JULY 2020

CITY OF DAVIS

Local Limits Report

Prepared by

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LIST OF ACRONYMS

AHL	Allowable headworks loading
BOD	Biochemical Oxygen Demand
CCR	California Code of Regulations
CFR	Code of Federal Regulations
MAHL	Maximum allowable headworks loading
MAIL	Maximum allowable industrial loading
MDL	Method detection limit
MGD	Million gallons per day
NIOSH	National Institute for Occupational Safety and Health
NPDES	National Pollutant Discharge Elimination System
POC	Pollutant of concern
POTW	Publicly-owned treatment works
QA/QC	Quality assurance/quality control
RL	Reporting limit
ROS	Regression on order statistics
STLC	Soluble Threshold Limit Concentration
TSS	Total suspended solids
USEPA	United States Environmental Protection Agency
WWTP	Wastewater Treatment Plant

SECTION 1. INTRODUCTION

The City of Davis (City) owns and operates the Wastewater Treatment Plant (Plant), which treats domestic, commercial, and industrial wastewater from the City of Davis and unincorporated areas in Yolo County. In 2017, the Plant was upgraded to a tertiary-level treatment facility with an average dry weather design capacity of 7.5 million gallons per day (MGD). Wastewater treatment consists of mechanical bar screening, aerated grit removal, primary sedimentation, aeration basins with nitrification and denitrification, tertiary filtration, chlorination, dechlorination, and reaeration. Final effluent is primarily discharged to the Willow Slough Bypass at Discharge Point No. 001. In significant rainfall conditions, final effluent may be mixed with stormwater runoff and discharged to the Conaway Ranch Toe Drain at Discharge Point No. 002.

Solids are dewatered using two rotary drum thickeners and anaerobically digested. Digested solids are transferred to sludge holding tanks and further dewatered using screw presses. Dried biosolids are hauled to the Yolo County Central Landfill for disposal.

The City is required to implement a Pretreatment Program, including developing and implementing local limits, as part of the National Pretreatment Program (Title 40 of the Code of Federal Regulations [40 CFR] Part 403) and its National Pollutant Discharge Elimination System (NPDES) permit (CA0079049, Order No. R5-2018-0086), which was adopted by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) in December 2018. The objectives of the City's Pretreatment Program are to prevent:

- Interference and/or upset with Plant treatment operations;
- Pass-through of conventional and toxic pollutants;
- Harm to Plant and/or collection system infrastructure;
- Contamination of municipal biosolids; and
- Worker exposure to chemical hazards.

The City operates under the authority of the City of Davis Municipal Code and regulates wastewater through Chapter 33 of the Municipal Code. The City's Pretreatment Program currently regulates four significant industrial users, which includes one categorical industrial user, and two non-significant categorical industrial users in the Plant service area. The City also tracks food service establishments, dentists, and commercial car washes that discharge non-domestic wastewater to the Plant.

Local limits development, implementation, and review are part of the City's Pretreatment Program, which involves strategies to control discharge of conventional and toxic pollutants entering the Plant from controllable sources (e.g., industrial users). Procedures for deriving local limits are described in the United States Environmental Protection Agency (USEPA) *Local Limits Development Guidance*, 2004 (Local Limits Guidance), which include the following steps:

- Identifying pollutants of concern (POCs);
- Monitoring POCs at various sampling locations;

- Deriving maximum allowable headworks loading (MAHL);
- Calculating maximum allowable industrial loading (MAIL); and
- Developing allocation method of permitted dischargers.

The City developed its current local limits in 1993 using the procedures and recommendations presented in the 1987 *USEPA Guidance Manual on the Development and Implementation of Local Discharge Limitations Under the Pretreatment Program* (1987 Local Limits Guidance). In 2013, the City adopted updated local limits in Section 33.03.080 of the City of Davis Municipal Code for the following pollutants: 1,2-dibromoethane; 1,2-dibromo-3-chloropropane; benzene; carbon tetrachloride; chlorobenzene; 1,2-dichloroethane; 1,2-dichloropropane; 1,3-dichloropropane; and 1,2,3-trichloropropane. The City currently has local limits, in addition to those listed above, for cadmium, chromium (hexavalent), copper, lead, mercury, nickel, selenium, silver, zinc, bromomethane, chloroform, chloromethane, 1,4-dichlorobromomethane, methylene chloride, tetrachloroethylene, toluene, 1,1,1-trichloroethane, bis(2-ethylhexyl)phthalate, tributyltin, biochemical oxygen demand (BOD), and total suspended solids (TSS).

In 2015, the City conducted a local limits study to assess the need to update its local limits. In December 2015, the City submitted a Local Limits Report (2015 Local Limits Report) to the Central Valley Water Board for review and approval of the updated local limits because there were proposed significant changes including removal of several local limits. The City did not receive a response from the Central Valley Water Board until March 2018. Because the City completed upgrades to the Plant in October 2017, the City did not implement the 2015 local limits.

With the upgrades to the Plant completed in 2017 and a new NPDES permit in 2018, the purpose of this report is to present new local limits developed to protect Plant treatment processes, meet current NPDES effluent limitations, protect biosolids quality, and protect worker health and safety. The major elements of this report include the following:

- Local limits development;
- Maximum allowable headworks loadings;
- Maximum allowable industrial loadings;
- Public participation; and
- Next steps.

SECTION 2. LOCAL LIMITS DEVELOPMENT

Local limits development consists of identifying pollutants that need to be addressed, collecting sufficient monitoring data to support calculation of local limits, and determining appropriate local limits. The first two parts of local limits development are addressed in this section of the report and the third part is addressed in Section 3.

2.1 Pollutants of Concern

The first step in local limits development involved identifying POCs that may prevent the City's Pretreatment Program from achieving its objectives. Local Limits Guidance identifies 15 national POCs that are often found in publicly-owned treatment works (POTW) effluent and biosolids. These national POCs are cadmium, chromium, copper, lead, nickel, zinc, arsenic, cyanide, silver, mercury, molybdenum, selenium, BOD, TSS, and ammonia as N. An evaluation of other potential POCs was conducted during the development of the *City of Davis Local Limits Sampling Plan* (July 2019) (see **Appendix A**) that did not indicate other POCs for consideration for this local limits development effort. The POCs considered for this study are presented in **Table 1**.

