

REPORT OF THE PRETREATMENT COMPLIANCE INSPECTION

AT

City of Wentzville

1001 Schroeder Creek Boulevard
Wentzville, Missouri 63385

NPDES Permit No.: MO-0093599

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION 7

ENFORCEMENT AND COMPLIANCE ASSURANCE DIVISION (ECAD)
WATER BRANCH / DRINKING WATER AND INSPECTIONS SECTION (WB/DWIS)

ON

APRIL 11-13, 2023

At the request of the Water Branch (WB), Enforcement and Compliance Assurance Division (ECAD), a Pretreatment Compliance Inspection (PCI) of the Wentzville, Missouri, approved Pretreatment program was conducted on April 11, 12, and 13, 2023. To direct the PCI, 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 PCI consisted of a discussion and file review with the City's program staff and an evaluation of the City's Biosolids Management Program (Sludge). This narrative report presents the findings of the inspection. All other documentation not included as an attachment to this report has been submitted directly to the Region 7 Record Center. Ms. Maria Bonney and Mr. Oscar Vazques, with the Missouri Department of Natural Resources-St. Louis Regional Office were also present for this inspection.

PARTICIPANTS

City of Wentzville Water Reclamation Center (WRC)

- Susan Spiegel, P.E., Director of Public Works, susan.spiegel@wentzvillemo.gov
- Ryan Peasel, WRC Superintendent/Pretreatment Coordinator, ryan.peasel@wentzvillemo.gov
- David Jolley, Supervisor, David.Jolley@wentzvillemo.gov

KimHEC

- Kim Cole, Principal, Kim.cole@KimHEC.com
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Missouri Department of Natural Resources-St. Louis Regional Office

- Oscar Vazquez Environmental Engineer. oscar.vazquez@dnr.mo.gov.
- Maria Bonney, P.E., ECAU, Supervisor. Maria.Bonney@dnr.mo.gov

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

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

INTRODUCTION

The City of Wentzville, with an approximate population of 44,452 (2021 census estimate), owns and operates the Wentzville Water Reclamation Center (WRC) located at 2455 Mette Road. The plant is permitted under the Missouri National Pollutant Discharge Elimination System (NPDES) permit number MO-0093599 that was issued on June 1, 2020 and set to expire on March 31, 2024.

The Wentzville pretreatment program was originally approved on July 16, 1984. According to the NPDES permit (Attachment 3), the WRC has a design flow of 7.04 million gallons per day (mgd), actual flow of 4.3 mgd, and sludge production of 1,113 dry tons/year.

The permit was modified on February 1, 2023, after the MDNR approved plant upgrades to increase the facility's treatment capacity (design flow) to 7.04 mgd from 5.33 mgd, and to improve operability. The one-year upgrades started approximately in September 2021, to include the addition of an activated sludge aeration basin and improvements to the existing aeration basin #5 in the west treatment train; and the conversion of treatment unit #2 in the east train to be exclusively an aerobic sludge digester. The sludge treatment line has also been upgraded with the installation of a sludge press for more efficient and faster sludge dewatering. Additionally, the facility has a new sludge storage area.

The NPDES permit describes the treatment of wastewater at the WRC as: influent wastewater enters the plant via three influent lift stations, 2 mechanical bar screens, 1 manual bar screen, 2 aerated cyclone grit chambers; influent then enters the influent flow splitter structure, which splits the influent flow between the East Treatment Train and the West Treatment Train.

The *East Treatment Train*: aerated equalization basin, 2 circular multi-zone activated sludge units with integral final clarifiers. The *West Treatment Train*: 2 rectangular multi-zone activated sludge basins, 2 final clarifiers. Effluent from the two trains is then rejoined and receives UV disinfection and then enters the post aeration basin prior to discharge at Outfall #003.

Sludge from both trains is pumped to the 4 aerobic sludge digesters, three sludge/biosolids holding tanks, frame and plate filter press, the dewatered biosolids are then stored on a covered concrete pad before land applied

The WRC receives discharges from four permitted Significant Industrial Users (SIUs) that make up twenty percent (20%) of its actual (average dry weather) influent of 4.3 mgd.

As a result of the August 8, 2019, MDNR's letter of warning (LOW) and the departure of the previous Pretreatment Coordinator, the City hired a consultant to assist the city to return to compliance. The Department followed with the issuance of a Return to Compliance (RTC) letter on September 23, 2020.

LEGAL AUTHORITY AND LOCAL LIMITS

In accordance with the requirement of the NPDES permit, on September 21, 2021, the City submitted an update to its approved pretreatment program (Attachment 2) including updated

local limits, proposed modifications to the ordinance, and an updated Enforcement Response Plan (ERP) (Attachment 5).

The modification involves a revision to the City's SUO to incorporate: 1) a few of the optional 2005 Streamlining Rule revisions to the federal rule such as non-significant categorical industrial user classification, specific monitoring waiver of pollutants not present, and authority to adopt best management practices to implement local limits; 2) updated surcharge limits for COD and ammonia/TKN; and 3) an increase of the specific prohibition for pH to 10.5 standard units (S.U.)

The City's current Sewer Use Ordinance (SUO) 4276, § 2 (Exh. B), Chapter 720 was adopted on April 13, 2022, to replace the former Ch. 720, §§ 720.010-720.630. The former Ch. 720 Ord. No. 2017-3804, §§ 720.010-720.630, adopted Dec. 13, 2017; and Ord. No. 4125 § 1, adopted Sept. 23, 2020.

The ordinance gives the City the authority to implement and enforce the Pretreatment Program, such as issuing permits for a duration of five years or less; requires the submittal of permit renewal applications prior to the expiration of the permit; and the right to inspect, sample, enforce, but it doesn't allow the City to collect fines up to one thousand dollars (\$1,000) per violation per day [403.8(f)(1)(vi)]. This is because the 2011 Missouri Revised Statutes Section 79.470 for Fourth Class Cities (Wentzville meets that category) set penalties for all ordinance violations not exceeding a fine of five hundred dollars.

On November 13, 2020, the City of Wentzville submitted the local limits, developed by a consultant, as part of the modification to the pretreatment program review. Technical Evaluation of Local Limits was accepted by MDNR on January 22, 2021 (Attachment 4).

Table 1 - Wentzville' WWTF 2021 Local Limits

Pollutant	(mg/l)	Pollutant	(mg/l)
Arsenic	0.05	Mercury	ND
Cadmium	0.18	Molybdenum	0.063
Cyanide	0.045	Nickel	0.33
Chromium	1.2	Selenium	0.025
Copper	0.23	Silver	0.25
Lead	0.09	Zinc	2.9
pH	5.5-10.5		

INDUSTRIAL WASTE SURVEY

The City's industrial community has remained somewhat stable for the past several years. According to City personnel, the City's last completed formal industrial waste survey (IWS) was conducted in 2021 by evaluating a list of potential industrial users. The City's Public Works

(PW) and Building Departments continue to work closely towards identifying new industrial users moving within the City's service area. The BD continues to provide an IWS form to any new IUs moving to town and requests them to complete and submit it to the PWD/Wastewater Utility Division and the BD.

SIGNIFICANT INDUSTRIAL USERS

The City's 2022 annual report indicates that the City regulates five SIUs. Three industries are subject to the Metal Finishing Categorical Standard 40 CFR Part 433. General Motors, Missouri Heat Treat a Division of Unitherm Furnace LLC, and Blastco.

Euclid Chemical Company and Dubois Chemicals were delisted as SIUs based on their zero-discharge operational status and the most recent two years of compliance history. Therefore, their permits were terminated on 11/17/2022 with the condition that they remain in compliance for the second half of 2022.

Missouri Heat Treat a Division of Unitherm Furnace LLC went to a zero discharge on September 22, 2022, as part of an escalated enforcement action including a show cause hearing. The City confirmed that wastewater discharges have been eliminated based on a site visit on March 3, 2023.

CONTROL MECHANISIM (PERMITS)

The City continues to issue all industrial waste discharge permits with a five-year duration. Overall, permits appeared to be adequate and include the necessary elements needed in a control mechanism in accordance with the SUO. The SUO requires industries to apply for a permit and provides guidelines on what type of requirements should be included in a permit (i.e., duration, limits, recordkeeping, and reporting). Permits require all industries to self-monitor and submit periodic monitoring reports. Permits clearly identify the sampling location and frequency for each industry. The City also issues a permit to Zero-discharger SIUs.

DENTAL AMALGAM RULE

The City identified 20 regulated dental office and sent a One-Time Compliance Report (OTCR) to all in 2020. Only four offices failed to return the OTCR. The most recent request was sent on 03/06/2023. City staff indicated that they would continue to follow up to attain form submission.

INSPECTIONS, COMPLIANCE MONITORING, SELF-MONITORING AND REPORTING

The City inspected all industries during the past 12 months. 2022 inspections were performed by the Pretreatment Coordinator along with the consultant using a checklist that includes the elements included in the Region 7 Industrial User Inspection Checklist. Inspection reports appeared adequate and comprehensive.

The City conducts compliance monitoring of its industries annually for all regulated pollutants by following the EPA's sampling procedures. The WRC laboratory can analyze conventional pollutants using procedures conforming to 40 CFR Part 136.

In 2021 DuBois and Euclid were not sampled because they are zero discharger facilities. In 2022, Blastco Incorporated (zero discharge), The Euclid Chemical Company (zero discharge), Dubois Chemicals Wentzville (zero discharge) were also not sampled. Self-monitoring requirements varies for all industries. General Motors and Missouri Heat Treat sample monthly. However, as mentioned above, due to repeated violations by Missouri Heat Treat, on March 1, 2023 the City revised their permit prohibiting them from discharging to the POTW and required them to update and submit a new slug discharge plan by March 3, 2023.

Permits also specify what parameters are to be sampled and the sampling location and Categorical industries, in lieu of monitoring for Total Toxic Organics (TTO), can submit TTO Certification statements that certify the development and implementation of Solvent Management Plans/Toxic Organic Management Plans (TOMP) (Attachment 10).

Periodic compliance reports included a TTO Certification Statements, and the regular compliance Certification Statements as required by the General Pretreatment regulations.

HAULED WASTE

Hauled waste is regulated under Section 720.140 of the SUO. The WRC routinely accept portapotty and occasionally residential/domestic wastewater from small WWPTs operated by American Water on an emergency basis only. Waste received, at a designated manhole, is typically monitored and screened for pH prior to acceptance. The City does not issue Wastehauler permits, however, manifest forms are required.

ENFORCEMENT

The City's Enforcement Response Plan was recently updated in 2022. The Pretreatment Coordinator uses EPA's Significant Noncompliance (SNC) criteria to determine SIU's compliance statutes. All industries appeared to return to compliance or were under a compliance order.

Records indicate that General Motors, Wentzville Assembly Center was issued, on July 28, 2023, a compliance schedule to install flow monitoring at the local limit's compliance point (Outfall-003); and Missouri Heat Treat a Division of Unitherm Furnace LLC was issued a compliance schedule on October 31, 2022; in addition, to a zero-discharge permit on March 1, 2023. Neither industry is currently in violation of any compliance schedule milestones by 90 days or greater.

In 2022, Missouri Heat Treat a Division of Unitherm Furnace LLC received 2 NOV's and AO's or the equivalent. A total of \$5,800 was issued in fines for the violations documented in 2022, and on March 15, 2023, the City published the facility in the newspaper for being in significant noncompliance for the first and second halves in 2022.

Program personnel indicated that they informally handle via email, phone call, and/or informal meetings per the Wentzville ERP with those SIUs that are in Infrequent Noncompliance.

DATA AND RECORDS MANAGEMENT

Overall, the industrial files have all the necessary documentation as recommended by the Agency checklist. Each file consisted of the permit and permit renewal application, inspection reports, monitoring and self-monitoring reports, and correspondence between the City and industries. Records are kept at the WRC for more than three years and are available for public review.

