

## **UTILITY COMMITTEE Meeting Notice**

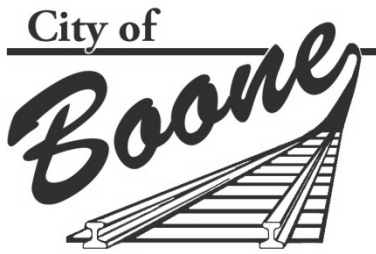
**Governing Body:** Utility Committee of Boone, Iowa

**Date of Meeting:** October 10, 2023

**Time of Meeting:** 4:30 P.M.

**Place of Meeting:** City Hall Council Chambers

1. Call Meeting to Order.
2. Approve Minutes from the September 12, 2023 Meeting.
3. Review/Discuss SEH Memo Regarding TdVib Pretreatment Application.
4. Discuss Total Tri-Halo Methane (THM) at the Water Treatment Plant.
5. Review August 2023 US Water Monthly Report.
6. Meter Upgrade Report.
  - a. September
7. Stop Box Repair/Shut Off Report.
  - a. September
8. Other Business.
9. Adjourn.



## UTILITY COMMITTEE Meeting Notice

**Governing Body:** Utility Committee of Boone, Iowa

**Date of Meeting:** September 12, 2023

**Time of Meeting:** 4:30 P.M.

**Place of Meeting:** City Hall Council Chambers

1. Call Meeting to Order.

*Present: Moorman, Stines, Angstrom*

*Others present: Skare, Robbins, Andrews, Majors, Vote, Aaron Voss, JD Roberts, Laurie Twitchell, Lora Olerich, Turbes*

2. Approve Minutes from the August 8, 2023, Meeting.

*Angstrom moved; Stines seconded to approve the minutes of the August 8, 2023, Utility Meeting. Ayes: all those in attendance. Nays: none.*

3. Discuss Solution for Phase 5 I & I Penalty Charges and Compliance. – Lora Olerich.

*Lora Olerich presented photographs of her downtown business property and correspondence with City officials in regard to pumping water from her building to the City street to comply with the Inflow and Infiltration Program. Olerich advised that her plumber told her there were no options other than to run her sump pump to the street because the walls and floors are thick concrete. Olerich feels this puts her business in jeopardy for lawsuits or her basement flooding. Olerich requested a written statement from the City to accept liability against any potential lawsuits or if her basement were to flood, or a variance excluding the downtown buildings from the program. Olerich also requested a refund on the non-compliance fees she has paid. Robbins advised that the City will not provide a written statement accepting liability.*

*Andrews stated he met with Olerich and the solution he found was to penetrate the floor, come through the wall, and dump any water into the gutter downspout; and this was not acceptable to Olerich. Andrews also suggested using heat tape in the winter.*

*Angstrom stated that he does not see sump pumps freezing in the winter and the heat tape would help. Once the water gets to the City street, it becomes the City's liability and for Olerich to do her due diligence to get any water away from her building and to the road.*

*Moorman suggested core drilling through the concrete close to the drain line and running a pipe to the street with heat tape on it. Moorman and Andrews agreed that this is not an easy fix and will take work. The Committee suggested using Kruck Plumbing or Pritchard Bros Plumbing as they both have core drills.*

*The Committee also advised that they would not be able to provide a variance excluding the downtown buildings from the program.*

4. Discuss HSC/Stairs Conflict. – UV Project.

*Laurie Twitchell, Project Manager with Fox Strand, advised that the contractor placed the hydraulic system incorrectly and not according to the approved plans; not leaving enough clearance for the metal stairs. Twitchell presented two (2) options from the contractor. Option one (1) is to run the railing down the middle of the stairs. Option two (2) is to rotate the hydraulic system around.*

*The Committee directed Twitchell to advise the contractor that the hydraulic system should be placed where it belongs according to plans and to move the hoses as necessary.*

5. Review July 2023 US Water Monthly Report.

*The Committee reviewed the monthly US Water and Wastewater Operations and Maintenance Report for July 2023.*

6. Meter Upgrade Report.

a. August

*Andrews reported that in August staff finished sixteen (16) meter upgrades, three (3) meters were installed for new service, and thirteen (13) meters were changed out due to other reasons.*

*Andrews is preparing to install half of the one hundred twenty-eight new meters at the new 22<sup>nd</sup> and Linn Street complex.*

*Andrews stated he has filled one (1) street laborer position internally and is working on filling another position.*

7. Stop Box Repair/Shut Off Report.

a. August

*Vote stated that in August, \$6,218.65 was collected during shut-offs; thirty four (34) accounts qualified to be on the shut off list. Six (6) delinquent bills totaling \$2,537.55 were certified August 29, 2023, and if left unpaid, nine (9) bills totaling \$4,273.50 are scheduled to be certified on September 22, 2023. Vote also reported that there are one hundred twenty-two (122) stop boxes in need of repair, fifty-three (53) of which have lead service lines.*

*Andrews advised the Annual Leak Survey showed no city leak issues. There was one (1) leak issue at the Park and seven (7) or eight (8) personal service leak issues.*

8. Other Business.

9. Adjourn.

*5:51 p.m.*



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## MEMORANDUM

TO: City of Boone, IA  
USW Utility Group

FROM: Thad Webb  
Perry Gjersvik

DATE: October 3, 2023

RE: Critical Materials Recycling (TdVib) REVISED Wastewater Contribution Permit  
Application  
SEH No. 173872 14.00

SEH has reviewed the REVISED Wastewater Contribution Permit Application (Attachment A) submitted by Critical Materials Recycling (TdVib).

Based on our evaluation of the information provided in the application it appears that metals should be undetectable in the pilot scale discharge from the facility. However, that may or may not be the case when the facility scales up to full production, depending on what existing metal discharges are in the collection system from other users as well as from this discharge.

We would advise that the City accept the pilot scale discharge with the proposed level of treatment. After some period of data collection on the actual discharge from TdVib and at the WWTF, an updated application to scale up the flows could then be more fully vetted.

A couple suggestions for special conditions for the discharge permit are:

1. A sample point capturing all discharged process flows prior to dilution with sanitary wastewater shall be provided.
2. A water or wastewater flowmeter measuring process flows discharged to the sewer collection system shall be provided.
3. Large batch discharges of process flows when the facility is scaled up to full production should be prohibited.
4. All costs for additional testing for metals associated with this permit at the Boone WWTF will be borne by the industry

tdw

### Enclosures

\\sp-pz1.sehinc.com\pzprojects1\ael\boone\173872\task 6-tdvib industrial assist\revised application tech memo 10-3-2023.docx

Engineers | Architects | Planners | Scientists

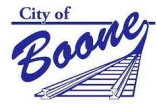
Short Elliott Hendrickson Inc., 400 Locust Avenue, Suite 2, Charlottesville, VA 22902-4858

434.202.3780 | 888.908.8166 fax | [sehinc.com](http://sehinc.com)

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**City of Boone, Iowa**  
**ENVIRONMENTAL SERVICES**  
**WASTEWATER CONTRIBUTION PERMIT APPLICATION**



<https://www.boonegov.com/>

Note to Signing Official: In accordance with Title 40 of the Code of Federal Regulations Part 403 Section 403.14, information and data provided in this permit application, which identifies the nature and frequency of discharge, shall be available to the public without restriction. Requests for confidential treatment of other information shall be governed by procedures specified in 40 CFR Part 2.

**SECTION A – GENERAL INFORMATION**

**Facility Name** Critical Materials Recycling

**Operator Name** Daniel Bina

**Is The operator identified above the owner of the facility?**  Yes  No **If no, provide the name and address of the owner and submit a copy of the contract and /or other documents indicating the operator’s scope of responsibility for the facility.**  
 Scott Beckwith

**Facility Address**

**Street** 2121 Industrial Park Road      **City** Boone      **State** IA      **Zip** 50036

**Mailing Address**

**Street** 2121 Industrial Park Road      **City** Boone      **State** IA      **Zip** 50036

**Designated signatory authority of the facility. Attach additional information for each authorized representative:**

**Name** Daniel Bina      **Title** CEO

**Address** 2121 Industrial Park Road      **City** Boone      **State** IA      **Zip** 50036

**Phone** 515-310-1012      **Fax**

**Email Address** dan.bina@cmr-us.com

**Designated facility contact:**      CEO

**Name** Daniel Bina      **Title**

**Phone** 515-310-1012      **Fax**      **Email** dan.bina@cmr-us.com

**SECTION B – BUSINESS ACTIVITY**

**1. If your facility employs or will be employing processes in any of the industrial categories or business activities listed below (regardless of whether they generate wastewater, waste, sludge or hazardous wastes) place a check beside the category of business activity (check all that apply)**

