Iowa Code section 455B.174, and rule 567-64.3, Iowa Administrative Code. You are authorized to operate the disposal system and to discharge the pollutants specified in this permit in accordance with the effluent limitations, monitoring requirements and other terms set forth in this permit.

You may appeal any condition of this permit by filing a written notice of appeal and request for administrative hearing with the director of this department within 30 days of your receipt of this permit.

Any existing unexpired Iowa operation permit or Iowa NPDES permit previously issued by the department for the facility identified above is revoked by the issuance of this permit. This provision does not apply to any authorization to discharge under the terms and conditions of a general permit issued by the department or to any permit issued exclusively for the discharge of stormwater.

FOR THE DEPARTMENT OF NATURAL RESOURCES

By _____

Anne Hildebrand
NPDES Section
ENVIRONMENTAL SERVICES DIVISON

EXHIBIT A

Facility Name: SIOUX CITY, CITY OF STP

Permit Number: 9778001

Outfall No.: 001 DISCHARGE FROM AN ACTIVATED SLUDGE WASTEWATER TREATMENT PLANT.

Receiving Stream: MISSOURI RIVER

Route of Flow: MISSOURI RIVER

Class A1 waters are primary contact recreational use waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risks of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.

Waters designated Class B(WW1) are those in which temperature, flow and other habitat characteristics are suitable to maintain warm water game fish populations along with a resident aquatic community that includes a variety of native nongame fish and invertebrates species. These waters generally include border rivers, large interior rivers, and the lower segments of medium-size tributary streams.

Waters designated Class HH are those in which fish are routinely harvested for human consumption or waters both designated as a drinking water supply and in which fish are routinely harvested for human consumption.

Outfall No.: 002 INTERNAL BYPASS - FROM INFLUENT CHANNEL PRIOR TO THE HEADWORKS TO THE CHLORINE BASIN, DISCHARGING THROUGH OUTFALL 001

Receiving Stream: MISSOURI RIVER

Route of Flow: MISSOURI RIVER

Class A1 waters are primary contact recreational use waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risks of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.

Waters designated Class B(WW1) are those in which temperature, flow and other habitat characteristics are suitable to maintain warm water game fish populations along with a resident aquatic community that includes a variety of native nongame fish and invertebrates species. These waters generally include border rivers, large interior rivers, and the lower segments of medium-size tributary streams.

Waters designated Class HH are those in which fish are routinely harvested for human consumption or waters both designated as a drinking water supply and in which fish are routinely harvested for human consumption.

Bypasses from any portion of a treatment facility or from a sanitary sewer collection system designed to carry only sewage are prohibited.

Facility Name: SIOUX CITY, CITY OF STP
Permit Number: 9778001

Effluent Limitations:

You are prohibited from discharging pollutants except in compliance with the following effluent limitations:

001 DISCHARGE FROM AN ACTIVATED SLUDGE WASTEWATER TREATMENT PLANT.

Outfall: 001 Effective Dates: 04/01/2015 to 03/31/2020			
Parameter	**Season**	**Limit Type**	**Limits**
CBOD5			**85% Removal Required**
	Yearly	7 Day Average	40 MG/L 5871 LBS/DAY
	Yearly	30 Day Average	25 MG/L 3670 LBS/DAY
TOTAL SUSPENDED SOLIDS			**85% Removal Required**
	Yearly	7 Day Average	45 MG/L 6605 LBS/DAY
	Yearly	30 Day Average	30 MG/L 4404 LBS/DAY
AMMONIA NITROGEN (N)			
	JAN	30 Day Average	84.9 MG/L 12436.4 LBS/DAY
	JAN	Daily Maximum	84.9 MG/L 12436.4 LBS/DAY
	FEB	30 Day Average	91.8 MG/L 12478.8 LBS/DAY
	FEB	Daily Maximum	97.4 MG/L 14229.7 LBS/DAY
	MAR	30 Day Average	68.7 MG/L 9332.7 LBS/DAY
	MAR	Daily Maximum	72.6 MG/L 10665.0 LBS/DAY
	APR	30 Day Average	47.9 MG/L 6509.8 LBS/DAY
	APR	Daily Maximum	55.7 MG/L 8260.1 LBS/DAY
	MAY	30 Day Average	37.7 MG/L 5122.4 LBS/DAY
	MAY	Daily Maximum	55.0 MG/L 8150.3 LBS/DAY
	JUN	30 Day Average	22.4 MG/L 3045.5 LBS/DAY
	JUN	Daily Maximum	54.0 MG/L 7993.9 LBS/DAY

Facility Name: SIOUX CITY, CITY OF STP

Permit Number: 9778001

Outfall: 001 Effective Dates: 04/01/2015 to 03/31/2020			
Parameter	**Season**	**Limit Type**	**Limits**
AMMONIA NITROGEN (N)			
	JUL	30 Day Average	29.5 MG/L 4005.4 LBS/DAY
	JUL	Daily Maximum	61.4 MG/L 9118.1 LBS/DAY
	AUG	30 Day Average	26.0 MG/L 3537.0 LBS/DAY
	AUG	Daily Maximum	52.6 MG/L 7833.1 LBS/DAY
	SEP	30 Day Average	33.5 MG/L 4557.7 LBS/DAY
	SEP	Daily Maximum	65.0 MG/L 9609.7 LBS/DAY
	OCT	30 Day Average	59.9 MG/L 8133.8 LBS/DAY
	OCT	Daily Maximum	64.0 MG/L 9444.2 LBS/DAY
	NOV	30 Day Average	54.3 MG/L 8045.0 LBS/DAY
	NOV	Daily Maximum	54.3 MG/L 8045.0 LBS/DAY
	DEC	30 Day Average	64.3 MG/L 9498.2 LBS/DAY
	DEC	Daily Maximum	64.3 MG/L 9498.2 LBS/DAY
CHLORINE, TOTAL RESIDUAL			
	Yearly	30 Day Average	0.402 MG/L 56.840 LBS/DAY
	Yearly	Daily Maximum	0.432 MG/L 63.381 LBS/DAY
OIL AND GREASE			
	Yearly	30 Day Average	10 MG/L
	Yearly	Daily Maximum	15 MG/L
ACUTE TOXICITY, CERIODAPHNIA			
	Yearly	Daily Maximum	1 NO TOXICITY
ACUTE TOXICITY, PIMEPHALES			
	Yearly	Daily Maximum	1 NO TOXICITY

Facility Name: SIOUX CITY, CITY OF STP

Permit Number: 9778001

Outfall: 001 Effective Dates: 04/01/2015 to 03/31/2020			
Parameter	**Season**	**Limit Type**	**Limits**
DISSOLVED OXYGEN			
	Yearly	Minimum	0.5 MG/L
PH			
	Yearly	Daily Maximum	9.0 STD UNITS
	Yearly	Minimum	6.0 STD UNITS
E. COLI			
	MAR	Geometric Mean	126 #/100 ML
	APR	Geometric Mean	126 #/100 ML
	MAY	Geometric Mean	126 #/100 ML
	JUN	Geometric Mean	126 #/100 ML
	JUL	Geometric Mean	126 #/100 ML
	AUG	Geometric Mean	126 #/100 ML
	SEP	Geometric Mean	126 #/100 ML
	OCT	Geometric Mean	126 #/100 ML
	NOV	Geometric Mean	126 #/100 ML

Monitoring and Reporting Requirements

(a) Samples and measurements taken shall be representative of the volume and nature of the monitored wastewater.

(b) Analytical and sampling methods specified in 40 CFR Part 136 or other methods approved in writing by the department shall be utilized. Samples collected for operational testing need not be analyzed by approved analytical methods; however, commonly accepted test methods should be used.

(c) You are required to report all data including calculated results needed to determine compliance with the limitations contained in this permit. The results of any monitoring not specified in this permit performed at the compliance monitoring point and analyzed according to 40 CFR Part 136 shall be included in the calculation and reporting of any data submitted in accordance with this permit. This includes daily maximums and minimums and 30-day and 7-day averages for all parameters that have concentration (mg/l) and mass (lbs/day) limits. In addition, flow data shall be reported in million gallons per day (MGD).

(d) Results of all monitoring shall be recorded on forms provided by, or approved by, the department, and shall be submitted to the appropriate regional field office of the department by the fifteenth day following the close of the reporting period. Your reporting period is on a MONTHLY basis, ending on the last day of each reporting period.

(e) Any records of monitoring activities and results shall include for all samples: the date, exact place and time of the sampling; the dates the analyses were performed; who performed the analyses; the analytical techniques or methods used; and the results of such analyses.

(f) Chapter 63 of the Iowa Administrative Code contains further explanation of these monitoring requirements.