2.2 Local Limits Monitoring

In order to develop a technically sound and supportable strategy to control POCs entering into and within the Plant, it is necessary to analyze water quality data. The three areas that are monitored to collect data for local limits development include the following:

- Collection system;
- Plant; and
- Biosolids.

First, it is important to determine the distribution of controllable and non-controllable pollutant sources. Uncontrollable pollutant sources (non-industrial users such as residential, commercial, inflow and infiltration, drinking water, and storm water) typically contribute most of the wastewater flow to a treatment plant and can result in significant pollutant loadings. However, for most pollutants, uncontrollable sources contain lower concentrations compared to industrial wastewater. In order to establish pollutant levels from uncontrollable sources, the collection system was monitored to isolate non-industrial dischargers or non-industrial wastewater inputs. For this study, the City conducted sampling at one collection system site (MH O08-007) located on Lake Boulevard in West Davis, which services residential and commercial users, but does not include any industrial users.

Second, in-plant removal efficiencies need to be determined to calculate the maximum headworks pollutant loadings that can be effectively treated without overloading Plant design treatment capacities, inhibiting treatment processes, or causing exceedances of effluent water or biosolids quality limitations. In order to obtain this information, water quality data were collected at the Plant influent, primary treatment effluent, anaerobic sludge digester, and final effluent to calculate appropriate in-plant removal efficiencies.

Table 1. City of Davis Wastewater Treatment Plant Pollutants of Concern

Pollutant	National POC	NPDES Permit Effluent Limitations	Treatment Process Inhibition	Biosolids Restrictions
Conventional				
Ammonia as N	X	X	X	
Biochemical oxygen demand	X	X	X	
Total suspended solids	X	X	X	
Metals				
Arsenic	X		X	X
Cadmium	X		X	X
Chromium	X		X	X
Copper	X		X	X
Lead	X		X	X
Mercury	X	X	X	X
Molybdenum	X			X
Nickel	X		X	X
Selenium	X			X
Silver	X		X	X
Zinc	X		X	X
Other Toxics				
Cyanide	X		X	

Finally, biosolids disposal regulations require different levels of biosolids quality depending on disposal practices. Biosolids must be assessed to determine the presence of any POCs and to derive local limits that will protect biosolids handling processes and quality. Biosolids quality data were not collected as part of the Local Limits Monitoring Program. Instead, data collected by the City as part of its regular biosolids monitoring requirements were used.

The *Local Limits Sampling Plan* provides detailed information about the City's Local Limits Monitoring Program. Data collected in August 2019 during local limits monitoring were supplemented with all relevant monitoring data collected between September 2018 and August 2019 by the City as part of its on-going monitoring program and requirements.

2.2.1 Local Limits Monitoring Results

All local limits monitoring sample analyses were conducted by Caltest Analytical Laboratory in Napa, CA. Laboratory reports included analytical results, reporting limits

(RLs), and method detection limits (MDLs) along with all laboratory quality assurance/quality control (QA/QC) results. Results below the RL, but above the MDL were qualified as estimated, or “J-flagged”. Results below the MDL were qualified as “non-detect”. Although they were estimated, all monitoring results qualified as “J-flagged” were included in local limits derivation calculations. Summaries of analytical results are presented in **Appendix C**. Original analytical laboratory reports are available upon request.

QA/QC analyses were conducted to ensure analytical data quality. For the Local Limits Monitoring Program, the following QA/QC analyses were initiated:

- Field controls (field log, clean sampling and handling techniques, field blanks, field duplicates);
- Laboratory controls (laboratory duplicates, standard laboratory calibration procedures, matrix spikes/matrix spike duplicates, laboratory control standards, method blanks);
- Sample chain-of-custody; and
- Data verification.

There were minor sampling and QA/QC issues during the local limits monitoring. These sampling and QA/QC issues are discussed in **Appendix E**.

2.2.2 Data Analysis

When possible, data were statistically analyzed using regression-on-order statistics (ROS), which is a method that determines summary statistics for data sets that have non-detect data. The ROS method develops probability plotting positions for each data point (detect and non-detect values) based on an ordering of the data. The log-transform of the data is regressed and fitted with a least squares line to probability plotting positions. Non-detect data points are assigned values for calculation of summary statistics based on their probability plotting positions and the regression line equation. Summary statistics are calculated based on the detected data points and “filled-in” non-detect values. Variance summary statistics are calculated using a Tukey-Jackknife algorithm, which sequentially removes one point from the dataset, runs the analysis, and calculates the variance estimators as the average of each of the “n” runs of data.

The ROS method is limited if there are insufficient data (e.g., less than 20 percent detected data, too few data points) to perform the analysis. The ROS method is found to provide only small errors for major summary statistics parameters (e.g., mean, median, standard deviation, interquartile range) when less than 100 percent of the data are detected. It should be noted that unless all data are detected, the ROS method is only an estimation of the data.

In cases where the ROS method could not be used, a surrogate was used to substitute for non-detect results. Three surrogates commonly used (per Local Limits Guidance) are the reporting limit, zero, and one-half the reporting limit. The most conservative approach is to select a surrogate equal to the reporting limit, which assumes that the pollutant concentration is always higher than the actual value. On the other hand, if the surrogate is equal to zero, it assumes that the pollutant concentration is always lower than the actual value. For this derivation of local limits, the one-half of the MDL is used for non-detect data when there were insufficient detected data to use the ROS method.

SECTION 3. MAXIMUM ALLOWABLE HEADWORKS LOADINGS

In order to develop local limits, the MAHL must be calculated for each POC. The MAHL is the maximum pollutant loading that may be received at the Plant headworks and not have the potential to negatively impact the aforementioned City's Pretreatment Program objectives. In this section, the following information is presented:

- Environmental and operational restrictions driving MAHL derivation;
- Flow measurements;
- Removal efficiency calculations;
- Allowable headworks loading calculations; and
- Need for local limit.

3.1 Environmental and Operational Restrictions Driving MAHL Derivation

Four major factors (NPDES permit effluent limitations, biosolids disposal restrictions, treatment process inhibition levels, treatment facility design capacity) serve as the basis for MAHL development. These restrictions are described in this section.

3.1.1 NPDES permit effluent limitations

The City's NPDES permit provides numeric restrictions on effluent discharges for multiple pollutants depending on the discharge location (i.e., Willow Slough Bypass, Conaway Ranch Toe Drain). To protect against exceedance of NPDES permit effluent limitations, the most stringent effluent limitations were used for local limits development. The applicable NPDES permit restrictions for the City are presented in Appendix B of this report.

