REPORT OF THE PRETREATMENT INSPECTION

AT
City of Dubuque, Iowa
Water & Resource Recovery Center
795 Julian Dubuque Drive,
Dubuque, Iowa 52003

NPDES Permit No.: IA0044458

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

ON
NOVEMBER 15-17, 2022

At the request of the Water Branch (WB), Enforcement and Compliance Assurance Division (ECAD), a pretreatment inspection was conducted of the Dubuque, Iowa approved Pretreatment Program on November 15, 16, and 17. To direct the inspection, a checklist was used that evaluates all important elements of the pretreatment program. A copy of the checklist is attached to this report (Attachment 1). The inspection consisted of a discussion and file review with the City's program staff. All other documentation not included as an attachment to this report has been submitted directly to the Region 7 Records Center.

Participants

City of Dubuque Water & Resource Recovery Center

- William O'Brien, Manager, Water & Resource Recovery Center
- Michael C. Van Milligen, City Manager
- Jason Mourning, Environmental Coordinator

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

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

Introduction

The City of Dubuque, with an approximate population of 58,530 people (2016 census estimate), owns and operates a pure oxygen activated sludge wastewater treatment plant (WWTP). In May of 2014, the City completed the construction of the Water & Resource Recovery Center (WRRC). The WRRC is permitted under the National Pollutant Discharge Elimination System (NPDES) permit number IA0044458 that will expire on October 31, 2024.

The WRRC consists of screening, grit removal, primary treatment, secondary treatment by the oxygen activated sludge process, final clarification, and ultraviolet disinfection. The plant discharges into the Mississippi River. Biosolids are removed in the primary and secondary treatment processes, are dewatered using dry solids centrifuges, digested and land applied. The WRRC receives discharges from fifteen Significant Industrial Users (SIUs) that make up approximately 40% of its actual (dry weather) influent of 7.0 million gallons per day (MGD).

According to the NPDES permit, the WRRC has a design average dry weather flow of 9.14 MGD, a design average wet weather flow of 13.47 MGD, and a design maximum flow of 24.5 MGD. The WRRC has a design 5-day biochemical oxygen demand (BOD5) load of 41,200 pounds per day (lbs/day), design total suspended solids (TSS) of 37,100 lbs/day, and a design Total Kjeldahl Nitrogen (TKN) load of 6,700 lbs/day.

The permit has the requirement for the City to evaluate its local limits and its approved September 29, 1983, Pretreatment Program for compliance with 40 CFR 403 and Iowa Administrative Code 567 - Chapter 62 with regards to the EPA pretreatment streamlining rule and submit a report of the evaluation no later than one year from the issuance date of the permit.

Findings and Observations:

My findings during this inspection identify multiple current deficiencies with the pretreatment program and multiple repeated findings noted by the Iowa Department of Natural Resources during their March 14, 2022 inspection (Attachment 3). Moreover, the issues of concern identified during this inspection are very similar to the EPA's 2018 and 2013 audit findings (Attachments 4 and 5). The following are the significant deficiencies that require immediate corrective action by the City:

1. The City failed to comply with the NPDES permit (Attachment 2) requirements by not submitting to the IDNR the evaluation of the local limits and its approved Pretreatment Program, with regards to the pretreatment streamlining rule by November 1, 2020, as required by 40 C.F.R. § 403.5(c) and the Significant Industrial User Limitations, Monitoring, and Reporting Requirements section of the City's NPDES Permit. This finding is noted as a repeated violation because the City also failed to comply with the same requirement during the previous permit cycle. During the February 1, 2018, EPA audit of the Dubuque program (Attachment 5), I noted that the City failed to comply with Condition 5 of the NPDES permit that required the City to evaluate the adequacy of its local limits and submit the results of the evaluation to the IDNR within one year from permit issuance. The City last submitted the required evaluation in July 2015. This same finding was noted during the March 14, 2022, IDNR inspection report (Attachment 3), that the City failed to evaluate its local limits by November 1, 2020, as required by the NPDES permit. Mr. O'Brien mentioned that lack of staffing and workload is a major factor why this deficiency continues to exist.

2. The last formal industrial waste survey was completed in 2015. The City started another survey but was put on hold due to staff change. The City is currently working on completing the survey started in 2019. 40 CFR 403.8(f)(6) requires that POTWs shall prepare and

maintain a list of its Industrial Users meeting the criteria in 40 CFR § 403.3(v)(1). In addition, 40 CFR 403.12(q) requires an annual certification from any facility determined to be a Non-Significant Categorical Industrial User pursuant to 40 CFR § 403.3(v)(2).