Facility Name: SIOUX CITY, CITY OF STP

Permit Number: 9778001

Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
The following monitoring requirements shall be in effect from 04/01/2015 to 03/31/2020				
001	SETTLEABLE SOLIDS	7/WEEK OR DAILY	GRAB	COMBINED EFFLUENT FROM FINAL CLARIFIERS 1, 2, 3, 4 & 5
001	30-MINUTE SETTLEABILITY	7/WEEK OR DAILY	GRAB	AERATION BASIN 6 CONTENTS
001	DISSOLVED OXYGEN	7/WEEK OR DAILY	GRAB	AERATION BASIN 6 CONTENTS
001	SOLIDS, MIXED LIQUOR SUSPENDED	7/WEEK OR DAILY	GRAB	AERATION BASIN 6 CONTENTS
001	TEMPERATURE	7/WEEK OR DAILY	GRAB	AERATION BASIN 6 CONTENTS
001	30-MINUTE SETTLEABILITY	7/WEEK OR DAILY	GRAB	AERATION BASIN 5 CONTENTS
001	DISSOLVED OXYGEN	7/WEEK OR DAILY	GRAB	AERATION BASIN 5 CONTENTS
001	SOLIDS, MIXED LIQUOR SUSPENDED	7/WEEK OR DAILY	GRAB	AERATION BASIN 5 CONTENTS
001	TEMPERATURE	7/WEEK OR DAILY	GRAB	AERATION BASIN 5 CONTENTS
001	30-MINUTE SETTLEABILITY	7/WEEK OR DAILY	GRAB	AERATION BASIN 4 CONTENTS
001	DISSOLVED OXYGEN	7/WEEK OR DAILY	GRAB	AERATION BASIN 4 CONTENTS
001	SOLIDS, MIXED LIQUOR SUSPENDED	7/WEEK OR DAILY	GRAB	AERATION BASIN 4 CONTENTS
001	TEMPERATURE	7/WEEK OR DAILY	GRAB	AERATION BASIN 4 CONTENTS
001	30-MINUTE SETTLEABILITY	7/WEEK OR DAILY	GRAB	AERATION BASIN 3 CONTENTS
001	DISSOLVED OXYGEN	7/WEEK OR DAILY	GRAB	AERATION BASIN 3 CONTENTS
001	SOLIDS, MIXED LIQUOR SUSPENDED	7/WEEK OR DAILY	GRAB	AERATION BASIN 3 CONTENTS
001	TEMPERATURE	7/WEEK OR DAILY	GRAB	AERATION BASIN 3 CONTENTS
001	30-MINUTE SETTLEABILITY	7/WEEK OR DAILY	GRAB	AERATION BASIN 2 CONTENTS
001	DISSOLVED OXYGEN	7/WEEK OR DAILY	GRAB	AERATION BASIN 2 CONTENTS
001	SOLIDS, MIXED LIQUOR SUSPENDED	7/WEEK OR DAILY	GRAB	AERATION BASIN 2 CONTENTS
001	TEMPERATURE	7/WEEK OR DAILY	GRAB	AERATION BASIN 2 CONTENTS
001	30-MINUTE SETTLEABILITY	7/WEEK OR DAILY	GRAB	AERATION BASIN 1 CONTENTS
001	DISSOLVED OXYGEN	7/WEEK OR DAILY	GRAB	AERATION BASIN 1 CONTENTS
001	SOLIDS, MIXED LIQUOR SUSPENDED	7/WEEK OR DAILY	GRAB	AERATION BASIN 1 CONTENTS
001	TEMPERATURE	7/WEEK OR DAILY	GRAB	AERATION BASIN 1 CONTENTS

Facility Name: SIOUX CITY, CITY OF STP

Permit Number: 9778001

Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
The following monitoring requirements shall be in effect from 04/01/2015 to 03/31/2020				
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	7/WEEK OR DAILY	24 HOUR COMPOSITE	RAW WASTE
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	RAW WASTE FLOW METER FOLLOWING THE GRIT REMOVAL SYSTEMS
001	NITROGEN, TOTAL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	NITROGEN, TOTAL KJELDAHL (AS N)	1 EVERY 2 WEEKS	24 HOUR COMPOSITE	RAW WASTE
001	PH	7/WEEK OR DAILY	GRAB	RAW WASTE
001	PHOSPHORUS, TOTAL (AS P)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	TEMPERATURE	7/WEEK OR DAILY	GRAB	RAW WASTE
001	TOTAL SUSPENDED SOLIDS	7/WEEK OR DAILY	24 HOUR COMPOSITE	RAW WASTE
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	FINAL EFFLUENT FLOW METER PRIOR TO THE CHLORINE CONTACT BASIN
001	CBOD5	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT PRIOR TO CHLORINE CONTACT BASIN
001	TOTAL SUSPENDED SOLIDS	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT PRIOR TO CHLORINE CONTACT BASIN
001	ACUTE TOXICITY, CERIODAPHNIA	1 EVERY 12 MONTHS	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	ACUTE TOXICITY, PIMEPHALES	1 EVERY 12 MONTHS	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	AMMONIA NITROGEN (N)	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	CHLORINE, TOTAL RESIDUAL	7/WEEK OR DAILY	GRAB	EFFLUENT AFTER DISINFECTION
001	DISSOLVED OXYGEN	7/WEEK OR DAILY	GRAB	EFFLUENT AFTER DISINFECTION
001	E. COLI	GEO. MEAN 1/3 MONTHS	GRAB	EFFLUENT AFTER DISINFECTION
001	NITROGEN, TOTAL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	OIL AND GREASE	1 TIME PER WEEK	GRAB	EFFLUENT AFTER DISINFECTION
001	PH	7/WEEK OR DAILY	GRAB	EFFLUENT AFTER DISINFECTION
001	PHOSPHORUS, TOTAL (AS P)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	TEMPERATURE	7/WEEK OR DAILY	GRAB	EFFLUENT AFTER DISINFECTION

Facility Name: SIOUX CITY, CITY OF STP
Permit Number: 9778001

Special Monitoring Requirements

Outfall #	Description
001	NITROGEN, TOTAL (AS N)

Total nitrogen shall be determined by testing for Total Kjeldahl Nitrogen (TKN) and nitrate + nitrite nitrogen and reporting the sum of the TKN and nitrate + nitrite results (reported as N). Nitrate + nitrite can be analyzed together or separately.

AMMONIA NITROGEN (N)

Ammonia shall be sampled and analyzed using an EPA approved method specified in 40 CFR 136 or using the Timberline Method Ammonia-001 alternative test procedure.

Facility Name: SIOUX CITY, CITY OF STP

Permit Number: 9778001

Special Monitoring Requirements (Continued)

Outfall #	Description
001	E. COLI

The limit for E. coli of 126 org/100 ml specified on page 5 of this permit for Outfall 001 is a geometric mean. The disinfection season is established in the Iowa Administrative Code, Subparagraph 567 IAC 61.3(3)"a"(1), and is in effect from March 15 to November 15. Any disinfection system (chlorine, UV light, etc.) shall be operated to comply with the limit during the entire disinfection season whenever wastewater is being discharged from Outfall 001.

The facility must collect and analyze a minimum of five samples in one calendar month during each 3-month period from March 15 to November 15. The 3-month periods are March – May, June – August, and September – November. The collection of five samples in each 3-month period will result in a minimum of 15 samples being collected during a calendar year. For example, for the first 3-month period, the operator may choose April as the calendar month to collect the 5 individual E. coli samples to determine compliance with the limits. The operator may also choose the months of March or May as well, as long as each of the 5 samples is collected during a single calendar month. The same principle applies to the other two 3-month periods during the disinfection season. The following requirements apply to the individual samples collected in one calendar month:
Samples must be spaced over one calendar month.
No more than one sample can be collected on any one day.
There must be a minimum of two days between each sample.
No more than two samples may be collected in a period of seven consecutive days.

If the effluent has been disinfected using chlorine, ultraviolet light (UV), or any other process intended to disrupt the biological integrity of the E. coli, the samples shall be analyzed using the Most Probable Number method found in Standard Method 9223B (Colilert® or Colilert-18® made by IDEXX Laboratories, Inc.). If the effluent has not been disinfected the samples may be analyzed using either the MPN method above or EPA Method 1603: Escherichia coli (E. coli) in water by membrane filtration using modified membrane-thermotolerant E. coli agar (modified mTEC) or mColiBlue-24® made by the Hach Company.

The geometric mean must be calculated using all valid sample results collected during a month. The geometric mean formula is as follows: Geometric Mean = (Sample one * Sample two * Sample three * Sample four *Sample five…Sample N)^(1/N), which is the Nth root of the result of the multiplication of all of the sample results where N = the number of samples. If a sample result is a less than value, the value reported by the lab without the less than sign should be used in the geometric mean calculation.

The geometric mean can be calculated in one of the following ways:
Use a scientific calculator that can calculate the powers of numbers.
Enter the samples in Microsoft Excel and use the function "GEOMEAN" to perform the calculation.
Use the geometric mean calculator on the Iowa DNR webpage at:
http://www.iowadnr.gov/InsideDNR/RegulatoryWater/NPDESWastewaterPermitting/NPDESOperatorInformation/BacteriaSampling.aspx.

Facility Name: SIOUX CITY, CITY OF STP
Permit Number: 9778001

Outfall Number: 001

Ceriodaphnia and Pimephales Toxicity Effluent Testing

1. For facilities that have not been required to conduct toxicity testing by a previous NPDES permit, the initial annual toxicity test shall be conducted within three (3) months of permit issuance. For facilities that have been required to conduct toxicity testing by a previous NPDES permit, the initial annual toxicity test shall be conducted within twelve months (12) of the last toxicity test.

2. The test organisms that are to be used for acute toxicity testing shall be Ceriodaphnia dubia and Pimephales promelas. The acute toxicity testing procedures used to demonstrate compliance with permit limits shall be those listed in 40 CFR Part 136 and adopted by reference in rule 567--63.1(1). The method for measuring acute toxicity is specified in USEPA, October 2002, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition. U.S. Environmental Protection Agency, Office of Water, Washington, D.C., EPA 821-R-02-012.

3. The diluted effluent sample must contain a minimum of 14.30 % effluent and no more than 85.70 % of culture water.

4. One valid positive toxicity result will require, at a minimum, quarterly testing for effluent toxicity until three successive tests are determined not to be positive.

5. Two successive valid positive toxicity results or three positive results out of five successive valid effluent toxicity tests will require a toxicity reduction evaluation to be completed to eliminate the toxicity.

6. A non-toxic test result shall be indicated as a "1" on the monthly operation report. A toxic test result shall be indicated as a "2" on the monthly operation report. DNR Form 542-1381 shall also be submitted to the DNR field office along with the monthly operation report.

Ceriodaphnia and Pimephales Toxicity Effluent Limits

The 30 day average mass limit of "1" for the parameters Acute Toxicity, Ceriodaphnia and Acute Toxicity, Pimephales means no positive toxicity results.

Definition: "Positive toxicity result" means a statistical difference of mortality rate between the control and the diluted effluent sample. For more information see USEPA, October 2002, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, U.S. Environmental Protection Agency, Office of Water, Washington, D.C., EPA 821-R-02-012.