3.1.2 Biosolids restrictions

The City currently disposes of biosolids through landfilling. Restrictions for metals, pesticides, and PCBs exist under CCR Title 26 for POTWs disposing of biosolids in municipal landfills. A review of historical data and pollutant screening conducted during the development of the *Local Limits Sampling Plan* indicated that pesticides and PCBs could be excluded from further consideration for local limits development in this effort. The applicable biosolids disposal restrictions are presented in Appendix B of this report.

3.1.3 Treatment process inhibition

Treatment process inhibition refers to pollutant levels that will interfere with biological, chemical, and/or physical processes of wastewater treatment, thereby resulting in reduced facility performance and/or upset. Activated sludge, nitrification, and anaerobic sludge digestion inhibition levels from the Local Limits Guidance, which are presented in Appendix B, were used for this analysis.

3.1.4 Plant treatment design capacity

For ammonia as N, BOD, TSS, it is necessary to consider the design capacity of the Plant in formulating the MAHLs. The Plant average daily dry weather design capacities were assumed to be 275 mg/L for BOD and TSS. There is no design capacity loading for ammonia.

3.2 Flow Measurements

Flow measurements are essential in calculating pollutant mass loadings. The following information is necessary to accurately calculate pollutant loadings:

- Plant influent and effluent flow;
- Industrial user flow;
- Biosolids flow to the anaerobic sludge digester; and
- Biosolids volume for disposal.

The September 2018 to August 2019 average daily influent and effluent flows were 4.99 MGD and 5.25 MGD, respectively. When calculating pollutant loads, average daily flow data corresponding to the sample date was used. The estimated industrial flow is 0.05 MGD based on Pretreatment Compliance Audit and Inspection Reports. The average daily feed rate to the anaerobic sludge digesters is 0.0165 MGD. From the 2018 NPDES permit, approximately 2,700 pounds per day dry weight of biosolids were disposed of at the Yolo County Central Landfill.

3.3 Removal Efficiency Calculations

Removal efficiency through the Plant, or specific unit within the treatment process, is defined as the fraction (or percent) of the pollutant that is removed. Local Limits Guidance identifies several methods of calculating removal efficiencies, including the average daily removal efficiency, mean removal efficiency, and decile methods.

In this local limits derivation, removal efficiencies are calculated using the mean removal efficiency method. This method was used in lieu of the decile method because there were too few pair removal efficiencies available to calculate removal efficiencies using the decile method. The mean removal efficiency method is disadvantageous in relation to the decile method because it does not indicate how often the derived removal efficiency is achieved. Similarly, there were too few paired data to use the average daily removal method. The mean removal efficiency method is still useful because it allows for the use of historical data that may not have been collected offset by the hydraulic residence time.

The primary treatment removal efficiency was calculated using the following equation:

$$R_P = \frac{C_{IN} - C_{PE}}{C_{IN}} \times 100\%$$

Where:

R_P = Pollutant removal efficiency through primary treatment process;

C_{IN} = Average influent pollutant concentration; and

C_{PE} = Average primary treatment effluent pollutant concentration.

Total Plant removal efficiencies are calculated as a change in loads as opposed to change in concentrations to account for the difference in influent and final effluent flows and to credit wastewater recycling efforts. The total Plant removal efficiency was calculated using the following equation:

$$R_{PLANT} = \frac{L_{IN} - L_{FE}}{L_{IN}} \times 100\%$$

Where:

R_{PLANT} = Pollutant removal efficiency through the Plant;

L_{IN} = Average influent pollutant load [lb/day]; and

L_{FE} = Average final effluent pollutant load [lb/day].

In general, the following guidelines were used when calculating removal efficiencies:

- Calculated removal efficiencies were cross-checked with removal efficiency ranges provided in the Local Limits Guidance to check that realistic values are used.
- Special consideration was given to instances when the concentrations of pollutants appear to increase during the treatment process. In these situations, negative removal efficiencies were used to derive local limits. This approach provides a conservative assessment of treatment performance as well as an additional safety factor to protect the Plant.
- The City conducts regular sampling of its influent and final effluent for pollutants for which it has NPDES permit effluent limitations. Other priority pollutants are sampled, at a minimum, on an annual basis. Use of historical data along with data collected through the Local Limits Monitoring Program provides for a more robust calculation of removal efficiencies. This approach also characterizes seasonal variations in Plant performance.

3.4 Allowable Headworks Loading Calculations

Prior to calculating a local limit of a POC, it is necessary to calculate allowable headworks loading (AHL) for each applicable environmental or operational restriction for each POC. AHLs were calculated for each type of restriction (NPDES permit effluent limitations, Plant treatment design capacity, treatment process inhibition levels, and biosolids disposal restrictions). The calculation procedures discussed below are based on the methodologies and equations in the Local Limits Guidance. Depending on the units used, conversion factors were applied to the calculations.

3.4.1 NPDES Permit Effluent Limitations

To prevent pass-through, the AHL based on NPDES permit effluent limitations was calculated using the following equation:

$$AHL_{NPDES} = \frac{8.34 \times C_{NPDES} \times Q_{FE}}{1 - R_{PLANT}}$$

Where:

AHL_{NPDES} = NPDES permit-based AHL [lb/day];

C_{NPDES} = NPDES permit effluent limitation [mg/L];

Q_{FE} = Average daily Plant final effluent flow rate [MGD]; and

R_{PLANT} = Pollutant removal efficiency through the Plant.

3.4.2 Plant Treatment Design Capacity

To prevent overloading of the Plant design capacity, the AHL based on Plant treatment design capacity restrictions was calculated using the following equation:

$$AHL_{DESIGN} = 8.34 \times C_{DESIGN} \times Q_{IN}$$

Where:

AHL_{DESIGN} = Plant design capacity-based AHL [lb/day];

C_{DESIGN} = Plant design capacity [mg/L]; and

Q_{IN} = Average daily Plant influent flow rate [MGD].

3.4.3 Activated Sludge Inhibition

The AHL based on activated sludge inhibition was calculated using the following equation:

$$AHL_{AS} = \frac{8.34 \times C_{AS} \times Q_{IN}}{1 - R_P}$$

Where:

AHL_{AS} = Activated sludge inhibition-based AHL [lb/day];

C_{AS} = Activated sludge inhibition concentration [mg/L];

Q_{IN} = Average daily Plant influent flow rate [MGD]; and

R_P = Pollutant removal efficiency through primary treatment.

