

REPORT OF THE PRETREATMENT COMPLIANCE INSPECTION
AT

City of Burlington, Iowa
400 Washington Street
Burlington, Iowa 52601
NPDES Permit No.: IA0043079

BY
U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 7
ENFORCEMENT AND COMPLIANCE ASSURANCE DIVISION (ECAD)
WATER BRANCH / DRINKING WATER AND INSPECTIONS SECTION (WB/DWIS)

ON
May 16, 17, and 18, 2023

At the request of the Water Branch (WB), Enforcement and Compliance Assurance Division (ECAD), a pretreatment compliance inspection was conducted of the City Burlington's, Iowa approved Pretreatment Program on May 16, 17, and 18, 2023. To direct the inspection, a checklist was used that evaluates all important elements of the Pretreatment Program. A copy of the checklist is attached to this report (Attachment 1). The inspection consisted of a discussion and file review with the City's program staff. All other documentation not included as an attachment to this report has been submitted directly to the Region 7 Records Center.

PARTICIPANTS

City of Burlington

- Donald Fitting, Superintendent Wastewater Treatment Facility.
- Arlene Henry, Pretreatment Coordinator/Laboratory Supervisor.

U.S. Environmental Protection Agency (EPA), Region 7

- Naji J. Ahmad, Environmental Engineer, ECAD/WB/DWIS

INTRODUCTION

The City of Burlington, with a population of 23,731 (2021 census estimate), owns and operates an activated sludge wastewater treatment facility (WWTF) under the National Pollutant Discharge Elimination System (NPDES) permit number IA0043079, which will expire on January 31, 2027.

According to the NPDES permit, the treatment facility is designed to treat an average dry weather flow of 5.1 million gallon per day (MGD), an average wet weather flow of 10.85 MGD, a

maximum wet weather flow of 20.8 MGD, a design 5-day biochemical oxygen demand load of 9,100 pounds per day (lbs./day).

Treatment consists of screening, grit removal, primary clarification, activated sludge, secondary clarification, and chlorine disinfection. Solids handling includes a Dissolved Air Flotation unit, an anaerobic digester and belt filter presses.

The WWTF, currently, receives discharges from seven Significant Industrial Users (SIUs) that make up about 10% of its actual dry weather residential, commercial, and industrial influent of 4.5 million gallons per day (MGD). The WWTF discharges into the Mississippi River via outfall 001. All biosolids generated from the activated sludge are land applied. During 2022, the City generated 440 dry metric tons and land applied 371 dry metric tons.

The Burlington's Pretreatment Program was originally approved on October 6, 1983, and the City's Sewer Use Ordinance (SUO) Section 6 Chapter 97, was originally approved in 1993. The ordinance has the required and necessary elements to administer and enforce a pretreatment program. In addition, it allows the City to enforce and collect fines up to \$1,000.00 per day.

Currently, the City regulates Seven Significant Industrial Users (SIUs). All of which are Categorical industries (CIUs) and are located within the City limits. Federal Mogul, and Flint Cliffs Manufacturing are no discharge facilities.

Of the seven regulated industries, five are subject to the Metal Finishing standard 40 CFR 433. Those are: Federal Mogul, Winegard, CNH, CSI, and Flint Cliffs Manufacturing. Silgan Containers Manufacturing Corporation is a steel can manufacturer that is subject to the Coil Coating standard 40 CFR 465, Subpart D-Canmaking Subcategory. Diamond Vogel is a paint manufacturing facility, and it is subject to the Paint Formulating standard 40 CFR 446.

In 2022, the City dropped Riley Industrial Painting from the list of regulated SIUs because the company changed its process/operation that eliminated the need to discharge process water to the WWTF. Therefore, the City discontinued the industry permit on of July 1, 2022.

The current NPDES permit that was issued on February 1, 2022 included the requirement for the City to: 1) 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), and 2) submit a report of the evaluation by February 1, 2023. However, the Iowa Department of Natural Resources (IDNR) amended the permit to extend the submission date of local limits evaluation by six months based on delays in contractor availability. City personnel indicated that they are currently in an agreement with a contractor to achieve this task.

Dunring the 2018 Audit, the EPA issued a Notice of Potential Violation (NOPV) because the City of Burlington failed to evaluate its October 6, 1983, approved Pretreatment Program for compliance the Pretreatment Streamlining Rule published in the Federal Register on October 14, 2005 as required by the 2009 NPDES permit. The City was required by the 2009 NPDES permit

to complete the evaluation and submit to the IDNR a report containing the findings of the evaluation by December 31, 2010.

In addition, the 2015 NPDES permit also required the City to evaluate the adequacy of its local limits by January 1, 2016. The City, however, submitted its SUO and its local limits evaluation to the IDNR on May 31, 2017. The IDNR approved the evaluation on May 2, 2018. On September 4, 2018, the City adopted the SUO (No. 3450) to include the new limits and changes.