Facility Name: SIOUX CITY, CITY OF STP

Permit Number: 9778001

Design Capacity

Design: 1

The design capacity for the treatment works is specified in Construction Permit Number 2009-255-S, issued Tuesday, May 12, 2009.
The treatment plant is designed to treat:
* An average dry weather (ADW) flow of 15.9800 Million Gallons Per Day (MGD).
* An average wet weather (AWW) flow of 17.6000 Million Gallons Per Day (MGD).
* A maximum wet weather (MWW) flow of 28.7300 Million Gallons Per Day (MGD).
* A design 5-day biochemical oxygen demand (BOD5) load of 87,208 lbs/day.
* A design Total Kjeldahl Nitrogen (TKN) load of 12,338 lbs/day.
* A design Total Suspended Solids (TSS) load of 69,676 lbs/day.

Operator Certification Type/Grade: WW/IV

Wastes in such volumes or quantities as to exceed the design capacity of the treatment works or reduce the effluent quality below that specified in the operation permit of the treatment works are considered to be a waste which interferes with the operation or performance of the treatment works and are prohibited by rule IAC 567-62.1(7).

Facility Name: SIOUX CITY, CITY OF STP
Permit Number: 9778001

SEWAGE SLUDGE HANDLING AND DISPOSAL REQUIREMENTS

"Sewage sludge" is solid, semisolid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge does not include the grit and screenings generated during preliminary treatment.

1. The permittee shall comply with all existing Federal and State laws and regulations that apply to the use and disposal of sewage sludge and with technical standards developed pursuant to Section 405(d) of the Clean Water Act when such standards are promulgated. If an applicable numerical limit or management practice for pollutants in sewage sludge is promulgated after issuance of this permit that is more stringent than a sludge pollutant limit or management practice specified in existing Federal or State laws or regulations, this permit shall be modified, or revoked and reissued, to conform to the regulations promulgated under Section 405(d) of the Clean Water Act. The permittee shall comply with the limitation no later than the compliance deadline specified in the applicable regulations.

2. The permittee shall provide written notice to the Department of Natural Resources prior to any planned changes in sludge disposal practices.

3. Land application of sewage sludge shall be conducted in accordance with criteria established in rule IAC 567--67.1 through 67.11 (455B).

Facility Name: SIOUX CITY, CITY OF STP
Permit Number: 9778001

MAJOR CONTRIBUTING INDUSTRIES
LIMITATIONS, MONITORING AND REPORTING REQUIREMENTS

1. You are required to notify the Department, in writing, of any of the following:

   (a) 180 days prior to the introduction of pollutants to your facility from a new significant industrial user unless reporting is not required in accordance with 64.7(5)(d)(2).

   (b) 60 days in advance of any substantial change in volume or character of pollutants being introduced into such treatment works in excess of limitations stated in the existing treatment agreement.

   (c) 10 days prior to any commitment by you to accept waste from any new significant industrial user. Your written notification must include a new or revised treatment agreement in accordance with rule 64.3(5)(455B).

2. You shall require all users of your facility to comply with Sections 204(b), 307 and 308 of the Clean Water Act.

   Section 204(b) requires that all users of the treatment works constructed with funds provided under Sections 201(g) or 601 of the Act to pay their proportionate share of the costs of operation, maintenance and replacement of the treatment works.

   Section 307 of the Act requires users to comply with pretreatment standards promulgated by EPA for pollutants that would cause interference with the treatment process or would pass through the treatment works.

   Section 308 of the Act requires users to allow access at reasonable times to state and EPA inspectors for the purpose of sampling the discharge and reviewing and copying records.

3. You shall continue to implement the pretreatment program approved June 12, 1984 and any amendments thereto.

4. An annual report in the form prescribed by the Department is to be submitted by March 1st of each year describing the pretreatment program activities for the preceding calendar year.

MAJOR CONTRIBUTING INDUSTRIES
LIMITATIONS, MONITORING AND REPORTING REQUIREMENTS (Continued)

5. The City shall evaluate the adequacy of its local limits to meet the general prohibitions against interference and pass through listed in 40 CFR 403.5(a) and the specific prohibitions listed in 40 CFR 403.5(b). At a minimum this evaluation shall consist of the following:

   (a) Identify each pollutant with the potential to cause process inhibition, pass through the treatment plant in concentrations that will violate NPDES permit limits of water quality standards, endanger POTW worker health and safety or degrade sludge quality.

   (b) For the new treatment plant, determine the maximum allowable headworks loading for each pollutant identified in item #5.a. that will prevent interference or a pass through.

   (c) After accounting for the contribution of each pollutant from uncontrolled (i.e.: domestic/commercial) sources to each treatment plant, determine the maximum allowable industrial loading for each pollutant identified in item #5.a.

   (d) Complete the evaluation and submit to the Department, by **April 1, 2016** a report containing the following information:

      (1) A list of pollutants identified in item #5.a. For each pollutant, state the reason(s) for its inclusion (e.g. potential to cause interference, potential to cause pass through, etc.).

      (2) The report shall contain all calculations used to determine the maximum allowable headworks loadings and shall identify the source(s) of all data used (e.g. literature value, site specific measurement, etc.).

      (3) The contribution of each pollutant identified in item #5d.(1). to each treatment plant from uncontrolled sources and an explanation of how each contribution was determined.

      (4) The allocation of the maximum allowable headworks loading for each pollutant to each treatment plant, and an explanation of how the allowable loadings will be allocated to significant industrial users regulated by the City's pretreatment program.

6. The City shall evaluate the approved pretreatment program for compliance with 40 CFR 403 and Iowa Administrative Code 567 – Chapter 62, specifically with regards to the pretreatment streamlining rule published in the Federal Register on October 14, 2005. Complete the evaluation and submit to the Department a report containing the findings of the evaluation, including a proposal for modifications to correct any deficiencies that are identified, by **April 1, 2016**.

Facility Name: SIOUX CITY, CITY OF STP

Permit Number: 9778001

Nutrient Reduction Requirements

In support of the Iowa Nutrient Reduction Strategy you shall prepare and submit a report that evaluates the feasibility and reasonableness of reducing the amounts of nitrogen and phosphorus discharged into surface water. The report shall be submitted no later than **April 1, 2017** and shall address the following:

- A description of the existing treatment facility with particular emphasis on its capabilities for removing nitrogen and phosphorus. The description shall include monitoring data that define the current amounts of total nitrogen (TKN+nitrate+nitrite) and total phosphorus in both the raw wastewater and the final effluent.

- A description and evaluation of operational changes to the existing treatment facility that could be implemented to reduce the amounts of total nitrogen and total phosphorus discharged in the final effluent and the feasibility and reasonableness of each. Your evaluation must discuss the projected degree of total nitrogen and total phosphorus reduction achievable for each operational change. When evaluating feasibility you must consider what, if any, effect operational changes would have on the removal of other pollutants (e.g. $CBOD_5$, TSS). When evaluating reasonableness you shall include estimates of the additional cost, if any, to implement such changes and for a publicly-owned treatment works the impact on user rates.

- A description and evaluation of new or additional treatment technologies that would achieve significant reductions in the amounts of total nitrogen and total phosphorus discharged in the final effluent with a goal of achieving annual average mass limits based on AWW design flow equivalent to concentrations of 10 mg/L total nitrogen and 1 mg/L total phosphorus for plants treating typical domestic strength sewage. For purposes of this evaluation typical domestic sewage is considered to contain approximately 25 – 35 mg/L total nitrogen and 4 - 8 mg/L total phosphorus. For plants treating wastewater with total nitrogen and/or total phosphorus concentrations greater than typical domestic strength sewage, the evaluation shall include the projected reductions in the total nitrogen and phosphorus effluent concentrations achievable with the application of feasible and reasonable treatment technology with a goal of achieving at least a 66 % reduction in nitrogen and 75% reduction in total phosphorus. For each treatment technology the report shall assess its feasibility, reasonableness, practicability, the availability of equipment, capital costs, annual operating costs, impact on user rates and any non-water quality environmental impacts (e.g. additional air pollution, increased sludge production, etc.).

- Based on the evaluations of operational changes and new or additional treatment technologies the report must select the preferred method(s) for reducing total nitrogen and total phosphorus in the final effluent, the rationale for the selected method(s) and an estimate of the effluent quality achievable.

- The report must include a schedule for making operational changes and/or installing new or additional treatment technologies to achieve the projected effluent quality attainable using the selected method(s). The effluent discharge limits will be based on one full year of operating data after implementation of the operational changes or completion of plant modifications and a six month optimization period and will be incorporated into the NPDES permit by amendment.

The report shall be sent to the following addresses:

Iowa Department of Natural Resources
Environmental Services Division
Regional Office #3
1900 N. Grand Ave., Suite E17
Spencer, IA 51301

Anne Hildebrand
NPDES Section
Iowa Department of Natural Resources
502 East 9th Street
Des Moines, IA 50319

STANDARD CONDITIONS

1. **ADMINISTRATIVE RULES**
Rules of this Department that govern the operation of your facility in connection with this permit are published in Part 567 of the Iowa Administrative Code (IAC) in Chapters 60-65, 67, and 121. Reference to the term "rule" in this permit means the designated provision of Part 567 of the IAC. Reference to the term "CFR" means the Code of Federal Regulations.

2. **DEFINITIONS**
(a) 7 day average means the sum of the total daily discharges by mass, volume, or concentration during a 7 consecutive day period, divided by the total number of days during the period that measurements were made. Four 7 consecutive day periods shall be used each month to calculate the 7-day average. The first 7-day period shall begin with the first day of the month.
(b) 30 day average means the sum of the total daily discharges by mass, volume, or concentration during a calendar month, divided by the total number of days during the month that measurements were made.
(c) Daily maximum means the total discharge by mass, volume, or concentration during a twenty-four hour period.

3. **DUTY TO COMPLY**
You must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Issuance of this permit does not relieve you of the responsibility to comply with all local, state and federal laws, ordinances, regulations or other legal requirements applying to the operation of your facility. *{See 40 CFR 122.41(a) and 567 IAC 64.7(4)"e"}*

4. **DUTY TO PROVIDE INFORMATION**
You must furnish to the Director, within a reasonable time, any information the Director may request to determine compliance with this permit or determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, in accordance with 567 IAC 64.3(11)(c). You must also furnish to the Director, upon request, copies of any records required to be kept by this permit.