3.4.4 Nitrification Inhibition

The AHL based on nitrification inhibition was calculated using the following equation:

$$AHL_N = \frac{8.34 \times C_N \times Q_{IN}}{1 - R_P}$$

Where:

AHL_N = Nitrification inhibition-based AHL [lb/day];

C_N = Nitrification inhibition concentration [mg/L];

Q_{IN} = Average daily Plant influent flow rate [MGD]; and

R_P = Pollutant removal efficiency through primary treatment.

3.4.5 Anaerobic Sludge Digestion Inhibition

The AHL for anaerobic sludge digestion inhibition depends on whether a pollutant is conservative (e.g., metals) or non-conservative (e.g., cyanide). For conservative pollutants, the AHL based on anaerobic sludge digestion inhibition was calculated using the following equation:

$$AHL_{ASD} = \frac{8.34 \times C_{ASD} \times Q_{ASD}}{R_{PLANT}}$$

Where:

AHL_{ASD} = Anaerobic sludge digestion inhibition-based AHL for conservative pollutants [lb/day];

C_{ASD} = Anaerobic sludge digestion inhibition concentration [mg/L];

Q_{ASD} = Average daily flow rate to anaerobic sludge digester [MGD]; and

R_{PLANT} = Pollutant removal efficiency through the Plant.

For non-conservative pollutants, the AHL based on anaerobic sludge digestion was calculated using the following equation:

$$AHL_{ASD} = 8.34 \times L_{IN} \times \frac{C_{ASD}}{C_{DIG}}$$

Where:

AHL_{ASD} = Anaerobic sludge digestion-based AHL for non-conservative pollutants [lb/day];

L_{IN} = Average influent pollutant load [lb/day];

C_{ASD} = Anaerobic sludge digestion inhibition concentration [mg/L]; and

C_{DIG} = Average anaerobic sludge digester pollutant concentration [mg/L].

3.4.6 Biosolids Restrictions

CCR Title 22 biosolids restrictions apply to the disposal of biosolids. Biosolids cannot be hazardous waste if they are to be disposed of in non-hazardous waste facilities (e.g., non-hazardous waste landfill). CCR Title 22 biosolids restrictions may apply either to conservative or non-conservative pollutants. However, non-conservative pollutants were evaluated and excluded from this local limits development effort. For conservative pollutants, the AHL based on CCR biosolids restriction was calculated using the following equation:

$$AHL_{CCR} = \frac{1.0 \times 10^{-6} \times C_{CCR} \times V_{LF} \times G_{BIOSOLIDS}}{PS \times R_{PLANT}}$$

Where:

AHL_{CCR} = CCR Title 22 biosolids restriction-based AHL for conservative pollutants [lb/day];

C_{CCR} = CCR Title 22 numeric biosolids restrictions [mg/kg wet weight];

V_{LF} = Average daily volume of biosolids disposed of in landfill [lb/day dry weight];

$G_{BIOSOLIDS}$ = Specific gravity of biosolids [kg/L];

PS = Percent solids at disposal; and

R_{PLANT} = Pollutant removal efficiency through the Plant.

3.5 Maximum Allowable Headworks Loading

Following the calculation of the applicable AHLs for each POC, the minimum AHL for each POC is designated as the MAHL, or the maximum influent loading that can be accepted at the Plant to ensure compliance with all operational restrictions and/or environmental criteria. The MAHLs are presented in **Table 2**.

Table 2. City of Davis Wastewater Treatment Plant Maximum Allowable Headworks Loadings

Pollutant	MAHL (lb/day) (1)	Basis for MAHL
Conventional		
Ammonia as N	3.000	Anaerobic Digestion Inhibition
Biochemical Oxygen Demand	11,000	Plant Design Capacity
Total Suspended Solids	11,000	Plant Design Capacity
Metals (Total Recoverable)		
Arsenic	0.89	Anaerobic Digestion Inhibition
Cadmium	2.2	Title 22 Biosolids Disposal
Chromium	11	Title 22 Biosolids Disposal
Copper	6.8	Anaerobic Digestion Inhibition
Lead	18	Title 22 Biosolids Disposal
Mercury	0.10	2018 NPDES Permit Effluent Limitation
Molybdenum	720	Title 22 Biosolids Disposal
Nickel	3.4	Anaerobic Digestion Inhibition
Selenium	6.4	Title 22 Biosolids Disposal
Silver	1.9	Anaerobic Digestion Inhibition
Zinc	8.2	Nitrification Inhibition
Other Toxics		
Cyanide	3.8	Activated Sludge Inhibition

(1) Based on average influent flow rate of 4.99 MGD (September 2018 to August 2019).

SECTION 4. MAXIMUM ALLOWABLE INDUSTRIAL LOADINGS

From the MAHL, the MAIL and subsequent local limit are derived. The MAIL is the maximum pollutant loading from industrial users that may enter the Plant without having the potential to negatively impact the aforementioned the City's Pretreatment Program objectives. In this section, the following information is presented:

- MAIL calculations procedures;
- Derivation results; and
- MAIL allocation methods.

4.1 MAIL Calculation Procedures

The MAIL, or the maximum pollutant load that can come from industrial sources, is obtained from the MAHL by reducing the MAHL by a safety factor and subtracting the existing loading from uncontrollable sources (i.e., non-industrial sources). The MAIL was calculated using the following equation:

$$MAIL = (1 - SF) \times MAHL - (8.34 \times Q_{NI} \times C_{NI})$$

Where:

MAIL = Maximum allowable industrial loading for pollutant [lb/day];

SF = Safety factor;

MAHL = Maximum allowable headworks loading [lb/day];

Q_{NI} = Average non-industrial flow rate [MGD]; and

C_{NI} = Average non-industrial pollutant concentration [mg/L].

As indicated in the equation above, Local Limits Guidance suggests reserving a portion of the MAIL as a safety factor to account for variability in data, quality of data used in MAHL and MAIL derivations, and potential for slug loadings. Local Limits Guidance also states that "as a general rule, a minimum safety factor of 10% of the maximum allowable headworks loading is usually necessary to adequately address [these] issues." Unless otherwise noted, a safety factor of 10 percent was used in the development of MAILs presented below.

4.2 Derivation Results

The following section provides the results of MAIL derivation and collection system-based numeric limits.