3. Industrial permits are reissued, by the City, with the same original limits and conditions without justification. During the February 1, 2018, EPA audit, I noted that the City continues to issue permits with conditions and limits that were included in previously issued permits without justification of why those conditions and/or limits are included. The IDNR also noted this same observation during the March 14, 2022, inspection. 40 CFR 403.8(f)(1)(iii)(B) requires that all permits or control mechanisms to be enforceable.

4. In addition, another issue that continues to exist with permits, that I pointed out during the EPA's audits in 2018 and 2013, is that permits issued to non-categorical industries include a statement allowing the industry to develop and implement a solvent management plan in lieu of sampling for Total Toxic Organics (TTOs). This language is only authorized for Categorical industries subject to TTO standards (i.e., electroplating - 40 CFR 413), metal finishing (40 CFR 433), and electrical and electronic components (40 CFR 469) that may implement alternatives in lieu of monitoring all regulated toxic organic compounds. The TTO certification language must only be used in industrial permits issued to the applicable industrial users listed in 40 CFRs - 413, 433, and 469.

5. Annual industrial inspections are not conducted adequately, and inspection reports continue to be inadequate. While the industrial inspection checklist included all relevant sections, it was noted that all applicable areas aren't being evaluated. During the 2013 audit, I noted that ninety percent (90%) of the questions on the 6-page industrial inspection checklist were unanswered and left blank, in the 2018 audit, I noted that industrial inspection checklists did not include evaluations of the need for a Slug Control Plan (SPC) or evaluation of the SPC or Solvent Management Plan if applicable, and during the IDNR 2022 inspection, it was noted that inspection reports are inconclusive in identifying whether a spill prevention plan and/or slug control plan is needed.

6. The City does not have adequate procedures in place to ensure that wastes received from hauled waste contractors does not contain hazardous waste or procedures to prevent prohibited discharges listed in 40 CFR 403.5(b)(8). The WRRC has a designated discharge point to receive hauled waste. However, the City does not visually monitor the loads being unloaded, does not collect grab samples and does not require haulers to collect samples of the waste. Hauled waste management continues to be inadequate and an ongoing issue for at least a decade.

7. In addition, during the IDNR 2022 audit, it was noted that no information was available at the time of the inspection regarding the number of loads per month accepted or the type of waste accepted monthly. This information was also not available during the previous inspection. It was further noted that there is no sampling conducted for any hauled waste.

8. My review of the submitted solvent management plans indicates that such plans were inadequate and outdated. I reminded City personnel that the pretreatment regulations allow the implementation of the plans in lieu of sampling for TTOs, for applicable industries. I noted that submitted plans were not being reviewed by the City. For example, Eagle Window submitted a plan in 2013 at the time of my inspection, the plan had not been reviewed. AIH Chrome submitted plan in 1993. The information included in the plans was outdated. I informed City personnel that failure to submit adequate plans may result in the facility being required to sample for TTOs. None of the industries have self-monitoring of TTOs nor is the City conducting compliance monitoring of TTOs. Therefore, such industries are potentially in SNC and the City in violation of the pretreatment regulations.

   This is a continuing issue in the Dubuque program since 2013. During the 2018 audit I noted that City failed to review and approve Toxic Organic Management Plan (TOMP) especially those where Spill Prevention and Counter Measure Control (SPCC) plans were submitted as a TOMP.

   The IDNR also noted during their 2022 inspection that TOMPs submitted by the industries are not being reviewed by the City.

9. Documentation and information in the industrial users' files required by 40 CFR 403.12 was either missing for certain periods or incomplete such as monitoring data, incomplete inspection reports, and outdated spill plans.

10. The Dubuque WRRC staff are designated to sample SIUs and to collect resamples when necessary. However, this was not always conducted to meet requirements in industrial permits and 40 CFR 403.12(g). In 2021, categorical industries were sampled only three of the four quarters by the Dubuque WRRC staff. RIE Coatings had a zinc result from a sample collected on 8/30/2021 of 12.9 mg/l. The limits for this parameter in their permit are 30-day average of 1.48 mg/l (average) and daily maximum of 2.61 mg/l. No sample was collected within 30 days nor at any time during the fourth quarter. According to program staff, the samples were missed due to lack of staffing.

11. The City's continued failure to follow the Enforcement Response Plan (ERP), in accordance with 40 CFR 403.8(f)(1), is a significant concern. Because records were incomplete, it was not clear how many industries were in significant noncompliance (SNC) or infrequent noncompliance (INC) and for what duration. This is another significant issue in the Dubuque program due to lack of staffing. During 2021, no enforcement letters were issued. The only enforcement that was taken were monetary penalties issued to Rousselot for pH exceedances.