**Industrial Categories\***

<input type="checkbox"/> Airport Deicing	<input type="checkbox"/> Aluminum Forming	<input type="checkbox"/> Asbestos Manufacturing	<input type="checkbox"/> Battery Manufacturing
<input type="checkbox"/> Builders Paper and Board Mills	<input type="checkbox"/> Carbon Black Manufacturing	<input type="checkbox"/> Cement Manufacturing	<input type="checkbox"/> Centralized Waste Treatment
<input type="checkbox"/> Chemical Formulators and Packagers	<input type="checkbox"/> Coil Coating	<input type="checkbox"/> Copper Forming	<input type="checkbox"/> Dairy Products Processing
<input type="checkbox"/> Electrical and Electronic Components	<input type="checkbox"/> Electroplating	<input type="checkbox"/> Explosives Manufacturing	<input type="checkbox"/> Feedlots
<input type="checkbox"/> Ferro Alloy Manufacturing	<input type="checkbox"/> Fertilizer Manufacturing	<input type="checkbox"/> Canned & Preserved Fruits and Vegetables Processing	<input type="checkbox"/> Glass Manufacturing
<input type="checkbox"/> Grain Mills	<input type="checkbox"/> Gum and Wood Chemicals Manufacturing	<input type="checkbox"/> Hospitals	<input type="checkbox"/> Industrial Laundries
<input type="checkbox"/> Ink Formulating	<input checked="" type="checkbox"/> Inorganic Chemicals Manufacturing	<input type="checkbox"/> Iron & Steel Manufacturing	<input type="checkbox"/> Landfills or Incinerators

<input type="checkbox"/> Leather Tanning and Finishing	<input type="checkbox"/> Meat Products	<input type="checkbox"/> Metal Finishing	<input type="checkbox"/> Metal Molding and Casting
<input type="checkbox"/> Metal Products & Machinery	<input type="checkbox"/> Mineral Mining & Processing	<input type="checkbox"/> Nonferrous Metals Forming & Metal Powders	<input type="checkbox"/> Nonferrous Metals Manufacturing
<input type="checkbox"/> Ore Mining and Dressing	<input type="checkbox"/> Organic Chemicals, Plastics, & Synthetic Fibers	<input type="checkbox"/> Paint Formulating	<input type="checkbox"/> Paving & Roofing Materials
<input type="checkbox"/> Petroleum Refining	<input type="checkbox"/> Pharmaceutical Manufacturing	<input type="checkbox"/> Phosphate Manufacturing	<input type="checkbox"/> Photographic Processing
<input type="checkbox"/> Plastics Molding and Forming	<input type="checkbox"/> Porcelain Enameling	<input type="checkbox"/> Pulp, Paper & Paper Board	<input type="checkbox"/> Rubber Processing
<input type="checkbox"/> Canned & Preserved Seafood Processing	<input type="checkbox"/> Soaps and Detergents	<input type="checkbox"/> Steam Electric Power Generating	<input type="checkbox"/> Sugar Processing
<input type="checkbox"/> Textile Mills	<input type="checkbox"/> Timber Products Processing	<input type="checkbox"/> Transportation Equipment Cleaning	<input type="checkbox"/> Urban Stormwater

**\*Environmental Protection Agency (EPA) Categorical Pretreatment standards may apply to facilities with the processes listed above. These facilities are termed "Categorical Users"**

**Give a brief description of all operations at this facility including primary products or services (attach additional sheets if necessary)**

CMR, founded 2022, is commercializing the acid-free dissolution recycling technology developed at Ames National Laboratory. CMR recovers rare earth elements to produce rare earth oxide.

**Indicate applicable Standard Industrial Classification (SIC) for all processes: (If more than one applies, list all)**

A 2819	B	C	D
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**Product Volume Estimate**

Product Produced	Past Calendar Year (Average Daily Units)	Amounts Per Day (Daily Units)		
		Maximum	Average	Maximum
Rare earth oxide	N/A (not in production)			

**SECTION C – WATER SUPPLY**

**Water Sources (check all that apply)**

<input type="checkbox"/> Private Well	<input type="checkbox"/> Surface Water	<input checked="" type="checkbox"/> Municipal Water (specify City)	<input type="checkbox"/> Other
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Name on water bill TdVib LLC

Street Address on bill 2121 Industrial Park Road

Water Service Account Number 0341460002

**List average water usage on premises (new facilities may estimate usage)**

Type	Average Water Usage (gpd)	Indicate Estimated or Measured
A. Contact cooling water		
B. Non-contact cooling water		
C. Boiler feed	8	
D. Process	640	Estimated
E. Sanitary		

Type	Average Water Usage (gpd)	Indicate Estimated or Measured
F. Air pollution control		
G. Contained in product		
H. Plant and equipment wash down		
I. Irrigation and equipment wash		
J. Other (specify)		
<b>Total of A-J</b>	648	

**Section D – Sewer Information**

**FOR EXISTING BUSINESSES ONLY**

Is the building presently connected to the public sanitary sewer system?	<input checked="" type="checkbox"/> Yes	Sanitary sewer account number <u>0341460002</u>
	<input type="checkbox"/> No	Have you applied for a sanitary sewer connection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

**FOR NEW BUSINESSES ONLY**

Will you be occupying an existing vacant building (such as in an industrial park)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Have you applied for a building permit if a new facility will be constructed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Will you be connected to the public sanitary sewer system?	<input type="checkbox"/> Yes	<input type="checkbox"/> No

List the size, descriptive location, and flow of each facility sewer line which connects to the City's sewer system. (If needed, attach additional information on another sheet)

Sewer Size	Descriptive Location of Sewer Connection or Discharge Point	Average Flow (GPD)

**SECTION E – WASTEWATER DISCHARGE INFORMATION**

Does (or will) this facility discharge any wastewater other than from restrooms to the city sewer?  Yes  No  
 If yes, complete the remainder of the application. If no, skip to Section I – Spill Prevention

Provide the following information on wastewater flow rate (new facilities may estimate)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Hours/Day of discharge (e.g., 8hrs/day)	8	8	8	8	8		
Hours of Discharge (e.g., 9 am to 5 pm)	8am-4pm	8am-4pm	8am-4pm	8am-4pm	8am-4pm		

Peak per minute 30 (GPM)      Max. daily flow rate 640 GPD      Annual daily average 640 GPD

Are there batch discharges?  Yes  No (If yes, please fill in A–E below)

A. Number of batch discharges per day 3      B. Average discharge per batch (gallons) 215

C. Time of batch discharges: Day(s) of week Monday - Friday      Time of day 9 am, 11am, 3pm

D. Flow rate (gpm) 30      E. Percent of total facility discharge

**Schematic Flow Diagram:** For each major activity in which wastewater is or will be generated, draw a diagram of the flow of materials, products, water, and wastewater from the start of the activity to its completion, showing all unit processes. Indicate which processes use water and generate wastestreams. Include the average daily volume and maximum daily volume of each wastestream (new facilities may estimate). If estimates are used for flow data, this must be indicated. Number each unit process having wastewater discharges to the public sewer. Use these numbers when showing the unit processes in the building layout in Section H.

See Attachment 1. Values are estimates.

**Facilities that checked activities in Section B (1) may be considered a Categorical Industrial User and should proceed to question 6 in section E.**

**For Non-Categorical Users Only:** List an average wastewater discharge, maximum discharge, and type of discharge (batch, continuous, or both), for each plant process. Include the reference number from the process schematic that corresponds to each process. (New facilities should provide estimates for each discharge)

No.	Process Description	Avg Flow (GPD)	Maximum Flow (GPD)	Type of Discharge

**Answer questions 6 and 7 only if you are subject to categorical pretreatment standards**

**6. For Categorical Users:** Provide the totals of wastewater discharge flows of each of your processes or proposed processes. Include the reference number from the process schematic that corresponds to each process. (New facilities should provide estimates for each discharge)

No.	Regulated Process	Average Flow (GPD)	Maximum Flow (GPD)	Type of Discharge

No.	Unregulated Process	Average Flow (GPD)	Maximum Flow (GPD)	Type of Discharge
1	Stream 1 pretreatment discharge	480	480	Batch (2/day, 9 & 11am)
2	Stream 2 pretreatment discharge	160	160	Batch (1/day, 3 pm)

**7. For Categorical users subject to Total Toxic Organic (TTO) requirements, please provide the following information**

- A. Does (or will) this facility use any of the toxic organics that are listed under the TTO standard of the applicable categorical pretreatment standards published by EPA?  Yes  No
- B. Has a baseline monitoring report (BMR) been submitted which contains TTO information?  Yes  No
- C. Has a toxic organics management plan (TOMP) been developed?  Yes  No



8. Do you have, or plan to have, automatic sampling equipment or continuous wastewater flow metering equipment at this facility?

Currently Flow Metering  Yes  No  NA  
 Sampling Equipment  Yes  No  NA

Planned Flow Metering  Yes  No  NA  
 Sampling Equipment  Yes  No  NA

If so, please indicate the present or future location of this equipment on the sewer schematic and describe the equipment below

9. Are any process changes or expansions planned during the next three years that could alter wastewater volumes or characteristics? Consider production processes as well as air or water pollution treatment processes that may affect the discharge.  Yes  No (If no, continue to question 11)

10. Briefly describe these changes and their effects on the wastewater volume and characteristics:  
 (Attach additional sheets if needed)  
 We are anticipating a scale-up process over the next 3 years. Streams 1 and 2 contents/concentrations would remain the same, however the flows could increase to 2,250 gpd and 800 gpd respectively. Beyond that, the maximum flows could increase to 15,750 gpd and 5,600 gpd, respectively.