4.2.1 MAIL Calculation Results

For this analysis, MAILs were derived using a spreadsheet model based upon the methodologies provided in the Local Limits Guidance for each pollutant. The MAIL derivations are summarized in **Table 3** and presented in **Appendix D**. The assumptions used in the local limits derivations are summarized in Appendix E. These are the proposed local limits expressed as the MAIL in pounds per day (lb/day).

Table 3. City of Davis Wastewater Treatment Plant Maximum Allowable Industrial Loadings/Local Limits

Pollutant	Maximum Allowable Industrial Loading (lb/day) (1)
Conventional	
Ammonia as N	3,000
Biochemical oxygen demand (BOD)	1,600 (2)
Total suspended solids (TSS)	1,100 (2)
Metals (Total Recoverable)	
Arsenic	0.71
Cadmium	2.0
Chromium	9.5
Copper	3.0
Lead	16
Mercury	0.086
Molybdenum	650
Nickel	2.8
Selenium	5.7
Silver	1.7
Zinc	1.7 (2)
Non-Conservative Pollutants	
Cyanide	3.4

(1) Based on average influent flow rate of 4.99 MGD (September 2018 to August 2019).

(2) The MAIL for this pollutant could not be derived using collection system data collected during local limits monitoring because the non-industrial load exceeds the MAHL. The MAIL was calculated using a mass balance of average influent load and industrial user monitoring data.

MAILs for BOD, TSS, and zinc were not calculated because the non-industrial loading, based on local limits monitoring of the collection system, exceeded the MAHLs. In reviewing industrial user monitoring data (2017-2019), the average loads for these pollutants from industrial users is a significantly small proportion of the overall influent loads. This indicates that the collection system monitoring results may overrepresent the pollutant loads for these pollutants when extrapolated to characterize uncontrollable sources. A comparison of the average influent pollutant loads, non-industrial loads based on collection system monitoring, and the total pollutant loads from industrial users is presented in **Table 4**.

Table 4. Comparison of Biochemical Oxygen Demand, Total Suspended Solids, and Zinc Pollutant Loads

Pollutant	Average Influent Load (lb/day)	Calculated Non-Industrial Load (lb/day)	Total Industrial User Load (lb/day)	Expected Non-Industrial Load (lb/day)
Biochemical oxygen demand (BOD)	8,900	14,000	250	8,700
Total suspended solids (TSS)	9,500	22,000	280	9,200
Zinc	5.8	12	0.063	5.7

To calculate the MAIL for BOD, TSS, and zinc, the expected non-industrial load, which is calculated based on the difference of the average influent load and industrial user monitoring data, was used to correct for the collection system data collected during local limits monitoring. The resultant MAILs for BOD, TSS, and zinc are presented in **Table 3**.

4.2.2 Collection System-Based Limits

Collection system-based numeric limits, which are intended to address explosivity, corrosivity, flow obstruction, temperature, and headspace toxicity, apply directly to industrial users and do not involve calculation of local limits.

The General Pretreatment Regulations (40 CFR Part 403.5(b)(1)) prohibit discharge of pollutants that will cause a fire or explosion hazard in the collection system. The City currently prohibits these discharges in Section 33.03.050(b)(1) of its Municipal Code. A resource for closed cup flashpoint values is the National Institute for Occupational Safety and Health (NIOSH) chemical database (http:///www.cdc.gov/niosh/npg).

The General Pretreatment Regulations (40 CFR Part 403.5(b)(2)) specify a minimum industrial discharge pH limit of 5.0 to prevent against corrosion. Federal regulations (40 CFR Part 261.22(a)(1)) also specify that the maximum discharge pH limit should be 12.5 to prevent wastewater from being classified as hazardous waste. The City currently implements a minimum discharge pH of 5.0 and a maximum discharge pH of 12.5 in Section 33.03.050(b)(3) of its Municipal Code.

The General Pretreatment Regulations (40 CFR Part 403.5(b)(3)) prohibit discharge of solid or viscous pollutants that will obstruct flows and interfere with wastewater flows in the collection system or at the Plant. The City currently implements this prohibition in Section 33.03.050(b)(2) of its Municipal Code.

The General Pretreatment Regulations (40 CFR Part 403.5(b)(4)) prohibit the discharge of any pollutant, including oxygen demanding pollutants (e.g., BOD) released in a discharge at a flow rate and/or pollutant concentration which will cause interference in the collection system or at the Plant. The City currently implements this prohibition in Section 33.03.050(b)(11) of its Municipal Code.

The General Pretreatment Regulations (40 CFR Part 403.5(b)(5)) prohibit the discharge of heat in amounts which will inhibit biological activity at the Plant resulting in interference. In no situation should heat be discharged in quantities such that the temperature at the Plant exceeds 104°F (40°C). The City currently implements this prohibition in Section 33.03.050(b)(10) of its Municipal Code.

The General Pretreatment Regulations (40 CFR Part 403.5(b)(6)) prohibit the discharge of petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through. The City currently implements this prohibition in Section 33.03.050(b)(4) of its Municipal Code.

General Pretreatment Regulations (40 CFR Part 403.5(b)(7)) prohibit discharge of pollutants that can lead to the accumulation of toxic gases, vapors, or fumes in the collection system and/or at the Plant in a quantity that may cause acute worker health and safety problems. The City currently implements this prohibition in Section 33.03(b)(6) of its Municipal Code. A resource for fume toxicity screening levels is the NIOSH chemical database (http://www.cdc.gov/niosh/npg).

The General Pretreatment Regulations (40 CFR Part 403.5(b)(8)) prohibit the discharge of trucked or hauled pollutants except at discharge points designated by a POTW. The City, which allows trucked or hauled waste, currently implements this prohibition in Article 33.06 of its Municipal Code.

4.3 MAIL Allocation Methods

MAIL allocation is necessary for developing and permitting users under the Pretreatment Program. Local Limits Guidance specifies the following four types of numeric local limits allocation strategies:

- Uniform local limits;
- Local limits by industrial contributory flow;
- Industry-specific local limits by mass proportion; and
- Creative allocation.

4.3.1 Uniform Local Limits

For certain parameters, it may be desirable to calculate uniform numeric discharge concentration restrictions that are intended to apply to all permitted users. This can be achieved by simply assigning the MAIL concentration as a local limit. In general, this is the most restrictive MAIL allocation approach, but the easiest to administer.

The MAIL can be converted to a uniform concentration using the following equation:

$$MAIL_{CONC} = \frac{MAIL}{8.34 \times Q_I}$$

Where:

$MAIL_{CONC}$ = MAIL expressed as a concentration [mg/L];

MAIL = MAIL expressed as a load [lb/day];

Q_I = Average flow rate from all permitted users [MGD];

4.3.2 Local Limits by Contributory Flow

The derivation of contributory flow local limits for targeted facilities is similar to the uniform local limits approach except that the number of permitted users affected is limited to those for which it has been established that the pollutant is present at levels higher than background levels. In other words, only dischargers that are known to or suspected of being significant contributors of the given pollutant would be subjected to the limit. For all remaining permitted sources, it is assumed that their discharges are uncontrollable in character. Contributory flow-based local limits are calculated from the MAIL as follows:

$$LL_C = \frac{MAIL - 8.34 \times Q_{NC} \times C_{NC}}{8.34 \times (Q_{NI} + Q_{NC})}$$

Where:

LL_C = Contributory flow-based limit [mg/L];

MAIL = Maximum allowable industrial loading of pollutant [lb/day];

Q_{NC} = Average total permitted user flow rate for controlled sources not discharging pollutant [MGD];

Q_{NI} = Average non-industrial flow rate [MGD]; and

C_{NC} = Average non-industrial pollutant concentration [mg/L].

4.3.3 Industry-Specific Local Limits by Mass Proportion

Industry-specific local limits by mass proportion are developed by allocating the MAIL for each pollutant in proportion to the existing loadings from each user or at the discretion of the regulating agency. This approach enables dischargers with higher strength effluent to receive more achievable limits, while providing lower strength dischargers with limits more in line with the characteristics of their own discharges. The methodology for derivation of industry-specific local limits by mass proportion is presented in the Local Limits Guidance.

4.3.4 Creative Allocation

In general, after the MAIL has been calculated, a POTW has flexibility in allocating the loading among its permitted users as long as a safety factor is maintained and the POTW accounted for all allocations, and public notice of the allocation is properly issued and allocation is adopted.

4.4 MAIL Allocation

The City proposes to adopt its local limits using the uniform local limits allocation method. The uniform local limits, which are based on the MAILs presented in **Table 3**, are presented in **Table 5**.

Table 5. Proposed City of Davis Uniform Local Limits

Pollutant	Proposed Uniform Local Limit (mg/L) (1)
Conventional	
Ammonia as N	2,700
Biochemical oxygen demand (BOD)	3,800
Total suspended solids (TSS)	2,600
Metals (Total Recoverable)	
Arsenic	1.7
Cadmium	4.7
Chromium	23
Copper	7.1
Lead	5.0 (2)
Mercury	0.21
Molybdenum	1,500
Nickel	6.8
Selenium	14
Silver	4.1
Zinc	4.0
Other Toxics	
Cyanide	8.2

(1) The proposed uniform local limits will be adopted as daily maximum concentrations.

(2) The calculated uniform local limit for lead was 39 mg/L. However, the proposed uniform local limit for lead is restricted to 5.0 mg/L to meet the Title 22 hazardous waste soluble threshold limit concentration (STLC).

SECTION 5. PUBLIC PARTICIPATION

General Pretreatment Regulations encourage public participation by requiring public notices or hearings for Pretreatment Program approval, removal credits, program revisions, local limits development and revisions, and permitted users in significant non-compliance. For a substantial change to the Pretreatment Program, such as the development less stringent local limits or removal of existing local limits, the City is required to notify the Central Valley Water Board of its desire to modify its program and its basis for the changes. The requested modifications cannot be implemented until the City receives approval from the Central Valley Water Board of the modifications. For non-substantial changes to the Pretreatment Program, such as the development of new local limits or more stringent local limits, the City is required to notify the Central Valley Water Board of its desire to modify its program and its basis for the changes at least forty-five (45) days prior to implementation of the modifications. For non-substantial changes, the City does not require Central Valley Water Board approval of the modifications.

Federal regulations [40 CFR Part 403.5(c)(3)] require the POTWs to notify permitted users and other affected parties and provide them with an opportunity to respond to changes in local limits. The federal regulations do not specify the exact public notice process, but USEPA recommends that the POTWs notify affected parties in the local newspaper when the new local limits are drafted. This public comment period can be open while the proposed local limits are being submitted to the Central Valley Water Board for initial review or, the POTW can wait until after it receives comments from the Central Valley Water Board. During the comment period, the public may present technical challenges to the rationale for a particular local limit. To prepare for potential challenges, a POTW should thoroughly document its local limits development process.

For this local limits development process, the City will provide a public notice and public comment period after the proposed local limits are submitted to the Central Valley Water Board for initial review.

SECTION 6. NEXT STEPS

The local limits updated and developed and discussed above are part of a dynamic process that includes periodic review and update as needed. Local Limits Guidance recommends that POTWs conduct regular monitoring as part of the local limits evaluation process. The recommended monitoring frequencies are presented in **Table 6**. It should be noted that more frequent monitoring may be required through other permits and/or regulations.

Table 6. Local Limits Monitoring Program – Recommended Ongoing Monitoring Frequency

Location	POCs with Local Limits (1)	Other POCs with Regulatory or Operational Restrictions (2)
Collection System	Annually	Annually
Plant Influent	Semiannually	Annually
Plant Primary Treatment Effluent	Annually	Annually
Plant Final Effluent	Semiannually	Annually
Plant Anaerobic Digester Effluent	Annually	Annually
Biosolids Disposal Point	Annually	Annually

(1) This refers to POCs that have proposed local limits (i.e., Table 3 POCs).

(2) This refers to POCs that were excluded from MAHL development (i.e., Table 1 POCs).

Future circumstances may again create a need to update the City's MAILs to allow for the City's compliance with environmental and operational restrictions. Such circumstances may include the following:

- Significant changes in the City's permitted user base;
- Significant changes in the discharge characteristics of existing users;
- Significant changes in the environmental and/or NPDES permit regulations applicable to the City;
- Future facility operational difficulties, discharge compliance difficulties, or biosolids disposal compliance difficulties from any pollutants known or suspected to be significantly contributed from permitted sources;
- Future facility infrastructure upgrades that can affect wastewater and/or biosolids treatment processes and quality; and/or
- Difficulties in meeting local limits without any corresponding facility operational challenges, discharge compliance challenges, or biosolids disposal compliance challenges.

The City intends to adopt the proposed local limits presented in **Table 5**. Following Central Valley Water Board approval of the local limits, the City will update its Sewer Use Ordinance and implement the updated local limits in industrial user permits.

APPENDIX A

Local Limits Sampling Plan (July 2019)

JULY 2019

CI T Y O F DAVI S

Local Limits Sampling Plan

Prepared by

LARRY W ALKER ASSOCIATES

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INTRODUCTION

The development, implementation, and periodic review/update of local discharge limitations (local limits) are requirements of the National Pretreatment Program. Local limits development, implementation, and review are part of the City of Davis (City) Pretreatment Program, which involves strategies to control discharge of conventional and toxic pollutants entering the City of Davis Wastewater Treatment Plant (Plant).

The objectives of the City's Pretreatment Program are to prevent:

- Interference with Plant treatment operations;
- Pass-through of conventional and toxic pollutants;
- Contamination of municipal biosolids; and
- Worker exposure to chemical hazards.

To meet these objectives, local limits are set to control inputs to the Plant from industrial users. Local limits are periodically evaluated, and revised as necessary, to respond to changes in treatment plant infrastructure or operations, regulations, or industrial user base. The procedure for developing and updating local limits is described in *Local Limits Development Guidance*, USEPA, 2004 (2004 Local Limits Guidance).

This sampling plan is based on fulfilling data requirements specified in the 2004 Local Limits Guidance to update the City's local limits. The major elements of this work plan include the following:

- Wastewater Treatment Plant description;
- Local limits development approach;
- Proposed local limits sampling plan;
- Quality assurance/quality control; and
- Local limits derivation.

WASTEWATER TREATMENT PLANT DESCRIPTION

The City owns and operates the Plant, which was upgraded in October 2017. The Plant provides treatment of domestic, commercial, and industrial wastewater from the City and communities of El Macero and North Davis Farms, and has an average dry weather design capacity of 7.5 million gallons per day (MGD). The Plant consists of a headworks with a mechanical bar screen and an aerated grit chamber, three primary sedimentation tanks, four activated sludge aeration tanks, secondary clarifiers, tertiary filtration, and chlorination, dechlorination, and reaeration facilities. Treated effluent is discharged to either the Willow Slough Bypass or restoration wetlands prior to discharge to Conaway Ranch Toe Drain or recycled. The Plant has two ponds available for overflow and additional storage capacity.

Solids are digested in two anaerobic sludge digesters operated in series and mechanically dewatered. Dried biosolids are disposed of at a Yolo County Landfill.

Stormwater captured within the Plant's storm drain system is conveyed to the headworks and treated through the Plant.

LOCAL LIMITS DEVELOPMENT APPROACH

The purpose of developing local limits is to prevent interference of Plant treatment operations, protect worker health and safety, prevent pass-through of conventional and toxic pollutants, and prevent contamination of biosolids. Since the development of the City's existing local limits, the City received new effluent water quality limitations under its National Pollutant Discharge Elimination System (NPDES) permit (CA000079049, Order No. R5-2018-0086) , which was adopted by the California Regional Water Quality Control Board Central Valley Region (Regional Water Board) in December 2018 to regulate the discharge into the Willow Slough Bypass and Conaway Ranch Toe Drain.

The approach for updating and developing technically- and scientifically-based local limits is based on identifying and evaluating the following applicable information:

- Identification of sampling locations;
- Development of sampling frequencies; and
- Evaluation of existing conditions

Sampling Locations Identification

The development of technically- and scientifically-based local limits relies on wastewater and biosolids quality data from the City's collection system and at various points in the treatment process to establish:

- Uncontrollable pollutant loads;
- In-plant removal efficiencies; and
- Biosolids quality.

Uncontrollable Pollutant Loads

Uncontrollable sources of pollutants (domestic users, commercial users, inflow and infiltration, drinking water, and stormwater) typically contribute most of the flow to a wastewater treatment plant, and can result in significant pollutant loads. However, for most pollutants, uncontrollable sources contain lower pollutant concentrations in comparison to industrial wastewater.

In order to establish pollutant levels from uncontrollable sources, the collection system must be monitored in an area where there are no industrial users or industrial wastewater sources. The 2004 Local Limits Guidance recommends selecting sampling points based on the size of the service area, variability in pollutant concentrations in different parts of the collection system, presence of inflow and infiltration, types and mix of commercial users, and variability in drinking water sources.

The collection system sampling location selected is quadrant O08-007 MH on Lake Boulevard in West Davis. The sample location was selected based on the predicted flow from a large area of residential homes and commercial sources with no input from permitted facilities. The hydraulic travel time to the Plant from this location is approximately seven to nine hours.

In-Plant Removal Efficiencies

In-plant removal efficiencies for pollutants are required to determine the maximum allowable headworks loading (MAHL) that can be effectively treated without overloading treatment design capacities, upsetting or inhibiting treatment processes, causing contamination of biosolids, or exceeding NPDES permit effluent limitations. In order to obtain this information, wastewater quality data are collected at the influent, primary treatment effluent, and final effluent locations.

Influent wastewater quality samples must be collected at a location prior to where raw wastewater mixes with any operational recirculation flows. Primary effluent data are used to determine the pollutant removal efficiencies through primary treatment in order to calculate allowable headworks loadings (AHLs) that are protective of biological treatment processes. Anaerobic sludge digester sampling is necessary to determine biosolids partitioning factors, which are used to develop loading limits that will protect against anaerobic sludge digester upset and inhibition. Final effluent sampling is necessary to calculate overall treatment plant removal efficiencies and to determine compliance with NPDES permit effluent limitations.

Biosolids Quality

Different regulations apply depending on the biosolids disposal practice. Biosolids must be monitored to determine the presence of any pollutants at levels exceeding the applicable biosolids regulations and to derive local limits that will protect biosolids handling processes and quality.

Recommended Sampling Frequency

For local limits development, the 2004 Local Limits Guidance recommends the sampling scheme, presented in **Table 1**, for a wastewater treatment plant of similar size to the Plant (i.e., 5-10 MGD).

Table 1. Minimum Recommended Sampling Frequency for Local Limits Development

Parameter	Publicly-Owned Treatment Works			Residential/ Commercial
	Influent	Effluent	Biosolids	Collection System
Organic priority pollutants	2	2	1	2
National pollutants of concern	14	14	2	7
POTW-specific pollutants of concern	14	14	2	7
Biosolids percent solids (1)	–	–	2	–
TCLP pollutants (2)	–	–	1	–

Note: Samples should be 24-hour composite samples unless sampling methods for a given pollutant only allow for grab samples. Samples should be collected on consecutive days.