5. **NEED TO HALT OR REDUCE ACTIVITY**
It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *{See 40 CFR 122.41(c) and 567 IAC 64.7(7)"j"}*

6. **DUTY TO MITIGATE**
You shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. *{See 40 CFR 122.41(d) and 567 IAC 64.7(7)"i"}*

7. **PROPERTY RIGHTS**
This permit does not convey any property rights of any sort or any exclusive privilege. *{See 567 IAC 64.4(3)"b"}*

8. **TRANSFER OF TITLE OR OWNER ADDRESS CHANGE**
If title to your facility, or any part of it, is transferred the new owner shall be subject to this permit. You are required to notify the new owner of the requirements of this permit in writing prior to any transfer of title. The Director shall be notified in writing within 30 days of the transfer. No transfer of the authorization to discharge from the facility represented by the permit shall take place prior to notifying the department of the transfer of title. Whenever the address of the owner is changed, the department shall be notified in writing within 30 days of the address change. Electronic notification is not sufficient; all title transfers or address changes must be reported to the department by mail. *{See 567 IAC 64.14}*

9. **PROPER OPERATION AND MAINTENANCE**
All facilities and control systems shall be operated as efficiently as possible and maintained in good working order. A sufficient number of staff, adequately trained and knowledgeable in the operation of your facility shall be retained at all times and adequate laboratory controls and appropriate quality assurance procedures shall be provided to maintain compliance with the conditions of this permit. *{See 40 CFR 122.41(e) and 567 IAC 64.7(7)"f"}*

10. **PERMIT MODIFICATION, SUSPENSION OR REVOCATION**
(a) This permit may be modified, suspended, or revoked and reissued for cause including but not limited to those specified in 567 IAC 64.3(11).
(b) This permit may be modified due to conditions or information on which this permit is based, including any new standard the department may adopt that would change the required effluent limits. *{See 567 IAC 64.3(11)}*
(c) If a toxic pollutant is present in your discharge and more stringent standards for toxic pollutants are established under Section 307(a) of the Clean Water Act, this permit will be modified in accordance with the new standards. *{See 40 CFR 122.62(a)(6) and 567 IAC 64.7(7)"g"}*
The filing of a request for a permit modification, revocation or suspension, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

11. **DUTY TO REAPPLY AND PERMIT CONTINUATION**
If you wish to continue to discharge after the expiration date of this permit, you must file a complete application for reissuance at least 180 days prior to the expiration date of this permit. If a timely and sufficient application is submitted, this permit will remain in effect until the Department makes a final determination on the permit application. *{See 567 IAC 64.8(1) and Iowa Code 17A.18}*

12. **SIGNATORY REQUIREMENTS**
Applications, reports or other information submitted to the Department in connection with this permit must be signed and certified as required by 567 IAC 64.3(8).

STANDARD CONDITIONS

13. TWENTY-FOUR HOUR REPORTING

You shall report any noncompliance that may endanger human health or the environment, including, but not limited to, violations of maximum daily limits for any toxic pollutant (listed as toxic under 307(a)(1) of the Clean Water Act) or hazardous substance (as designated in 40 CFR Part 116 pursuant to 311 of the Clean Water Act). Information shall be provided orally within 24 hours from the time you become aware of the circumstances. A written submission that includes a description of noncompliance and its cause; the period of noncompliance including exact dates and times, whether the noncompliance has been corrected or the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent a reoccurrence of the noncompliance must be provided within 5 days of the occurrence. *{See 567 IAC 63.12}*

14. OTHER NONCOMPLIANCE

You shall report all instances of noncompliance not reported under Condition #13 at the time monitoring reports are submitted. You shall give advance notice to the appropriate regional field office of the department of any planned activity which may result in noncompliance with permit requirements. *{See 567 IAC 63.14}*

15. PLANNED CHANGES

The permittee shall give notice to the appropriate regional field office of the department 30 days prior to any planned physical alterations or additions to the permitted facility. Notice is required only when:

(a) Notice has not been given to any other section of the department: (Note: Facility expansions, production increases, or process modifications which may result in new or increased discharges of pollutants must be reported to the Director in advance. If such discharges will exceed effluent limitations, your report must include an application for a new permit. If any modification of, addition to, or construction of a disposal system is to be made, you must first obtain a written permit from this Department.) *{See 567 IAC 64.7(7)"a" and 64.2}*

(b) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as defined in 567 IAC 60.2;

(c) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices; or

(d) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in the permit. *{See 567 IAC 63.13 and 63.14}*

16. EFFECT OF A PERMIT

Compliance with a permit during its term constitutes compliance, for purposes of enforcement, with Sections 301, 302, 306, 307, 318, 403 and 405(a)-(b) of the Clean Water Act, and equivalent limitations and standards set out in 567 IAC Chapters 61 and 62. *{See 567 IAC 64.4(3)"a"}*

17. MONITORING AND RECORDS OF OPERATION

(a) Maintenance of records. You shall retain for a minimum of three years all paper and electronic records of monitoring activities and results including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records. *{See 567 IAC 63.2(3)}*

(b) Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years, or both. *{See 40 CFR 122.41(j)(5)}*

18. USE OF CERTIFIED LABORATORIES

Effective October 1, 1996, analyses of wastewater, groundwater or sewage sludge that are required to be submitted to the department as a result of this permit must be performed by a laboratory certified by the State of Iowa. Routine, on-site monitoring for pH, temperature, dissolved oxygen, total residual chlorine and other pollutants that must be analyzed immediately upon sample collection, settleable solids, physical measurements, and operational monitoring tests specified in 567 IAC 63.3(4) are excluded from this requirement.

19. INSPECTION OF PREMISES, RECORDS, EQUIPMENT, METHODS AND DISCHARGES

You are required to permit authorized personnel to:

(a) Enter upon the premises where a regulated facility or activity is located or conducted or where records are kept under conditions of this permit.

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit.

(c) Inspect, at reasonable times, any facilities, equipment, practices or operations regulated or required under this permit.

(d) Sample or monitor, at reasonable times, to assure compliance or as otherwise authorized by the Clean Water Act.

20. FAILURE TO SUBMIT FEES

This permit may be revoked, in whole or in part, if the appropriate permit fees are not submitted within thirty (30) days of the date of notification that such fees are due. *{See 567 IAC 64.16(1)}*

21. OTHER INFORMATION

Where you become aware that you failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, you must promptly submit such facts or information. Where you become aware that you failed to submit any relevant facts in the submission of in any report to the director, including records of operation, you shall promptly submit such facts or information. *{See 567 IAC 60.4(2)"a" and 567 IAC 63.7}*

STANDARD CONDITIONS

22. NOTICE OF CHANGED CONDITIONS

You are required to notify the director of any changes in existing conditions or information on which this permit is based. This includes, but is not limited to, the following:

(a) If your facility is a publicly owned treatment works (POTW) or otherwise may accept waste for treatment from an indirect discharger or industrial contributor (See 567 IAC 64.3(5) for further notice requirements).

(b) If your facility is a POTW and there is any substantial change in the volume or character of pollutants being introduced to the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit. *{See 40 CFR 122.42(b)}*

(c) As soon as you know or have reason to believe that any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in this permit. *{See 40 CFR 122.42(a)}*

(d) If you have begun or will begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

(e) No construction activity that will result in disturbance of one acre or more shall be initiated without first obtaining coverage under NPDES General Permit No. 2 for "Storm water discharge associated with construction activity".

23. BYPASSES

(a) Definition. "Bypass" means the diversion of waste streams from any portion of a treatment facility or collection system. A bypass does not include internal operational waste stream diversions that are part of the design of the treatment facility, maintenance diversions where redundancy is provided, diversions of wastewater from one point in a collection system to another point in a collection system, or wastewater backups into buildings that are caused in the building lateral or private sewer line.

(b) Prohibitions.

i. Bypasses from any portion of a treatment facility or from a sanitary sewer collection system designed to carry only sewage are prohibited.

ii. Bypass is prohibited and the department may not assess a civil penalty against a permittee for bypass if the permittee has complied with all of the following:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(2) There were no feasible alternatives to the bypass such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required by paragraph (d) of this section.

(c) The Director may approve an anticipated bypass after considering its adverse effects if the Director determines that it will meet the three conditions listed above and a request for bypass has been submitted to the Department in accordance with 567 IAC 63.6(2).

(d) Reporting bypasses. Bypasses shall be reported in accordance with 567 IAC 63.6.

24. UPSET PROVISION

(a) Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(b) Effect of an upset. An upset constitutes an affirmative defense in an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph *"c"* of this condition are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(c) Conditions necessary for demonstration of an upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate through properly signed operating logs or other relevant evidence that;

i. An upset occurred and that the permittee can identify the cause(s) of the upset;

ii. The permitted facility was at the time being properly operated;

iii. The permittee submitted notice of the upset to the Department in accordance with 567 IAC 63.6(3); and

iv. The permittee complied with any remedial measures required in accordance with 567 IAC 63.6(6)"*b*".

(d) Burden of Proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

25. SEVERABILITY

The provisions of this permit are severable and if any provision or application of any provision to any circumstance is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding.

IOWA DEPARTMENT OF NATURAL RESOURCES

National Pollutant Discharge Elimination System (NPDES) Permit

OWNER NAME & ADDRESS

CITY OF SIOUX CITY
CITY HALL, PO BOX 447
SIOUX CITY, IA 51102-0447

FACILITY NAME & ADDRESS

SIOUX CITY, CITY OF STP
3100 SOUTH LEWIS BLVD, RR 6
SIOUX CITY, IA 51106

Section 12, T88N, R48W
Woodbury County

IOWA NPDES PERMIT NUMBER: 9778001
DATE OF ISSUANCE: 12/01/2020
DATE OF EXPIRATION: 11/30/2025

YOU ARE REQUIRED TO FILE FOR RENEWAL OF THIS PERMIT BY: 06/03/2025
EPA NUMBER: IA0043095

This permit is issued pursuant to the authority of section 402(b) of the Clean Water Act (33 U.S.C. 1342(b)), Iowa Code section 455B.174, and rule 567-64.3, Iowa Administrative Code. You are authorized to operate the disposal system and to discharge the pollutants specified in this permit in accordance with the effluent limitations, monitoring requirements and other terms set forth in this permit.