Current local limits listed in table 1 below are included under Section 97.07 of the SUO

Table 1, Burlington's Local Limits as listed under Section 97.07 of the Ordinance

0.019 mg/l or 0.80 lbs/d arsenic	9.55 mg/l or 400 lbs/d barium
9100 lbs/d BOD5 daily average	4.77 mg/l or 200 lbs/d boron
0.005 mg/l or 0.214 lbs/d cadmium	0.128 mg/l or 5.378 lbs/d chromium(T)
0.103 mg/l or 4.345 lbs/d copper	0.286 mg/l or 12.0 lbs/d cyanide
10.85 MGD flow, DAVG WW flow	17.98 mg/l or 753 lbs/d fluoride
4.77 mg/l or 200 lbs/d iron	0.043 mg/l or 1.807 lbs/d lead
1.6 mg/l or 67 lbs/d manganese	0.00019 mg/l or 0.008 lbs/d mercury
0.053 mg/l or 2.224 lbs/d nickel	8 mg/l or 335 lbs/d phosphorus
0.19 mg/l or 8.0 lbs/d selenium	0.0386 mg/l or 1.619 lbs/d silver
21800 lbs/d TSS daily average	0.336 mg/l or 14.09 lbs/d zinc
0.269 mg/l or 11.3 lbs/d TTOs	200 mg/l phenol
500 mg/l toluene	

FINIDNG AND OBSERVATIONS

1. According to City records, the last formal Industrial Waste Survey (IWS) was conducted in 2008. Dunring the 2018 Audit, the EPA issued a NOPV to the City because it failed to conduct an IWS to ensure that all industrial and commercial contributors are accounted for. I informed city personnel that they should conduct a survey to adequately update the list of industrial users.
2. EPA's 2006, 2011, and the 2018 Audits all determined that the local limits listed in the SUO are not enforceable based on the way the SUO reads. The SUO reads, "*The total wastewater discharge of all users in combination with domestic users shall not contain in excess of...*" As worded, these limits are essentially Maximum Allowable Headworks Loads (MAHLs) not local limits, which are based on Maximum Allowable Industrial Loads. The Pretreatment regulations require that the City compare local limits to Categorical standards and apply the most stringent. Worded this way, as MAHLs, the City is unable to do the comparison. Therefore, these limits are not enforceable under the pretreatment regulations. The current SUO was revised to include the 2018 local limits. The City, however, continues to use the same language and did not make any changes per EPA's findings.
3. The City continues to implement an adequate Hauled Waste Program. The City only accepts liquid wastes at the WWTF such as septic waste and, grease interceptor wastes from within its

jurisdiction. All wastes are accepted at the West lift station just outside the WWTF prior to the headworks. The City used to accept industrial waste from the Riley Industrial Painting facility; however, the industry no longer hauls waste to the WWTF.

The SUO requires all liquid waste haulers to have a permit and to be billed monthly for the volume discharged to cover treatment costs, sample handling and analysis costs. The City requires each hauler to grab a sample and complete a ticket indicating the source, type and date of the waste prior to accepting the waste. The City analyzes those samples randomly at the WWTF laboratory. Ms. Henry indicated that it has been a few years since they have analyzed a sample. A log sheet kept at the WWTF includes the date, the name of the hauler, and volume along with the ticket number.

4. Compliance monitoring is done for all regulated pollutants and the City laboratory is capable of analyzing conventional pollutants using procedures conforming to 40 CFR Part 136, except for pH. However, The City does not have a pH field meter. Therefore, they are not meeting the 15-minute hold time requirement, required by 40 CFR 136.3(e). In addition, according to city personnel, the city laboratory is also in need of sampler.
5. According to City personnel, the approved program requires compliance monitoring frequency of three times per year at each industry except for Silgan which is once per year. Records indicated that the City was able to meet this requirement for the past two calendar years.
6. Self-monitoring requirements are different for each industry depending on the industrial load, effluent nature and concentration, and compliance history. Self-monitoring frequencies required for each industry can vary from daily to semiannually. Each industry's permit contains specific sampling requirements as summarized in Table 3 below.

Table 2, Self-monitoring requirement

<u>Industry</u>	<u>Frequency</u>
CNH America LLC.	12/year
CSI Limited	4/year
Diamond Vogel Paint Co.	No Discharge
Federal Mogul	4 and 52/year
Flint Cliffs Manufacturing Corp	No Discharge
Silgan Containers Manufacturing	4/year
Winegard Company	12/year

The City allowed CIUs, that are subject to the Metal finishing standard 40 CFR Part 433, to prepare and implement a toxic organic management program (TOMP) in lieu of periodic monitoring. Industrial permits, however, included TTO sampling frequencies as follow: CSI is required to sample for TTOs semiannually, Winegard and CNH required to sample quarterly, and Federal Mogul is required to sample monthly.

I explained to Ms. Henry that a CIU can demonstrate compliance by adhering to the TOMP and submitting periodic certification statements attesting to the fact that no dumping of concentrated toxic organic pollutants has occurred and that the facility's TOMP is being implemented. I added, the TOMP should identify all potential sources from which toxic organic materials could enter the wastestream, and should also identify proposed control measures to eliminate the possibility.

In addition to those CIUs that are subject to the Metal finishing standard 40 CFR Part 433, Silgan, subject to the Coil Coating standard 40 CFR 465, Subpart D- Canmaking Subcategory, can monitor for oil and grease as an alternative to TTO monitoring. However, the Silgan did sample for TTOs in 2022.

7. All industries are required to submit monthly monitoring reports that include a compliance certification statement and a total toxic organics certification statement. Those monthly reports fulfill the semiannual reporting required by the categorical standard. Reports appeared to be adequate.
8. Inspection reports are filed in the industry's files. Inspections are performed annually by the Pretreatment Coordinator using checklist similar to Region 7 Industrial User Inspection Checklist. Inspection reports appeared adequate.
9. The City appeared to take proper enforcement by following its Enforcement Response Plan. The 2021 and 2022 annual reports indicated that in 2021, the City took one enforcement action, two in 2021. There were no industries in SNC.
10. During my file review, I observed that the industrial files do have the necessary documentation as recommended by the agency checklist except for self-monitoring as mentioned above. The files consist of the permit and permit renewal application, inspection reports, monitoring and self-monitoring reports, and enforcement documentation and correspondence between the City and industries. Records are kept for more than three years and are available for public review. The SUO has provisions for confidential business information and availability of records to the public. The City has a designated location to keep confidential business information. Records are kept as hard copies at the PC's office at the WWTF.

SLUDGE MANAGEMENT PROGRAM

One function of the Pretreatment Program is to protect the city's sludge from metals contamination. As part of this inspection, the most recent calendar year of sludge monitoring report was reviewed to determine the Pretreatment Program's effectiveness. Below is the table that compares the city's peak observed metals levels for 2022 against the statutory ceiling and the WPC's average level against the exceptional quality (EQ) sludge level specified by the 40 CFR Part 503 Sludge regulations.

Because the City sampled its sludge once per quarter, the monthly average is the maximum value observed. In 2022, the WWTF generated 440 dry metric tons of sludge and lad applied 371 dmt.

Table 3, 2022 Burlington's Sludge Quality (mg/kg)

Pollutant	503 Ceiling	503 EQ	Max	Mo. Avg.	Max/Ceiling	Avg./EQ
Arsenic (As)	75	41	5.7	5.7	7.60%	13.90%
Cadmium (Cd)	85	39	2	2	2.35%	5.13%
Copper (Cu)	4,300	1,500	360	360	8.37%	24.00%
Lead (Pb)	840	300	113	113	13.45%	37.67%
Mercury (Hg)	57	17	1.5	1.5	2.63%	8.82%
Molybdenum (Mo)	75	----	7.5		10.00%	
Nickel (Ni)	420	420	39	39	9.29%	9.29%
Selenium (Se)	100	36	4.6	4.6	4.60%	12.78%
Zinc (Zn)	7,500	2,800	740	740	9.87%	26.43%

The table above shows that the WWTF's sludge is well below both the ceiling level and EQ level for all metals.

CONCLUSION AND RECOMMENDATIONS

The U.S. Environmental Protection Agency - Region 7 conducted pretreatment audits in 2006, 2011 and 2018, and found several issues with the city's implementation of its Pretreatment Program. Based on my findings during this PCI, some of those issues continue to exist and the City continues to fail to address those issues. However, overall, the City is doing an acceptable job implementing the Pretreatment Program as it stands. The City should abide by items below.

1. The City should revise paragraph l of Section 97.07 in the SUO, so the current local limits can be enforceable.
2. The City should conduct a comprehensive Industrial Waste Survey to ensure that all industrial and commercial contributors are accounted for. The City should also conduct a thorough review of all completed forms. In addition, the City should conduct an inspection of those facilities that might have the potential of being classified as significant industrial users. All IWSs should be documented and filed.
3. The City should purchase a pH field meter in order to meet the 15-minute holding time required by 40 CFR 136. The City should also purchase e field sampler.
4. The City has an aggressive monitoring program which allows the City to make reliable compliance determinations. The City should continue review all monitoring results and continue take more enforcement actions against SIUs that continue to have permit violations.
5. Ms. Henery is the only staff member familiar with all aspects of the City's Pretreatment

Program. The City should encourage cross training of its staff so that other staff members become more familiar with the Program.

6. In order to continue verifying compliance with applicable requirements, the City should continue to conduct thorough inspections of its industrial facilities. Inspections should consist of a facility walkthrough, records review, and an evaluation of the need for a Spill Prevention Plan and/or Slug Control Plan if applicable. In addition, the City should complete all of the items in the industrial user inspection checklist during the interview with industry staff.

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Nicole Moran
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ATTACHMENTS

1. Audit Checklist