11. Are any materials or water reclamation systems in use or planned?  Yes  No (If no, continue to section F)

12. Briefly describe recovery process, substance recovered, percent recovered, and the concentration in the spent solution. Submit a flow diagram for each process (Attach additional sheets if needed)  
 The pretreatment of the waste raises the pH of the solution, causing material to precipitate. This material is collected prior to solution discharge.

### SECTION F – CHARACTERISTICS OF DISCHARGE

**Priority Pollutant Information:** Please indicate by selecting from the check boxes below for each listed chemical whether it is "Suspected to be Absent," "Known to be Absent," "Suspected to be Present," or "Known to be Present" in your manufacturing or service activity or generated as a by-product. Some compounds are known by other names. Compounds with an asterisk (\*) indicate possible synonym listing- See Priority Pollutant synonym list in Appendix A.

Item No.	Chemical Compound	Suspected Absent	Known Absent	Suspected Present	Known Present	Item No.	Chemical Compound	Suspected Absent	Known Absent	Suspected Present	Known Present
1.	Asbestos (fibrous)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	66.	1,2-dichloroethane*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Cyanide (total)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	67.	1,1-dichloroethene*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	Antimony (total)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	68.	Trans-1,2-dichloroethene*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Arsenic (total)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	69.	2,4-dichlorophenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Beryllium (total)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	70.	1,2-dichloropropane*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Cadmium (total)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	71.	(cis & trans) 1,3-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Chromium (total)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	72.	Dieldrin	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.	Copper (total)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	73.	Diethyl phthalate*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9.	Lead (total)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	74.	2,4-dimethylphenol*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10.	Mercury (total)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	75.	Dimethyl phthalate	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11.	Nickel (total)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	76.	Di-n-butyl phthalate	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12.	Selenium (total)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	77.	Di-n-octyl phthalate*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	Silver (total)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	78.	4,6-dinitro-2-methylphenol*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	Thallium (total)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	79.	2,4-dinitrophenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15.	Zinc (total)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	80.	2,4-dinitrotoluene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16.	Acenaphthene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	81.	2,6-dinitrotoluene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17.	Acenaphthylene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	82.	1,2-diphenylhydrazine*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Item No.	Chemical Compound	Suspected Absent	Known Absent	Suspected Present	Known Present	Item No.	Chemical Compound	Suspected Absent	Known Absent	Suspected Present	Known Present
18.	Acrolein	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	83.	Endosulfan 1*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19.	Acrylonitrile	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	84.	Endosulfan 11*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20.	Aldrin	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	85.	Endosulfan sulfate	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21.	Anthracene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	86.	Endrin	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22.	Benzene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	87.	Endrin aldehyde	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23.	Benzidine	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	88.	Ethylbenzene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24.	Benzo (a) anthracene*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	89.	Fluoranthene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25.	Benzo (a) pyrene*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	90.	Fluorene*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26.	Benzo (b) fluoranthene*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	91.	Heptachlor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27.	Benzo (g,h,i) perylene*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	92.	Heptachlor epoxide	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28.	Benzo (k) fluoranthene*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	93.	Hexachlorobenzene*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29.	a-BHC (alpha)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	94.	Hexachlorobutadiene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30.	b-BHC (beta)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	95.	Hexachlorocyclopentadiene*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31.	d-BHC (delta)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	96.	Hexachloroethane*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32.	g-BHC (gamma)*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	97.	Indeno (1,2,3-cd) pyrene*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33.	Bis (2-chloroethyl) ether*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	98.	Isophorone*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34.	Bis (2-chloroethoxy)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	99.	Methylene chloride*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35.	Bis (2-chloroisopropyl)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100.	Naphthalene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36.	Bis (chloromethyl) ether*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	101.	Nitrobenzene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37.	Bis (2-ethylhexyl)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	102.	2-nitrophenol*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38.	Bromodichloromethane*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	103.	4-nitrophenol*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39.	Bromoform*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	104.	N-nitrosodimethylamine*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40.	Bromomethane*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	105.	N-nitroso-di-n-propylamine*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41.	4-bromophenylphenyl	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	106.	N-nitrosodiphenylamine*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42.	Butylbenzyl phthalate	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	107.	PCB-1016*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43.	Carbon tetrachloride*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	108.	PCB-1221*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44.	Chlordane	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	109.	PCB-1232*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45.	4-chloro-3-	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	110.	PCB-1242*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46.	Chlorobenzene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	111.	PCB-1248*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47.	Chloroethane*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	112.	PCB-1254*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48.	2-chloroethylvinyl ether	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	113.	PCB-1260*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49.	Chloroform*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	114.	Pentachlorophenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50.	Chloromethane*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	115.	Phenanthrene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51.	2-chloronaphthalene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	116.	Phenol	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52.	2-chlorophenol*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	117.	Pyrene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53.	4-chlorophenylphenyl ether	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	118.	2,3,7,8-tetrachlorodibenzo-p-dioxin*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54.	Chrysene*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	119.	1,1,2,2-tetrachloroethane*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55.	4,4 - DDD*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	120.	Tetrachloroethene*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56.	4,4 - DDE*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	121.	Toluene*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57.	4,4 - DDT*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	122.	Toxaphene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
58.	Dibenzo (a,h)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	123.	1,2,4-trichlorobenzene	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
59.	Dibromochloromethane*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	124.	1,1,1-trichloroethane*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
60.	1,2-dichlorobenzene*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	125.	1,1,2-trichloroethane*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



<input type="checkbox"/> Other chemical treatment (list											
<input type="checkbox"/> Other (list type)											
Describe the pollutant loadings, flow rates, design capacity, physical size, and operating procedures for each treatment facility checked above (attach additional sheets if necessary) Ion exchange and pH neutralization via calcium carbonate and calcium hydroxide will be performed in a mix tank to precipitate and filter contents. A pH meter will confirm the desired pH is reached. At that time, the solution will be filtered to remove solids and discharged.											
Attach a process flow diagram for each existing treatment system. Include process equipment, by-products, by-product disposal method, waste and by-product volumes, and design and operating conditions.											
Describe any changes in treatment or disposal methods planned or under construction for the wastewater discharge to the City of Boone sanitary sewer. Please include estimated completion dates The system described above is in it's final R&D. Should changes be made to the process described above, the only difference would be the filtration technique, the chemical properties of the discharge should not become more concentrated.											
Do you have a wastewater treatment operator? <input type="checkbox"/> Yes (If yes answer question 7 below) <input checked="" type="checkbox"/> No											
7. Name of Operator				Title							
Phone				Email Address							
Specify Operating Hours			Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday		
<input type="checkbox"/> Full time employee											
<input type="checkbox"/> Part time employee											
Do you have a written manual on the correct operation of your treatment equipment? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (In-progress dependent on R&D results)											
Do you have a written maintenance schedule for your treatment equipment? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											
<b>SECTION H – FACILITY OPERATIONAL CHARACTERISTICS</b>											
<b>Shift Information</b>											
		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday			
Work days		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
Shifts per work day		1	1	1	1	1					
Employees per shift	1 <sup>st</sup>	8	8	8	8	8					
	2 <sup>nd</sup>										
	3 <sup>rd</sup>										
Shift start and end time	1 <sup>st</sup>	8am-4pm	8am-4pm	8am-4pm	8am-4pm	8am-4pm					
	2 <sup>nd</sup>										
	3 <sup>rd</sup>										
Is business activity <input checked="" type="checkbox"/> Continuous through the year <input type="checkbox"/> Seasonal                      If seasonal, indicate below the months of the year during which the business activity occurs											
January	February	March	April	May	June	July	August	September	October	November	December
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments											
Is discharge <input checked="" type="checkbox"/> Continuous through the year <input type="checkbox"/> Seasonal                      If seasonal, indicate below the months of the year during which the business activity occurs											
January	February	March	April	May	June	July	August	September	October	November	December
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments											
Does operation shut down for vacation, maintenance, or any other <input checked="" type="checkbox"/> Yes (if yes indicate below reasons) <input type="checkbox"/>											
Operations shut down for federal holidays.											



If you have chemical storage containers, tanks, vessels, etc. in the manufacturing area, could an accidental spill lead to a discharge to (check all that apply)

- An onsite disposal system                       Storm drain                       N/A, No possible discharge to any route  
 Sanitary sewer system (e.g. through a floor drain)                       To ground                       Other

Do you have an accidental spill prevention plan, Slug Control Plan, or SPCC plan to prevent spills of chemicals or sludge discharges from entering the wastewater or storm collection systems?

Yes (please enclose a copies with application)- Slug Control Plan required within 90 days of issuance of permit

No - Slug Control Plan required within 90 days of issuance of permit

Please describe below any previous spill events (within last three years) and remedial measures taken to prevent their reoccurrence

N/A

### SECTION J – NON-DISCHARGED WASTES

Are any waste liquids or sludge materials generated and not disposed of in the sanitary sewer system?

- Yes (Please describe below)                       No (Please continue to section K)

Waste Generated	Quantity (Per Year)	Disposal Method

Indicate which wastes identified above are disposed of at an off-site facility and which are disposed of on-site

If any of your wastes are sent to an off-site centralized waste treatment facility, identify the waste and the facility

If an outside firm removes any of the above listed wastes, state the name(s) and address(es) of all waste haulers

Name	Address	Permit No.