You may appeal any condition of this permit by filing a written notice of appeal and request for administrative hearing with the director of the department within 30 days of permit issuance.

Any existing, unexpired Iowa operation permit or Iowa NPDES permit previously issued by the department for the facility identified above is revoked by the issuance of this permit. This provision does not apply to any authorization to discharge under the terms and conditions of a general permit issued by the department or to any permit issued exclusively for the discharge of stormwater.

FOR THE DEPARTMENT OF NATURAL RESOURCES

By Ben Hucka Digitally signed by Ben Hucka Date: 2020.11.20 11:57:07 -06'00'

Ben Hucka
NPDES Section, Environmental Services Division

EXHIBIT B

Facility Name: SIOUX CITY, CITY OF SF1

Permit Number: 9778001

Outfall No.: 001 DISCHARGE FROM AN ACTIVATED SLUDGE WASTEWATER TREATMENT PLANT.

Receiving Stream: MISSOURI RIVER

Route of Flow: MISSOURI RIVER

Class A1 waters are primary contact recreational use waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risks of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.

Waters designated Class B(WW1) are those in which temperature, flow and other habitat characteristics are suitable to maintain warm water game fish populations along with a resident aquatic community that includes a variety of native nongame fish and invertebrates species. These waters generally include border rivers, large interior rivers, and the lower segments of medium-size tributary streams.

Waters designated Class HH are those in which fish are routinely harvested for human consumption or waters both designated as a drinking water supply and in which fish are routinely harvested for human consumption.

Outfall No.: 002 INTERNAL BYPASS - FROM INFLUENT CHANNEL PRIOR TO THE HEADWORKS TO THE CHLORINE BASIN, DISCHARGING THROUGH OUTFALL 001

Receiving Stream: MISSOURI RIVER

Route of Flow: MISSOURI RIVER

Class A1 waters are primary contact recreational use waters in which recreational or other uses may result in prolonged and direct contact with the water, involving considerable risks of ingesting water in quantities sufficient to pose a health hazard. Such activities would include, but not be limited to, swimming, diving, water skiing, and water contact recreational canoeing.

Waters designated Class B(WW1) are those in which temperature, flow and other habitat characteristics are suitable to maintain warm water game fish populations along with a resident aquatic community that includes a variety of native nongame fish and invertebrates species. These waters generally include border rivers, large interior rivers, and the lower segments of medium-size tributary streams.

Waters designated Class HH are those in which fish are routinely harvested for human consumption or waters both designated as a drinking water supply and in which fish are routinely harvested for human consumption.

Bypasses from any portion of a treatment facility or from a sanitary sewer collection system designed to carry only sewage are prohibited.

Effluent Limitations:

You are prohibited from discharging pollutants except in compliance with the following effluent limitations:

001 DISCHARGE FROM AN ACTIVATED SLUDGE WASTEWATER TREATMENT PLANT.

Outfall: 001 Effective Dates: 12/01/2020 to 11/30/2025			
Parameter	**Season**	**Limit Type**	**Limits**
CBOD5			**85% Removal Required**
	Yearly	7 Day Average	40 MG/L 5871 LBS/DAY
	Yearly	30 Day Average	25 MG/L 3670 LBS/DAY
TOTAL SUSPENDED SOLIDS			**85% Removal Required**
	Yearly	7 Day Average	45 MG/L 6605 LBS/DAY
	Yearly	30 Day Average	30 MG/L 4404 LBS/DAY
OIL AND GREASE			
	Yearly	30 Day Average	10 MG/L
	Yearly	Daily Maximum	15 MG/L
ACUTE TOXICITY, CERIODAPHNIA			
	Yearly	Daily Maximum	1 NO TOXICITY
ACUTE TOXICITY, PIMEPHALES			
	Yearly	Daily Maximum	1 NO TOXICITY
PH			
	Yearly	Daily Maximum	9.0 STD UNITS
	Yearly	Daily Minimum	6.0 STD UNITS
E. COLI			
	MAR	Geometric Mean	126 #/100 ML
	APR	Geometric Mean	126 #/100 ML
	MAY	Geometric Mean	126 #/100 ML
	JUN	Geometric Mean	126 #/100 ML
	JUL	Geometric Mean	126 #/100 ML
	AUG	Geometric Mean	126 #/100 ML
	SEP	Geometric Mean	126 #/100 ML
	OCT	Geometric Mean	126 #/100 ML
	NOV	Geometric Mean	126 #/100 ML

Facility Name: SIOUX CITY, CITY OF STP

Permit Number: 9778001

Outfall: 001 Effective Dates: 12/01/2020 to 03/31/2025				
Parameter	**Season**	**Limit Type**	**Limits**	
AMMONIA NITROGEN (N)				
	JAN	30 Day Average	84.9 MG/L	12436.4 LBS/DAY
	JAN	Daily Maximum	84.9 MG/L	12436.4 LBS/DAY
	FEB	30 Day Average	91.8 MG/L	12478.8 LBS/DAY
	FEB	Daily Maximum	97.4 MG/L	14229.7 LBS/DAY
	MAR	30 Day Average	68.7 MG/L	9332.7 LBS/DAY
	MAR	Daily Maximum	72.6 MG/L	10665.0 LBS/DAY
	APR	30 Day Average	47.9 MG/L	6509.8 LBS/DAY
	APR	Daily Maximum	55.7 MG/L	8260.1 LBS/DAY
	MAY	30 Day Average	37.7 MG/L	5122.4 LBS/DAY
	MAY	Daily Maximum	55.0 MG/L	8150.3 LBS/DAY
	JUN	30 Day Average	22.4 MG/L	3045.5 LBS/DAY
	JUN	Daily Maximum	54.0 MG/L	7993.9 LBS/DAY
	JUL	30 Day Average	29.5 MG/L	4005.4 LBS/DAY
	JUL	Daily Maximum	61.4 MG/L	9118.1 LBS/DAY
	AUG	30 Day Average	26.0 MG/L	3537.0 LBS/DAY
	AUG	Daily Maximum	52.6 MG/L	7833.1 LBS/DAY
	SEP	30 Day Average	33.5 MG/L	4557.7 LBS/DAY
	SEP	Daily Maximum	65.0 MG/L	9609.7 LBS/DAY
	OCT	30 Day Average	59.9 MG/L	8133.8 LBS/DAY
	OCT	Daily Maximum	64.0 MG/L	9444.2 LBS/DAY
	NOV	30 Day Average	54.3 MG/L	8045.0 LBS/DAY
	NOV	Daily Maximum	54.3 MG/L	8045.0 LBS/DAY
	DEC	30 Day Average	64.3 MG/L	9498.2 LBS/DAY
	DEC	Daily Maximum	64.3 MG/L	9498.2 LBS/DAY

Facility Name: SIOUX CITY, CITY OF STP

Permit Number: 9778001

Outfall: 001 Effective Dates: 12/01/2020 to 11/30/2023				
Parameter	**Season**	**Limit Type**	**Limits**	
CHLORINE, TOTAL RESIDUAL				
	Yearly	30 Day Average	0.402 MG/L	56.84 LBS/DAY
	Yearly	Daily Maximum	0.432 MG/L	63.381 LBS/DAY

Outfall: 001 Effective Dates: 12/01/2023 to 11/30/2025				
Parameter	**Season**	**Limit Type**	**Limits**	
CHLORINE, TOTAL RESIDUAL				
	Yearly	30 Day Average	0.122 MG/L	17.9 LBS/DAY
	Yearly	Daily Maximum	0.122 MG/L	17.9 LBS/DAY

Facility Name: SIOUX CITY, CITY OF SF1

Permit Number: 9778001

Outfall: 001 Effective Dates: 04/01/2025 to 11/30/2025				
Parameter	**Season**	**Limit Type**	**Limits**	
AMMONIA NITROGEN (N)				
	JAN	30 Day Average	54.0 MG/L	7900 LBS/DAY
	JAN	Daily Maximum	54.0 MG/L	7900 LBS/DAY
	FEB	30 Day Average	60.3 MG/L	8249 LBS/DAY
	FEB	Daily Maximum	60.3 MG/L	8818 LBS/DAY
	MAR	30 Day Average	50.7 MG/L	6887 LBS/DAY
	MAR	Daily Maximum	53.0 MG/L	7755 LBS/DAY
	APR	30 Day Average	38.0 MG/L	5170 LBS/DAY
	APR	Daily Maximum	43.5 MG/L	6364 LBS/DAY
	MAY	30 Day Average	37.7 MG/L	5122.4 LBS/DAY
	MAY	Daily Maximum	48.0 MG/L	7013 LBS/DAY
	JUN	30 Day Average	22.4 MG/L	3045.5 LBS/DAY
	JUN	Daily Maximum	47.0 MG/L	6870 LBS/DAY
	JUL	30 Day Average	21.5 MG/L	2924 LBS/DAY
	JUL	Daily Maximum	51.5 MG/L	7532 LBS/DAY
	AUG	30 Day Average	21.8 MG/L	2963 LBS/DAY
	AUG	Daily Maximum	49.5 MG/L	7237 LBS/DAY
	SEP	30 Day Average	25.3 MG/L	3436 LBS/DAY
	SEP	Daily Maximum	44.8 MG/L	6552 LBS/DAY
	OCT	30 Day Average	39.9 MG/L	5415 LBS/DAY
	OCT	Daily Maximum	43.6 MG/L	6380 LBS/DAY
	NOV	30 Day Average	42.1 MG/L	6159 LBS/DAY
	NOV	Daily Maximum	42.1 MG/L	6159 LBS/DAY
	DEC	30 Day Average	43.8 MG/L	6413 LBS/DAY
	DEC	Daily Maximum	43.8 MG/L	6413 LBS/DAY

Monitoring and Reporting Requirements

(a) Samples and measurements taken shall be representative of the volume and nature of the monitored wastewater.