CITY BUDGET CONCERNS

During my discussion with City personnel regarding the program budget, City personnel indicated that the budget was not adequate. On May 11, 2023, I received an email from Ms. Susan Spiegel explaining the budget concern “While we have been making sound progress in our biosolids and pretreatment programs, future years will still need more staff hours as well as monitoring equipment and testing funding for improved data tracking, ongoing review, communication, and enforcement for FOG management and pretreatment permitted industries. Additional resource needs include advanced pretreatment training for field testing, data tracking, and program management, legal support for regulatory enforcement, and additional field staff and equipment to monitor or perform pretreatment, treatment, & biosolids testing, flow monitoring, and data management. These resources are particularly needed to meet the demands of expected medical and industrial growth within Wentzville as well as expected expansion of future EPA/DNR regulatory criteria. The recent inflation of 2022/2023 has increased costs for capital projects as well as all aspects of maintenance and operations. Low unemployment rates have increased wages, and upcoming PFAS regulations are forecast to significantly increase near term wastewater revenue needs. The City of Wentzville boundaries still contain significant undeveloped parcels, and it is anticipated that more residential, commercial, institutional, medical, and industrial users will join our system as I-64 and I-70 widening and interchange improvements near completion. The combination of the above factors translates into a forecast for continued wastewater volume and pretreatment program growth which along with rising maintenance of the system is driving cost increases throughout the wastewater program. We currently forecast that customer rates and fees will need to rise 4% to 6% per year for three consecutive calendar years from 2025 to 2027. These future rate adjustments will be presented to the Board of Aldermen during the annual budget cycle beginning in June 2024.

SLUDGE QUALITY (Attachment 8).

One function of the Pretreatment Program is to protect the City’s sludge from metals contamination. As part of this PCI, the most recent calendar year sludge monitoring reports were reviewed to determine the Pretreatment Program’s effectiveness. In 2022 the WWRC generated 552 dry tons of Class B sludge.

The City has recently acquired approximately 180-acres of land, which has resulted in increased land application capabilities. The City aims for 50/50 land application of solid and liquid sludge, with the cost of polymers and weather conditions being key factors driving City decisions. The sludge treatment line has been upgraded with the installation of a sludge press for more efficient and faster sludge dewatering. Additionally, the facility has a new sludge storage area. City personnel explained that when it comes to the application of liquid biosolids, weather is a limiting factor. These upgrades provide the City with more flexibility and also allows them to land apply solid/cake sludge versus only liquid sludge

Below is the table that compares the City's peak observed metal 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 sampled its sludge quarterly, the monthly average is the maximum value observed. As shown in the table, the City's sludge is below the ceiling level and the EQ level for all metals.

Table 2, Wentzville 2022 Sludge Quality (mg/kg)

Pollut	503 Ceiling	503 EQ	Max	Mo. Avg.	Max/Ceiling	Avg./EQ
Arsenic, As	75	41	4.85	4.85	6.47%	11.83%
Cadmium, Cd	85	39	1.34	1.34	1.58%	3.44%
Copper, Cu	4300	1500	525	525	12.21%	35.00%
Lead, Pb	840	300	14.4	14.4	1.71%	4.80%
Mercury, Hg	57	17	0.49	0.49	0.86%	2.88%
Molybdenum , Mo	75	----	11.9	11.9	15.87%	
Nickel, Ni	420	420	105	105	25.00%	25.00%
Selenium, Se	100	36	8.76	8.76	8.76%	24.33%
Zinc, Zn	7500	2800	1070	1070	14.27%	38.21%

CONCLUSION AND RECOMENDATIONS

Overall, the City of Wentzville's approved Pretreatment Program is moving toward better management and implementation. This is attributed to frequent communication with MDNR personnel, the hiring of KimHEC consultant, and the hiring of Mr. Ryan Peasel as the Pretreatment Coordinator.

The City should allow Mr. Peasel and other City personnel the opportunity to attend a formal Pretreatment training. Mr. Peasel should also be more familiar with the SUO, the ERP, and the general the general requirements.

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Nicole Moran
Section Chief, WB/DWIS

ATTACHMENT

1. PCI Checklist
2. Program modification
3. NPDES permit
4. Local Limits calculations
5. ERP
6. 2021 and 2022 Annual Report
7. Industrial permits
8. Slug Control plans

9. City Budget concern
10. GM TOMP
11. MDNR PCAs