Have you been issued any Federal, State, or local environmental permits?     Yes (please list permits below)     No

### SECTION K – AUTHORIZED SIGNATURES

#### Compliance Certification

Are all applicable Federal, State, or local pretreatment standards and requirements being met on a consistent basis?

- Yes     No (if no answer question below)     Not Yet Discharging

What additional operations and maintenance procedures are being considered to bring the facility into compliance? Also, list additional treatment technology or practice being considered in order to bring the facility into compliance



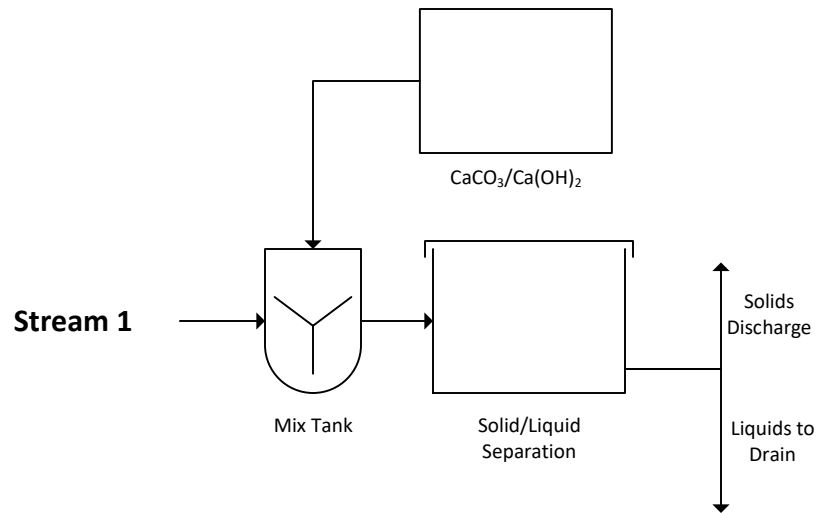
**APPENDIX A – PRIORITY POLLUTANT SYNONYM LISTING**

Item	Chemical Compound	Synonym	Item	Chemical Compound	Synonym
1	Asbestos	Actinolite, Amosite, Antophyllite, Chrysotile, Crocidolite, Tremolite	35	bis(2-chloroisopropyl) ether	2,2'-Dichloroisopropyl ether
2	Cyanide	Hydrogen Cyanide, Potassium Cyanide, Sodium Cyanide	36	bis(chloromethyl)ether	(sym)Dichloromethyl ether
3	Antimony	Stibium	37	bis(2-ethylhexyl) phthalate	2,2'-Diethylhexyl phthalate
4	Arsenic	Arsenia	38	Bromodichloromethane	Dichlorobromomethane
5	Beryllium	Glucinium	39	Bromoform	Tribromomethane
9	Lead	Plumbum	40	Bromomethane	Methyl bromide
10	Mercury	Hydrargyrum; Liquid Silver, Quick Silver	43	carbon tetrachloride	Tetrachloromethane
13	Silver	Argentum	45	4-chloro-3-methylphenol	Para-chloro-meta-cresol
16	Acenaphthene	1,2-Dihydroacenoaphthylene; Periethylenenaphthalene; 1,8-Ethylenenaphthalene	47	chloromethane	Ethylchloride
18	Acrolein	2-Propenal; Propenal; Allyl aldehyde, Acraldehyde; Acrylaldehyde, Acrylic aldehyde, Aqualin	49	chloroform	Trichloromethane
19	Acrylonitrile	2-Propenenitrile; Propenenitrile, Vinyl cyanide, Cyanoethylene; Acritet; Fumigrain; Ventox; Acrylonitrile monomer	50	chloromethane	Methyl chloride
20	Aldrin	1,2,3,4,10, 10-Hexachloro-1,4,4a,5,8,8a-Hexahydro-1,4:5,8-Dimethanonaphthalene; HHDN; Compound 118; Octalene	52	2-chlorophenol	Para-chlorophenol
22	Benzene	Benzol; Cyclohexatriene, Phenyl hydride	54	Chrysene	1,2-Benzphenanthrene
23	Benzidine	4,4'-Bianiline; 4,4'-Biphenyldiamine; 1,1'-Biphenyl-4,4'-diamine; 4,4'-Diaminobiphenyl; p-Diaminodiphenyl	55	4,4'-DDD	Dichlorodipenyldichlorethane, p,p'-tde, Tetrachlorodiphenylethane
24	Benzo(a)anthracene	1,2-Benzanthracene, 2,3-Benzphenanthrene	56	4,4'-DDE	Dicholodipenyldichloroethylene
25	Benzo(a)pyrene	3,4-Benzopyrene	57	4,4'-DDT	Dichlorodiphenyltrichloroethane
26	Benzo(b)fluoranthene	2,3-Benzfluoranthen 2,3-Benzofluoranthene 3,4-Benz(e)acephenathrylene 3,4-Benzfluoranthene 3,4-Benzofluoranthene Benz(e)fluoranthene	58	Dibenzo(a,h)anthracene	1,2,5,6-dibenzanthracene
27	Benzo(g,h,i)perylene	1,12-Benzoperylene	59	Dibromochloromethane	Chlorodibromomethane
28	Benzo(k)fluoranthene	11,12-Benzofluoranthene	60	1,2-dichlorobenzene	Ortho-dichlorobenzene
32	g-BHC (gamma)	Lindane	61	1,2-dichlorobenzene	Meta-dichlorobenzene
33	bis(2-chlorethoxl) methane	2,2'-Dichlorethyl ether	62	1,4-dichlorobenzene	Para-dichlorobenzene

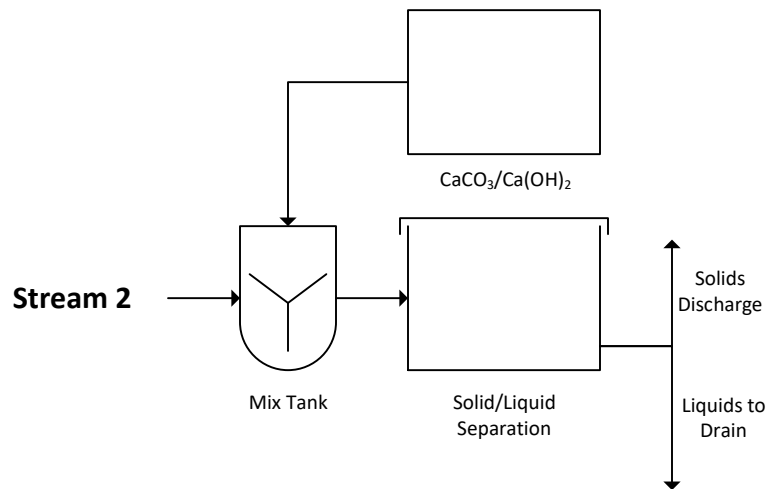


**APPENDIX A – PRIORITY POLLUTANT SYNONYM LISTING**

Item	Chemical Compound	Synonym	Item	Chemical Compound	Synonym
64	Dichlorodifluoromethane	Difluorodichloromethane, Fluorocarbon-12	102	2-nitrophenyl	Para-nitrophenyl
65	1,1-dichloroethane	Ethylidene chloride	103	4-nitrophenyl	Ortho-nitrophenyl
66	1,2-dichloroethane	Ethylene chloride, Ethylene dichloride	104	N-nitrosodimethylamine	Dimethylnitrosoamine
67	1,1-dichloroethane	1,1-Dichloroethylene	105	N-nitrosodi-n-propylamine	n-Nitro-di-n-propylamine
68	trans-1,2-dichloroethene	Acetylene dichloride	106	N-nitrosodipheynylamine	Diphenyl-nitrosoamine
70	1,2-dichloropropane	Propylene dichloride	107	PCP-1018	Arochlor-1018
71	(cis & trans) 1,3-dichloropropane	(cis & trans) 1,3-Dichloropropylene	108	PCB-1221	Arochlor-1221
73	Diethylphthalate	Ethyl phthalate	109	PCB-1232	Arochlor-1232
74	2,4-dimethylphenol	2,4-zylenol	110	PCB-1242	Arochlor-1242
77	di-n-octyl phthalate	Di(2-ethylhexyl)phthalate	111	PCB-1248	Arochlor-1248
78	4,6-dinitro-2-methylphenol	4,6-Dinitro-octyl-cresol	112	PCB-1254	Arochlor-1254
82	1,2-diphenylhydrazine	Hydrazobenzene	113	PCB-1260	Arochlor-1260
83	Endosulfan I	a-Endosulfan-alpha	118	2,3,7,8-tetrachlorodibenzo-p-dioxin	TCDD
84	Endosulfan II	b-Endosulfan-beta	119	1,1,2,2-tetrachloroethene	Acetylene tetrachloride
90	Fluorene	(alpha)-Diphylene methane	120	Tetrachloroethene	Perchloroethylene, Tetrachloroethylene
93	Hexachlorbenzene	Perchlorobenzene	121	Toluene	Methylbenzene toluol
95	Hexachlorcyclopentadiene	Perchlorocyclopentadiene	124	1,1,1-trichloroethane	Methyl chloroform
96	Hexachloroethane	Perchloroethane	125	1,1,2-trichloroethane	Vinyl trichloride
97	indeno-(1,3,3-cd) pyrene	2,3-ortho-Phenylene pyrene	126	Trichloroethane	Trichloroethylene
98	Isophorone	3,5,5-Trimethyl-2-Cyclohexene-1-one	127	Trichlorofluoromethane	Fluorocarbon-11; Fluorotrchloromethane
99	Methylene chloride	Dichloromethane	129	Vinyl chloride	Chloroethene; Chloroethylene



**Stream 1 Discharge (No. 1)**  
(See 'Elemental Analysis' attachment for composition)



**Stream 2 Discharge (No. 2)**  
(See 'Elemental Analysis' attachment for composition)



Critical Materials Recycling, Inc.