(b) Analytical and sampling methods specified in 40 CFR Part 136 or other methods approved in writing by the department shall be utilized. All effluent samples for which a limit applies must be analyzed using sufficiently sensitive methods (i.e. testing procedures) approved under 567 IAC Chapter 63 and 40 CFR Part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter I, subchapter N or O.

For the purposes of this paragraph, an approved method is sufficiently sensitive when:
(1) the method minimum level (ML) is at or below the level of the effluent limit established in the permit for the measured pollutant or pollutant parameter; or
(2) the method has the lowest ML of the approved analytical methods for the measured pollutant or pollutant parameter.

Samples collected for operational testing need not be analyzed by approved analytical methods; however, commonly accepted test methods should be used.

(c) You are required to report all data including calculated results needed to determine compliance with the limitations contained in this permit. The results of any monitoring not specified in this permit performed at the compliance monitoring point and analyzed according to 40 CFR Part 136 shall be included in the calculation and reporting of any data submitted in accordance with this permit. This includes daily maximums and minimums, 30-day averages and 7-day averages for all parameters that have concentration (mg/l) and mass (lbs/day) limits. In addition, flow data shall be reported in million gallons per day (MGD).

(d) Records of monitoring activities and results shall include for all samples: the date, exact place and time of the sampling; the dates the analyses were performed; who performed the analyses; the analytical techniques or methods used; and the results of such analyses.

(e) Results of all monitoring shall be recorded on forms provided by, or approved by, the department, and shall be submitted to the appropriate regional field office of the department by the fifteenth day following the close of the reporting period. Your reporting period is on a MONTHLY basis, ending on the last day of each reporting period.

(f) Operational performance monitoring for treatment unit process control shall be conducted to ensure that the facility is properly operated in accordance with its design. The results of any operational performance monitoring need not be reported to the department, but shall be maintained in accordance with rule 567 IAC 63.2 (455B). The results of any operational performance monitoring specified in this permit shall be submitted to the department in accordance with these reporting requirements.

(g) Chapter 63 of the rules provides you with further explanation of your monitoring requirements.

Facility Name: SIOUX CITY, CITY OF STP

Permit Number: 9778001

Outfall	Wastewater Parameter	Sample Frequency	Sample Type	Monitoring Location
The following monitoring requirements shall be in effect from 12/01/2020 to 11/30/2025				
001	BIOCHEMICAL OXYGEN DEMAND (BOD5)	7/WEEK OR DAILY	24 HOUR COMPOSITE	RAW WASTE
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	RAW WASTE
001	NITROGEN, TOTAL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	NITROGEN, TOTAL KJELDAHL (AS N)	1 EVERY 2 WEEKS	24 HOUR COMPOSITE	RAW WASTE
001	PH	7/WEEK OR DAILY	GRAB	RAW WASTE
001	PHOSPHORUS, TOTAL (AS P)	1 TIME PER WEEK	24 HOUR COMPOSITE	RAW WASTE
001	TEMPERATURE	7/WEEK OR DAILY	GRAB	RAW WASTE
001	TOTAL SUSPENDED SOLIDS	7/WEEK OR DAILY	24 HOUR COMPOSITE	RAW WASTE
001	CBOD5	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT PRIOR TO CHLORINE CONTACT BASIN
001	FLOW	7/WEEK OR DAILY	24 HOUR TOTAL	FINAL EFFLUENT FLOW METER PRIOR TO THE CHLORINE CONTACT BASIN
001	TOTAL SUSPENDED SOLIDS	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT PRIOR TO CHLORINE CONTACT BASIN
001	ACUTE TOXICITY, CERIODAPHNIA	1 EVERY 12 MONTHS	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	ACUTE TOXICITY, PIMEPHALES	1 EVERY 12 MONTHS	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	AMMONIA NITROGEN (N)	7/WEEK OR DAILY	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	CHLORINE, TOTAL RESIDUAL	7/WEEK OR DAILY	GRAB	EFFLUENT AFTER DISINFECTION
001	E. COLI	GEO. MEAN 1/3 MONTHS	GRAB	EFFLUENT AFTER DISINFECTION
001	NITROGEN, TOTAL (AS N)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	OIL AND GREASE	1 TIME PER WEEK	GRAB	EFFLUENT AFTER DISINFECTION
001	PH	7/WEEK OR DAILY	GRAB	EFFLUENT AFTER DISINFECTION
001	PHOSPHORUS, TOTAL (AS P)	1 TIME PER WEEK	24 HOUR COMPOSITE	EFFLUENT AFTER DISINFECTION
001	TEMPERATURE	7/WEEK OR DAILY	GRAB	EFFLUENT AFTER DISINFECTION

Special Monitoring Requirements

Outfall # **Description**

001 **NITROGEN, TOTAL (AS N)**

Total nitrogen shall be determined by testing for Total Kjeldahl Nitrogen (TKN) and nitrate + nitrite nitrogen and reporting the sum of the TKN and nitrate + nitrite results (reported as N). Nitrate + nitrite can be analyzed together or separately.

E. COLI

The limit for E. coli specified in the limit pages of this permit is a geometric mean. The disinfection season is established in the Iowa Administrative Code, Subparagraph 567 IAC 61.3(3)"a"(1), and is in effect from March 15 to November 15. Any disinfection system (chlorine, UV light, etc.) shall be operated to comply with the limit during the entire disinfection season.

The facility must collect and analyze a minimum of five samples in one calendar month during each 3-month period from March 15 to November 15. The 3-month periods are March – May, June – August, and September – November. The collection of five samples in each 3-month period will result in a minimum of 15 samples being collected during a calendar year. For example, for the first 3-month period, the operator may choose April as the calendar month to collect the 5 individual E. coli samples to determine compliance with the limits. The operator may also choose the months of March or May as well, as long as each of the 5 samples is collected during a single calendar month. The same principle applies to the other two 3-month periods during the disinfection season. The following requirements apply to the individual samples collected in one calendar month:
Samples must be spaced over one calendar month.
No more than one sample can be collected on any one day.
There must be a minimum of two days between each sample.
No more than two samples may be collected in a period of seven consecutive days.

If the effluent has been disinfected using chlorine, ultraviolet light (UV), or any other process intended to disrupt the biological integrity of the E. coli, the samples shall be analyzed using the Most Probable Number method found in Standard Method 9223B (Colilert® or Colilert-18® made by IDEXX Laboratories, Inc.). If the effluent has not been disinfected the samples may be analyzed using either the MPN method above or EPA Method 1603: Escherichia coli (E. coli) in water by membrane filtration using modified membrane-thermotolerant E. coli agar (modified mTEC) or mColiBlue-24® made by the Hach Company.

The geometric mean must be calculated using all valid sample results collected during a month. The geometric mean formula is as follows: Geometric Mean = (Sample one * Sample two * Sample three * Sample four *Sample five…Sample N)^(1/N), which is the Nth root of the result of the multiplication of all of the sample results where N = the number of samples. If a sample result is a less than value, the value reported by the lab without the less than sign should be used in the geometric mean calculation.

The geometric mean can be calculated in one of the following ways:
Use a scientific calculator that can calculate the powers of numbers.
Enter the samples in Microsoft Excel and use the function "GEOMEAN" to perform the calculation.
Use the geometric mean calculator on the Iowa DNR webpage at: http://www.iowadnr.gov/Environmental-Protection/Water-Quality/NPDES-Wastewater-Permitting/NPDES-Operator-Information/Bacteria-Sampling

Site-Specific Mixing Zone Requirements

The mixing zone (MZ) and zone of initial dilution (ZID) used to calculate the water-quality based effluent limits (WQBELs) in this permit were based on a CORMIX model submitted by the city. In order to use the same CORMIX model for future WQBEL calculations, the permittee must submit a bathymetric analysis showing that the stream channel has not significantly changed in the reach extending from the outfall to 2,000 feet downstream of the outfall since the time the CORMIX model was completed. The city has the option to complete and submit a new CORMIX model if the bathymetric analysis shows significant change. Default MZ and ZID will be used in the absence of an acceptable bathymetric analysis and/or updated CORMIX model. The bathymetric analysis and/or updated CORMIX model must be submitted with the renewal application to be considered in future WQBEL calculations. Contact Katie Greenstein at Katie.Greenstein@dnr.iowa.gov or at 515-725-8400 for additional information.

Facility Name: SIOUX CITY, CITY OF STP

Permit Number: 9778001

Outfall Number: 001

Ceriodaphnia and Pimephales Toxicity Effluent Testing

1. For facilities that have not been required to conduct toxicity testing by a previous NPDES permit, the initial annual toxicity test shall be conducted within three (3) months of permit issuance. For facilities that have been required to conduct toxicity testing by a previous NPDES permit, the initial annual toxicity test shall be conducted within twelve months (12) of the last toxicity test.

2. The test organisms that are to be used for acute toxicity testing shall be Ceriodaphnia dubia and Pimephales promelas. The acute toxicity testing procedures used to demonstrate compliance with permit limits shall be those listed in 40 CFR Part 136 and adopted by reference in rule 567 IAC 63.1(1). The method for measuring acute toxicity is specified in USEPA, October 2002, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition. USEPA, Office of Water, Washington, D.C., EPA 821-R-02-012.

3. The diluted effluent sample must contain a minimum of 15.50 % effluent and no more than 84.50 % of culture water.

4. One valid positive toxicity result will require, at a minimum, quarterly testing for effluent toxicity until three successive tests are determined not to be positive.

5. Two successive valid positive toxicity results or three positive results out of five successive valid effluent toxicity tests will require a toxicity reduction evaluation to be completed to eliminate the toxicity.

6. A non-toxic test result shall be indicated as a "1" on the monthly operation report. A toxic test result shall be indicated as a "2" on the monthly operation report. DNR Form 542-1381 shall also be submitted to the DNR field office along with the monthly operation report.

Ceriodaphnia and Pimephales Toxicity Effluent Limits

The maximum limit of "1" for the parameters Acute Toxicity, Ceriodaphnia and Acute Toxicity, Pimephales means no positive toxicity results.

