

Pretreatment Audit Report

City of Casper

WY-0021920

Casper, Wyoming

July 17, 2023 to July 19, 2023



Prepared by:

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Pretreatment Audit Summary Table

City of Casper Pretreatment Audit Report

WY-0021920

July 17, 2023 to July 19, 2023

Pretreatment Audit Findings	Pretreatment Requirement and Corrective Action
<i>Section 5.0 – Local Limits</i>	
1. In addition to the established technically-based local limits, the City has incorporated the following numeric ordinance limits: • §13.32.040(A)(1) – At no time shall two successive readings on an explosion hazard meter, at the point of discharge into the POTW system (or at any point in the POTW system), be more than five percent, nor any single reading over ten percent of the lower explosive limit (LEL) of the meter. • §13.32.040(A)(3) – Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin, in amounts that will cause interference or pass through, and in no cases, exceeding one hundred mg/l. • §13.32.040(A)(4) – Any wastewater having a pH less than 5.0 or greater than 12.0, unless the POTW is specifically designed to accommodate such wastewater or wastewater having any other corrosive property capable of causing damage or hazard to structures, equipment and/or personnel of the POTW. The City established justification for the 100 mg/L for petroleum-based oil and grease. However, it does not appear that the City has established the justification for the upper pH limit of 12.0 std units and the LEL numeric limits.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.5(C)(1) 40 C.F.R. § 403.8(f)(4) <u>Corrective Action Item</u> Establish justification for the upper pH limit of 12.0 std units and the LEL numeric limits incorporated in the City’s municipal ordinance. The justifications for these pollutants may be based on engineering observations of the City’s collection system to accommodate these limited prohibited discharges or published studies or literature for these pollutants.
2. The NPDES permit issued by the WY DEQ will expire on October 31, 2023. The reissued permit will require a technical evaluation of the City’s 2020 local limits to incorporate current data, current standards, construction or rehab updates to the POTW that result in different removal efficiency, growth in the service area and to incorporate SIU changes in the service area.	<u>Pretreatment Requirements</u> Casper renewed NPDES permit #CO-0021920, Pretreatment Requirements 40 C.F.R. § 122.44(j)(2)(ii) 40 C.F.R. § 403.5(C)(1) 40 C.F.R. § 403.8(f)(4)

	<u>Corrective Action Item</u> The City will be required to submit the technical evaluation to the EPA, as a condition of the reissued NPDES permit and required by 40 C.F.R. 122.44(j)(2)(ii).
<i>Section 7.0 – Industrial User Inventory and Characterization</i>	
3. 40 C.F.R. §403.8(f)(2)(i-iii) of the Pretreatment Regulations states, The POTW shall <i>develop and implement</i> procedures to ensure compliance with the requirements of a Pretreatment Program. At a minimum, these procedures shall enable the POTW to: • “Identify and locate all possible Industrial Users which might be subject to the POTW Pretreatment Program. Any compilation, index or inventory of Industrial Users made under this paragraph shall be made available to the Regional Administrator or Director upon request.” This requires a POTW to develop and maintain an inventory of IUs in the service area. • “Identify the character and volume of pollutants contributed to the POTW by the Industrial Users identified under paragraph (f)(2)(i) of this section. This information shall be made available to the Regional Administrator or Director upon request.” This requires a POTW to characterize the IUs in the inventory of the service area. • “Notify Industrial Users identified under paragraph (f)(2)(i) of this section, of applicable Pretreatment Standards and any applicable requirements under sections 204(b) and 405 of the Act and subtitles C and D of the Resource Conservation and Recovery Act. Within 30 days of approval pursuant to 40 C.F.R. 403.8(f)(6), of a list of significant industrial users, notify each significant industrial user of its status as such and of all requirements applicable to it as a result of such status.” These procedures must include the notification of IUs of applicable Pretreatment Standards and other applicable requirements.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(i-iii) <u>Corrective Action Item</u> Update and maintain the City’s current IU inventory to ensure it is current for IUs in the POTW’s service area, as required in 40 C.F.R. § 403.8(f)(2)(i). <u>Recommended Item</u> • The EPA recommends the City collaborate with the Building department and require signature on the building permit to provide a certificate of occupancy to a new IU or an existing IU with tenant finishes. • The EPA recommends the City collaborate with the Fire Department because this department is also performing facility inspections based on fire codes but may be able to provide information to the City regarding potential significant process/wastewater generation or spill/slug potential in the service area, based on their observations. • The EPA recommends the City determine IUs or sectors of IUs that have the potential to impact the POTW, such as machine shops or metal working IUs that may change their process to include unit operations subject to the Metal Finishing Categorical Pretreatment Standards found in 40 CFR 433.

The City provided its current IU inventory of the IUs in its service area for EPA to review. According to information gathered during the audit, the City developed and maintains its current inventory of IUs in its service area by using tools and methods such as surveys, drive-bys, google/yellow pages searches and collaboration with internal City departments to identify new IUs in its service area or tenant finishes at existing IUs. Based on EPA's review, the City's IU inventory consists of approximately 500 IUs that are in the following IU sectors: • Auto Oil and Lube/Repair/Transmissions • Chemical • Dry Cleaners • Protective Coating • Engines • Foundries • Furniture Refinishing • Machine Shops • Steel Fabrications • Tank Cleaning • Water Treatment Plant • Funeral Homes • Oilfield Equipment Rental/Hauling/Services • Car Rental • Commercial Investment Properties The City provides contact information and business/process description for each IU on its inventory. However, it appears that the IU inventory needs to be updated and maintained to include all IUs, including the dental offices, restaurants, manufacturing facilities and other IUs not currently identified in the IU inventory.	
4. Prior to the Pretreatment audit, the EPA conducted a google search for IUs in the City's service area and the following IUs were not listed on the City's IU inventory: • 307 Metal Works – 225 South David St, • Acme Sheet Metal Works – 5142 Reserve Drive, Unit C • Ruff Kutt Kustoms – 2070 East Yellowstone Hwy	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(i-iii) <u>Corrective Action Item</u> The City is required to provide adequate characterization on these IUs and provide notification of applicable Pretreatment Standards.

Section 8.0 – Control Mechanism (Permit) Evaluation and Permit Specific Issues

5. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(ii) require the City to “Identify the character and volume of pollutants contributed to the POTW.” The SIU inspection reports include minimal descriptions of the facility’s unit operations. Facility inspection reports need to include more detail regarding the SIU’s chemical storage/handling/transfer, process/unit operations, wastestream generation from these unit operations, wastestream management or wastewater treatment, sampling procedures to provide a current characterization, including an evaluation of slug discharge potential and process or treatment plant changes. This information is important to capture current conditions and determine if control such as an SIU permit or BMPs are necessary or if modifications to existing control mechanism or control plans such as slug discharge control plans or spill plans are necessary.

It appears that the Pretreatment Coordinator is committed to the conducting inspections at the IUs by reviewing previous inspection reports, compliance monitoring reports, compliance history and current permit to prepare for the inspection. However, this has not resulted in complete and current inspection reports. As a result, the EPA provided compliance assistance and training on conducting facility inspections and generating inspections reports that gather information to capture current conditions at the facility that may impact categorical determinations, permit conditions, or control documents such as the slug discharge control plan.

6. The Pretreatment Regulations require in 40 C.F.R. § 403.8(f)(2)(iii) that a POTW shall notify Industrial Users of applicable Pretreatment Standards. Based on the EPA’s review of the Pretreatment records, it does not appear that the City is providing the SIU a follow-up letter after the inspection or a copy of the inspection report to notify the IU of their status under the Pretreatment program.

7. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(1)(iii) require a POTW to “Control through

Pretreatment Requirements

40 C.F.R. § 403.8(f)(2)(ii)

Corrective Action Item

Provide more detail in the SIU inspection reports to capture current conditions at the SIU, as discussed in the detail provided for each SIU to identify the character and volume of contributed pollutants.

Recommended Action Item

The EPA recommends the City evaluate its current IU inspection form to determine if it is an adequate tool used to adequately characterize IUs in its service area.

Pretreatment Requirements

40 C.F.R. § 403.8(f)(2)(iii)

Corrective Action Item

Provide follow-up after an inspection to notify the SIU or IU of applicable Pretreatment Standards.

Pretreatment Requirements

Permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable Pretreatment Standards and Requirements.” The EPA conducted a facility inspection of the Sinclair Casper Refinery Company on July 18, 2023 and based on EPA’s observations at the facility inspection, the SIU currently samples over an 8-hour period to determine compliance with the permit limits while the City samples using an automatic sampler over 24-hours.	40 C.F.R. § 403.8(f)(1)(iii) <u>Corrective Action Item</u> Determine the sampling method that is representative of the process wastewater discharged throughout the production day and ensure that both the City and the SIU conduct equivalent sampling methods. Modify the sampling conditions found in Part II.A of the permit to specify the type of required composite sampling at Outfall 001 for metals. The EPA recommends the City update the fact sheet for the Sinclair Casper Refinery Company to describe the required representative composite sampling methods at Outfall 001.
8. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vii) require the City to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices.” The City sampled Quala Wash Holdings LLC on 08/17/22 for total petroleum hydrocarbons (TPH) with a result of 414 mg/L. Based on the EPA’s evaluation, this data result is a violation of the permit limit for hexane extracted materials with a silica gel cleanup (HEM-SGT) at 100 mg/L limit. (Note: TPH is equivalent to HEM-SGT) The City resampled for TPH on 09/14/22 because it determined that the 08/17/22 data was not valid and the resample showed a TPH result of <5 mg/L. However, during the review of the Pretreatment records, the EPA did not find adequate justification on why the 08/17/22 data is not valid and therefore, not enforceable.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(vii) <u>Corrective Action Item</u> Provide an enforcement response for the TPH permit violation on 08/17/22 or provide the EPA documentation that justifies why the 08/17/22 is sample is not valid, based on sampling or analytical methods out of QA/QC control. In addition, the City needs to determine if this permit violation results in SNC for the criteria found in §13.20.010(LL)(1) of the City’s municipal ordinance.
9. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(ii) require the City to “Identify the character and volume of pollutants contributed to the POTW.” The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(1)(iii)(B)(3) further require a permit to consist of effluent limits, based on applicable categorical Pretreatment Standards.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(ii) 40 C.F.R. § 403.8(f)(1)(iii)(B)(3) <u>Corrective Action Item</u> Provide the EPA with the SDS for the exterior brightener chemical used at Quala Wash

The EPA conducted a facility inspection of Quala Wash Holdings LLC on July 18, 2023. The facility is conducting brightening of the truck/tanker exteriors with a chemical that appears to be an acid. If this brightener chemical is acid, this process may be subject to the Metal Finishing Categorical Pretreatment Standards found in 40 CFR 433.	Holdings LLC to determine if the wastewater generated is subject to the Metal Finishing Categorical Pretreatment Standards.
10. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vi) require a POTW to evaluate whether each such Significant Industrial User needs a plan or other action to control Slug Discharges. A Slug Discharge is any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch Discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate the POTW's regulations, local limits or Permit conditions. These conditions are incorporated in the City's municipal ordinance at §13.36.180(B). The EPA conducted a facility inspection of the Quala Wash Holdings LLC on July 18, 2023 and based on the EPA's evaluation of the truck washing process, there is a significant potential for slug discharges to occur. • The tankers and other vessels to be washed are manually emptied to remove the residual in the vessels. This process is completed using 5-gallon buckets to transfer into a larger container and appears to result in spill occurring on the process floor. The wastewater from the truck washing process is allowed to drain into the floor and to the conveyance trench leading to the below-grade sump. • In addition, according to the Truck Wash Facilities Manager the wastewater is either pumped to the oil/water separator or to the discharge tank based on visual observation of oil in the sump. The methods used to determine this visual observation should be documented to ensure oily wastewater is not mistakenly pumped to the discharge tank.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(vi) Casper Municipal Ordinance, §13.36.180(B) <u>Corrective Action Item</u> Require Quala Wash Holdings LLC to develop a slug discharge control plan to address the slug discharge potential in the truck washing process.
<i>Section 10.0 – Control Authority Compliance Monitoring</i>	
11. As required in 40 C.F.R. § 403.8(f)(2), the POTW shall “develop and implement procedures to ensure	<u>Pretreatment Requirements</u>

compliance with the requirements of a Pretreatment Program.” The development and implementation of a sampling plan or procedures ensures the POTW is appropriately and consistently performing sampling or monitoring events, as well as providing enforceable data that is representative of the discharge conditions at the facility. The sampling plan should include the following: • purpose and objective of the sampling program, • specific sampling protocols at each facility sampling location to ensure representative sampling, and • appropriate QA/QC procedures to ensure legally defensible data. The City has not developed a sampling plan that addresses its sampling program for SIUs in the POTW’s service area. The development of a sampling plan will ensure consistency in sampling and result in enforceable data and will help ensure the to ensure the sample taking and analysis shall be performed with sufficient care to produce evidence, which is admissible in enforcement proceedings or judicial actions, as required by 40 C.F.R. § 403.8(f)(2)(vii)..	40 C.F.R. § 403.8(f)(2) 40 C.F.R. § 403.8(f)(2)(vii) <u>Corrective Action Item</u> Develop a sampling plan to establish SIU-specific sampling protocols, sampling techniques/procedures, equipment, and an identification of the sampling location to ensure consistent sampling that is representative for the production day. In addition, the sampling plan needs to incorporate QA/QC samples such as equipment blanks, trip blanks, sample duplicates, matrix spikes, control standards to ensure the sampling and analytical techniques are in control and in compliance with 40 C.F.R. 136.
<i>Section 11.0 – Enforcement</i>	
12. The City submitted its enforcement response plan (ERP) to the EPA for review, prior to the audit. Based on the EPA’s review, the ERP needs to be updated to meet the requirements established in the Pretreatment regulations at 40 C.F.R. § 403.8(f)(5)(i-iv) and which are incorporated in Chapter 13.44, Article I of Casper’s municipal ordinance: (Note: the EPA’s review of the City ERP and the EPA’s embedded comments in the City’s ERP are included as enclosures to the audit report). <i>Describe how the POTW will investigate instances of noncompliance.</i> • Provide a summary of the methods the City utilizes to investigate IU noncompliance: ○ IU Inventory/characterization ○ Permitting ○ Self-monitoring reporting/notification ○ Control authority (City) monitoring	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(5)(i-iv) Casper Municipal Ordinance, Chapter 13.44, Article I <u>Corrective Action Item</u> Modify the enforcement response plan to be in compliance with 40 C.F.R. § 403.8(f)(5)(i-iv) of the Pretreatment Regulations.