## TEST REPORT

The reported test results  
relate only to the item(s)  
tested

Customer ID: City of Boone

Date: 07/27/2023

Stream 1 Discharge (No. 2)				
Elements	Experimental (%)	Results (%)	Method	Comments
Ca	0.07	8.90	ICP-MS	-
Co	0.006	0.76	ICP-MS	-
Cr	0.003	0.382	ICP-MS	-
Cu	<0.001 (BDL)	<0.127	ICP-MS	-
Dy	<0.001 (BDL)	<0.127	ICP-MS	-
Fe	0.67	85.242	ICP-MS	-
Na	0.005	0.636	ICP-MS	-
Nd	<0.001 (BDL)	<0.127	ICP-MS	-
Ni	0.006	0.76	ICP-MS	-
Pb	0.02	2.544	ICP-MS	-
Pr	<0.001 (BDL)	<0.127	ICP-MS	-
Sn	<0.001 (BDL)	<0.127	ICP-MS	-
Zn	<0.001 (BDL)	<0.127	ICP-MS	-
<b>TOTAL :</b>	-	100%	-	-

Stream 2 Discharge (No. 2)				
Elements	Experimental (%)	Results (%)	Method	Comments
Ca	<0.005 (BDL)	<1.700	ICP-MS	-
Co	<0.001 (BDL)	<0.340	ICP-MS	-
Cr	<0.001 (BDL)	<0.340	ICP-MS	-
Cu	<0.001 (BDL)	<0.340	ICP-MS	-
Dy	<0.001 (BDL)	<0.340	ICP-MS	-
Fe	0.014	4.762	ICP-MS	-
Nd	<0.001 (BDL)	<0.340	ICP-MS	-
Ni	<0.001 (BDL)	<0.340	ICP-MS	-
Pb	<0.001 (BDL)	<0.340	ICP-MS	-
Pr	<0.001 (BDL)	<0.340	ICP-MS	-
Na	<0.005	<1.700	ICP-MS	-
Sn	<0.001 (BDL)	<0.340	ICP-MS	-
Zn	<0.001 (BDL)	<0.340	ICP-MS	-
<b>Ammonium (NH<sub>4</sub><sup>+</sup>)</b>	0.26	88.435	-	-
<b>TOTAL :</b>	-	100%	-	-

\*BDL: below detectable limit

FD: floor drain  
SP: stand pipe  
SA: sealed access  
WM: water meter



August 2023

# City of Boone, Iowa

Water & Wastewater Treatment Facilities, Storage, and Lift Stations  
Monthly Operations & Maintenance Report

Prepared by:



1406 Central Avenue  
Fort Dodge, IA 50501  
(515) 269-2338

Prepared For:



923 8<sup>th</sup> Street  
Boone, IA 50036  
(515) 432-4211

August 2023

City of Boone  
William J. Skare, City Administrator  
923 8<sup>th</sup> Street  
Boone, IA 50036

**August Monthly Water & Wastewater Operations Report**

Dear Mr. Skare:

In accordance with contract requirements, we are pleased to provide the following monthly report for August 2023. Below is a list of the significant events that occurred during the month:

**SUBMITTED TO:** William J. Skare, City Administrator  
Utility Committee and City Council, City of Boone  
Aaron Voss, U.S. Water Services Corporation

We appreciate the opportunity to be of service to the City of Boone. We are available to discuss this report, or any other aspect of our operations, at your convenience. Should you have any questions or need additional information, please do not hesitate to contact us.

Sincerely,

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J.D. Roberts, Water Environment Plant Supervisor  
USW Utility Group  
(712) 259-0805  
JRoberts@USWaterCorp.net

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Dave Moore, Water Works Supervisor  
USW Utility Group  
(515) 230-3130  
DMoore@USWaterCorp.net

## WATER

### Water Treatment Facility

Finished Water Monthly Flows and Hardness			
		August-2022	August-2023
<b>Water</b>	<b>Units</b>		
Average Daily Pumped	gallons	1,970,000	1,939,000
Maximum Daily Pumped	gallons	2,225,000	2,319,000
Minimum Daily Pumped	gallons	1,651,000	1,502,000
<b>Hardness</b>			
Hardness - Avg Raw	grains	19.6	17.7
Hardness - Avg Finish	grains	9.6	9.1
<b>Iron mg/l</b>			
Avg Raw	mg/L	.01	.01
Avg Finish	mg/L	.01	.01
<b>Fluoride mg/l</b>			
Avg Raw Fl.	mg/L	.62	.60
Avg Finish Fl.	mg/L	.71	.72

### Water Storage

During the month of August, all three water towers were in operation as well as the 2 million gallon reservoir and 100,000 gallon contact basin for a total of 3,700,000 gallons of storage.

### Maintenance Report

During the month of August staff rotated lime slakers, cleaned and serviced slaker #2, verified turbidity meters weekly, calibrated turbidity meters, cleaned and verified calibration on CL2 analyzers weekly, and replaced rooftop dehumidifier filters. Staff mowed grass at Water Plant, Water Towers, and Pump Station, around lime ponds, sprayed weeds at water towers and plants, and mowed well field. They installed new sample lines on Claricone #1, repaired brush mower attachment for John Deere diesel

tractor, repaired ventilation fans at pump station and blower room at main plant, repaired phosphate feed line, and replaced chlorine cylinder vent tubing. Serviced electric solenoid on high service pump #1, fumigated pump room for insects, repaired PLC at industrial water tower, repaired water tower phone lines, serviced septic system, and cleaned and serviced water distiller.

### **Current & Planned Projects**

During the month of September staff plans to continue cutting and trimming trees, replace Backflow Preventer valves on Claricones, replace tubing on CL-17's, clean inside of Claricone #1, and remove trees around wells and well field. Misc. mowing and maintenance. Begin scheduling work in anticipation of SCADA upgrade project with Automatic Systems.

### **Health & Safety**

There were no safety violations to report for the current month.

The subjects of the monthly safety training were: Personal Fall Arrest Systems, Office Safety, Cutting Pipe Safely, Temperature Extremes, Safe Use of Compressed Air and Working At Altitude.

### **Regulatory Reports**

See attached documents



## WASTEWATER

### Wastewater Treatment Facility

During the month of August

Wastewater Treatment Facility Flows			
	Plant Influent	Plant Effluent	Units
Total	63.7	•	MGD
Average per day	2.05	•	MGD
Minimum	1.38	•	MGD
Maximum	4.90	•	MGD

Parameter	Wastewater Influent & Effluent Quality							
	Influent		Effluent					
	Daily Ave MG/L	Daily Ave LBS/Day	Daily Max MG/L	Permit Daily MG/L Limit	7 Day Max Ave MG/L	Permit 7 Day Max Limit	30 Day Average	Permit 30 Day Ave
BOD <sub>5</sub>	137.6	2420.8	•	•	•	•	•	•
CBOD <sub>5</sub>	•	•	3	•	3	40	3	25
Suspended solids	112.9	1928.4	7	•	3	45	3	30
Nitrogen Ammonia	14	200	.1	17.6	.1	•	.1 MG/L	1.0 MG/L
Nitrate Nitrogen	•	•	62 LBS/Day	1075 LBS/Day	•	•	•	657 LBS/Day
Dissolved Oxygen	•	•	8.7	>5.0	8.52	•	8.24	>5.0
pH	7.4	•	8.0	6.5 to 9 STD Units	7.9	•	7.87	6.5 to 9 STD Units

ND= No Detection

• = No limit set

## **Solids Inventory**

During the month of August, we pressed for 6 days (198,000 gallons) and hauled 45.29 tons to the landfill.

## **Lift Stations**

Lift Station on Airport Rd. has problems with Pump 1 not pumping for a while. It is unable to prime or keep a prime when the pump is off.

Generator Install at 14<sup>th</sup> and Division (no time frame)

Generator Install at 220<sup>th</sup> Lift Station (no time frame)

8-4-23 Replaced Batteries in UPS 220<sup>th</sup> Lift-station

## **Maintenance Report**

8-21-23 Replaced bearing on West Aerator for VLR #2

Half of the UV System is working but the hydraulics are not. We are unable to work the wipers or lift the banks out of the water. Trojan, Fox Engineering, and King Construction are aware of the issues.

Fifty-six (56) Preventive Maintenance Work Orders were Completed in August.