Definition: "Positive toxicity result" means a statistical difference of mortality rate between the control and the diluted effluent sample. For more information, see USEPA, October 2002, Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, USEPA, Office of Water, Washington, D.C., EPA 821-R-02-012.

Design Capacity

Design: 1

The design capacity for the treatment works is specified in Construction Permit Number 2009-255-S, issued Tuesday, May 12, 2009. The treatment plant is designed to treat:

* An average dry weather (ADW) flow of 15.9800 Million Gallons Per Day (MGD).
* An average wet weather (AWW) flow of 17.6000 Million Gallons Per Day (MGD).
* A maximum wet weather (MWW) flow of 28.7300 Million Gallons Per Day (MGD).
* A design 5-day biochemical oxygen demand (BOD5) load of 87208 lbs/day.
* A design Total Kjeldahl Nitrogen (TKN) load of 12338.00 lbs/day.
* A design Total Suspended Solids (TSS) load of 69676 lbs/day.

Operator Certification Type/Grade: WW/IV

Wastes in such volumes or quantities as to exceed the design capacity of the treatment works or reduce the effluent quality below that specified in the operation permit of the treatment works are considered to be a waste which interferes with the operation or performance of the treatment works and are prohibited by subrule IAC 567-62.1(7).

SEWAGE SLUDGE HANDLING AND DISPOSAL REQUIREMENTS

"Sewage sludge" is solid, semisolid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge does not include the grit and screenings generated during preliminary treatment.

1. The permittee shall comply with all existing Federal and State laws and regulations that apply to the use and disposal of sewage sludge and with technical standards developed pursuant to Section 405(d) of the Clean Water Act when such standards are promulgated. If an applicable numerical limit or management practice for pollutants in sewage sludge is promulgated after issuance of this permit that is more stringent than a sludge pollutant limit or management practice specified in existing Federal or State laws or regulations, this permit shall be modified, or revoked and reissued, to conform to the regulations promulgated under Section 405(d) of the Clean Water Act. The permittee shall comply with the limitation no later than the compliance deadline specified in the applicable regulations.

2. The permittee shall provide written notice to the Department of Natural Resources prior to any planned changes in sludge disposal practices.

3. Land application of sewage sludge shall be conducted in accordance with criteria established in rule IAC 567 67.1 through 67.11 (455B).

SIGNIFICANT INDUSTRIAL USER LIMITATIONS, MONITORING AND REPORTING REQUIREMENTS

1. You shall require all users of your facility to comply with Sections 204(b), 307, and 308 of the Clean Water Act.

   Section 204(b) requires that all users of the treatment works constructed with funds provided under Sections 201(g) or 601 of the Act to pay their proportionate share of the costs of operation, maintenance and replacement of the treatment works.

   Section 307 of the Act requires users to comply with pretreatment standards promulgated by EPA for pollutants that would cause interference with the treatment process or would pass through the treatment works.

   Section 308 of the Act requires users to allow access at reasonable times to state and EPA inspectors for the purpose of sampling the discharge, reviewing, and copying records.

2. You shall continue to implement the pretreatment program approved June 12, 1984 and any amendments thereto.

3. An annual report in the form prescribed by the Department is to be submitted by March 1st of each year describing the pretreatment program activities for the preceding calendar year.

4. The City recently completed an evaluation of the adequacy of its local limits to meet the general prohibitions against interference and pass through listed in 40 CFR 403.5(a) and the specific prohibitions listed in 40 CFR 403.5(b) and updated their program accordingly. The city is not required to submit any additional evaluations at this time.

Nutrient Reduction Requirements

In support of the Iowa Nutrient Reduction Strategy you shall prepare and submit a report that evaluates the feasibility and reasonableness of reducing the amounts of nitrogen and phosphorus discharged into surface water. The report shall be submitted no later than **December 31, 2021** and shall address the following:

- A description of the existing treatment facility with particular emphasis on its capabilities for removing nitrogen and phosphorus. The description shall include monitoring data that define the current amounts of total nitrogen (TKN+nitrate+nitrite) and total phosphorus in both the raw wastewater and the final effluent.

- A description and evaluation of operational changes to the existing treatment facility that could be implemented to reduce the amounts of total nitrogen and total phosphorus discharged in the final effluent and the feasibility and reasonableness of each. Your evaluation must discuss the projected degree of total nitrogen and total phosphorus reduction achievable for each operational change. When evaluating feasibility you must consider what, if any, effect operational changes would have on the removal of other pollutants (e.g. $CBOD_5$, TSS). When evaluating reasonableness you shall include estimates of the additional cost, if any, to implement such changes and for a publicly-owned treatment works the impact on user rates.

- A description and evaluation of new or additional treatment technologies that would achieve significant reductions in the amounts of total nitrogen and total phosphorus discharged in the final effluent with a goal of achieving annual average concentrations of 10 mg/L total nitrogen and 1 mg/L total phosphorus for plants treating typical domestic strength sewage. For purposes of this evaluation typical domestic sewage is considered to contain approximately 25 – 35 mg/L total nitrogen and 4 - 8 mg/L total phosphorus. For plants treating wastewater with total nitrogen and/or total phosphorus concentrations greater than typical domestic strength sewage, the evaluation shall include the projected reductions in the total nitrogen and phosphorus effluent concentrations achievable with the application of feasible and reasonable treatment technology with a goal of achieving at least a 66 % reduction in nitrogen and 75% reduction in total phosphorus. For each treatment technology the report shall assess its feasibility, reasonableness, practicability, the availability of equipment, capital costs, annual operating costs, impact on user rates and any non-water quality environmental impacts (e.g. additional air pollution, increased sludge production, etc.).

- Based on the evaluations of operational changes and new or additional treatment technologies the report must select the preferred method(s) for reducing total nitrogen and total phosphorus in the final effluent, the rationale for the selected method(s) and an estimate of the effluent quality achievable.

- The report must include a schedule for making operational changes and/or installing new or additional treatment technologies to achieve the concentration and/or percentage removal goals listed above. Additional financial justification must be included in the report if no operational changes or treatment technologies are feasible or reasonable.

The schedule will be incorporated into the NPDES permit by amendment. Effluent discharge limits will be based on one full year of operating data after implementation of the operational changes or completion of plant modifications and a six month optimization period.

The report shall be sent to the following address:
Ben Hucka
NPDES Section
Iowa Department of Natural Resources
502 East 9th Street
Des Moines, IA 50319

Ammonia Nitrogen Compliance Schedule

The facility shall make necessary improvements to meet ammonia nitrogen limits according to the following schedule:

- Submit a Work Record Request form to DNR's Wastewater Engineering Section at wastewater-engineering@dnr.iowa.gov by **March 1, 2021**. The forms and instructions are available on the DNR website at http://www.iowadnr.gov/Environmental-Protection/Water-Quality/Wastewater-Construction/Construction-Permits. Questions on the forms should be directed to either Terry Kirschenman at 515/725-8422 or Emy Liu at 515/725-8421.

- Submit progress report by **March 1, 2022**. Progress report shall include specific information on the status of the project and future expected timelines for completing construction. Include status on an antidegradation analysis and progress, completion and submittal of the facility plan.

- Submit progress report by **March 1, 2023**. Progress report shall include specific information on the status of the project and future expected timelines for completing construction. Include status on the approval of the facility plan and progress towards completion of final plans and specifications.

- Submit progress report by **March 1, 2024**. Progress report shall include specific information on the status of the project and future expected timelines for completing construction. Include status on the final plans and specifications, construction permit, and awarding contracts for construction.

    - Complete construction of wastewater treatment improvements necessary to comply with the ammonia nitrogen limits by **March 1, 2025**.

    - Achieve compliance with all final ammonia nitrogen limits by **April 1, 2025**.

Within fourteen (14) days following all dates of compliance, the permittee shall provide written notice of compliance with the scheduled event. All written notices and progress reports shall be sent to the following address:

Iowa Department of Natural Resources
Environmental Services Division
Field Office # 3
1900 N. Grand Ave.
Spencer, IA 51301

Total Residual Chlorine Compliance Schedule

The facility shall make necessary improvements to meet the Total Residual Chlorine (TRC) limit according to the following schedule:

- Complete a Self-Assessment Matrix and submit a Work Record Request form to DNR's Wastewater Engineering Section by **March 1, 2021**. The forms and instructions are available on the DNR website at http://www.iowadnr.gov/Environmental-Protection/Water-Quality/Wastewater-Construction/Construction-Permits. Questions on the forms should be directed to either Terry Kirschenman at 515/725-8422 or Emy Liu at 515/725-8421.

- Submit progress report by **March 1, 2022**. Progress report shall include specific information on the status of the project and future expected timelines for completing construction. Include status on an antidegradation analysis (if required) and progress, completion and submittal of the facility plan.

- Submit progress report by **March 1, 2023**. Progress report shall include specific information on the status of the project and future expected timelines for completing construction. Include status on the submittal of final plans and specifications and awarding a contract for construction.

- Complete construction of wastewater treatment improvements necessary to comply with the final TRC limits by **November 1, 2023**.

- Achieve compliance with final TRC limits by **December 1, 2023**.

Within fourteen (14) days following all dates of compliance, the permittee shall provide written notice of compliance with the scheduled event. All written notices and progress reports shall be sent to the following address:

Iowa Department of Natural Resources
Environmental Services Division
Field Office # 3
1900 N. Grand Ave.
Spencer, IA 51301

STANDARD CONDITIONS

1. ADMINISTRATIVE RULES

Rules of this Department that govern the operation of your facility in connection with this permit are published in Part 567 of the Iowa Administrative Code (IAC) in Chapters 60-65, 67, and 121. Reference to the term "rule" in this permit means the designated provision of Part 567 of the IAC. Reference to the term "CFR" means the Code of Federal Regulations.

2. DEFINITIONS

(a) 7 day average means the sum of the total daily discharges by mass, volume, or concentration during a 7 consecutive day period, divided by the total number of days during the period that measurements were made. Four 7 consecutive day periods shall be used each month to calculate the 7-day average. The first 7-day period shall begin with the first day of the month.