    Mr. O'Brien indicted that he communicates with industries by email. However, the information wasn't available in the file as there are currently no updated files either hard copy or electronic for any industry.

    Since the Dubuque WRRC staff collect most samples, they can determine all compliance within 24 hours as results received. However, this is not the case with samples collected by

industries. I pointed out to City personnel that each SIU is required to report violations, including pH, within 24 hours.

During the 2013 audit it was noted that there was only one documented formal Notice of Violation and City staff were not able to locate the ERP; therefore, they were not familiar with its requirements or the program's legal authority. Similarly, the IDNR noted, in 2022, that while the ERP may be adequate; however, the City failed to follow the plan. IDNR staff also noted that, issues cited during the 2022 audit had been noted in the previous audit as they have been repeatedly unaddressed for over a decade.

12. None of the hard files were complete nor had they been updated for at least two years. Most of the information may be available electronically but is potentially scattered in more than one location.

13. Currently there is no Pretreatment Coordinator (PC) and it is unclear how much time the previous coordinator spent on this program. The former PC had resigned, and the City was without a PC for most of 2019. During this time period, industrial users' compliance had not been calculated for 2019 and annual inspections were only completed at the end of the year. Files were missing necessary components and no follow up was conducted when noted as necessary. A new PC was ultimately hired and started work on July 13, 2020. This person left employment with the City in September 2021. To date, no one has been hired to replace this position and no duties of this position have been reassigned to any person with the exception of Mr. O'Brien who is already the manager of a Grade 4 treatment plant.

Post Inspection Follow-up

On January 18, 2023, I received an email from Mr. O'Brien indicating *that "Our request to add the Industrial Pretreatment Coordinator position was approved at council last night. In addition, we are working through general terms and conditions for our agreement with ISG, Inc. We hope to have the terms agreed upon and have a signed agreement by the end of next week. Both Jason and I have signed up for the 30-hour course, at DMACC, in February/March. If we are able to onboard the new position, by then, we would intend for them attend as well."*

Conclusion and Recommendations

1. Based on my findings from the inspection and discussions with city personnel it was clear, and agreed on, that staffing of the pretreatment program continues to be the number one factor in the failure of the Dubuque Pretreatment Approved Program. Repeated findings over the past decade by the EPA and the IDNR continued to be ignored by the City. Historically, especially after EPA or IDNR inspections, brief advancements in the pretreatment program are followed by longer instances of failure to meet the approved programs minimum requirements.

2. During the exit meeting, I reminded the City Manager and Mr. O'Brien that CFR 403.8(f)(3) requires that the City have sufficient resources and qualified personnel to carry out the control

authority's pretreatment responsibilities.

3. The City is currently in potential violation of:

   - Section 40 CFR 403.8(f)(3) Funding of the general Pretreatment Regulations. "The POTW shall have sufficient resources and qualified personnel to carry out the authorities and procedures described in paragraphs (f) (1) and (2) of this section."

   - The SIU Limitation, Monitoring and Reporting Requirement section of the NPDES permit which requires the permittee to evaluate the program and local limits for the past two permit cycles.

   - 40 CFR 403.8(f)(1) – Failure to implement the requirements of the City's ERP.

   - Failure to develop accurate and enforceable industrial user permits in accordance with 40 CFR 403.8(f)(1)(iii)(B).

   - Failure to identify and maintain and inventory of IUs in accordance with 40 CFR 403.8(f)(6).

   - Failure to conduct inspections of IUs in required timeframes in accordance with 40 CFR 403.8(f)(2)(v).

   - Failure to maintain records in accordance with 40 CFR 403.12.

4. Recommendations: The following recommendations should be addressed in order to improve the City's pretreatment program:

   a. Ensure the alternate TTO certification is included in applicable categorical industries.

   b. Develop a program to accept hauled wastes that prevents prohibited discharges in accordance with 40 CFR 403.5(b)(8) and prevents the acceptance of hazardous wastes.

5. The City should take the above findings seriously and corrective measure should be taken immediately to address them.

NAJI AHMAD Digitally signed by NAJI AHMAD Date: 2023.03.28 13:09:40 -05'00'

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Moran, Nicole Digitally signed by Moran, Nicole Date: 2023.04.03 08:49:27 -05'00'

Nicole Moran
Section Chief, WB/DWIS

ATTACHMENTS

1. Audit Checklist

2. NPDES Permit
3. DNR March 14, 2022, inspection and NOV
4. 2013 EPA Audit Reports
5. 2018 EPA Audit Reports
6. 2021 POTW Annual Report