Enforcement Response Guide:

The following anticipated types of violations are either absent or need to be modified:

- Unpermitted Discharges
- Violation of Permit Limits
- Reporting Violations
- Data Falsification
- Failure to notify (24-hour, slug/potential problems, changed discharges, hazardous waste, upset, bypass)
- Improper Sampling, Preservation or Analytical Methods
- Analytical Deficiencies
- Tampering with monitoring equipment/manhole
- Recordkeeping
- Dilution
- Refusal of Entry
- Sector Control Programs
- Trucked and Hauled Waste

The following enforcement remedies for SNC criteria listed in the City's municipal ordinance at §13.20.010(LL)(1-8) need to be established in the ERP:

- Violation of Permit Limits resulting in SNC (SNC Criteria # 1 and 2)
- Any other violation of a Pretreatment Standard or Requirement as defined by 40 CFR 403.3(1) that the POTW determines has caused Interference or Pass Through (including endangering the health of POTW personnel or the general public) (SNC Criteria # 3)
- Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment or has resulted in the POTW's exercise of its emergency authority (SNC Criteria # 4)
- Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance (SNC Criteria # 5)
- Reporting Violations that are over 30 days

and/or result in SNC (SNC Criteria #6) • Failure to accurately report noncompliance (SNC Criteria # 7) • Any other violation or group of violations, which may include a violation of Best Management Practices, which the POTW determines will adversely affect the operation or implementation of the local Pretreatment program (SNC Criteria # 8)	
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1.0 Introduction

The U.S. Environmental Protection Agency, Region 8 (EPA) conducted an audit of the Pretreatment program, administered by the City of Casper, WY (City) from July 17, 2023 through July 19, 2023. The Pretreatment audit started on July 17, 2023 at 8:00 a.m. with an opening interview. The closing conference was held on July 19, 2023 at 7:00 a.m. during which the EPA presented the preliminary observations, conclusions, and findings from the audit.

Participants in the audit included:

City of Casper, WY

Randy Ogden	Pretreatment Coordinator
Megan Lockwood	POTW Manager
Bruce Martin	Public Utilities Manager
James Ritchey	Laboratory Analyst

EPA

Al Garcia	Region 8 Pretreatment Coordinator
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The primary purpose of the EPA audit was to evaluate the Pretreatment program administered and implemented by the City. In addition, the audit served as a forum for the EPA and the City to discuss issues related to the implementation of the Pretreatment program, including PFAS requirements in the City's NPDES permit and for the EPA to provide outreach and training to the City, such as IU inspection training.

The EPA Pretreatment audit consisted of an evaluation of the following:

- The City's legal authority codified in its municipal ordinance; Title 13-Public Services, Division III-Wastewater Chapter 13.20-Industrial Pretreatment.
- Development and implementation of the City's local limits.
- The City's resources to implement the Pretreatment program in its service area.
- Implementation policies and templates developed by the City.
- Review and evaluation of the Pretreatment programmatic activities and records maintained for the permitted Significant Industrial Users (SIUs).
- Site inspection of selected SIUs and IUs in the service area to ensure the Pretreatment records reflect current conditions.
- Discussion of the Pretreatment Regulations and implementation.

The following sections of the report highlight the findings, corrective actions, and recommended actions of the audit. The action items to correct program deficiencies and meet regulatory requirements are identified in the Pretreatment Audit Summary Table, beginning on page 3 of this report. Specific actions to clarify and strengthen program implementation are provided as recommendations within the body of the audit report.

2.0 Publicly Owned Treatment Works (POTW) Information

The City owns and operates a Publicly Owned Treatment Works (POTW) located at 2400 Bryan-Evansville Road, Casper, WY 82609. The POTW serves the boundary of the City of Casper and five outside contributing jurisdictions discharging wastewater to the City. The service area for the POTW is shown in Figure 1, a POTW process diagram is shown in Figure 2 and the Google Earth view of the City's POTW is shown in Figure 3.

A site visit of the POTW was performed during the audit to develop an overview of the City's wastewater treatment plant operation and processes. The information regarding the Casper POTW and tour was provided by Ms. Megan Lockwood, POTW Superintendent. The POTW receives wastewater from the service area via 3 main trunk lines:

1. 54-inch line servicing Central and West portions of the City, including the airport
2. 36-inch line servicing the North portion of the City
3. 36-inch line servicing the East portion of the City, including Evansville

The three main interceptors combine in a mixer box prior to being pumped into the headworks building with three raw sewage screw pumps, the POTW runs one pump at a time. The wastewater enters a bar screen to remove large solids and organic material. The POTW has two bar screens but only runs one at a time. The solids and organic material are removed with automatic rakes and these solids are washed, compacted and collected in a dumpster. The wastewater flows to a cyclonic grit chamber to remove grit, which is sent to the headworks dumpster. The POTW sends two dumpster loads of headworks solids and grit to the landfill twice a week, according to Ms. Lockwood.

The wastewater effluent from the headworks flows to two primary clarifiers. The solids from the primaries are sent to the gravity thickener and the primary effluent flows to the four-chamber activated basins. The effluent from the activated basins flow to four secondary clarifiers for additional solids settling. The solids are returned to the activated basins at a rate of 65 gpm and wasted to the DAFT day tank at 110 gpm. The secondary effluent is sent to the disinfection process for UV disinfection. The disinfected POTW effluent flows through pipe to Outfall 001 and discharges to the North Platte River.

Solids –

The primary solids in the gravity thickener are sent to the DAFT day tank to combine with the secondary solids. The DAFT solids are sent to two anaerobic digesters and are digested for approximately 35 days and are then centrifuged to about 23%. About 1,500 dry metric tons of biosolids are sent to the landfill as Class B.

2.1 NPDES Permit

The City's NPDES permit #WY-0021920, issued by the Wyoming Department of Environmental Quality (WYDEQ), contains provisions for an EPA-approved Pretreatment program in Part III.B. The permit was issued on November 1, 2018 and will expire on October 31, 2023.

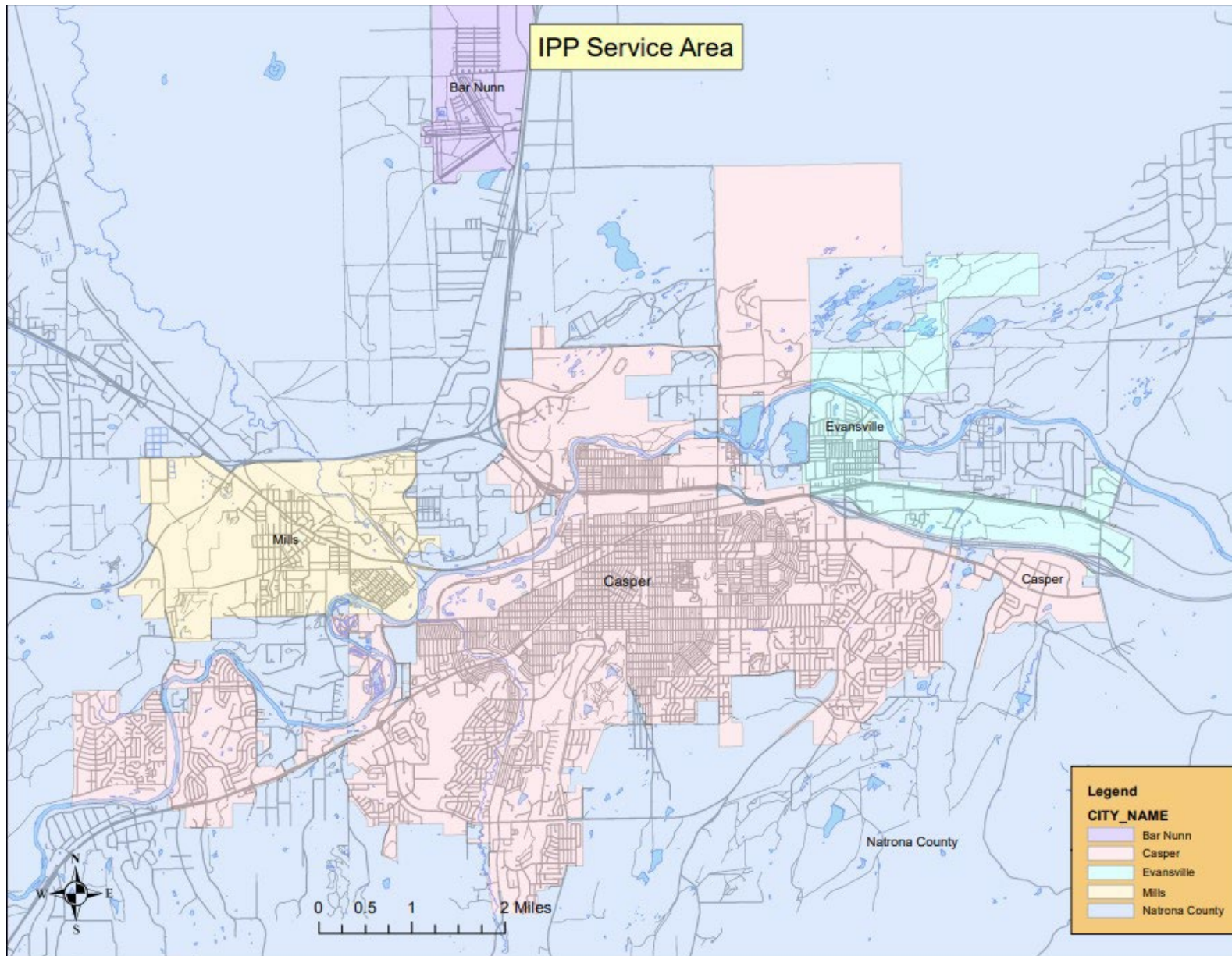


Figure 1 –City of Casper Service Area

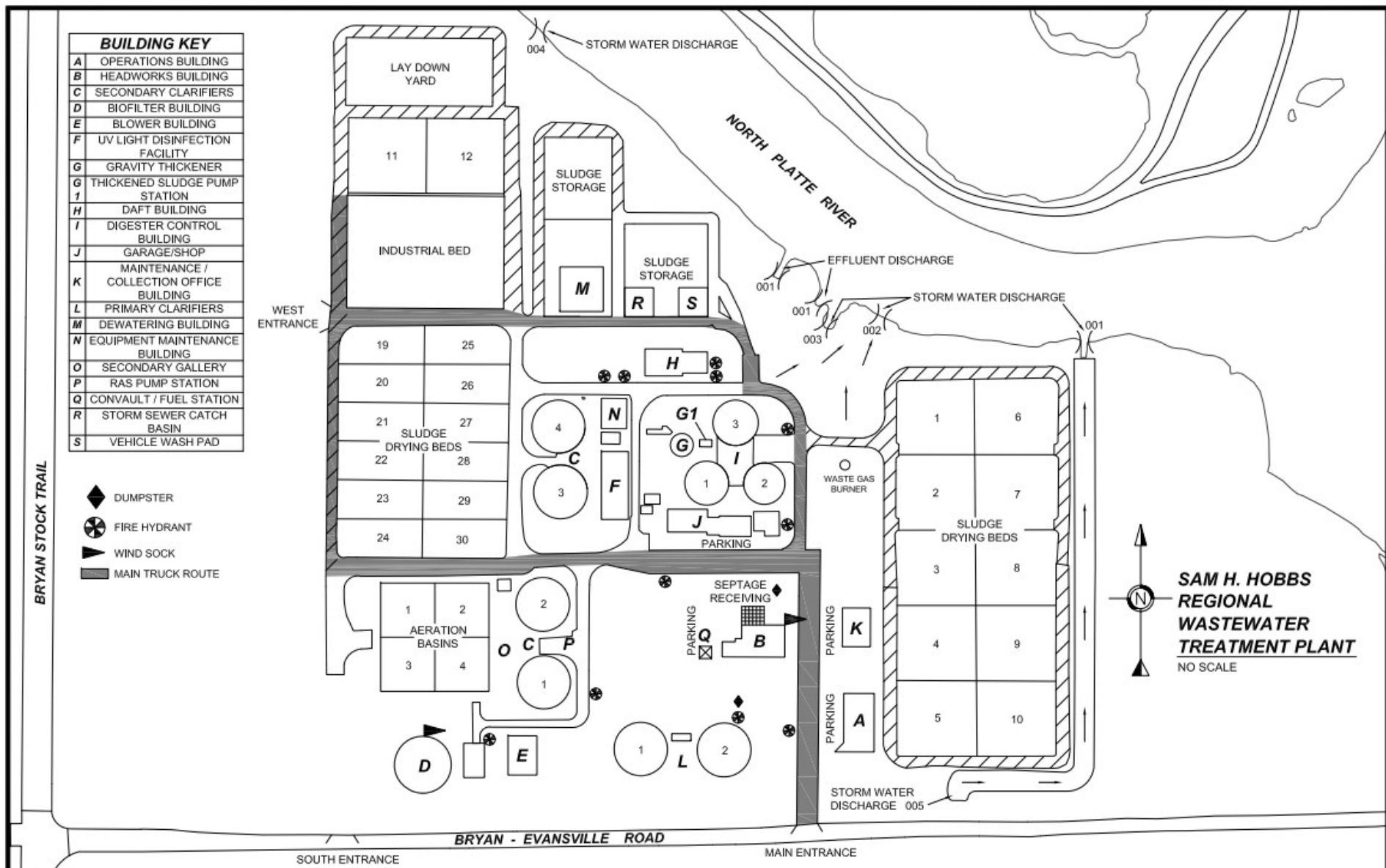


Figure 2 – Casper POTW Site Diagram



Figure 3 - City of Casper POTW, Google Earth View

3.0 Resources

3.1 Resources Regulatory Background

The Pretreatment Regulations found in 40 C.F.R. § 403.8(f)(1-6) include POTW Pretreatment requirements and procedures to implement an approved Pretreatment program. These requirements and procedures include the legal authority and the implementation procedures of the Pretreatment program (permitting, inspections, sampling, industrial waste survey, receipt of IU reporting and notification, record-keeping, slug discharge control, data evaluation and enforcement for non-compliance). In addition, the Pretreatment Regulations found in 40 C.F.R. § 403.8(f)(3) state that the POTW shall have sufficient resources and qualified personnel to carry out the authorities and implementation procedures of the Pretreatment program.

A Pretreatment program, in compliance with the criteria listed in the Pretreatment Regulations, requires adequate and qualified staffing to implement the Pretreatment program in its service area. The resources required for each implementation activity depend largely on the size of the service area, number of IUs/SIUs/sector control programs, and Pretreatment program policies. A compliant program also requires a consistent funding mechanism to ensure the program is adequately funded and equipped to fully implement the program.

3.2 Evaluation of the City's Resources and Funding

According to the FY22 Pretreatment annual report, the City's resource commitment to the Pretreatment program is 1.0 FTE. The Pretreatment Coordinator implements all programmatic activities such as the industrial user inventory/characterization, permitting or BMP sector control, field activities such as inspections/sampling, compliance evaluation and enforcement. The Pretreatment Coordinator is provided support from the POTW laboratory staff for SIU inspections and sampling. In addition, the Pretreatment Coordinator collaborates with the internal City departments such as Building and Utilities. The Pretreatment Coordinator reports to the POTW Plant Manager, who reports to the Public Utilities Director. The Public Utilities Director reports to the Public Works Director who reports to the City Manager.

The City reported in the FY22 Annual Report that its Pretreatment program is budgeted \$162,687. The budget is a line item within the wastewater treatment plant budget. The wastewater treatment plant budget is funded by the City's Enterprise Fund, generated from residential and non-residential users in the service area. The City appears to be well equipped to implement the field activities of the Pretreatment program and has portable automatic samplers, sampling equipment, confined space entry equipment, and personal protective equipment.

Based on EPA's review of the City's implementation of its Pretreatment program, it appears that the City's current resources and budget is adequate to implement all programmatic activities of the Pretreatment program, in compliance with 40 C.F.R. § 403.8(f)(3).

3.3 Examples of Available Pretreatment Training/Resources

This is not a comprehensive list of all Pretreatment related training/resources available. The City is encouraged to seek out training and resources that will support its Pretreatment program implementation. EPA is also available to the City for Pretreatment training opportunities.

The Region 8 Pretreatment workshop provided by Region 8 Pretreatment Association provides training sessions directly related to Pretreatment implementation, updates to upcoming regulations and policies, and networking opportunities.

The EPA provides “Pretreatment 101” webinar training designed to provide consistent national training to local and state Pretreatment programs. The webinar series is located at <https://www.epa.gov/npdes/national-pretreatment-program-training-and-webinar>. Archived presentations may be downloaded, and a schedule of future training opportunities is located at the website.

An additional resource available is the Pretreatment Coordinators Group discussion forum, found at the following website:

<https://groups.io/g/Pretreatment/topics>

4.0 Municipal Ordinance and Intergovernmental Agreements

4.1 Legal Authority Background

40 C.F.R. § 403.8(f)(1) of the Pretreatment Regulations states:

“The POTW shall operate pursuant to legal authority enforceable in Federal, State, or local courts, which authorizes or enables the POTW to apply and to enforce the requirements of sections 307 (b) and (c), and 402(b)(8) of the Clean Water Act (Act) and any regulations implementing those sections. Such authority may be contained in a statute, ordinance, or series of contracts or joint powers agreements which the POTW is authorized to enact, enter into or implement, and which are authorized by State law.

At a minimum, this legal authority shall enable the POTW to:

- i.* Deny or condition new or increased contributions of pollutants, or changes in the nature of pollutants, to the POTW by Industrial Users where such contributions do not meet applicable Pretreatment Standards and Requirements or where such contributions would cause the POTW to violate its NPDES permit;
- ii.* Require compliance with applicable Pretreatment Standards and Requirements by Industrial Users;
- iii.* Control through Permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable Pretreatment Standards and Requirements. In the case of Industrial Users identified as significant under

§403.3(v), this control shall be achieved through individual permits or equivalent individual control mechanisms issued to each such User...

- iv. Require (A) the development of a compliance schedule by each Industrial User for the installation of technology required to meet applicable Pretreatment Standards and Requirements and (B) the submission of all notices and self-monitoring reports from Industrial Users as are necessary to assess and assure compliance by Industrial Users with Pretreatment Standards and Requirements, including but not limited to the reports required in §403.12.
- v. Carry out all inspection, surveillance and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable Pretreatment Standards and Requirements by Industrial Users. Representatives of the POTW shall be authorized to enter any premises of any Industrial User in which a Discharge source or treatment system is located or in which records are required to be kept under §403.12(o) to assure compliance with Pretreatment Standards. Such authority shall be at least as extensive as the authority provided under section 308 of the Act;
- vi. (A) Obtain remedies for noncompliance by any Industrial User with any Pretreatment Standard and Requirement. All POTW's shall be able to seek injunctive relief for noncompliance by Industrial Users with Pretreatment Standards and Requirements. All POTWs shall also have authority to seek or assess civil or criminal penalties in at least the amount of \$1,000 a day for each violation by Industrial Users of Pretreatment Standards and Requirements.

(B) Pretreatment requirements which will be enforced through the remedies set forth in paragraph (f)(1)(vi)(A) of this section, will include but not be limited to, the duty to allow or carry out inspections, entry, or monitoring activities; any rules, regulations, or orders issued by the POTW; any requirements set forth in control mechanisms issued by the POTW; or any reporting requirements imposed by the POTW or these regulations in this part. The POTW shall have authority and procedures (after informal notice to the discharger) immediately and effectively to halt or prevent any discharge of pollutants to the POTW which reasonably appears to present an imminent endangerment to the health or welfare of persons. The POTW shall also have authority and procedures (which shall include notice to the affected industrial users and an opportunity to respond) to halt or prevent any discharge to the POTW which presents or may present an endangerment to the environment, or which threatens to interfere with the operation of the POTW. The Approval Authority shall have authority to seek judicial relief and may also use administrative penalty authority when the POTW has sought a monetary penalty which the Approval Authority believes to be insufficient.

- vii. Comply with the confidentiality requirements set forth in §403.14.”

The provisions in 40 C.F.R. § 403.8(f)(1)(i-vii) do not provide local Pretreatment programs with legal authority, but they do establish the minimum requirements for the local municipality to implement the Pretreatment program. A POTW’s legal authority is derived from State law. Therefore, State law must confer the minimum legal authority required by the Pretreatment Regulations on a POTW.

To apply the regulatory authority provided by State law, it is necessary for the POTW to establish local regulations to legally implement and enforce pretreatment requirements. A POTW's legal authority is typically established in a sewer use ordinance as part of the municipality's code, or in the case of a sanitation district, its Rules and Regulations. The EPA's 2007 *Model Pretreatment Ordinance* provides a template for POTWs that are required to develop pretreatment programs and can be found at the following website:

https://www3.epa.gov/npdes/pubs/pretreatment_model_suo.pdf

4.2 *City of Casper Municipal Ordinance*

EPA approved the City's Pretreatment program on March 31, 1986. According to records maintained by EPA, it appears the City submitted updates to its legal authority or municipal ordinance in 1992, 1993 for the Domestic Sewage Exclusions, 2001, and 2008. The current ordinance was approved by the EPA on May 26, 2016.

The City provided its Pretreatment legal authority found in Title 13-Public Services, Division III-Wastewater, Chapter 13.20-Pretreatment of the municipal ordinance for the EPA to review. The Pretreatment legal authority established by the City of Casper in its municipal ordinance provide the City the framework to implement the Pretreatment Regulations in the POTW's service area.

4.3 *Inter-Jurisdictional or Governmental Agreements (IGA)*

4.3.1 IGA Regulatory Background

A POTW's authority to implement and enforce its approved Pretreatment program is directly related to its regulatory jurisdiction. The POTW's authority is established in ordinance or Rules and Regulations, which are in effect for its service area. Local entities with connectors, or outside jurisdictions to the service area that contribute wastewater, must establish legally binding mechanisms to ensure that all IUs in these outside contributing jurisdictions are subject to enforceable Pretreatment standards and requirements, as required in §403.8(f)(1).

40 C.F.R. § 403.8(f)(1)(i) states, "The POTW shall operate pursuant to legal authority enforceable in Federal, State or local courts, which authorizes or enables the POTW to apply and to enforce the requirements of sections 307 (b) and (c), and 402(b)(8) of the Act and any regulations implementing those sections. *Such authority may be contained in a statute, ordinance, or series of contracts or joint powers agreements which the POTW is authorized to enact, enter into or implement, and which are authorized by State law.*" [Emphasis added]

The local entity that implements the Pretreatment program must either obtain this authority for itself through an IGA or ensure that the outside contributing jurisdiction has both the authority and the obligation to implement and enforce the Pretreatment Standards and Requirements against every IU that discharges to the POTW.

4.3.2 Evaluation of the City's IGAs with Outside Contributing Jurisdictions

According to information gathered during the audit, there are five outside jurisdictions contributing non-domestic wastewater to the City's POTW:

- Town of Mills
- Town of Evansville
- Brooks Water and Sewer District
- Wardwell Water and Sewer District
- Town of Bar Nunn
- Portions of unincorporated Natrona County

The City established an original IGA with these outside contributing jurisdictions on July 31, 1981. The 1981 IGA was amended on August 1, 1985, February 22, 1988, February 20, 1996 and February 7, 2002.

EPA evaluated all agreements that exists between the City and the outside contributing jurisdictions, including the most recent amendment established on February 7, 2002. It appears that the 2002 agreement adequately delegates the administration and enforcement, including judicial enforcement, of the Industrial Pretreatment Program to the City of Casper.

5.0 Local Limits

5.1 Local Limits Regulatory Background

40 C.F.R. § 403.8(f)(4) of the Pretreatment Regulations require POTWs that are developing pretreatment programs to develop and enforce specific limits on prohibited discharges or demonstrate that the limits are not necessary. 40 C.F.R. § 403.5(c)(1) states, "Each POTW developing a POTW Pretreatment Program pursuant to §403.8 shall develop and enforce specific limits to implement the prohibitions listed in paragraphs (a)(1) and (b) of this section [*general and specific prohibitions*]. Each POTW with an approved pretreatment program shall continue to develop these limits as necessary and effectively enforce such limits." [*Clarification and emphasis added*].

The National Pretreatment Program consists of three types of national pretreatment standards established by regulation that apply to industrial users. These include prohibited discharge standards, categorical standards, and local limits. Prohibited discharge and categorical standards are developed by the EPA to establish nationwide Pretreatment Standards. Prohibited discharge standards, comprised of general and specific prohibitions found in 40 C.F.R. 403.5(a) and (b) of the Pretreatment Regulations, apply to all IUs regardless of the size or type of operation. Categorical standards are uniform, technology-based standards that apply to specific process wastewater discharges from industrial categories. These categorical standards are found at 40 C.F.R. Parts 405 through 471.

The EPA's promulgation of categorical standards does not relieve a POTW from its obligation to evaluate the need for and to develop local limits to meet the general and specific prohibitions in the Pretreatment Regulations. Because specific prohibitions and

categorical standards provide only general protection against pass through and interference, local limits based on POTW-specific conditions may be necessary. Local limits are developed by POTWs to enforce the specific and general prohibitions, as well as any state and local regulations.

An EPA-approved Pretreatment program is required to develop local limits that are protective of the POTW, the collection system, and the POTW's site-specific standards. These site-specific standards may be NPDES permit effluent limits, biosolids limits, environmental criterion, worker health and safety standards or other local standards.

The EPA recommends that POTWs establish their local limits based on the maximum allowable headworks loading (MAHL) calculated for each pollutant of concern. The MAHL approach enables the POTW to calculate local limits considering the portion of the MAHL that is controllable (non-domestic discharges from IUs) from the uncontrollable portion (domestic sources, background concentrations, etc.). A pollutant's MAHL is determined by first calculating its Allowable Headworks Loading (AHL) for each POTW's site-specific standard or environmental criterion. Local limit development uses a mass-balance approach to determine the AHLs for a POTW based on the environmental and treatment plant criteria.

An AHL is the estimated maximum loading of a pollutant that can be received at a POTW's headworks, that should not cause a POTW to violate a treatment plant limit or environmental criterion. An AHL is developed to prevent interference or pass through. An AHL is calculated for each applicable POTW site-specific standard: pass through, sludge contamination, air quality standards, and the various forms of interference (i.e. biological treatment inhibition, sludge digestion inhibition). The AHLs for each pollutant of concern (POC) are calculated based on the various suitable environmental criteria, plant flow rates, and plant removal efficiency. After calculating a series of AHLs for each POC, the lowest AHL is chosen as the MAHL.

MAHLs estimate the maximum combined loadings that can be received at the POTW's headworks from all sources. Maximum allowable industrial loadings (MAIL), developed by the POTW, represent the amount of pollutant loadings the POTW can receive from controlled sources (i.e., industrial users, some commercial sources, and some hauled waste) that the POTW chooses to control through local limits. Local limits can take many forms based on how MAILs are allocated by the POTW. The designation and implementation of these MAILs, including the allocation of loadings to SIUs, are left to each POTW. The POTW should provide a reasonable method of allocating the MAIL to the SIUs while ensuring the implementation procedures do not exceed the calculated MAHL. Typically, the POTWs allocate the MAIL as a uniform concentration-based or a mass limit to each SIU.

The local limits should be based on the following:

- Sampling of the service area to develop a representative data set collected for local limits (e.g., influent, effluent, biosolids, commercial, residential, industrial, trucked/hauled waste),

- Evaluation of the current POTW standards/criteria (including, but not limited to: NPDES permit limits/conditions, water quality standards, biosolids standards),
- Identification of the POTW removal efficiency and pollutant partitioning,
- Evaluation of data to ensure it is current and representative of current conditions,
- Identification of pollutants of concern,
- Calculations of loadings and determination of MAHL,
- Development of local limits and allocation methods.

5.2 Local Limits Requirements Established in the City's NPDES Permits

The City's NPDES permit issued by the WYDEQ on November 1, 2018 include local limit requirements in Part III.B.

5.3 The EPA Evaluation of the City's Local Limits

5.3.1 Technically-based Local Limits

The City's local limits were initially established when the Pretreatment Program was approved in 1986 and were updated in 1995, 1997, 2001, 2016. The City's current local limits were public noticed on October 2, 2020 for a 30-day public comment period and approved by EPA on November 3, 2020. The City's local limits are incorporated in §13.32.030(A) of the municipal ordinance. The 2020 local limits were developed by the City using SIU regulated flows located at the permitted monitoring points. As a result, the local limits are applicable to SIUs. The local limits applicability language in §13.32.030(A) is as follows:

“Local limits that can be accepted from significant industrial users at the POTW for treatment in accordance with guidance established by federal law is limited to:”

Table 1 – City of Casper Local Limits

Pollutant	Symbol	Daily Maximum (mg/L)
Arsenic, Total	As	6.42
Cadmium, Total	Cd	3.48
Chromium, Total	Cr	39.44
Copper, Total	Cu	27.66
Lead, Total	Pb	6.84
Mercury, Total	Hg	0.49

Pollutant	Symbol	Daily Maximum (mg/L)
Molybdenum, Total	Mo	4.11
Nickel, Total	Ni	20.49
Selenium, Total	Se	3.08
Silver, Total	Ag	18.08
Zinc, Total	Zn	43.60

5.3.2 Numeric Ordinance Limits

In addition to the established technically-based local limits, the City has incorporated the following numeric ordinance limits:

- §13.32.040(A)(1) – At no time shall two successive readings on an explosion hazard meter, at the point of discharge into the POTW system (or at any point in the POTW system), be more than five percent, nor any single reading over ten percent of the lower explosive limit (LEL) of the meter.
- §13.32.040(A)(3) – Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin, in amounts that will cause interference or pass through, and in no cases, exceeding one hundred mg/l.
- §13.32.040(A)(4) – Any wastewater having a pH less than 5.0 or greater than 12.0, unless the POTW is specifically designed to accommodate such wastewater or wastewater having any other corrosive property capable of causing damage or hazard to structures, equipment and/or personnel of the POTW.

The City established justification for the 100 mg/L for petroleum-based oil and grease. However, it does not appear that the City has established the justification for the upper pH limit of 12.0 std units and the LEL numeric limits. The justifications for these pollutants may be based on engineering observations of the City’s collection system to accommodate these limited prohibited discharges or published studies or literature for these pollutants.

5.3.3 Dilution Prohibition

The City has incorporated a prohibition on dilution in §13.32.060 of the municipal ordinance to ensure the IUs are appropriately managing their regulated wastestreams to meet compliance with an applicable Pretreatment Standard or Requirement:

“No user shall increase the use of process water or in any way attempt to dilute a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in the pretreatment standard, or in any other pollutant-specific

limitation developed for the industrial user.”

The dilution prohibition language in §13.32.060 meets the requirement in 40 C.F.R. Part 403.6(d) of the Pretreatment Regulations.

5.4 Local Limits Technical Evaluation-Regulatory Background

40 C.F.R. § 122.44(j)(2)(ii) of the NPDES regulations require POTWs to provide a written technical evaluation of the need to revise local limits following permit issuance or reissuance. The technical evaluation is a detailed re-evaluation of data, criteria, conditions, and assumptions on which local limits are based to determine whether any significant changes affecting the local limits have occurred. Chapter 7 of the *Local Limits Development Guidance Manual*, EPA-833-R-04-002A, July 2004 provides guidance on completing the technical evaluation of local limits.

The Annual Pretreatment Reports submitted to the EPA provide the POTW with an opportunity to perform reviews for exceedances of the established MAHL for the POCs, on an annual basis. The POTW compares both the maximum and average influent data for the reporting year against the MAHL to determine if there were any exceedances. In addition, the POTW is required to report biosolids data to determine if there were any changes or concerns with the biosolids loadings. An exceedance of the established MAHL may be indicative of a change in the service area, changes to the POTW operations or changes to domestic or non-domestic loadings and may indicate a need to recalculate the local limits. However, the annual review may not have addressed conditions that can change over time, such as operating conditions, environmental criteria/standards, data, or assumptions that may make local limits no longer appropriate, protective or legally-defensible.

As a follow-up to MAHL exceedances listed on the annual report and as required during a permit reissuance, a POTW should compare its current conditions and requirements with those that existed when the local limits were developed. The EPA recommends that POTWs determine if re-calculating existing local limits, or developing MAHLs for new pollutants of concern, is necessary in response to the following criteria:

1. Removal Efficiencies
 - a. Modification to the POTW or new POTW brought online.
 - b. Changes in POTW processes or operations that have affected the POTW removal efficiencies.
2. Total POTW or IU Loading
 - a. Significant changes to flow or loadings to the POTW, due to significant residential or domestic growth.
 - b. Significant changes to loadings to the POTW due to new IUs, changes in loadings at existing IUs or significant growth in the service area.
 - c. Significant changes in loadings from SIUs in the service area.
3. Limiting Criteria
 - a. New or revised NPDES permit limits.
 - b. New or revised biosolids standards.
 - c. Changes in EPA or State Criteria (acute and chronic water quality standards

- for the receiving waters, reuse water quality criteria) at the time of local limit development to existing criteria.
4. Sludge Characteristics or Method of Disposal
 - a. Changes in loadings to biosolids.
 - b. Changes in biosolids disposal methods.
 5. Background Concentrations of Pollutants in Receiving Water

5.5 Technical Evaluation of the City's Local Limits

The NPDES permit issued by the WY DEQ will expire on October 31, 2023. The reissued permit will require a technical evaluation of the City's 2020 local limits to incorporate current data, current standards, construction or rehab updates to the POTW that result in different removal efficiency, growth in the service area and to incorporate SIU changes in the service area. The City will be required to submit the technical evaluation to the EPA, as a condition of the reissued NPDES permit and required by 40 C.F.R. 122.44(j)(2)(ii).

5.6 Permit or Site-Specific Limits

Local municipalities implementing the Pretreatment program should have the ability to establish site or permit-specific limits as deemed necessary to be protective of the POTW. This is a beneficial authority because situations or projects may occur in the service area that the municipality may want to provide control to protect the POTW. However, the current limits in the ordinance may not address the pollutant of concern.

The EPA considers the development of any local limit, whether codified in the municipal ordinance/rules and regulations or developed on a site-specific situation (i.e., permits-specific limit) to be a program modification under 40 C.F.R §403.18 (53 FR 40579, Final Rule, General Pretreatment Regulations for Existing and New Sources, October 17, 1988). The development of any local limit is required to follow the approval and public notice provisions, both at the local level and by submitting to the EPA.

40 C.F.R §403.5(c)(3) of the Pretreatment Regulations states, "Specific effluent limits shall not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond." The EPA recommends that POTWs conduct public participation in the local limits process (whether codified in the municipal ordinances/rules and regulations or new limits developed in a permit) as openly as possible. This may involve notifying the SIUs/IUs and other affected parties of the proposed limits or announcing a 30-day public comment period. This would allow sufficient time for the public to participate, which is a fundamental goal of the Clean Water Act in Section 101(e).

The City has established the ability to develop site or permit-specific limits in §13.32.030(E) of its municipal ordinance:

"The city reserves the right to establish, by ordinance or in individual wastewater discharge permits or in general permits, more stringent standards or requirements on discharges to the POTW consistent with the purpose of this chapter."

Based on the EPA’s review of the Pretreatment records, the City has not established site-specific limits in the SIU permits.

6.0 Pretreatment Operating Procedures

6.1 Regulatory Background

40 C.F.R. §403.8(f)(2) of the Pretreatment Regulations states, “The POTW shall *develop and implement* procedures to ensure compliance with the requirements of a Pretreatment Program.” [*emphasis added*] The Pretreatment Regulations identify these minimum procedures in 40 C.F.R. §403.8(f)(2)(i-viii) to include the following **implementation** activities, summarized below:

- Identify and locate all possible IUs that might be subject to the Pretreatment program,
- Obtain information describing the character and volume of wastes discharged by IUs,
- Notify IUs of all applicable Pretreatment standards and other applicable State or Federal standards or requirements,
- Review self-monitoring reports and other notices submitted by IUs,
- Randomly sample and analyze effluents from IUs,
- Evaluate whether each SIU needs a slug discharge control plan,
- Investigate instances of noncompliance with Pretreatment standards and requirements,
- Comply with public participation requirements.

The requirements listed in 40 C.F.R. §403.8(f)(2) include the **development** of procedures. Adequate and updated standard operating procedures (SOPs) provide the following benefits to a Pretreatment program:

- Develop the baseline knowledge of the Pretreatment Regulations and establish the framework for program implementation,
- Adequately implement the authorities established in the municipal ordinance and ensure consistency in program implementation,
- Retain institutional and historical knowledge developed within the POTW’s program, and
- Provide a valuable training resource for new or inexperienced staff members.

Ultimately, the benefits of valid SOPs to the Pretreatment program are increased efficiency, along with improved data comparability, credibility, and legal defensibility. In addition, the development of written SOPs and templates allow the EPA to determine if the procedures adequately implement the legal authority developed in the municipal ordinance/rules and regulations as required in 40 C.F.R. §403.8(f):

“A POTW Pretreatment program must be based on the following legal authority and include the following procedures. These authorities and procedures shall at all times be

fully and effectively exercised and implemented.”

6.2 *Standard Operating Procedures (SOPs)*

EPA evaluated the City’s procedures and templates during the audit to ensure these meet the requirements listed in 40 C.F.R. § 403.8(f)(2). As previously discussed, developing SOPs are beneficial for the City’s Pretreatment program but most importantly, to ensure adequate implementation of the authorities established in the municipal ordinance and ensure consistency in program implementation. EPA considers the Industrial User Inventory and Characterization, Sampling Plan/QA-QC, and the Enforcement Response Plan to be priority and required SOPs to ensure consistent implementation of the City’s legal authority. EPA evaluated these priority SOPs and provided comments in the following sections within this audit report:

- Industrial User Inventory and Characterization Procedures (*discussed in §7.0*),
- Sampling Plan, Site-Specific Sampling Protocol, Quality Assurance and Quality Control (*discussed in §10.0*), and
- Enforcement Response Plan and Data Compliance Evaluation (*discussed in §11.0*).

EPA recommends the City evaluate the need to develop Pretreatment procedures, as necessary.

6.3 *Templates*

Templates and checklists are also critical to a Pretreatment program to ensure consistent and appropriate implementation of the Pretreatment regulations. The City has developed a permit application for discharging facilities and an SIU permit template. The permit application appears to provide adequate information and data for the City to develop an appropriate control mechanism. The evaluation of the permit template is included in §8.4 of this audit report.

6.4 *Records and Data Management*

6.4.1 *Regulatory Background*

The recordkeeping requirements of the Pretreatment program are established in 40 C.F.R. §403.12(o)(1-3):

“(1) Any Industrial User and POTW subject to the reporting requirements established in this section shall maintain records of all information resulting from any monitoring activities required by this section, including documentation associated with Best Management Practices. Such records shall include for all samples:

- (i) The date, exact place, method, and time of sampling and the names of the person or persons taking the samples.
- (ii) The dates analyses were performed.
- (iii) Who performed the analyses.
- (iv) The analytical techniques/methods use; and

(v) The results of such analyses.

(2) Any Industrial User or POTW subject to the reporting requirements established in this section (including documentation associated with Best Management Practices) shall be required to retain for a minimum of 3 years, any records of monitoring activities and results (whether or not such monitoring activities are required by this section) and shall make such records available for inspection and copying by the Director and the Regional Administrator (and POTW in the case of an Industrial User). This period of retention shall be extended during the course of any unresolved litigation regarding the Industrial User or POTW or when requested by the Director or the Regional Administrator.

(3) Any POTW to which reports are submitted by an Industrial User pursuant to paragraphs (b), [baseline monitoring reports] (d), [90-day compliance reports] (e), [categorical industrial user monitoring reports] and (h) [significant industrial user monitoring reports] of this section shall retain such reports for a minimum of 3 years and shall make such reports available for inspection and copying by the Director and the Regional Administrator. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Industrial User or the operation of the POTW Pretreatment Program or when requested by the Director or the Regional Administrator.”

6.4.2 Recordkeeping and Data Management

Based on information gathered during the audit, the SIU permit and IU records are located in the Pretreatment Coordinator’s office and are maintained for at least three years. The SIUs are chronologically organized and the IUs on the industrial user inventory may include records such as building permit, survey, inspection reports, hazardous waste notifications, slug plans, as necessary.

6.5 *Receipt of Discharge Monitoring Reports and Notifications*

The Pretreatment regulations in 40 C.F.R. §403.8(f)(2)(vii) require a POTW to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices required under §403.12 [IU compliance reports], or indicated by analysis, inspection, and surveillance activities [control authority monitoring].” This requires the POTW to ensure adequate receipt and tracking of self-monitoring reports and notifications, have procedures to evaluate the data and information contained within these reports and notices, and determine compliance with the Pretreatment standards (e.g., permit limits and conditions).

The SIU self-monitoring reports, notifications and other reports submitted are date stamped by hand as received. The City evaluates compliance, based on its manual review of the information in the reports and notifications.

6.6 *Management of Confidential Records*

40 C.F.R. § 403.14 of the Pretreatment Regulations establishes the public availability of the Pretreatment records and the provisions to establish confidential business information

(CBI). The City has incorporated the public availability and confidentiality requirements in §13.36.120 of the municipal ordinance:

“A. Information and data on a user obtained from reports, questionnaires, permit applications, permits and monitoring programs and from inspections shall be available to the public or other governmental agency without restriction unless the user specifically requests and is able to demonstrate to the satisfaction of the city that the release of such information would divulge information, processes or methods of production entitled to protection as trade secrets of the user.

B. When requested by the person furnishing a report, the portions of a report, which might disclose trade secrets or secret processes shall not be made available to any person unless required under applicable state law. Wastewater constituents and characteristics will not be recognized as confidential information.

C. Information accepted by the city as confidential shall not be transmitted to any governmental agency or to the general public, except as provided by Wyoming law.”

According to information gathered during the audit, the City has not received confidential business information.

7.0 Industrial User Inventory and Characterization

7.1 Regulatory Background

The Pretreatment Regulations state in 40 C.F.R. § 403.8(f)(2)(i-iii) that a POTW shall develop and implement procedures to ensure compliance with requirements of a Pretreatment Program. [These requirements are summarized after the regulation language in **bold** and *italics* font].

- i. “Identify and locate all possible Industrial Users which might be subject to the POTW Pretreatment Program. Any compilation, index or inventory of Industrial Users made under this paragraph shall be made available to the Regional Administrator or Director upon request.” ***This requires a POTW to develop and maintain an inventory of IUs in the service area.***
- ii. “Identify the character and volume of pollutants contributed to the POTW by the Industrial Users identified under paragraph (f)(2)(i) of this section. This information shall be made available to the Regional Administrator or Director upon request.” ***This requires a POTW to characterize the IUs in the inventory of the service area.***
- iii. “Notify Industrial Users identified under paragraph (f)(2)(i) of this section, of applicable Pretreatment Standards and any applicable requirements under sections 204(b) and 405 of the Act and subtitles C and D of the Resource Conservation and Recovery Act. Within 30 days of approval pursuant to 40 C.F.R. 403.8(f)(6), of a list of significant industrial users, notify each significant industrial user of its status as such and of all requirements applicable to it as a result of such status.” ***These procedures must include the notification of IUs of applicable Pretreatment Standards and other applicable requirements.***

The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(6) state, “The POTW shall prepare and maintain a list of its non-domestic or Industrial Users meeting the criteria in §403.3(v)(1). The list shall identify the criteria in §403.3(v)(1) applicable to each Industrial User and, where applicable, shall also indicate whether the POTW has made a determination pursuant to §403.3(v)(2) that such Industrial User should not be considered a Significant Industrial User. The initial list shall be submitted to the Approval Authority pursuant to §403.9 or as a non-substantial modification pursuant to §403.18(d).”

Approved Pretreatment programs are required by the Pretreatment Regulations to understand their service area and outside contributing jurisdictions, by developing and maintaining an inventory of IUs. In addition, the Pretreatment Regulations require a Pretreatment program to characterize the IUs listed on the inventory and notify the IU of their status under the Pretreatment program. For example, the following characterizations may apply to an IU, based on information received from questionnaires, drive-by or facility inspections:

- The IU is not characterized as significant, based on volume and characteristic of the discharged wastewater.
- The IU is characterized as significant and issued a permit.
- The IU is not characterized as significant, but loadings need to be controlled using BMPs in a source control program.
- The IU is generating wastewaters that are significant but is characterized as a zero-discharging facility.

The **Industrial Waste Inventory and Characterization** or industrial waste survey (IWS)/IU inventory procedures are an important component to an effective Pretreatment program because this is a POTW’s first exposure to the IUs, allows the POTW to determine if an IU is significant, notify the IU of its status under the Pretreatment regulations, and determine the appropriate type of control mechanisms for these facilities to protect the POTW and collection system.

7.2 Industrial User Identification and Characterization Procedure

40 C.F.R. §403.8(f)(2) of the Pretreatment Regulations require the City to “develop and implement procedures” that “enable the POTW” to comply with these Pretreatment Program requirements. The EPA recommends the City develop an Industrial Waste Survey standard operating procedure (SOP) that identifies methods and procedures used to identify and characterize IUs in the service area of its POTW. In addition, the Industrial Waste Survey SOP needs to include the notification to these IUs of applicable Pretreatment Standards, as required in 40 C.F.R. § 403.8(f)(2)(iii).

7.3 Industrial User Database of the City’s Service Area

40 C.F.R. § 403.8(f)(2)(i-iii) of the Pretreatment regulations require the City to identify and locate all IUs in its service area, identify the character and volume of pollutants contributed by these IUs based on current information, and notify these IUs of applicable Pretreatment Standards and Requirements.

The City provided its current IU inventory of the IUs in its service area for EPA to review. According to information gathered during the audit, the City developed and maintains its current inventory of IUs in its service area by using tools and methods such as surveys, drive-bys, google/yellow pages searches and collaboration with internal City departments to identify new IUs in its service area or tenant finishes at existing IUs. EPA recommends the City collaborate with the Building department and require signature on the building permit to provide a certificate of occupancy to a new IU or an existing IU with tenant finishes.

Based on EPA's review, the City's IU inventory consists of approximately 500 IUs that are in the following IU sectors:

- Auto Oil and Lube/Repair/Transmissions
- Chemical
- Dry Cleaners
- Protective Coating
- Engines
- Foundries
- Furniture Refinishing
- Machine Shops
- Steel Fabrications
- Tank Cleaning
- Water Treatment Plant
- Funeral Homes
- Oilfield Equipment Rental/Hauling/Services
- Car Rental
- Commercial Investment Properties

The City provides contact information and business/process description for each IU on its inventory. However, it appears that the IU inventory needs to be updated and maintained to include all IUs, including the dental offices, restaurants, manufacturing facilities and other IUs not currently identified in the IU inventory. The City is required to update and maintain its current IU inventory to ensure it is current for IUs in the POTW's service area, as required in 40 C.F.R. § 403.8(f)(2)(i).

In addition, the EPA conducted a google search for IUs in the City's service area and the following IUs were not listed on the City's IU inventory:

- 307 Metal Works – 225 South David St,
- Acme Sheet Metal Works – 5142 Reserve Drive, Unit C
- Ruff Kutt Kustoms – 2070 East Yellowstone Hwy

The City is required to provide adequate characterization on these IUs and provide notification of applicable Pretreatment Standards, as required in 40 C.F.R. § 403.8(f)(2)(i-iii).

EPA recommends the City collaborate with the Fire Department because this department

is also performing facility inspections based on fire codes but may be able to provide information to the City regarding potential significant process/wastewater generation or spill/slug potential in the service area, based on their observations.

The EPA currently provides “Pretreatment 101” webinar training, and a training for “Industrial User Inventory and Characterization Procedures,” provided in September 2010, is archived at the following website:

<https://www.epa.gov/npdes/national-pretreatment-program-events-training-and-publications#pretreat101>

8.0 Control Mechanism (Permit) Evaluation and Permit Specific Issues

8.1 Regulatory Background

POTWs are required to issue control mechanisms to IUs identified through IU Inventory and Characterization procedures as SIUs. Individual permits or general control mechanisms authorize the discharge of wastewater to a POTW upon condition that the discharger complies with the permit limitations and conditions. An SIU permit is effective for only a limited period and should be revocable by the issuing authority at any time for just cause. In addition, the POTW’s legal authority will typically include a provision that forbids the discharge of industrial wastewater from a SIU without a current permit.

The Pretreatment Regulations establish the required permit conditions in 40 C.F.R. § 403.8(f)(1)(iii)(B)(1-6) that include the following minimum elements:

1. Statement of duration (in no case more than five years);
2. Statement of non-transferability without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator;
3. Effluent limits, including Best Management Practices, based on applicable general Pretreatment Standards, categorical Pretreatment Standards, local limits, and State and local law;
4. Self-monitoring, sampling, reporting, notification and recordkeeping requirements, including an identification of the pollutants to be monitored, sampling location, sampling frequency, and sample type, based on the applicable general Pretreatment Standards, categorical Pretreatment Standards, local limits, and State and local law;
5. Statement of applicable civil and criminal penalties for violation of Pretreatment Standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond applicable federal deadlines;
6. Requirements to control Slug Discharges, if determined by the POTW to be necessary.

The reporting and notification requirements in permit condition #4 above are found in 40 C.F.R. § 403.12 of the Pretreatment Regulations and include the following:

- Baseline Monitoring Reports – 403.12(b)
- Compliance Schedule Progress Reports – 403.12(c)

- 90-Day Compliance Reports – 403.12(d)
- CIU Periodic Compliance Reports – 403.12(e)
- Notice of Potential Problems, including Slug Loading – 403.12(f)
- Notification of Changes Affecting Slug Discharge Potential – 403.8(f)(2)(vi)
- 24-Hour Non-Compliance Notification – 403.12(g)
- SIU Periodic Compliance Reports – 403.12(h)
- Notification of Changed Discharge – 403.12(j)
- Notification of Hazardous Waste Discharge – 403.12(p)
- Notification of Bypass – 403.17

Under general principles of administrative law, permit applicants and other interested parties may challenge the POTW's permit decisions, including the permit limitations and conditions and the POTW's authority to issue the permit. The POTW must ensure that it has the requisite legal authority to impose Pretreatment Standards and Requirements in SIU permits and that it exercises its authority in a consistent and non-arbitrary manner. The local ordinance must clearly provide the POTW with the following authorities to support the permit requirements found in 40 C.F.R. § 403.8(f)(1)(iii):

- Authority to regulate all Industrial Users contributing wastewater to the POTW.
- Authority to require and issue permits, orders, or other control mechanisms, including:
 - Authority to require Industrial Users to submit all data that the POTW deems relevant to permit decisions and provisions for public access to data.
 - Authority to enter, inspect, and sample to verify information supplied by the Industrial User as well as to assess the Industrial User's compliance status.
 - Authority to incorporate local limits, including BMPs (if applicable).
 - Authority to incorporate federal and state Pretreatment Standards and Requirements.
 - Authority to require self-monitoring, record keeping, reporting, and notifications by the permittee.
 - Authority to develop other appropriate permit conditions.
- Authority to enforce sewer use ordinance and discharge permit violations.
- Authority to require the development of a slug discharge control plan.

The POTW is required to establish the legal authority to require an IU to complete and file a permit application, with current information, to receive an initial or reissued permit. A permit application enables the POTW to obtain the information necessary to characterize the facility, to evaluate the quality and quantity of wastewater discharged, or projected to be discharged for a new facility, and to determine the applicable Pretreatment Standards and controls. The permit application serves as the formal request from the IU to discharge to the POTW and is required to be signed by a responsible corporate officer of the IU, as defined in 40 C.F.R. § 403.12(l) of the Pretreatment Regulations. In addition to the permit application, the POTW should evaluate, if available, historic IU effluent data, compliance reports, previous inspection reports, Safety Data Sheets, etc.

Throughout the permit drafting process, the POTW should carefully and thoroughly

document each step in a permit rationale or statement of basis. A statement of basis is a document that provides a justification of the permit conditions and limits based on a characterization of the IU, its wastewater discharge, and the applicable Pretreatment Standards and Requirements. The statement of basis should include a description of the facility's production, process(es), wastewater generation/management, and discharge locations to adequately characterize the facility. The statement of basis should also identify the appropriate Federal, State, and Local Pretreatment Standards, based on the IU's characterization; and should provide justification for permit conditions and requirements, such as pollutants of concern, monitoring/reporting frequencies, representative sampling types, notification requirements, slug discharge control, operation and maintenance requirements, etc.

The statement of basis facilitates defending any challenges that the permit terms and conditions were developed arbitrarily or capriciously and provides the required documentation in the permit record of any relief from otherwise applicable requirements (i.e., pollutants not expected to be present, equivalent limits, decisions on general control mechanisms, decisions on Non-Significant Categorical Industrial User (NSCIU) classification, and decisions on reduced monitoring requirements). In addition, the statement of basis can serve as a resident document to preserve institutional knowledge and continuity for new or different staff members.

The EPA updated the IU Permitting Guidance Manual, 833-R-12-0001A in September 2012. This guidance manual supports the implementation of the permit conditions found in 40 C.F. R. § 403.8(f)(1)(iii)(B)(1-6) of the Pretreatment Regulations. The guidance manual is intended to provide both new and experienced permit writers with conceptual support and specific examples to strengthen their permit development expertise. The guidance manual references technical guidance developed by the EPA regarding local limits, enforcing Pretreatment Standards and Requirements, controlling hauled waste, information regarding compliance inspections and sampling, and BMPs.

The IU Permitting Guidance Manual can be found at the following website:

https://www.epa.gov/sites/production/files/2015-10/documents/industrial_user_permitting_manual_full.pdf

8.2 The EPA's Evaluation of the City's Permitting Legal Authority

EPA evaluated the City's municipal ordinance to ensure it provides an adequate framework to require permit coverage, to deny or condition non-domestic wastewater contributions and to establish adequate permit conditions.

- Section 13.36.010—establishes the requirement for SIUs to obtain a wastewater discharge permit.
- Section 13.36.020 – contains the permit application contents.
- Section 13.36.020 (B) — establishes the authority for the City to deny or conditions wastewaters discharged to the public sewers.
- Section 13.36.030 – establishes the permit conditions to prevent Passthrough or Interference and to protect the POTW, worker health and safety, biosolids and the

receiving stream water quality.

8.3 Permit Template Overview

EPA evaluated the City's permit template to ensure the City is incorporating the required permit conditions found in 40 C.F.R. § 403.8(f)(1)(iii)(B)(1-6) of the Pretreatment required Regulations and Section 13.36.030 of the City's municipal ordinance. Based on EPA evaluation, the SIU permit complies with the permit conditions found in the Pretreatment Regulations and incorporated in the City's municipal ordinance. (Note: The EPA's evaluation of the City's permit is included in the Casper Permit Template Review.docx attached to the audit report.)

8.4 Specific Permit Record Findings

The City has identified ten IUs in the service area that is determined to be significant industrial users (SIU) and that have been issued permits under the Pretreatment program. Findings from the EPA's review of the Pretreatment records, including the facility inspection report, statement of basis, permit, compliance evaluation, and enforcement records are listed below:

8.4.1 Permit records Overview

1. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(ii) require the City to "Identify the character and volume of pollutants contributed to the POTW." The SIU inspection reports include minimal descriptions of the facility's unit operations. Facility inspection report need to include more detail regarding the SIU's chemical storage/handling/transfer, process/unit operations, wastestream generation from these unit operations, wastestream management or wastewater treatment, sampling procedures to provide a current characterization, including an evaluation of slug discharge potential and process or treatment plant changes. This information is important to capture current conditions and determine if control such as an SIU permit or BMPs are necessary or if modifications to existing control mechanism or control plans such as slug discharge control plans or spill plans are necessary.
 - a. It appears that the Pretreatment Coordinator is committed to the conducting inspections at the IUs by reviewing previous inspection reports, compliance monitoring reports, compliance history and current permit to prepare for the inspection. However, this has not resulted in complete and current inspection reports. As a result, the EPA provided compliance assistance and training on conducting facility inspections and generating inspections reports that gather information to capture current conditions at the facility that may impact categorical determinations, permit conditions, or control documents such as the slug discharge control plan.
 - b. In addition, the EPA recommends the City evaluate its current IU inspection form to determine if it is an adequate tool used to adequately characterize IUs in its service area.

2. The Pretreatment Regulations require in 40 C.F.R. § 403.8(f)(2)(iii) that a POTW shall notify Industrial Users of applicable Pretreatment Standards. Based on the EPA's review of the Pretreatment records, it does not appear that the City is providing the SIU a follow-up letter after the inspection or a copy of the inspection report to notify the IU of their status under the Pretreatment program. The City needs to provide follow-up after an inspection to provide notification to the SIU or IU of applicable Pretreatment Standards.
3. Fact Sheets/Permit Rationales: The City should develop permit rationales that adequately capture current conditions at the SIUs, identifies applicable Pretreatment Standards and justifies permit conditions, including the most stringent permit limits based on an evaluation of all Pretreatment Standards, representative monitoring type/frequencies based on the SIU's wastewater discharge and recent compliance history, slug discharge/spill potential, reporting frequency and reportable data, TOMP requirement, requirement for slug discharge control plan based on current conditions.
4. Based on the EPA's review of the Pretreatment records, the Pretreatment Coordinator ensures these records are well organized, complete and current.

8.4.2 Sinclair Casper Refinery Company

1. The facility inspection reports generated for the Sinclair Casper Refinery Company need to include more detail, as described in §8.4.1(1) of this audit report.
2. As described in §8.4.1(3) of this audit report, EPA recommends the City update the fact sheet for the Sinclair Casper Refinery Company to ensure it describes current conditions at the facility and adequately addresses appropriate permit conditions such as representative sampling at the monitoring point. If changes occur at the facility, the fact sheet should be modified, and a determination be made if permit conditions need to be amended.
3. The EPA conducted a facility inspection of the Sinclair Casper Refinery Company on July 18, 2023 and has the following observations: (Note: the Sinclair Casper Refinery Company inspection report was submitted to the facility on August 7, 2023 and is attached to this report.)
 - a. Based on EPA's observations at the facility inspection, the SIU currently samples over an 8-hour period to determine compliance with the permit limits while the City samples using an automatic sampler over 24-hours. The City needs to determine the sampling method that is representative of the process wastewater discharged throughout the production day and ensure that both the City and the SIU conduct equivalent sampling methods.
 - b. The City is required to modify the sampling conditions found in Part II.A of the permit to specify the type of required composite sampling at Outfall 001 for metals.

8.4.3 Western Radiator

1. The facility inspection reports generated for Western Radiator need to include more detail, as described in §8.4.1(1) of this audit report.

2. As described in §8.4.1(3) of this audit report, EPA recommends the City update the fact sheet for Western Radiator to ensure it describes current conditions at the facility such as detailed flow diagram of the radiator repair process and adequately addresses appropriate zero-discharge permit conditions. If changes occur at the facility, the fact sheet should be modified, and a determination be made if permit conditions need to be amended.

8.4.4 Alsco American Linen

1. The facility inspection reports generated for Alsco American Linen need to include more detail, as described in §8.4.1(1) of this audit report.
2. As described in §8.4.1(3) of this audit report, EPA recommends the City update the fact sheet for Alsco American Linen to ensure it describes current conditions at the facility and adequately addresses permit conditions. If changes occur at the facility, the fact sheet should be modified, and a determination be made if permit conditions need to be amended.

8.4.5 Quala Wash Holdings LLC

1. The facility inspection reports generated for Quala Wash Holdings LLC need to include more detail, as described in §8.4.1(1) of this audit report.
2. As described in §8.4.1(3) of this audit report, EPA recommends the City update the fact sheet for Quala Wash Holdings LLC that describes current conditions at the facility such as the exterior truck washing and an evaluation of slug discharge potential in the truck washing bays. The fact sheet should also address the appropriate permit conditions, based on current conditions. If changes occur at the facility, the fact sheet should be modified, and a determination be made if permit conditions need to be amended.
3. The City sampled the permittee on 08/17/22 for total petroleum hydrocarbons (TPH) with a result of 414 mg/L. Based on the EPA's evaluation, this data result is a violation of the permit limit for hexane extracted materials with a silica gel cleanup (HEM-SGT) at 100 mg/L limit. (**Note:** TPH is equivalent to HEM-SGT) The City resampled for TPH on 09/14/22 because it determined that the 08/17/22 data was not valid and the resample showed a TPH result of <5 mg/L. The EPA did not find adequate justification on why the 08/17/22 data is not valid and therefore, not enforceable during the review of the Pretreatment records.
 - a. The City is required to provide an enforcement response for the TPH permit violation on 08/17/22 or provide the EPA documentation that provides justification why this sample is not valid, based on sampling or analytical methods out of QA/QC control. In addition the City needs to determine if this permit violation meets SNC for criteria found in §13.20.010(LL)(1) of the City's municipal ordinance.
4. The EPA conducted a facility inspection of the Quala Wash Holdings LLC on July 18, 2023 and has the following observations: (Note: the Quala Wash

Holdings LLC inspection report was submitted to the facility on August 7, 2023 and is attached to this report.)

- a. Based on the EPA's evaluation of the truck washing process, there is a significant potential for slug discharges to occur.
 - i. The tankers and other vessels to be washed are manually emptied to remove the residual in the vessel. This process is completed using 5-gallon buckets to transfer into a larger container and appears to result in spill occurring to the floor. The wastewater from the truck washing process is allowed to drain into the floor and to the conveyance trench leading to the below-grade sump.
 - ii. In addition, according to the Truck Wash Facilities Manager, the wastewater in the sump is pumped to either the oil/water separator or to the discharge tank, depending on visual observation of oil in the sump. The methods used to determine this visual observation should be documented to ensure oily wastewater is not mistakenly pumped to the discharge tank.
 - iii. The City needs to require the facility to develop a slug discharge control plan to address the slug discharge potential in the truck washing process.
- b. The facility is conducting brightening of the truck/tanker exteriors with a chemical that appears to be an acid. If this brightener chemical is acid, this process may be subject to the Metal Finishing Categorical Pretreatment Standards found in 40 CFR 433. The City is required to provide the EPA with the SDS for the exterior brightener chemical to determine if the wastewater generated is subject to the Metal Finishing Categorical Pretreatment Standards.

9.0 Significant Industrial User Facility Inspections

9.1 Regulatory Background

The General Pretreatment Regulations at 40 C.F.R. § 403.8(f)(1)(v) states that the POTW shall have the legal authority to:

“Carry out all inspection, surveillance and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable Pretreatment Standards and Requirements by Industrial Users. Representatives of the POTW shall be authorized to enter any premises of any Industrial User in which a Discharge source or treatment system is located or in which records are required to be kept under §403.12(o) to assure compliance with Pretreatment Standards. Such authority shall be at least as extensive as the authority provided under section 308 of the Act;”

40 C.F.R. § 403.8(f)(2)(v) of the Pretreatment Regulations requires the POTW to inspect its SIUs at least once per year. 40 C.F.R. § 403.8(f)(2)(ii) require the City to “Identify the

character and volume of pollutants contributed to the POTW.” 40 C.F.R. § 403.8(f)(2)(vii) establishes the standard of evidence collection during sampling or inspection activities:

“Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices required under §403.12, or indicated by analysis, inspection, and surveillance activities described in paragraph (f)(2)(v) of this section. Sample taking and analysis and the collection of other information shall be performed with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions.”

Typically, an inspector is the only representative from the POTW that regularly appears at the IU’s facility and significantly represents the POTW’s role as a responsible public agency, observing the actions and evaluating the performance of the regulated industry.

9.2 *Right of Entry*

The City has established the authority for right of entry in §13.36.200 of the municipal ordinance:

“The city shall inspect the facilities of any user to ascertain whether the purpose of this division is being met. Persons or occupants of premises where wastewater is created or discharged shall allow the city, or its representatives, ready access at all times to all parts of the premises for the purposes of inspection, sampling, records examination and copying, or in the performance of any of their duties. The city and/or EPA shall have the right to set up on the user's property such devices as are necessary to conduct sampling inspection, compliance monitoring, and/or metering operations. Where a user has security measures in force which would require proper identification and clearance before entry into their premises, the user shall make necessary arrangements so that upon presentation of suitable identification, personnel from the city and/or EPA will be permitted to enter, without delay, for the purposes of performing their specific responsibilities.”

The municipal ordinance adequately establishes the right of entry authority for the City, as required in 40 C.F.R. § 403.8(f)(1)(v) of the Pretreatment Regulations.

9.3 *Facility Inspection Records – Background*

40 C.F.R. § 403.8(f)(2)(vii) of the Pretreatment Regulations requires the POTW to meet the criterion for evidence collection “with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions.” This is performed during facility inspections by adequate documentation in the inspection report of the observations, surveillance, inspections, sampling performed, and analysis gathered during facility inspections. A complete and well-developed inspection report that provides a current characterization of the facility will benefit the POTW’s Pretreatment program for programmatic decisions such as categorical determinations, slug discharge/spill potential, changes at the facility that may affect the current permit conditions, sampling frequencies, etc.

As discussed in §2.11.2 of the *Industrial User Inspection and Sampling Manual for*

POTWs, EPA-831B17001, January 2017, the inspection report generated from the facility inspections should accomplish the following three objectives: 1) organize and coordinate all information in a comprehensive, usable manner for use by the POTW's compliance personnel; 2) identify areas that may require follow-up activity; and 3) provide significant background information on the facility that can be reviewed prior to conducting subsequent inspections at the facility. The quality of this documentation will, to a large degree, determine how effective these follow-up activities will be at the facility. The information in the inspection report must be presented in a clear, concise, and well-organized manner.

The Industrial User Inspection and Sampling Manual for POTWs describes the information necessary to characterize a facility in §§2.10.3 and 2.12. The manual also discusses the records to review at a facility to help determine the facility's compliance in §2.10.8. It is important for Pretreatment programs to capture the following information during facility inspections to characterize the facility, and document facility changes to ensure the SIU's permit addresses current conditions:

- Chemical storage areas, including potential spill concerns during chemical receiving and transfer/handling.
- Process tanks or processing areas – detailed descriptions of the process including tank contents, capacities.
- Wastestream generation from the process areas and disposal/discharge practices – frequency of discharge rinse water tanks, whether spent chemical solutions tanks discharged to the POTW or hauled off site, proximity to floor/trench drains, slug discharge control and spill containment measures, etc.
- Wastestream management (treatment, recycling, hauling off site, evaporation, etc.).
- Waste treatment system.
- Wastestream or hazardous waste storage areas, including potential spill concerns.
- Discharge monitoring points.
 - Evaluation of the sampling/monitoring protocols to determine if these are appropriate to provide representative data of the wastewaters regulated by the permit.

A facility inspection of a permitted SIU should include a review of relevant records used to support compliance with the permit conditions and that may not be reported in the self-monitoring compliance reports such as pH and continuous flow monitoring records, tank change out logs, analytical reports, waste manifests, operation and maintenance logs, etc. A detailed facility inspection report with descriptions of tank contents, capacities, generated wastestreams, plumbing, and management of the wastestreams will benefit the POTW to establish the baseline for the year and to determine if any changes will impact the permit conditions/limits or associated documents such as the slug discharge control plan, spill plan, treatment system operation manual or sampling protocol.

During the Pretreatment audit, the EPA discussed inspection procedures with the City, including EPA's procedures. The EPA performs facility inspections by gathering verbal information in an opening conference, then performing a walkthrough to visually confirm the information gathered during the opening interview. The EPA structures its information gathering by following the raw materials/chemical supply through the unit operations and

ultimately to the finished product or service. A closing conference is performed to gather follow-up information, review records, and to provide preliminary conclusions to the facility.

9.4 Evaluation of the City's Inspection Reports/Records

The EPA evaluated the inspection reports and other records related to the facility inspection for the SIU annual facility inspection. As discussed in § 8.4.1(1) of this audit report, the SIU inspection reports provide minimal characterization of the facility and needs to be improved to include information regarding the facility's chemical storage/handling, process, (sources, flow volume and types of discharges) wastewater generation, slug discharge potential, waste treatment methods, sampling procedures, and review of records in the annual inspection report. The inspection reports should also include digital photos to further support information gathered during the inspection.

9.5 Notification of Applicable Pretreatment Standards

The Pretreatment Regulations require in 40 C.F.R. § 403.8(f)(2)(iii) that a POTW shall notify Industrial Users of applicable Pretreatment Standards. As discussed in § 8.4.1(2) of this audit report, it does not appear that the City is providing the SIU a follow-up letter after the inspection or a copy of the inspection report to notify the IU of their status under the Pretreatment program. The City needs to provide follow-up after an inspection to provide notification to the SIU or IU of applicable Pretreatment Standards.

9.6 Facility Inspections

During the audit, EPA and the City inspected the Sinclair Casper Refinery Company and Quala Wash Holdings LLC on July 18, 2023. The inspection reports were submitted to the facilities on August 7, 2023 and is included in this audit report as an enclosure. Areas of concern during the facility inspection is provided in the facility inspection report.

10.0 Control Authority Compliance Monitoring

10.1 Regulatory Background

40 C.F.R. § 403.8(f)(1)(v) of the Pretreatment Regulations requires the POTW to have the legal authority to "Carry out all inspection, surveillance, and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable Pretreatment Standards and requirements." Further, 40 C.F.R. § 403.8(f)(2)(v) require a POTW to "Randomly sample and analyze the effluent from Industrial Users and conduct surveillance activities in order to identify, independent of information supplied by Industrial Users, occasional and continuing noncompliance with Pretreatment Standards. Inspect and sample the effluent from each Significant Industrial User at least once a year."

The standard to which POTWs are held for purposes of evidence collection during a Control Authority monitoring event is outlined in 40 C.F.R. § 403.8(f)(2)(vii): "Sample taking and analysis and the collection of other information shall be performed with

sufficient care to produce evidence which is admissible in enforcement proceedings or judicial actions.”

In addition, a POTW is required to ensure the Control Authority monitoring events are based on representative conditions at the monitoring point, to ensure that these sampling events are legally defensible and of the same quality as required for self-monitoring events. 40 C.F.R. § 403.12(g)(3) of the Pretreatment Regulations require, “The reports ...must be based upon data obtained through appropriate sampling and analysis performed during the period covered by the report, which data are representative of conditions occurring during the reporting period.”

An enforceable sample must be representative of the nature and character of the discharges during the reporting period and is required to be representative in composition to that in the larger volume of wastewater being discharged. A POTW is required to implement a Control Authority monitoring program that meets the compliance monitoring requirements of the Pretreatment Regulations, provides representative data for compliance determinations, and that would be legally defensible in court, if such an enforcement action is taken by the POTW. In addition, representative and legally defensible data helps the POTW support other program objectives such as local limits evaluation, and permit development or reissuance.

10.2 Sampling Plan and Protocols

As required in 40 C.F.R. § 403.8(f)(2), the POTW shall “develop and implement procedures to ensure compliance with the requirements of a Pretreatment Program.” The development and implementation of a sampling plan or procedures ensures the POTW is appropriately and consistently performing sampling or monitoring events, as well as providing enforceable data that is representative of the discharge conditions at the facility. The sampling plan should include the following:

- purpose and objective of the sampling program,
- specific sampling protocols at each facility sampling location to ensure representative sampling, and
- appropriate QA/QC procedures to ensure legally defensible data.

10.2.1 Site-Specific Sampling Protocols

The sampling protocols must include specific procedures used at each facility to ensure adequate and representative sampling protocols. The development of the sampling protocols will ensure the sampling events are performed in accordance with appropriate standards and procedures and produce quality data that is legally defensible.

At a minimum, the specific sampling protocols at each sampling location should include the following:

- Sampling locations – should include all monitoring points included in the SIU’s permit, including the use of digital photos for each monitoring point.
- Type of sample – the POTW is required to ensure the sampling event is

representative of the SIU's discharge, as required by 40 C.F.R. §403.12(g)(3). The type of sample will be dependent on the parameter to be sampled and discharge characteristics. The type of sample could include specifications for use of automatic samplers (including programming to provide representative sampling) or manual sampling techniques.

- Type of Flow Measurement – if applicable
- Parameters for Analysis – based on the SIU's permit
- Sample Volume
- Type of Sample Containers
- Sample Preservation Techniques
- Sample Identification and Chain of Custody Procedures
- QA/QC Procedures

10.2.2 Quality Assurance/Quality Control (QA/QC)

QA and QC are tools which are necessary in a sampling program to maintain a level of quality, such as legally defensible data, in the measurement, documentation, and interpretation of sampling data. The QA/QC procedures are used to obtain data that are both precise (degree of closeness between two or more samples) and accurate (degree of closeness between the results obtained from the sample analysis and the true value that should have been obtained). Proper implementation of QA/QC procedures will result in an increase in the POTW's confidence in the validity of the reported analytical data.

The QA/QC procedures used to ensure data collected is valid and legally defensible include, but are not limited to the following:

- equipment maintenance/calibration,
- proper sampling bottles, proper sampling techniques that are adequate and representative of the discharge from the facility,
- field blanks, equipment blanks, method blanks, standards, blind duplicates, and
- ensuring sampling personnel are adequately trained.

10.3 *The EPA Evaluation of the City's Control Authority Monitoring*

10.3.1 SOPs

The City has not developed a sampling plan that addresses its sampling program for SIUs in the POTW's service area. The City is required to develop a sampling plan to ensure the sample taking and analysis shall be performed with sufficient care to produce evidence, which is admissible in enforcement proceedings or judicial actions, as required by 40 C.F.R. § 403.8(f)(2)(vii). The sampling plan needs to establish SIU-specific sampling protocols that establish sampling techniques/procedures, equipment, and an identification of the sampling location to ensure consistent sampling that is representative for the production day. In addition, the sampling plan needs to incorporate QA/QC samples such as equipment blanks, trip blanks, sample duplicates, matrix spikes, control standards to ensure the sampling and analytical techniques are in control and in compliance with 40 C.F.R. 136. The development of a sampling plan will ensure consistency in sampling and result in enforceable data.

10.3.2 City's Control Authority Monitoring

Based on the EPA's review of the Pretreatment records, the City samples the permitted SIUs at least once per year and meets the Control Authority monitoring frequency required in 40 C.F.R. § 403.8(f)(2)(v).

11.0 Enforcement

11.1 Regulatory Background

The EPA establishes the regulatory requirement to develop and implement an Enforcement Response Plan (ERP) in 40 C.F.R. § 403.8(f)(5)(i-iv) of the Pretreatment Regulations. The regulations state:

“The POTW shall develop and implement an enforcement response plan. This plan shall contain detailed procedures indicating how a POTW will investigate and respond to instances of industrial user noncompliance. The plan shall, at a minimum:

- (i) Describe how the POTW will investigate instances of noncompliance.
- (ii) Describe the types of escalating enforcement responses the POTW will take in response to all anticipated types of industrial user violations and the time periods within which responses will take place.
- (iii) Identify (by title) the official(s) responsible for each type of response.
- (iv) Adequately reflect the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards.”

The development and implementation of an ERP is an important component of an effective Pretreatment Program. Although a successful Pretreatment program should provide outreach to facilities in the service area regarding the applicability of the Pretreatment Standards and compliance with these standards, in many situations, enforcement is the necessary driving force that makes the Pretreatment program functional.

The ERP establishes a framework for POTWs to formalize procedures for investigating and responding to instances of IU noncompliance and to ensure that POTWs enforce against IUs objectively, consistently, and equitably. A well-developed ERP should help the POTW decide what resources are needed to enforce the Pretreatment Standards/Requirements and assist in dealing with IU violations. In addition, the ERP will provide notice to the IUs regarding the POTW's responsibility to respond to violations of Pretreatment Standards/Requirements.

11.2 Enforcement Legal Authority

The EPA evaluated the City's enforcement authority and remedies found in its municipal ordinance.

1. Civil penalties established in §13.44.100
2. Criminal penalties established in §13.44.110

3. Injunctive relief provisions established in §13.44.090
4. Authority to enforce against falsifying information established in §13.44.080
5. Notice of violations authority established in §13.44.030
6. Administrative orders authority established in §13.44.040
7. Administrative penalty authority established in §13.44.070
8. Suspensions of service provisions in §13.44.010(A)
9. Permit termination provisions established in §13.44.020
10. Publication of IUs in significant noncompliance in §13.20.010(LL)(9)

11.3 Enforcement Response Plan

The City submitted its ERP to the EPA for review, prior to the audit. Based on the EPA's review, the ERP needs to be updated to meet the requirements established in the Pretreatment regulations at 40 C.F.R. § 403.8(f)(5)(i-iv) and incorporated in the and incorporated in Chapter 13.44, Article I of Casper's municipal ordinance: (Note: the EPA's review of the City ERP and the EPA's embedded comments in the City's ERP are included as enclosures to the audit report).

Describe how the POTW will investigate instances of noncompliance

- Provide a summary of the methods the City utilizes to investigate IU noncompliance:
 - IU Inventory/characterization
 - Permitting
 - Self-monitoring reporting/notification
 - Control authority (City) monitoring

Enforcement Response Guide:

The following anticipated types of violations are either absent or need to be modified:

- Unpermitted Discharges
- Violation of Permit Limits
- Reporting Violations
- Data Falsification
- Failure to notify (24-hour, slug/potential problems, changed discharges, hazardous waste, upset, bypass)
- Improper Sampling, Preservation or Analytical Methods
- Analytical Deficiencies
- Tampering with monitoring equipment/manhole
- Recordkeeping
- Dilution
- Refusal of Entry
- Sector Control Programs
- Trucked and Hauled Waste

The following enforcement remedies for SNC criteria listed in the City's municipal

ordinance at §13.20.010(LL)(1-8) need to be established in the ERP:

- Violation of Permit Limits resulting in SNC) (SNC Criteria # 1 and 2)
- Any other violation of a Pretreatment Standard or Requirement as defined by 40 CFR 403.3(l) that the POTW determines has caused Interference or Pass Through (including endangering the health of POTW personnel or the general public) (SNC Criteria # 3)
- Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment or has resulted in the POTW's exercise of its emergency authority (SNC Criteria # 4)
- Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance (SNC Criteria # 5)
- Reporting Violations that are over 30 days and/or result in SNC (SNC Criteria #6)
- Failure to accurately report noncompliance (SNC Criteria # 7)
- Any other violation or group of violations, which may include a violation of Best Management Practices, which the POTW determines will adversely affect the operation or implementation of the local Pretreatment program (SNC Criteria # 8)

11.4 Compliance Evaluation

Based on EPA's review described in §8.4.1(4) of this audit report, it appears that the City evaluates the self-monitoring reports or notices of violation for compliance. However, as documented in §8.4.5(3), the City needs to provide enforcement for a TPH permit violation on 08/17/22 or provide the EPA documentation that provides justification why this sample is not valid, based on sampling or analytical methods out of QA/QC control.

11.5 SNC Calculations and Public Participation

40 C.F.R. § 403.8(f)(2)(viii) of the Pretreatment Regulations require a POTW to comply with the public participation requirements in the enforcement of National Pretreatment Standards. These procedures shall include a provision for at least annual public notification in a newspaper of general circulation, that provides meaningful public notice within the jurisdictions served by the POTW, of IUs which, at any time during the previous 12 months, were in SNC with applicable Pretreatment requirements. The SNC determinations are both calculation of numeric Pretreatment Standards, as listed in 40 C.F.R. § 403.8(f)(2)(viii)(A-D) and determination of violations of the narrative Pretreatment Standards, as listed in 40 C.F.R. § 403.8(f)(2)(viii)(E-H). The City has established these SNC criteria in §13.20.010(LL)(1-8) of the City's municipal ordinance.

Based on EPA's review of the Pretreatment records, the City is not calculating numeric SNC and determining narrative SNC because there has not been identified violations in the IU/SIU reports and notifications. However, as documented in §8.4.5(3), the City needs to provide enforcement for a TPH permit violation on 08/17/22 or provide the EPA documentation that provides justification why this sample is not valid, based on sampling or analytical methods out of QA/QC control. In addition the City needs to determine if this

permit violation meets SNC for criteria found in §13.20.010(LL)(1) of the City's municipal ordinance.

12.0 Trucked and Hauled Waste

12.1 Regulatory Background

In addition to receiving wastes through the collection system, many POTWs accept trucked and hauled wastes. As stated in 40 C.F.R. § 403.1(b)(1), pollutants from nondomestic sources that are transported to the POTW by truck or rail are also subject to the Pretreatment Regulations. They may also be subject to categorical Pretreatment Standards. Therefore, hauled wastes from CIUs or hauled waste that otherwise qualifies the discharger as an IU must be regulated in accordance with the requirements of the Pretreatment Regulations, including any applicable requirements for permitting and inspecting the generating facility. Hauled wastes, like wastes received through the collection system, have the potential to negatively affect the POTW, making regulatory control of the wastes necessary.

Most wastewaters hauled or trucked to a POTW are domestic septage, typically from homes outside the POTW's service area, but compatible in nature. Because such discharges are predominantly compatible wastes, treatment at a POTW is the most appropriate disposal method. The biosolids regulations at 40 C.F.R. § 503.9(f) define domestic septage as the liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar system that holds only domestic sewage. Domestic septage does not include liquid or solid material removed from any system that receives either commercial wastewater or industrial wastewater, and it does not include grease removed from a restaurant grease trap.

The POTW cannot know for certain the nature and concentration of the trucked wastes and the impact on the POTW without implementing some type of control or surveillance program. Unlike discharges from IUs directly connected to the POTW, the makeup of a load of hauled waste is virtually unknown without some type of monitoring, be it visual or analytical. Even compatible loads of domestic septage can cause problems for a POTW due to high strength or discharge rate. Domestic septage can be partially digested, higher in metals concentrations than normal domestic wastes, or contain small amounts of household contaminants (e.g., cleaners). Similarly, disinfectants used in portable toilets have the potential to affect POTW operations.

Receipt of hauled hazardous waste (as defined in Resource Conservation and Recovery Act (RCRA)) might not only affect POTW operations but also could subject the POTW to additional reporting requirements. The Domestic Sewage Exclusion, specified in 40 C.F.R. § 261.4(a)(1)(ii), provides that hazardous wastes mixed with domestic sewage and under control of the Pretreatment program are exempt from the RCRA waste regulations. However, hazardous wastes received by truck or rail (or dedicated pipe) at the treatment plant are not exempt from the regulations. POTWs that accept hazardous wastes from those sources are subject to *permit by rule* status under RCRA [40 C.F.R. § 270.60(c)] provided that certain requirements are met. The POTW must be in compliance with all its NPDES permit requirements and the waste must comply with all federal, state, and local

pretreatment requirements.

12.2 Legal Authority

The City has adopted the Federal specific discharge prohibitions for trucked and hauled wastes found in 40 C.F.R. § 403.5(b)(8) of the Pretreatment Regulations. This is incorporated by the City in §13.32.040(14) of the municipal ordinance:

“Any discharge of trucked or hauled wastes is prohibited except at discharge points designated by the POTW. Designation points shall be pursuant to rules and regulations of the city.”

Section 13.32.160 establishes the Trucked or hauled wastes removal and transportation requirements:

“A. No person, firm or corporation engaged in trucked or hauled waste removal or transportation shall be allowed to discharge or dispose waste into the POTW unless they comply with the following hauling requirements:

1. Hold a valid hauling account from the City of Casper.
2. Carry liability insurance of such kind and in such amounts as the city may require to protect itself from loss or damage that may directly or indirectly be occasioned by the discharge of hauled waste into the POTW.
3. Complete a waste manifest obtained from the city or its designee.
4. Commingling of industrial, process, and domestic wastewater is prohibited, unless authorized by the city or its designee.
5. Any waste collected from a business or industry must receive an authorization from the city before disposal into the POTW is allowed.

B. The city or its designee shall have the right to inspect and sample any trucked or hauled waste before allowing discharge to the POTW to verify compliance with the provisions of this chapter and any applicable federal or state laws.

C. The city shall have the right to refuse the discharge of any trucked or hauled waste to the POTW if it determines within its absolute discretion that the discharge of such trucked or hauled waste would not comply with the provisions of this chapter and any applicable federal or state laws.

D. The discharge of any trucked or hauled waste containing hazardous wastes, as defined under applicable federal and state laws and regulations, to the POTW shall be strictly prohibited.”

Section 13.32.170 establishes the disposal requirements for trucked or hauled waste:

“A. Trucked or hauled waste shall be introduced into the POTW at a designated receiving area or discharge point. Such wastes shall not violate any applicable Casper Municipal Code(s), specifically Section 13.32.040 or any other requirements established by the city and applicable federal or state laws.

B. The city or its designee may issue wastewater discharge permits to the waste generator(s) or the hauler(s).

C. All nondomestic hauled wastes must have prior authorization from the city or its designee for disposal at the POTW. The city or its designee may collect samples of each load or sample randomly to ensure compliance with applicable standards.

D. The applicable waste hauler(s) or the generator(s) must complete city's waste-tracking manifest for every load and furnish the listed required information.

E. In all cases, the city reserves the right to accept or reject any waste as it deems necessary. The city or its designee may stop or cease a discharge or disposal from a truck or other device at any time.

F. A hauled waste disposal permit may be suspended or revoked for any violations of these regulations.”

12.3 Trucked and Hauled Waste Disposal Location and Control Mechanisms

According to information gathered during the audit, the City accept sumps from petroleum-based oil and grease IUs, oil and grease interceptors from food service establishments (FSE) and septic/porta potty trucked and hauled waste. Six hauling companies provides industrial, septic and oil and grease service in the service area and haul these wastes to the POTW. The City does not issue permits to the trucked and waste haulers but requires waste manifests. The trucks typically discharge loads during daytime operating hours but have 24-hour access to the POTW. All trucks are required to contact an operator to deliver the manifest, prior to dumping either at the headworks or in the drying beds.

- The septic and porta potties loads are dumped into the wet well (Figure 3), prior to the headworks. The septic loads are combined with the influent wastewater in the wet well and are pumped to the headworks. The volume and pH of the loads are recorded.
- The industrial or sump wastes are discharged into the industrial drying beds that is open for these loads. The City has six drying beds dedicated for this waste (Figure 3), these beds are rotated and managed by allowing to evaporate when full. The City will turn over the waste in this bed with a skid loader and allowed to fully dry. When fully dried, this waste is transported to the landfill.
- The FSE oil and grease is sent to the six dedicated drying beds, separate from the industrial drying beds, as shown in Figure 3. The City rotates these beds as they become full. The City will add lime and stir/turnover the contents of the full beds to help with evaporation. When fully dried, the contents of these beds are transported to the landfill.

Based on information gathered during the audit and a POTW walkthrough, it appears that the City has adequate control of the trucked and hauled waste program. The acceptance of these wastes by the City provides a significant benefit to the community and its residents. EPA acknowledges the City’s resource commitment to provide this beneficial service to the community.

13.0 Best Management Practices – Sector Control Programs

13.1 Regulatory Background

BMPs are defined in 40 C.F.R. § 403.3(e) as “schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to implement the prohibitions listed in 40 C.F.R. § 403.5(a)(1) [General Prohibitions] and (b) [Specific Prohibitions]. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.”

40 C.F.R. § 403.5(c)(4) states, “POTWs may develop Best Management Practices (BMPs) to implement paragraphs (c)(1) [develop limits to implement the general/specific prohibitions] and (c)(2) [develop and enforce specific effluent limits for industrial users that contribute pollutants that may result in Interference and Pass-Through] of this section. Such BMPs shall be considered local limits and Pretreatment Standards for the purposes of this part and section 307(d) of the Act.” The regulations establish that BMPs are enforceable Pretreatment Standards.

13.2 Authority in Rules and Regulations

The City established the authority to implement BMPs in its Rules and Regulations as follows:

- BMP definition in §13.20.010(D).
- BMPs are established as Pretreatment Standards in §13.32.030 (D)
- BMPs established as a permit condition in §13.36.030 (D).
- BMP recordkeeping requirements in §13.36.145.
- BMPs established as an SNC criterion in §13.20.010(LL)(8)-SNC Definition.

13.3 Dental Amalgam BMP Sector Control Program

The Dental Amalgam Rule, found in 40 C.F.R. Part 441, was promulgated as a final rule with new source dental facilities required to be in compliance with the Pretreatment Standards as of July 14, 2017, and existing source dental facilities required to be in compliance as of June 14, 2020. Compliance with the rule requires the installation of an ISO1143 amalgam separator or equivalent device, and compliance with the following two BMPs:

- Prohibition on the use of oxidizing or chlorine-containing line cleaners; and
- Ensuring all amalgam process wastewater including chair-side traps, screens, vacuum pump filters, dental tools, cuspidors or collection devices are treated through the amalgam separator.

In addition, the new and existing dental facilities are required in 40 C.F.R. § 441.50 of the Dental Amalgam Rule to provide a report that characterizes the dental facility and certifies compliance. The new source dental facilities are required to be in compliance upon discharge and submit a one-time compliance report within 90 days of startup.

The City has identified 30 dental facilities in its industrial waste survey and has received one-time compliance reports within the deadline required by the Rule. In addition, the City has inspected the dental offices to confirm compliance.

14.0 PFAS Roadmap and Implementation

Harmful per- and poly-fluoroalkyl substances (PFAS) are an urgent public health and environmental issue facing communities across the United States. PFAS have been manufactured and used in a variety of industries in the United States and around the globe since the 1940s, and they are still being used today. Because of the duration and breadth of use, PFAS can be found in surface water, groundwater, soil, and air—from remote rural areas to densely-populated urban centers. A growing body of scientific evidence shows that exposure at certain levels to specific PFAS can adversely impact human health and other living things. Despite these concerns, PFAS are still used in a wide range of consumer products and industrial applications. Every level of government—federal, Tribal, state, and local—needs to exercise increased and sustained leadership to accelerate progress to clean up PFAS contamination, prevent new contamination, and make game-changing breakthroughs in the scientific understanding of PFAS.

14.1 2021 EPA PFAS Strategic Roadmap

On October 18, 2021, the EPA developed the **Agency’s PFAS Strategic Roadmap** — laying out a whole-of-agency approach to addressing PFAS. The roadmap sets timelines by which EPA plans to take specific actions and commits to policies designed to safeguard public health, protect the environment, and hold polluters accountable. The PFAS Strategic Roadmap may be found at the following link: <https://www.epa.gov/pfas/pfas-strategic-roadmap-epas-commitments-action-2021-2024>

The EPA’s integrated approach to PFAS is focused on three central directives:

1. **Research.** Invest in research, development, and innovation to increase understanding of PFAS exposures and toxicities, human health and ecological effects, and effective interventions that incorporate the best available science.
2. **Restrict.** Pursue a comprehensive approach to proactively prevent PFAS from entering air, land, and water at levels that can adversely impact human health and the environment.
3. **Remediate.** Broaden and accelerate the cleanup of PFAS contamination to protect human health and ecological systems.

The EPA’s approach is shaped by the unique challenges to addressing PFAS contamination. The EPA cannot solve the problem of “forever chemicals” by tackling one route of exposure or one use at a time. Rather, the EPA understood that it needed to take a lifecycle approach to PFAS to make meaningful progress. PFAS pollution is not a legacy issue—these chemicals remain in use in U.S. commerce.

The risks posed by PFAS demand that the Agency attack the problem on multiple fronts at the same time. In the 2021 PFAS Roadmap, the EPA is leveraging the full range of statutory authorities to confront the human health and ecological risks of PFAS:

- Water – Clean Act (CWA)
- Solid Waste – Resource Conservation and Recovery Act (RCRA)
- Land – Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- Air – Clean Air Act (CAA)
- Chemical Safety and Pollution Prevention – Toxic Substances Control Act (TSCA)

For purposes of this audit, the EPA is addressing the initiatives used in the Office of Water under the Safe Drinking Water Act, the Clean Water Act, the NPDES Permitting program and associated programs under the NPDES regulatory umbrella. The specific PFAS Roadmap commitments and updates may be found at the following link: <https://www.epa.gov/pfas/pfas-strategic-roadmap-epas-commitments-action-2021-2024#ow>

14.1.1 Office of Water

14.1.1.1 Undertake nationwide monitoring for PFAS in drinking water

The Safe Drinking Water Act (SDWA) establishes a data-driven and risk-based process to assess drinking water contaminants of emerging concern. Under SDWA, EPA requires water systems to conduct sampling for unregulated contaminants every five years. The fifth Unregulated Contaminant Monitoring Rule (UCMR 5) was published on December 27, 2021. UCMR 5 requires sample collection for 30 chemical contaminants between 2023 and 2025 from drinking water systems using analytical methods developed by EPA and consensus organizations. This action provides EPA and other interested parties with scientifically valid data on the national occurrence of these contaminants in drinking water. Going forward, EPA will continue to prioritize additional PFAS for inclusion in UCMR 6 and beyond, as techniques to measure these additional substances in drinking water are developed and validated.

14.1.1.2 Establish a national primary drinking water regulation for PFOA and PFOS

Under the SDWA, EPA has the authority to set enforceable National Primary Drinking Water Regulations (NPDWRs) for drinking water contaminants and require monitoring of public water supplies. To date, EPA has regulated more than 90 drinking water contaminants but has not established national drinking water regulations for any PFAS. In March 2021, EPA published the Fourth Regulatory Determinations, including a final determination to regulate Perfluorooctanoic acid (PFOA) and Perfluorooctane sulfonic acid (PFOS) in drinking water.

On March 14, 2023, EPA announced the proposed National Primary Drinking Water Regulation (NPDWR) for six PFAS including perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), perfluorononanoic acid (PFNA), hexafluoropropylene oxide dimer acid (HFPO-DA, commonly known as GenX Chemicals), perfluorohexane sulfonic acid (PFHxS), and perfluorobutane sulfonic acid (PFBS). The proposed PFAS NPDWR does not require any actions until it is finalized. EPA anticipates finalizing the regulation by the end of 2023. EPA expects that if fully implemented, the rule will prevent thousands of deaths and reduce tens of thousands of serious PFAS-attributable illnesses.

14.1.1.3 Publish the final toxicity assessment for GenX and five additional PFAS

On June 15, 2022, EPA issued final health advisories (HAs) for these two per- and polyfluoroalkyl substances (PFAS): 1) hexafluoropropylene oxide (HFPO) dimer acid and its ammonium salt (referred to as “GenX chemicals”); and 2) perfluorobutane sulfonic acid and its potassium salt (PFBS). In chemical and product manufacturing, GenX chemicals are considered a replacement for perfluorooctanoic acid (PFOA), and PFBS is considered a replacement for perfluorooctane sulfonic acid (PFOS). GenX chemicals have been found in surface water, groundwater, drinking water, rainwater, and air emissions. GenX chemicals are known to impact human health and ecosystems. Scientists have observed liver and kidney toxicity, immune effects, hematological effects, reproductive and developmental effects, and cancer in animals exposed to GenX chemicals.

The Office of Research and Development is also currently developing toxicity assessments for five other PFAS—PFBA, PFHxA, PFHxS, PFNA, and PFDA.

14.1.1.4 Publish health advisories for GenX and PFBS Expected Spring 2022

PFAS contamination has impacted drinking water quality across the country, including in underserved rural areas and communities of color. SDWA authorizes EPA to develop non-enforceable and non-regulatory drinking water health advisories to help Tribes, states, and local governments inform the public and determine whether local actions are needed to address public health impacts in these communities. Health advisories offer a margin of protection by defining a level of drinking water concentration at or below which lifetime exposure is not anticipated to lead to adverse health effects. They include information on health effects, analytical methodologies, and treatment technologies and are designed to protect all lifestages.

On June 15, 2022, EPA issued interim updated drinking water health advisories for PFOA and PFOS that replace those EPA issued in 2016. In addition, EPA published health advisories for GenX and PFBS chemicals. These updated health advisories levels, which are based on new science, will remain in place until EPA establishes a National Primary Drinking Water Regulation. (As identified above the proposed National Primary Drinking Water Regulations were proposed on March 14, 2023.

14.1.1.5 Restrict PFAS discharges from industrial sources through a multi-faceted Effluent Limitations Guidelines program

Effluent Limitations Guidelines (ELGs) are a powerful tool to limit pollutants from entering the nation’s waters. ELGs establish national technology-based regulatory limits on the level of specified pollutants in wastewater discharged into surface waters and into municipal sewage treatment facilities. EPA has been conducting a PFAS multi-industry study to inform the extent and nature of PFAS discharges. Based on this study, EPA is taking a proactive approach to restrict PFAS discharges from multiple industrial categories. EPA plans to make significant progress in its ELG regulatory work by the end of 2024. EPA has established timelines for action—whether it is data collection or rulemaking—on the nine industrial categories in the proposed PFAS Action Act of 2021, as well as other industrial categories such as landfills. EPA’s multi-faceted approach entails:

- Undertake rulemaking to restrict PFAS discharges from industrial categories where EPA has the data to do so—including the guidelines for organic chemicals, plastics and synthetic fibers (OCPSF), metal finishing, and electroplating. Proposed rule is expected in Summer 2023 for OCPSF and Summer 2024 for metal finishing and electroplating.
- Launch detailed studies on facilities where EPA has preliminary data on PFAS discharges, but the data are currently insufficient to support a potential rulemaking. These include electrical and electronic components, textile mills, and landfills. EPA expects these studies to be complete by Fall 2022 to inform decision making about a future rulemaking by the end of 2022.
- Initiate data reviews for industrial categories for which there is little known information on PFAS discharges, including leather tanning and finishing, plastics molding and forming, and paint formulating. EPA expects to complete these data reviews by Winter 2023 to inform whether there are sufficient data to initiate a potential rulemaking.
- Monitor industrial categories where the phaseout of PFAS is projected by 2024, including pulp, paper, paperboard, and airports. The results of this monitoring, and whether future regulatory action is needed, will be addressed in the Final ELG Plan 15 in Fall 2022.

14.1.1.6 Leverage NPDES permitting to reduce PFAS discharges to waterways

The National Pollutant Discharge Elimination System (NPDES) program interfaces with many pathways by which PFAS travel and are released into the environment and ultimately impact people and water quality.

On December 5, 2022, the EPA issued the **Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs Memo** to the U.S. States to proactively use existing NPDES authorities to reduce discharges of PFAS at the source and obtain more comprehensive information through monitoring on the sources of PFAS and quantity of PFAS discharged by these sources. This memorandum provides EPA’s guidance to states and updates the April 28, 2022 guidance to EPA Regions for addressing PFAS discharges when they are authorized to administer the NPDES permitting program or Pretreatment program. The memo provides the following recommendations for POTW NPDES permits and Pretreatment programs:

- POTW NPDES Permits:
 - Quarterly Effluent, Influent and biosolids monitoring using EPA Method 1633
 - Recommended biosolids assessment, based on biosolids monitoring and a PFAS source reduction for IUs in the POTW’s service area, if necessary
 - Public notice of downstream drinking systems that are potentially affected by the POTW effluent when the POTW’s NPDES permit is renewed or issued.
- Pretreatment Programs:
 - Source Identification: Update IU inventory to include PFAS sources
 - Source Control: Utilize BMPS and pollution prevention to address PFAS discharges to the POTW

- Update IU permits to required quarterly PFAS monitoring
- Develop IU BMPS or local limits for PFAS, where authority exists through the NPDES permit limits or PFAS ELG promulgation.

14.1.1.7 Publish multi-laboratory validated analytical method for 40 PFAS

In September 2021, EPA (in collaboration with the Department of Defense) published a single-laboratory validated method to detect PFAS. The method can measure up to 40 specific PFAS compounds in eight environmental matrices (including wastewater, surface water and biosolids) and has numerous applications, including NPDES compliance monitoring. EPA and DOD are continuing this collaboration to complete a multi-laboratory validation of the method. In response to stakeholder requests to update the method with multi-laboratory validation data as soon as practical, the EPA is releasing multiple revisions of the draft method. These revisions (past, present, and future) are outlined below. It should be noted that none of these revisions significantly changed (or are anticipated to change) the procedure.

- August 2021: EPA posted the initial draft of Method 1633 at this website using the data from the single laboratory validation.
- June 2022: Second draft of Method 1633 included clarification on several issues that the laboratories participating in the multi-laboratory validation thought were vague or confusing.
- December 2022: Third draft of Method 1633 included some multi-laboratory validation data for the wastewater matrix, which added required QC criteria for the wastewater matrix. This revision had some additional clarifications and flexibilities that were responsive to formal comments received from multiple parties.
- July 2023: Fourth draft of Method 1633 incorporates the QC acceptance criteria for all aqueous matrices (surface water, ground water, and wastewater), derived from the multi-lab validation study. A multi-laboratory validation study report (published by DoD) is available below that summarizes the results of the multi-laboratory study for these aqueous matrices.
- Anticipated 2023: the Final version of Method 1633 will include the QC acceptance for all eight environmental matrices (wastewater, surface water, groundwater, soil, biosolids, sediment, landfill leachate, and fish tissue), derived from the multi-lab validation study. A second multi-laboratory validation study report will be made available that summarizes the results for the solid matrices and the landfill leachate matrix.

In addition, on April 8, 2022, the EPA published a new *Adsorbable Organic Fluorine (AOF)* method 1621 that can broadly screen for the presence of PFAS in water at the part per billion level. The new AOF Method 1621 provides an aggregate measurement of chemical substances that contain carbon-fluorine bonds. PFAS are a common source of organofluorines in wastewater. This new method is especially useful for understanding the presence and forms of PFAS in wastewater when used in conjunction with methods that

target individual PFAS. EPA's Draft Method 1621 has successfully completed single laboratory validation.

14.1.1.8 Publish updates to PFAS analytical methods to monitor drinking water

Expected Fall 2024 SDWA requires EPA to use scientifically robust and validated analytical methods to assess the occurrence of contaminants of emerging concern, such as an unidentified or newly detected PFAS chemical. EPA will update and validate analytical methods to monitor additional PFAS. First, EPA will review reports of PFAS of concern and seek to procure certified reference standards that are essential for accurate and selective quantitation of emerging PFAS of concern in drinking water samples. EPA will evaluate analytical methods previously published for monitoring PFAS in drinking water (EPA Methods 533 and 537.1) to determine the efficacy of expanding the established target PFAS analyte list to include any emerging PFAS. Upon conclusion of this evaluation, EPA will complete multi-laboratory validation studies and peer review and publish updated EPA PFAS analytical methods for drinking water, making them available to support future drinking water monitoring programs.

14.1.1.9 Publish final recommended ambient water quality criteria for PFAS

Tribes and states use EPA recommended water quality criteria to develop water quality standards to protect and restore waters, issue permits to control PFAS discharges, and assess the cumulative impact of PFAS pollution on local communities. On April 28, 2022, the EPA published proposed national recommended ambient water quality criteria for PFAS to protect aquatic life.

EPA is proposing the first Clean Water Act aquatic life criteria for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS)—two of the most well-studied chemicals in this group. The criteria are intended to protect aquatic life in the United States from short-term and long-term toxic effects of PFOA and PFOS. Following the comment period, EPA intends to issue final PFOA and PFOS recommended criteria, considering public comments and any new toxicity data. States and Tribes may consider adopting the final criteria into their water quality standards or can adopt other scientifically defensible criteria that are based on local or site-specific conditions.

14.1.1.10 Monitor fish tissue for PFAS from the nation's lakes and evaluate human biomarkers for PFAS

States and Tribes have highlighted fish tissue data in lakes as a critical information need. Food and water consumption are important pathways of PFAS exposure, and PFAS can accumulate in fish tissue. In fact, EPA monitoring to date shows the presence of PFAS, at varying levels, in approximately 100 percent of fish tested in the Great Lakes and large rivers. In Summer 2022, EPA will collect fish tissue in the National Lakes Assessment for the first national study of PFAS in fish tissue in U.S. lakes. This will provide a better understanding of where PFAS fish tissue contamination is occurring, which PFAS are involved, and the severity of the problem. The new data will complement EPA's analyses of PFAS in fish tissue and allow EPA to better understand unique impacts on subsistence fishers, who may eat fish from contaminated waterbodies in higher quantities. EPA's preliminary analysis on whether concentrations of certain PFAS compounds in human blood could be associated with eating fish using the Centers for Disease Control and

Prevention's National Health and Nutrition Examination Survey (NHANES) data found a positive correlation. Completing this analysis will help make clear the importance of the fish consumption pathway for protecting communities. EPA will continue to pursue collaboration with Tribal and federal partners to investigate this issue of mutual interest.

14.1.1.11 Finalize list of PFAS for use in fish advisory programs

EPA will publish a list of PFAS for state and Tribal fish advisory programs that are either known or thought to be in samples of edible freshwater fish in high occurrence nationwide. This list will serve as guidance to state and Tribal fish tissue monitoring and advisory programs so that they know which PFAS to monitor and how to set fish advisories for PFAS that have human health impacts via fish consumption. This information will encourage more robust data collection from fish advisory programs and promote consistency of fish tissue PFAS monitoring results in EPA's publicly accessible Water Quality Portal. By issuing advisories for PFAS, state and Tribal programs can provide high-risk populations, including communities and individuals who depend on subsistence fishing, with more information about how to protect their health.

14.1.1.12 Finalize risk assessment for PFOA and PFOS in biosolids

Biosolids, or sewage sludge, from wastewater treatment facilities can sometimes contain PFAS. When spread on agricultural fields, the PFAS can contaminate crops and livestock. The CWA authorizes EPA to set pollutant limits and monitoring and reporting requirements for contaminants in biosolids if sufficient scientific evidence shows that there is potential harm to human health or the environment. A risk assessment is key to determining the potential harm associated with human exposure to chemicals. EPA will complete the risk assessment for PFOA and PFOS in biosolids by Winter 2024. The risk assessment will serve as the basis for determining whether regulation of PFOA and PFOS in biosolids is appropriate. If EPA determines that a regulation is appropriate, biosolids standards would improve the protection of public health and wildlife health from health effects resulting from exposure to biosolids containing PFOA and PFOS.

14.2 Impact of the NPDES Initiatives on the City's Pretreatment Program

The analytical tools, rules, procedures, and methods developed by the EPA in the PFAS Strategic Roadmap and identified in §§14.1.1.1 through 14.1.1.12 are currently recommendations to identify and control non-domestic or IU sources in a POTW's service area. The requirement to control IUs will occur either when the EPA promulgates categorical Pretreatment Standards for specific IU sectors such as OCPSF, Metal Finishers or other future rulemakings, as identified in §14.1.1.5 or when the NPDES State adopts the EPA National Water Quality Criteria for PFAS and PFOS, identified in §14.1.1.9 as State water quality standards and begin implementing these as NPDES permit limits. However, EPA recommends the City evaluate these recommendations and determine proactive measures to identify PFAS non-domestic sources in its service area and determine appropriate level of control or compliance assistance.