(b) 30 day average means the sum of the total daily discharges by mass, volume, or concentration during a calendar month, divided by the total number of days during the month that measurements were made.

(c) Daily maximum means the total discharge by mass, volume, or concentration during a twenty-four hour period.

3. DUTY TO PROVIDE INFORMATION

You must furnish to the Director, within a reasonable time, any information the Director may request to determine compliance with this permit or determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, in accordance with 567 IAC 64.3(11)"*c*". You must also furnish to the Director, upon request, copies of any records required to be kept by this permit.

4. MONITORING AND RECORDS OF OPERATION

(a) Maintenance of records. You shall retain for a minimum of three years all paper and electronic records of monitoring activities and results including all original strip chart recordings for continuous monitoring instrumentation and calibration and maintenance records. ***{See 567 IAC 63.2(3)}***

(b) Any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years, or both. ***{See 40 CFR 122.41(j)(5)}***

5. SIGNATORY REQUIREMENTS

Applications, reports or other information submitted to the Department in connection with this permit must be signed and certified in accordance with 567 IAC 64.3(8).

6. OTHER INFORMATION

Where you become aware that you failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, you must promptly submit such facts or information. Where you become aware that you failed to submit any relevant facts in the submission of in any report to the director, including records of operation, you shall promptly submit such facts or information. ***{See 567 IAC 60.4(2)"a" and 567 IAC 63.7}***

7. TRANSFER OF TITLE OR OWNER ADDRESS CHANGE

If title to your facility, or any part of it, is transferred the new owner shall be subject to this permit. You are required to notify the new owner of the requirements of this permit in writing prior to any transfer of title. The Director shall be notified in writing within 30 days of the transfer. No transfer of the authorization to discharge from the facility represented by the permit shall take place prior to notifying the department of the transfer of title. Whenever the address of the owner is changed, the department shall be notified in writing within 30 days of the address change. Electronic notification is not sufficient; all title transfers or address changes must be reported to the department by mail. ***{See 567 IAC 64.14}***

8. PROPER OPERATION AND MAINTENANCE

All facilities and control systems shall be operated as efficiently as possible and maintained in good working order. A sufficient number of staff, adequately trained and knowledgeable in the operation of your facility shall be retained at all times and adequate laboratory controls and appropriate quality assurance procedures shall be provided to maintain compliance with the conditions of this permit. ***{See 40 CFR 122.41(e) and 567 IAC 64.7(7)"f"}***

9. PERMIT MODIFICATION, SUSPENSION OR REVOCATION

(a) This permit may be modified, suspended, or revoked and reissued for cause including but not limited to those specified in 567 IAC 64.3(11).

(b) This permit may be modified due to conditions or information on which this permit is based, including any new standard the department may adopt that would change the required effluent limits. ***{See 567 IAC 64.3(11)}***

(c) If a toxic pollutant is present in your discharge and more stringent standards for toxic pollutants are established under Section 307(a) of the Clean Water Act, this permit will be modified in accordance with the new standards. ***{See 40 CFR 122.62(a)(6) and 567 IAC 64.7(7)"g"}***

The filing of a request for a permit modification, revocation or suspension, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

10. DUTY TO REAPPLY AND PERMIT CONTINUATION

If you wish to continue to discharge after the expiration date of this permit, you must file a complete application for reissuance at least 180 days prior to the expiration date of this permit. If a timely and sufficient application is submitted, this permit will remain in effect until the Department makes a final determination on the permit application. ***{See 567 IAC 64.8(1) and Iowa Code 17A.18}***

11. DUTY TO COMPLY

You must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. Issuance of this permit does not relieve you of the responsibility to comply with all local, state and federal laws, ordinances, regulations or other legal requirements applying to the operation of your facility. ***{See 40 CFR 122.41(a) and 567 IAC 64.7(4)"e"}***

STANDARD CONDITIONS

12. DUTY TO MITIGATE

You shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment. ***{See 40 CFR 122.41(d) and 567 IAC 64.7(7)"i"}***

13. TWENTY-FOUR HOUR REPORTING

You shall report any noncompliance that may endanger human health or the environment, including, but not limited to, violations of maximum daily limits for any toxic pollutant (listed as toxic under 307(a)(1) of the Clean Water Act) or hazardous substance (as designated in 40 CFR Part 116 pursuant to 311 of the Clean Water Act). Information shall be provided orally within 24 hours from the time you become aware of the circumstances. A written submission that includes a description of noncompliance and its cause; the period of noncompliance including exact dates and times, whether the noncompliance has been corrected or the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent a reoccurrence of the noncompliance must be provided within 5 days of the occurrence. ***{See 567 IAC 63.12}***

14. OTHER NONCOMPLIANCE

You shall report all instances of noncompliance not reported under Condition #13 at the time monitoring reports are submitted. You shall give advance notice to the appropriate regional field office of the department of any planned activity which may result in noncompliance with permit requirements. ***{See 567 IAC 63.14}***

15. INSPECTION OF PREMISES, RECORDS, EQUIPMENT, METHODS AND DISCHARGES

You are required to permit authorized personnel to:

(a) Enter upon the premises where a regulated facility or activity is located or conducted or where records are kept under conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect, at reasonable times, any facilities, equipment, practices or operations regulated or required under this permit; and

(d) Sample or monitor, at reasonable times, to assure compliance or as otherwise authorized by the Clean Water Act.

16. FAILURE TO SUBMIT FEES

This permit may be revoked, in whole or in part, if the appropriate permit fees are not submitted within thirty (30) days of the date of notification that such fees are due. ***{See 567 IAC 64.16(1)}***

17. NEED TO HALT OR REDUCE ACTIVITY

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. ***{See 40 CFR 122.41(c) and 567 IAC 64.7(7)"j"}***

18. NOTICE OF CHANGED CONDITIONS

You are required to notify the director of any changes in existing conditions or information on which this permit is based. This includes, but is not limited to, the following:

(a) If your facility is a publicly owned treatment works (POTW) or otherwise may accept waste for treatment from an indirect discharger or industrial contributor (See 567 IAC 64.3(5) for further notice requirements).

(b) If your facility is a POTW and there is any substantial change in the volume or character of pollutants being introduced to the POTW by a source introducing pollutants into the POTW at the time of issuance of the permit. ***{See 40 CFR 122.42(b)}***

(c) As soon as you know or have reason to believe that any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in this permit. ***{See 40 CFR 122.42(a)}***

(d) If you have begun or will begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.

19. PLANNED CHANGES

The permittee shall give notice to the appropriate regional field office of the department 30 days prior to any planned physical alterations or additions to the permitted facility. Notice is required only when:

(a) Notice has not been given to any other section of the department. (Note: Facility expansions, production increases, or process modifications which may result in new or increased discharges of pollutants must be reported to the Director in advance. If such discharges will exceed effluent limitations, your report must include an application for a new permit. If any modification of, addition to, or construction of a disposal system is to be made, you must first obtain a written permit from this Department. In addition, no construction activity that will result in disturbance of one acre or more shall be initiated without first obtaining coverage under NPDES General Permit No. 2 for "Storm water discharge associated with construction activity.") ***{See 567 IAC 64.7(7)"a" and 64.2}***

(b) The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source as defined in 567 IAC 60.2;

(c) The alteration or addition results in a significant change in the permittee's sludge use or disposal practices; or

(d) The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in the permit. ***{See 567 IAC 63.13 and 63.14}***

20. USE OF CERTIFIED LABORATORIES

Analyses of wastewater, groundwater or sewage sludge that are required to be submitted to the department as a result of this permit must be performed by a laboratory certified by the State of Iowa. Routine, on-site monitoring for pH, temperature, dissolved oxygen, total residual chlorine and other pollutants that must be analyzed immediately upon sample collection, settleable solids, physical measurements, and operational monitoring tests specified in 567 IAC 63.3(4) are excluded from this requirement.

STANDARD CONDITIONS

21. BYPASSES

(a) Definition. "Bypass" means the diversion of waste streams from any portion of a treatment facility or collection system. A bypass does not include internal operational waste stream diversions that are part of the design of the treatment facility, maintenance diversions where redundancy is provided, diversions of wastewater from one point in a collection system to another point in a collection system, or wastewater backups into buildings that are caused in the building lateral or private sewer line.

(b) Prohibitions.

i. Bypasses from any portion of a treatment facility or from a sanitary sewer collection system designed to carry only sewage are prohibited.

ii. Bypass is prohibited and the department may not assess a civil penalty against a permittee for bypass if the permittee has complied with all of the following:

(1) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

(2) There were no feasible alternatives to the bypass such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(3) The permittee submitted notices as required by paragraph (d) of this section.

(c) The Director may approve an anticipated bypass after considering its adverse effects if the Director determines that it will meet the three conditions listed above and a request for bypass has been submitted to the Department in accordance with 567 IAC 63.6(2).

(d) Reporting bypasses. Bypasses shall be reported in accordance with 567 IAC 63.6.

22. UPSET PROVISION

(a) Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

(b) Effect of an upset. An upset constitutes an affirmative defense in an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph *"c"* of this condition are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

(c) Conditions necessary for demonstration of an upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate through properly signed operating logs or other relevant evidence that;

i. An upset occurred and that the permittee can identify the cause(s) of the upset;

ii. The permitted facility was at the time being properly operated;

iii. The permittee submitted notice of the upset to the Department in accordance with 567 IAC 63.6(3); and

iv. The permittee complied with any remedial measures required in accordance with 567 IAC 63.6(6)"*b*".

(d) Burden of Proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

23. PROPERTY RIGHTS

This permit does not convey any property rights of any sort or any exclusive privilege. ***{See 567 IAC 64.4(3)"b"}***

24. EFFECT OF A PERMIT

Compliance with a permit during its term constitutes compliance, for purposes of enforcement, with Sections 301, 302, 306, 307, 318, 403 and 405(a)-(b) of the Clean Water Act, and equivalent limitations and standards set out in 567 IAC Chapters 61 and 62. ***{See 567 IAC 64.4(3)"a"}***

25. SEVERABILITY

The provisions of this permit are severable and if any provision or application of any provision to any circumstance is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding.