REPORT OF PRETREATMENT AUDIT

City of Chanute, Kansas
P.O. Box 907
Chanute, Kansas 66720
NPDES Permit No.: KS0080837

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

ON
FEBRUARY 1 AND 2, 2022

At the request of the Water Branch (WB), Enforcement and Compliance Assurance Division (ECAD), a pretreatment audit was conducted of the Chanute, Kansas, approved Pretreatment Program on February 1 and 2, 2022. To direct the audit, 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 audit consisted of a discussion and file review with the City's program staff. In addition, an evaluation of the City's Biosolids Management Program (Sludge) was conducted to determine the Pretreatment Program's effectiveness in protecting the sludge from metals contamination. This narrative report presents the findings of the audit. Due to the COVID-19 pandemic and high infection rate, I did not visit any industries as part of this audit. Steve Caspers with the Kansas Department of Health and Environment (KDHE) was present for this audit.

PARTICIPANTS

City of Chanute, Kansas

- Ron Oliphant, Wastewater Supervisor
- Jeff Litzel, Water Plant Supervisor

Bureau of Water-Industrial Program Section-KDHE

- Steve Caspers, Pretreatment Specialist

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

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

FACILITY DESCRIPTION

The City of Chanute, with an approximate population of 9,102 people (2019 census), currently owns and operates an activated sludge Wastewater Treatment Plant (WWTP) under the National Pollutant Discharge Elimination System (NPDES) permit number KS0080837, which will expire on January 30, 2023.

The WWTP is located at 19495 Ford Road in Chanute, Kansas. According to the NPDES permit, the WWTP has a design dry weather flow of 2.2 million gallons per day (mgd), and a design wet weather flow of 4.5 mgd. The Chanute WWTP went online in March 1983, and it was a secondary treatment plant using trickling filters (towers) and anaerobic sludge digestion. In 2001, the plant was upgraded with an ultraviolet disinfection (UV) system to meet the changing regulations. In addition, a fine screen and a supervisory control and data acquisition (SCADA) system were added to the process. The WWTP actual average flow in 2021 was 2.2 mgd. The WWTP discharges into the Neosho River via Little Turkey Creek.

LEGAL AUTHORITY

The City's original Sewer Use Ordinance (SUO) number 2379 under Chapter 14.24 was approved by the EPA on June 18, 1991. In 2014, the City made minor changes to the SUO that included raising the permit fees from $200 to $300 and shortening the time period permittees would need to apply for new permit to thirty days instead of sixty days. On November 21, 2014, the EPA approved the changes and the City adopted them under ordinance number 2611.

On November 26, 2021, the City adopted changes to the SUO under ordinance number 2643 (Attachment 2). A review of the new SUO was performed by the EPA with suggestions provided to the City. These suggestions were deemed non-substantial, therefore, no be public notice was required.

LOCAL LIMITS

Table 1 below lists the numerical values for the local limits for Maximum Allowable Headworks Loading (MAHL) and Maximum Allowable Industrial Loading (MAIL) that were derived by technical analysis for twelve metals, 5-day biochemical oxygen demand (BOD_5), and total suspended solids (TSS). Local limits were approved by the EPA and KDHE on January 3, 2013.

Table 1, Chanute Local Limits (lbs.)

Pollutant	MAHL	MAIL	Pollutant	MAHL	MAIL
Arsenic	0.067	0.063	Cadmium	0.051	0.049
Chromium	1.465	0.672	Copper	1.845	0.736
Cyanide	0.193	0.114	Lead	0.551	0.472
Mercury	0.0023	0.002	Nickel	0.40	0.31
Silver	0.578	0.569	Zinc	3.801	2.216
Selenium	0.088	0.075	Molybdenum	0.06	0.026
BOD_5*	3030	1112	TSS*	3565	1309

*Mass limit in pound/ day

Local limits are not included in the SUO. However, the SUO included the pH upper and lower limits as 5.5 S.U. to 9.5 S.U.

With the exception of copper and zinc, calculated local limits showed loadings of less than 60% of the MAHL loading.

In accordance with the requirement of 40 CFR Part 122.44(j)(2)(ii) *"Provide a written technical evaluation of the need to revise local limits under 40 CFR 403.5(c)(1), following permit issuance or reissuance",* the City should have performed and must perform a written technical evaluation of the need to revise local limits under 40 CFR Part 403.5(c)(1). The permit was issued on February 1, 2018 and will expire on January 30, 2023.

INDUSTRIAL WASTE SURVEY (IWS) & SIGNIFICANT INDUSTRIAL USERS

The City's industrial community has remained somewhat stable for the past several years. All industries are subject to Categorical Standards and classified as Categorical Industrial Users (CIU). Orizon and Young's Welding are subject to the Metal Finishing Categorical Standard 40 CFR Subpart 433, and HBD is subject to the Rubber Manufacturing Categorical Standard 40 CFR Subpart 428. Subpart E § 428.456.

According to Mr. Oliphant, the City's last formal industrial waste survey (IWS) was conducted in 2016. Mr. Oliphant stated that updating the list of regulated industries is an ongoing process, since interdepartmental communication procedures are in place when a new industry arrives in town. After the audit, I provided, Mr. Oliphant via email, with a list of businesses that are in Chanute city limits that can be used as another tool to aid in identifying unknown SIUs. The list was generated from Reference Solutions.

DENTAL AMALGAM RULE

During the discussion of the dental amalgam rule 40 CR 441.50, Mr. Oliphant indicated that he used the Kansas Dental Association and the Kansas Dental Board lists of dental offices that was provided by Mr. Steve Caspers with the KDHE. Based on those two lists, in 2020, Mr. Oliphant sent a letter along with the one-time compliance report form to two entities. Both offices are determined to be in compliance with the Rule.

PERMITS

All industries have current permits. The City continues to issue all permit on the same date with duration of two years. Overall, permits appeared to contain the necessary elements that should be included in an enforceable permit. Permit renewal applications are due 30 days prior to permit expiration date. Mr. Oliphant continues to send out a one-page reminder to all SIUs prior to the 30 days. Records indicate that industries did not submit a complete and adequate permit renewal application, they only completed the one-page form sent by Mr. Oliphant. Records also indicate that the last adequate permit applications were submitted to the City in 2014.

COMPLIANCE MONITORING, SELF-MONITORING, AND REPORTING

Sampling and self-monitoring requirements differ from one industry to another. Self-monitoring is described in detail in the industrial permit. Young's Welding is required to sample and report once every six months, Orizon and HBD are required to sample quarterly and report quarterly.

HBD and Orizon are certified to collect and analyze pH field samples. The City, however,

continues to collect and analyze pH field samples for Young's Welding.

The general pretreatment regulations state that facilities subject the electroplating, metal finishing, and electrical and electronic components categories may choose to submit total toxic organics (TTO) certification in lieu of TTO monitoring, but such facilities must also develop and implement a Toxic Organics Management Plan (TOMP).

As mentioned above, Orizon and Young's Welding are subject to the Metal Finishing Categorical Standard 40 CFR Part 433. The industries chose to develop and implement a TOMP and submit the TTO certification statement. Records also indicate that Orizon developed its TOMP in 2017 and Young's Welding developed one in 2019.

During my review of the periodic monitoring reports (PMR) (quarterly for Orizon and semiannually for Young's Welding), I noticed and pointed out to city personnel that both industries failed to submit the TTO certification statement as required in lieu of monitoring for TTO. In fact, records indicate that the last TTO statements were submitted in 2018 just before the city changed the format of the PMR.

I mentioned to city personnel that industries failure to not submit the TTO certifications as required should be an enforceable matter.

INDUSTRIAL INSPECTIONS

The City inspected all industries during the past 12 months. Inspections are usually performed by Mr. Oliphant using EPA Region 7 Industrial User Inspection Checklist. Inspection reports appeared adequate and comprehensive.

Mr. Oliphant evaluates each industry for the need for a slug control plan annually during inspections. Submitted plans appeared adequate.