## **Current & Planned Projects**

RAS pumps replacement-(currently in Engineering)

Sand Blasting on North Clarifier: Owner tore his rotator cuff, not sure if this is going to get completed this fiscal year.

Roof Replacements-(currently in Engineering)

In-plant Lift Station-(currently in Engineering)

Preliminary Screen Install-(currently in Engineering)

## **Health & Safety**

There were no safety violations to report for the current month.

The subjects of this month's safety training were Fire Extinguisher Safety, Personal Fall Arrest Systems, Office Safety, Cutting Pipe Safely, Temperature Extremes, Safe Use of Compressed Air and Working At Altitude.

## **Regulatory Reports**

See attached documents

**SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT  
IOWA DNR WATER SUPPLY SECTION**

Basic Information

S/EP #: 1

SYSTEM NAME: Boone Water Works

PWSID #: 0819033

MONTH: August

YEAR: 2023

DAY	Pumpage		Operating Hours	Fluoride		Chlorine Residual								CT	Cl <sub>2</sub> Used
	Raw in 1,000s Gallons Per Day	To System in 1,000s Gallons Per Day		Quantity Used in lbs.	Finished Water (mg/L)	Source/Entry Point (S/EP)			Distribution						
			Number of Hours of Treatment Plant Operation Per Day			Number of Tests Taken*	Specify Free (F) or Total (T)	Lowest Measured Residual (mg/L)	Continuous Hours Less Than 0.3 mg/L Free or 1.5 mg/L Total	Number of Tests Taken	Lowest Measured Residual Free (mg/L)	Number With Undetected Residual	Highest Measured Residual Free (mg/L)	Ratio of CT Obtained to CT Required	Chlorine in lbs.
1	2,449	2,039	20.75	35	0.72	"C"	(F)	2.03	0	1	0.96	0	0.96	14.6	74
2	2,306	1,922	19.50	31	0.73	"C"	(F)	2.05	0	1	0.91	0	0.91	16.3	68
3	2,383	2,008	20.00	34	0.67	"C"	(F)	2.00	0	1	0.96	0	0.96	15.5	51
4	2,373	1,974	20.00	35	0.77	"C"	(F)	1.98	0	1	0.91	0	0.91	15.1	63
5	2,349	1,971	20.25	33	0.70	"C"	(F)	2.03	0	1	0.90	0	0.90	15.6	62
6	1,993	1,670	17.25	27	0.66	"C"	(F)	2.03	0	1	0.89	0	0.89	18.3	51
7	2,208	1,848	19.00	29	0.65	"C"	(F)	1.96	0	1	0.86	0	0.86	16.0	57
8	2,198	1,821	19.75	30	0.70	"C"	(F)	2.00	0	9	0.72	0	1.57	16.7	59
9	2,115	1,770	19.00	31	0.68	"C"	(F)	2.03	0	1	0.82	0	0.82	17.3	55
10	2,109	1,794	20.50	17	0.68	"C"	(F)	2.01	0	1	0.83	0	0.83	16.4	52
11	2,082	1,742	21.50	32	0.71	"C"	(F)	1.99	0	1	0.75	0	0.75	16.4	55
12	2,098	1,743	20.50	28	0.76	"C"	(F)	1.94	0	1	0.80	0	0.80	15.9	54
13	1,954	1,610	19.25	28	0.82	"C"	(F)	1.95	0	1	0.81	0	0.81	18.2	50
14	2,193	1,953	19.75	30	0.79	"C"	(F)	1.92	0	7	0.36	0	0.80	15.6	59
15	1,798	1,502	18.00	22	0.77	"C"	(F)	1.97	0	2	0.82	0	1.21	20.0	46
16	2,285	1,908	23.50	28	0.70	"C"	(F)	1.92	0	1	0.85	0	0.85	16.2	63
17	2,193	1,801	20.25	32	0.67	"C"	(F)	1.99	0	1	0.70	0	0.70	17.1	59
18	2,188	1,808	19.50	34	0.68	"C"	(F)	1.99	0	1	0.72	0	0.72	16.8	59
19	2,313	1,931	20.75	34	0.80	"C"	(F)	1.93	0	1	0.77	0	0.77	16.1	61
20	2,264	1,890	20.25	28	0.71	"C"	(F)	1.90	0	1	0.77	0	0.77	16.7	59
21	2,469	2,070	21.25	33	0.68	"C"	(F)	1.98	0	1	0.75	0	0.75	15.3	65
22	2,787	2,279	24.00	39	0.70	"C"	(F)	1.99	0	1	0.81	0	0.81	13.9	73
23	2,622	2,179	20.00	37	0.78	"C"	(F)	1.92	0	1	0.77	0	0.77	14.3	70
24	2,724	2,224	21.50	36	0.73	"C"	(F)	2.05	0	1	0.81	0	0.81	14.9	72
25	2,484	2,033	20.50	36	0.70	"C"	(F)	2.13	0	1	0.87	0	0.87	17.8	66
26	2,437	2,000	20.25	34	0.70	"C"	(F)	2.01	0	1	0.85	0	0.85	17.4	64
27	2,538	2,057	21.00	37	0.72	"C"	(F)	2.05	0	1	0.79	0	0.79	16.9	70
28	2,434	2,056	22.25	33	0.72	"C"	(F)	2.06	0	1	0.81	0	0.81	17.0	69
29	2,869	2,319	23.75	41	0.71	"C"	(F)	2.05	0	1	0.80	0	0.80	14.7	74
30	2,299	2,002	20.75	32	0.69	"C"	(F)	2.03	0	1	0.80	0	0.80	19.3	55
31	2,602	2,180	23.50	36	0.68	"C"	(F)	1.91	0	1	0.83	0	0.83	15.8	65
Total	72,116	60,104	638.00	992						46		0			1,900
Avg	2,326	1,939	20.51	32	0.72										61
Max	2,869	2,319	24.00	41	0.82				0				1.57		74
Min	1,798	1,502	17.25	17	0.65			1.90			0.36			13.9	46

\*If continuous monitoring of chlorine is provided, enter "C" in the space provided.

I certify that I am familiar with the information contained in this report and that the information is true, complete, and accurate.

DRC Operator's or Designee's Signature: David Moore  
Certificate #: 4108 Grade: IV Date: 9/5/2023

**SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT**

**IOWA DNR WATER SUPPLY SECTION**

Turbidity Data Page 1 of 1

S/EP: #1

SYSTEM NAME: Boone Water Works

PWSID #: 0819033

MONTH: August

YEAR: 2023

DAY	Finished Water			Filter Effluent																Raw Water Turbidity (Highest Daily Reading NTU)
	Number of Readings Taken **	Number of Readings >0.3 NTU	Highest Daily Reading (NTU)	#1			#2			#3			#4							
				Highest Consecutive Results >0.5 NTU Anytime After 4 Hours From Start Up or Backwash	Daily Highest (NTU)	# of Consec Results >1.0 NTU	Highest Consecutive Results >0.5 NTU Anytime After 4 Hours From Start Up or Backwash	Daily Highest (NTU)	# of Consec Results >1.0 NTU	Highest Consecutive Results >0.5 NTU Anytime After 4 Hours From Start Up or Backwash	Daily Highest (NTU)	# of Consec Results >1.0 NTU	Highest Consecutive Results >0.5 NTU Anytime After 4 Hours From Start Up or Backwash	Daily Highest (NTU)	# of Consec Results >1.0 NTU					
1	21	0	.02	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.02	0	.01	.01	.02	0	0.07
2	22	0	.02	.01	.01	.02	0	.01	.01	.03	0	.01	.01	.02	0	.02	.02	.03	0	0.07
3	19	0	.02	.02	.02	.04	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.07
4	20	0	.02	.03	.02	.03	0	.01	.01	.03	0	.01	.01	.02	0	.01	.01	.02	0	0.06
5	20	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.06
6	19	0	.02	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	.02	.02	.03	0	0.07
7	19	0	.02	.04	.04	.04	0	.01	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.06
8	20	0	.02	.03	.03	.04	0	.01	.01	.03	0	.01	.01	.04	0	.01	.01	.02	0	0.06
9	20	0	.02	.01	.01	.07	0	.02	.01	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.06
10	19	0	.02	.01	.01	.02	0	.01	.01	.03	0	.01	.01	.02	0	.02	.01	.02	0	0.06
11	21	0	.01	.02	.03	.03	0	.01	.01	.05	0	.01	.01	.03	0	.01	.01	.03	0	0.06
12	20	0	.03	.03	.03	.05	0	.02	.01	.07	0	.01	.01	.03	0	.01	.01	.02	0	0.06
13	21	0	.02	.01	.01	.02	0	.01	.01	.04	0	.02	.02	.04	0	.01	.01	.02	0	0.07
14	19	0	.02	.01	.01	.02	0	.01	.01	.04	0	.01	.01	.03	0	.02	.02	.03	0	0.07
15	21	0	.02	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.03	0	.01	.01	.03	0	0.07
16	18	0	.02	.02	.01	.03	0	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.07
17	23	0	.02	.01	.01	.02	0	.01	.01	.16	0	.02	.02	.03	0	.01	.01	.06	0	0.06
18	20	0	.02	.01	.01	.03	0	.01	.01	.04	0	.01	.03	.03	0	.02	.02	.03	0	0.07
19	20	0	.02	.02	.02	.02	0	.01	.01	.03	0	.01	.01	.02	0	.01	.01	.02	0	0.07
20	21	0	.02	.02	.02	.03	0	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.02	0	0.07
21	21	0	.02	.01	.01	.02	0	.02	.02	.02	0	.02	.02	.02	0	.01	.01	.02	0	0.07
22	21	0	.02	.02	.02	.02	0	.01	.01	.04	0	.01	.02	.02	0	.02	.02	.02	0	0.06
23	24	0	.01	.02	.02	.02	0	.01	.01	.02	0	.01	.01	.01	0	.01	.01	.01	0	0.06
24	20	0	.03	.02	.02	.03	0	.03	.03	.06	0	.01	.01	.04	0	.01	.01	.14	0	0.06
25	22	0	.02	.01	.01	.02	0	.03	.02	.03	0	.02	.02	.03	0	.01	.01	.03	0	0.06
26	20	0	.02	.01	.01	.02	0	.01	.01	.05	0	.01	.01	.08	0	.02	.02	.03	0	0.07
27	21	0	.02	.02	.02	.02	0	.02	.02	.03	0	.01	.01	.02	0	.01	.01	.02	0	0.06
28	22	0	.02	.02	.02	.03	0	.02	.02	.03	0	.02	.02	.08	0	.01	.01	.02	0	0.06
29	20	0	.02	.01	.01	.02	0	.02	.02	.03	0	.02	.02	.02	0	.01	.01	.02	0	0.06
30	24	0	.03	.01	.01	.01	0	.02	.02	.02	0	.02	.02	.02	0	.02	.02	.02	0	0.06
31	20	0	.04	.03	.03	.03	0	.02	.02	.13	0	.01	.02	.13	0	.02	.01	.08	0	0.06
Total	638	0					0				0				0				0	
Avg																				0.06
Max			.04			.07				.16				.13				.14		0.07
Min																				0.06

\*\*If continuous monitoring of turbidity is provided, measurements must be recorded at equal time intervals at least once every four hours or hourly for plants w/pop. >100,000.

I certify that I am familiar with the information contained in this report and that the information is true, complete, and accurate.

DRC Operator's or Designee's Signature: David Moore  
 Certificate #: 4108      Grade: IV      Date: 9/5/2023

**SURFACE WATER/INFLUENCED GROUNDWATER MONTHLY OPERATION REPORT**  
**IOWA DNR WATER SUPPLY**  
 Basic Information

S/EP: #1

System Name:		PWSID #: 819033				Month: August				Year: 2023				
D a y	Operating Hours	Pumpage		Fluoride		Raw Turbidity	Settled Turbidity (individual sedimentation basin)							
	Number of hours the plant operated per day	Raw in 1,000s Gallons Per Day	To System in 1,000s Gallons Per Day	Quantity Used in lbs. or gal. (circle one)	Finished Water (mg/L)	Highest Daily Reading (NTU)	Highest Daily Reading Sed 1 (NTU)	Highest Daily Reading Sed 2 (NTU)	Highest Daily Reading Sed 3 (NTU)	Highest Daily Reading Sed 4 (NTU)				
1	20.75	2449.00	2039.00	35.00	0.72	0.07		0.65						
2	19.50	2306.00	1922.00	31.00	0.73	0.07		0.83						
3	20.00	2383.00	2008.00	34.00	0.67	0.07		0.88						
4	20.00	2373.00	1974.00	35.00	0.77	0.06		0.58						
5	20.25	2349.00	1971.00	33.00	0.70	0.06		0.80						
6	17.25	1993.00	1670.00	27.00	0.66	0.07		1.42						
7	19.00	2208.00	1848.00	29.00	0.65	0.06		1.28						
8	19.75	2198.00	1821.00	30.00	0.70	0.06		0.42						
9	19.00	2115.00	1770.00	31.00	0.68	0.06		0.21						
10	20.50	2109.00	1794.00	17.00	0.68	0.06		1.04						
11	21.50	2082.00	1742.00	32.00	0.71	0.06		0.56						
12	20.50	2098.00	1743.00	28.00	0.76	0.06		0.30						
13	19.25	1954.00	1610.00	28.00	0.82	0.07		0.82						
14	19.75	2193.00	1953.00	30.00	0.79	0.07		0.96						
15	18.00	1798.00	1502.00	22.00	0.77	0.07		1.32						
16	23.50	2285.00	1908.00	28.00	0.70	0.07		0.39						
17	20.25	2193.00	1801.00	32.00	0.67	0.06		0.40						
18	19.50	2188.00	1808.00	34.00	0.68	0.07		0.99						
19	20.75	2313.00	1931.00	34.00	0.80	0.07		0.36						
20	20.25	2264.00	1890.00	28.00	0.71	0.07		0.62						
21	21.25	2469.00	2070.00	33.00	0.68	0.07		0.93						
22	24.00	2787.00	2279.00	39.00	0.70	0.06		0.44						
23	20.00	2622.00	2179.00	37.00	0.78	0.06		1.22						
24	21.50	2724.00	2224.00	36.00	0.73	0.06		1.21						
25	20.50	2484.00	2033.00	36.00	0.70	0.06		1.30						
26	20.25	2437.00	2000.00	34.00	0.70	0.07		0.59						
27	21.00	2538.00	2057.00	37.00	0.72	0.06		1.26						
28	22.25	2434.00	2056.00	33.00	0.72	0.06		0.79						
29	23.75	2869.00	2319.00	41.00	0.71	0.06		1.09						
30	20.75	2299.00	2002.00	32.00	0.69	0.06		0.62						
31	23.50	2602.00	2180.00	36.00	0.68	0.06		0.65						
Total	638	72,116	60,104	992				0	0	0	0			
Avg	20.58	2,326	1,939	32.00	0.72	0.06	#DIV/0!	0.80	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Max	24.00	2,869	2,319	41.00	0.82	0.07	0.00	1.4	0.0	0.00	0.00	0.00	0.00	0.00
Min	17.25	1,798	1,502	17.00	0.65	0.06	0.00	0.21	0.00	0.00	0.00	0.00	0.00	0.00

I certify that I am familiar with the information contained in this report and that the information is true, complete, and accurate.

DRC Operator or Designee's Signature: David Moore \_\_\_\_\_

Certificate #: 4108 \_\_\_\_\_ Grade: IV \_\_\_\_\_ Date: 9/5/2023 \_\_\_\_\_

**IOWA DEPARTMENT OF NATURAL RESOURCES  
NPDS REPORTING SYSTEM - DISCHARGE MONITORING REPORT  
FACILITY INFORMATION**

*This form is valid 2/1/2023 to 7/31/2024*

**Facility Name:** BOONE CITY OF STP

**Permit #:** 0819001

**Month/Year:**

8	2023
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**Outfall #(s):** 001 - DISCHARGE FROM AN ACTIVATED SLUDGE WASTEWATER TREATMENT FACILITY.

**Operator Name:**

John Roberts
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**Certification #:**

10924
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**Phone #:**

7122590808
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**Lab Cert. #:**

156
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**Comments:**

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*\*Include Comments longer than 1000 characters in email*

**Signature:**

John Roberts
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<p>I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for known violations.</p>
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Permit # 0819001  
 Facility Name: BOONE CITY OF STP

Monthly Operation Report  
 IOWA DEPARTMENT OF NATURAL RESOURCES  
 NPDS - Operation Permit System  
 INFLUENT Data