SLUDGE QUALITY

One function of the Pretreatment Program is to protect the City's sludge from metals contamination. As part of this audit, the 2019, 2020, and 2021 annual reports were reviewed. In 2019, 2020, and 2021 the City produced 25.4 dry metric tons (dmt), 45.62 dmt, and 47.72 dmt of Class B sludge, respectively.

During my review of annual sludge reports and biosolids files at the WWTP, I noticed and pointed out to city personnel that the City reported a total of 12.7 dmt in 2019. This number is exceptionally low compared to the average amount of sludge annually reported by the City. As part of my review of land application data/calculations, it was determined that the City mis-calculated the correct volume of sludge hauled for land application. The correct volume was determined to be 25.4 dmt rather than 12.7 dmt as initially reported.

Further discussion of such decrease in sludge, Mr. Oliphant explained in a February 3, 2022,

email that, *"I apparently did not convert properly from ton to metric ton. I believe the reason for 25.4 metric ton being lower than the usual yearly amount, is attributed to the high rain fall in 2019 and probably 2018. Rain fall recorded at the plant was recorded at 43.94 inches in 2019 and 2018 with 33.34 inches. High rains washed out the collection system and sent more water to the plant than it could handle. With all the rain events in 2019, it reduced our sludge and BOD going through the plant. The digester methane gas production dropped substantially in 2019, to correct the methane gas production we feed dog food to the digester to keep the bacteria working. As the rain fall slowed down in November and December in 2019 our BOD and sludge started coming back. In the first half of 2020 we had more rain and washed out again and had to feed dog food again. The rain let up in the second half of 2020, which generated more sludge and BOD. When the rain fall comes all at once it tends to washout the collection lines and this what I think happened."* The email also included the monthly BOD and rain fall data for 2018, 2019, and 2020 (Attachment 7).

Below are the tables that compare the WWTP's peak observed metals levels against the statutory ceiling and the City's average level against the exceptional quality (EQ) sludge level specified by the 40 CFR Part 503 Sludge regulations. Because the City only samples its sludge once per year, the monthly average is the maximum value observed.

Table 2, Chanute 2019 Sludge Quality (mg/kg)

Pollutant	503 Ceiling	503 EQ	Max	Mo. Avg.	Max/Ceiling	Avg./EQ
Arsenic (As)	75	41	8.1	8.1	10.80%	19.76%
Cadmium (Cd)	85	39	4.1	4.1	4.82%	10.51%
Copper (Cu)	4,300	1,500	411	411	9.56%	27.40%
Lead (Pb)	840	300	62.2	62.2	7.40%	20.73%
Mercury (Hg)	57	17	0.74	0.74	1.30%	4.35%
Molybdenum (Mo)	75	----	14.5	14.5	19.33%	
Nickel (Ni)	420	420	28.8	28.8	6.86%	6.86%
Selenium (Se)	100	36	10.9	10.9	10.90%	30.28%
Zinc (Zn)	7,500	2,800	1330	1330	17.73%	47.50%

Table 3, Chanute 2020 Sludge Quality (mg/kg)

Pollutant	503 Ceiling	503 EQ	Max	Mo. Avg.	Max/Ceiling	Avg./EQ
Arsenic (As)	75	41	6.7	6.7	8.93%	16.34%
Cadmium (Cd)	85	39	3.8	3.8	4.47%	9.74%
Copper (Cu)	4,300	1,500	425	425	9.88%	28.33%
Lead (Pb)	840	300	64.6	64.6	7.69%	21.53%
Mercury (Hg)	57	17	0.87	0.87	1.53%	5.12%
Molybdenum (Mo)	75	----	13.4	13.4	17.87%	
Nickel (Ni)	420	420	31.8	31.8	7.57%	7.57%
Selenium (Se)	100	36	10	10	10.00%	27.78%
Zinc (Zn)	7,500	2,800	1340	1340	17.87%	47.86%

Table 4, Chanute 2021 Sludge Quality (mg/kg)

Pollutant	503 Ceiling	503 EQ	Max	Mo. Avg.	Max/Ceiling	Avg./EQ
Arsenic (As)	75	41	6.3	6.3	8.40%	15.37%
Cadmium (Cd)	85	39	3.9	3.9	4.59%	10.00%
Copper (Cu)	4,300	1,500	400	400	9.30%	26.67%
Lead (Pb)	840	300	50.4	50.4	6.00%	16.80%
Mercury (Hg)	57	17	1.4	1.4	2.46%	8.24%
Molybdenum (Mo)	75	----	12.1	12.1	16.13%	
Nickel (Ni)	420	420	22.8	22.8	5.43%	5.43%
Selenium (Se)	100	36	7.4	7.4	7.40%	20.56%
Zinc (Zn)	7,500	2,800	1210	1210	16.13%	43.21%

WASTE HAULERS

The City accepts domestic waste at the headworks. According to Mr. Oliphant, the City continues to accept domestic hauled waste from one local hauler that hauls between 15 to 20 loads per month averaging one-thousand-gallon per load. The City requires haulers to complete a sign-in sheet indicating the source, type, and date of the waste prior to accepting the waste. The City collects random samples to ensure hazardous material are not brought into the WWTP.

ENFORCEMENT

The City's Enforcement Response Plan (ERP) has been in place since February 6, 1991. During the Audit, Mr. Oliphant appeared to be somewhat familiar with the requirement of the ERP, the federal definition of Significant Noncompliance, and how to determine compliance status of an industry. Records indicate that all industries were in compliance during the past 12 months. In 2021, the City worked with the EPA in revising its ERP. On November 26, 2021, the City issued a public notice of the new revised ERP (Attachment 3).

I did discuss with city personnel that enforcement should have been taken for inadequate permit renewal applications and PMRs missing the TTO certification statement.

DATA MANAGEMENT

Overall, industrial files have all the necessary documentation as recommended by the Agency checklist. Each file consisted of permit and permit renewal applications, inspection reports, monitoring reports, and correspondence between the Pretreatment Program and the industries. Records are well kept at the Pretreatment Coordinator's office at the WWTP for more than three years and are available for public review.

Orizon claims confidential business information on some of their submitted reports. Those reports are kept in a locked drawer at the pretreatment office.

CONCLUSION AND RECOMMENDATIONS

Overall, personnel responsible for the implementation of the pretreatment program appeared to have adequate knowledge and skills implementing the program. Currently the City is training Mr. Jeff Litzel on implementation of the pretreatment program.

Industrial files included all the necessary documentation recommended by the agency checklist and were easily accessible.

The last local limit evaluation was conducted in 2013. In accordance with the requirement of 40 CFR Part 122.44(j)(2)(ii) the City should have performed a written technical evaluation of the need to revise local limits under 40 CFR Part 403.5(c)(1) after the issuance of the current permit which is on February 1, 2018.

Records indicate that industries did not submit a complete permit renewal application, and they only complete the one-page form sent to them by Mr. Oliphant which was only addressing administrative information. Records also indicate that the last adequate permit renewal applications were submitted to the City in 2014.

Orizon and Young's Welding must submit the TTO certification statement if they elect to implement the TOMP in lieu of sampling for TTOs.

On February 3, 2022, Mr. Oliphant sent me an email that included an updated PMR form that included a TTO certification statement (Attachment 5). In addition, the email included an updated permit renewal application (Attachment 6).

NAJI AHMAD Digitally signed by NAJI AHMAD Date: 2022.02.22 08:28:44 -06'00'

Naji J. Ahmad
Environmental Engineer, WB/DWIS

NICOLE MORAN Digitally signed by NICOLE MORAN Date: 2022.02.23 08:55:49 -06'00'

Nicole Moran
Acting Chief, WB

ATTACHMENTS:

1. Audit Checklist (17 pages)
2. 2021 SUO
3. 2021 ERP/ public notice
4. Biosolid checklist and the Sludge management Plan
5. Updated PMR w/ TTO Certification
6. Updated permit renewal application
7. BOD and Rainfall for the years 2018,2019 and 2020.