Outfall #: 001  
 Month/Year: 8-2023

Mon. Point	RAW WASTE												TEMP	PH
	FLOW	BOD5		TSS		TOT-N		TKN		PHOS				
Parameter	MGD	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	FAHRENHEIT	STD UNITS	
Units	7/WEEK OR DAILY	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	1 TIME PER WEEK	1 TIME PER WEEK	1 EVERY MONTH	1 EVERY MONTH	1 TIME PER WEEK	1 TIME PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	
Frequency														
Start Date														
End Date	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	
No Discharge														
LOQ														
Day: 1	1.5					27.1	339.021	27	337.77	5	62.55	68	7.4	
2	1.471	169	2073.31566	143	1754.34402							66	7.4	
3	1.506											68	7.3	
4	1.379	139	1598.61954									69	7.4	
5	1.855													
6	3.196													
7	2.183			99	1802.41578							66	7.5	
8	1.957					17.46	284.9712948	17	277.46346	2.9	47.332002	68	7.4	
9	4.862	129	5230.83132	96	3892.71168							66	7.4	
10	3.418	105	2993.1426									68	7.3	
11	3.044											68	7.5	
12	2.638													
13	2.473													
14	2.417			84	1693.25352									
15	2.21					22.1	407.33394	22	405.4908	4	73.7256	66	7.5	
16	2.131	56	995.26224	26	462.08604							66	7.4	
17	1.972											68	7.4	
18	1.837	84	1286.92872									66	7.5	
19	1.777													
20	1.729													
21	1.681			111	1556.16894							68	7.4	
22	1.776					16.52	244.6915968	16	236.98944	2.5	37.0296	70	7.4	
23	1.764	173	2545.13448	136	2000.79936							70	7.4	
24	1.811											70	7.4	
25	1.675	141	1969.6995									68	7.3	
26	1.619													
27	1.615													
28	1.596			170	2262.8088							68	7.4	
29	1.603											68	7.4	
30	1.533	242	3094.02324	151	1930.56822							68	7.5	
31	1.454											67	7.1	
<b>Total</b>	<b>63.682</b>	<b>1238</b>	<b>21786.9573</b>	<b>1016</b>	<b>17355.15636</b>	<b>83.18</b>	<b>1276.017832</b>	<b>82</b>	<b>1257.7137</b>	<b>14.4</b>	<b>220.637202</b>	<b>1556</b>	<b>170.2</b>	
<b>Monthly Avg.</b>	<b>2.054258065</b>	<b>137.5555556</b>	<b>2420.773033</b>	<b>112.8888889</b>	<b>1928.350707</b>	<b>20.795</b>	<b>319.0044579</b>	<b>20.5</b>	<b>314.428425</b>	<b>3.6</b>	<b>55.1593005</b>	<b>67.65217391</b>	<b>7.4</b>	
<b>Daily Max.</b>	<b>4.862</b>	<b>242</b>	<b>5230.83132</b>	<b>170</b>	<b>3892.71168</b>	<b>27.1</b>	<b>407.33394</b>	<b>27</b>	<b>405.4908</b>	<b>5</b>	<b>73.7256</b>	<b>70</b>	<b>7.5</b>	
<b>Daily Min.</b>	<b>1.379</b>	<b>56</b>	<b>995.26224</b>	<b>26</b>	<b>462.08604</b>	<b>16.52</b>	<b>244.6915968</b>	<b>16</b>	<b>236.98944</b>	<b>2.5</b>	<b>37.0296</b>	<b>66</b>	<b>7.1</b>	
<b>Max. 7/Avg.</b>	<b>2.972714286</b>	<b>157</b>	<b>4111.98696</b>	<b>153</b>	<b>2792.9826</b>	<b>27.1</b>	<b>407.33394</b>	<b>27</b>	<b>405.4908</b>	<b>5</b>	<b>73.7256</b>	<b>69.2</b>	<b>7.44</b>	

Permit # 0819001  
 Facility Name: BOONE CITY OF STP

Monthly Operation Report  
 IOWA DEPARTMENT OF NATURAL RESOURCES  
 NPDS - Operation Permit System  
 EFFLUENT Data

Outfall #: 001  
 Month/Year: 8-2023

Mon. Point	EFFLUENT PRIOR TO DISINFECTION												EFFLUENT AFTER DISINFECTION					
	CBOD5		TSS		NH3-N		NO3-N		TOT-N		PHOS		TOX CER	TOX PIM	TEMP	DO	PH	E. COLI
Parameter	MG/L	LBS/DAY	MG/L	LBS/DAY	MG/L	LBS/DAY	LBS/MONTH	MG/L	LBS/DAY	MG/L	LBS/DAY	NO TOXICITY	NO TOXICITY	FAHRENHEIT	MG/L	STD UNITS	#/100 ML	
Frequency	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	2 TIMES PER WEEK	1 EVERY MONTH	1 TIME PER WEEK	1 TIME PER WEEK	1 TIME PER WEEK	1 TIME PER WEEK	1 EVERY 12 MONTHS	1 EVERY 12 MONTHS	2 TIMES PER WEEK	2 TIMES PER WEEK	5 TIMES PER WEEK	Geo. MEAN 13 MONTHS	
Start Date	Permit Duration		Permit Duration		Permit Duration		Permit Duration	Permit Duration		Permit Duration		Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	8/1/2023
End Date	Permit Duration		Permit Duration		Permit Duration		Permit Duration	Permit Duration		Permit Duration		Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	Permit Duration	7/31/2024
No Discharge													06 - NOT REQ / MP	06 - NOT REQ / MP				06 - NOT REQ / MP
LOG																		
Day: 1					0.1	1.251		12	150.12	2.5	31.275			70	8.4		7.9	
2	3	36.80442	3	36.80442	0.1	1.226814								68	8.1		7.9	
3					0.1	1.256004								70	8.3		7.9	
4	3	34.50258			0.1	1.150086								70	8.1		7.9	
5																		
6																		
7			3	54.61866											68	8.5	7.9	
8					0.1	1.632138	62	4.76	77.6897688	1.5	24.48207			68	8.3		7.8	
9	3	121.84724	2	81.09816	0.1	4.054908								68	8.1		7.8	
10	3	85.51836			0.1	2.850612								68	8.6		7.9	
11					0.1	2.538696								68	8.5		8	
12																		
13																		
14			2	40.31556										66	8.4		7.9	
15					0.1	1.84314		10.75	198.13755	2.8	51.60792			68	8.7		7.9	
16	3	53.31762	2	35.54508	0.1	1.777254								68	8.5		7.9	
17					0.1	1.044648								68	8.7		7.9	
18	3	45.96174			0.1	1.532058								68	8.7		7.9	
19																		
20																		
21			7	98.13678														
22					0.1	1.481184		10.49	155.3762016	2.1	31.104864			70	8		7.9	
23	3	44.13528	2	29.42352	0.1	1.471176								72	7.8		7.8	
24					0.1	1.510374								72	7.8		7.8	
25	3	41.9085			0.1	1.38695								72	7.9		7.8	
26																		
27																		
28			2	26.62128										70	8.3		7.8	
29														70	7.9		7.8	
30	3	38.35568	5	63.9261	0.1	1.278522								70	8.2		7.9	
31					0.1	1.212636								70	8.3		7.9	
<b>Total</b>	27	502.1514	28	466.48956	1.8	31.1082	62	38	581.3235204	8.9	138.469854			1594	189.7		181.1	
<b>Monthly Avg.</b>	3	55.7946	3.111111111	51.83213333	0.1	1.728233333	62	9.5	145.3308801	2.225	34.6174835			69.30434783	8.247826087		7.873913043	
<b>Daily Max.</b>	3	121.84724	7	98.13678	0.1	4.054908	62	12	198.13755	2.8	51.60792			72	8.7		8	
<b>Daily Min.</b>	3	34.50258	2	26.62128	0.1	1.150086	62	4.76	77.6897688	1.5	24.48207			66	7.3		7.8	
<b>Max. 7/Avg.</b>	3	103.5828	4.5	66.84063	0.1	2.7690885	62	12	198.13755	2.8	51.60792			71.6	8.52		7.9	





1406 Central Avenue  
Fort Dodge, Iowa 50501  
515-269-2338

[www.USWUtilityGroup.com](http://www.USWUtilityGroup.com)

<b>UPGRADE PROGRAM</b>		<b>September 2023</b>				
<b>DATE</b>	<b>ADDRESS</b>	<b>ORIG INSTALL</b>	<b>Note</b>	<b>Low</b>	<b>Med</b>	<b>High</b>
9/1/2023	1521 Crestwood H	New Service				
9/1/2023	1521 Crestwood L	New Service				
9/1/2023	430 S Linn	10/19/99				
9/6/2023	306 Sunrise H	7/26/2005				
9/6/2023	306 Sunrise L	7/26/2005				
9/6/2023	1120 Southview H	11/22/04				
9/6/2023	1120 Southview L	11/22/04				
9/6/2023	503 W Park Ave	5/20/2008				
9/7/2023	1828 Aldrich H	7/30/2004				
9/7/2023	1828 Aldrich L	7/30/2004				
9/8/2023	1727 Union H	8/8/2007				
9/8/2023	1727 Union L	8/8/2007				
9/8/2023	1534 Hancock H	7/2/2007				
9/8/2023	1534 Hancock L	7/2/2007				
9/11/2023	1219 W 5th	8/6/2007				
9/11/2023	1730 Clinton H	03/08/04				
9/11/2023	1730 Clinton L	03/08/04				
9/11/2023	832 S Jackson H	01/12/04				
9/11/2023	832 S Jackson L	01/12/04				
9/12/2023	1217 W 5th	08/06/07				
9/13/2023	514 Madison	Frozen				
9/13/2023	2003 Linn	04/29/02				
9/15/2023	540 S Cedar H	01/26/99				
9/15/2023	540 S Cedar L	10/20/04				
9/15/2023	2407 Marshall	Pre 1999				
9/18/2023	307 5th St	05/31/07				
9/20/2023	1502 Crawford	pre 1999				
9/21/2023	1703 SE Linn H	03/12/99				
9/21/2023	1703 SE Linn L	03/12/99				
9/21/2023	614 W Mamie	Removed				
9/22/2023	324 S Clinton H	05/14/04				
9/22/2023	324 S Clinton L	05/14/04				
9/25/2023	1011 Story St	New Service				
9/27/2023	116 Benton	09/02/08				
Locates						
8/1 to 9/1		233				

**Curb Box Repair Update for 10/10/2023 – as of 10/02/2023**

Due to a mishap with the disconnection notices in the new software, shut offs were not performed in the month of September.

122 stop boxes need repaired, 53 of which have lead service lines.

7 delinquent bills in the amount of \$3477.26 certified on September 25<sup>th</sup>. Due to issues with the new software, no assessments were started in the month of September to be certified in October.

Lesli Vote  
Utility Billing Supervisor