(1) Biosolids regulations in 40 CFR Part 503 require percent solids to be determined every day that biosolids are applied to land.

(2) Conduct if biosolids are (or are likely to be) disposed of in a landfill.

Existing Conditions and Data Evaluation

The City developed its current local limits in 1993 using the procedures and recommendations presented in the 1987 *USEPA Guidance Manual on the Development and Implementation of Local Discharge Limitations Under the Pretreatment Program* (1987 Local Limits Guidance). In 2013, the City re-adopted local limits in Section 33.03.080 of the City of Davis Municipal Code for the following pollutants: 1,2- dibromoethane; 1,2-dibromo-3-chloropropane; benzene; carbon tetrachloride; chlorobenzene; 1,2-dichloroethane; 1,2-dichloropropane; 1,3-dichloropropane; and 1,2,3-trichloropropane. The City currently has local limits, in addition to those listed above, for cadmium, chromium (hexavalent), copper, lead, mercury, nickel, selenium, silver, zinc, bromomethane, chloroform, chloromethane, 1,4-dichlroobromomethane, methylene chloride, tetrachloroethylene, toluene, 1,1,1-trichloroethane, bis(2-ethylhexyl)phthalate, tributyltin, biochemical oxygen demand (BOD), and total suspended solids (TSS). The City initiated a local limits update in 2015, but the local limits developed from that study were not implemented because the City upgraded the Plant.

Potential pollutants of concern (POCs) are selected for evaluation and sampling, following the 2004 Local Limits Guidance, for all pollutants that have the potential to interfere with one or more of the City Pretreatment Program's objectives or cause an exceedance of NPDES permit effluent limitations. A summary of potential POCs that are national POCs, have NPDES permit effluent limitations, cause treatment process inhibition, have biosolids restrictions, or were detected during recent Plant monitoring are presented in **Table 2**.

Table 2. City of Davis Wastewater Treatment Plant Potential Pollutants of Concern

Pollutant	National POCs	NPDES Permit Effluent Limitations	Treatment Process Inhibition	Biosolids Restrictions	Detected During Monitoring (1)
Conventional					
Ammonia as N	X	X	X		X
Biochemical oxygen demand	X	X	X		X
Sulfate as SO4			X		(2)
Sulfide as S			X		(2)
Surfactants (MBAS)			X		(2)
Total suspended solids	X	X	X		X
Metals (Total Recoverable)					
Antimony				X	X
Arsenic	X		X	X	X
Barium				X	X
Beryllium				X	X
Cadmium	X		X	X	X
Chromium	X		X	X	X
Chromium (VI)			X	X	X
Cobalt				X	X
Copper	X		X	X	X
Lead	X		X	X	X
Mercury	X	X	X	X	X
Molybdenum	X			X	X
Nickel	X		X	X	X
Selenium	X			X	X
Silver	X		X	X	X
Thallium				X	X
Vanadium				X	X
Zinc	X		X	X	X
Volatile Organics					
1,2-Dichlorobenzene			X		
1,3-Dichlorobenzene			X		
1,4-Dichlorobenzene			X		

Pollutant	National POCs	NPDES Permit Effluent Limitations	Treatment Process Inhibition	Biosolids Restrictions	Detected During Monitoring (1)
Acrylonitrile			X		
Benzene			X		
Carbon tetrachloride			X		
Chlorobenzene			X		
Chloroform			X		X
Ethylbenzene			X		
Methyl chloride			X		
Tetrachloroethylene			X		
Toluene			X		X
Trichloroethylene			X		
Semi- and Non-volatile Organics					
1,2-Diphenylhydrazine			X		
2-Chlorophenol			X		
2,4-Dichlorophenol			X		
2,4-Dimethylphenol			X		
2,4-Dinitrophenol			X		
2,4-Dinitrotoluene			X		
2,4,6-Trichlorophenol			X		
Anthracene			X		X
Hexachlorobenzene			X		
Naphthalene			X		
Nitrobenzene			X		
Pentachlorophenol			X	X	
Phenanthrene			X		X
Phenol			X		X
Chlorinated Pesticides and PCBs					
4,4’-DDD				X	
4,4’-DDE				X	
4,4’-DDT				X	
Aldrin				X	
gamma-BHC				X	
Chlordane				X	

Pollutant	National POCs	NPDES Permit Effluent Limitations	Treatment Process Inhibition	Biosolids Restrictions	Detected During Monitoring (1)
Chlorpyrifos		X			
Diazinon		X			
Endrin				X	
Heptachlor				X	
Methoxychlor				X	
PCBs				X	
Toxaphene				X	
Other Toxics					
Cyanide	X		X		X

(1) Detected data include estimated values (sometimes referred to as “J-flagged” or “detected but not quantified [DNQ]” values). The data evaluated were collected 2016-2018.

(2) Insufficient recent Plant monitoring data (influent, primary treatment effluent, final effluent, biosolids, and/or anaerobic sludge digester).

A screening step included in the 1987 Local Limits Guidance, but not included in the 2004 Local Limits Guidance, is a useful tool for determining if a potential POC warrants a headworks loading analysis to evaluate the need for the development of a local limit. This screening step is particularly useful in determining if it is necessary to conduct a headworks loading analysis, and if necessary additional sampling, for organic pollutants that have treatment process inhibition levels, but may not have any other environmental/ operational restriction to technically base local limits development. Current standard laboratory detection levels are typically several orders of magnitude lower than the treatment process inhibition thresholds identified in the 2004 Local Limits Guidance.

Additionally, most organic pollutants that have treatment process inhibition levels are typically not detected in wastewater, which further justifies that these pollutants be excluded from further consideration for local limits update/development.

The following screening step criteria were used to determine if a potential POC needs to undergo the headworks loading analysis:

- **Criterion 1**. The maximum concentration of the pollutant in the effluent is more than one-half the allowable effluent concentration required to meet water quality criteria/standards or the maximum sludge concentration is more than one-half the applicable biosolids criteria guidelines;
- **Criterion 2**. The maximum concentration of the pollutant in a grab sample from the influent is more than one-half the inhibition threshold;
- **Criterion 3**. The maximum concentration of the pollutant in a composite sample from the influent is more than one-fourth the inhibition threshold; or

- **Criterion 4**. The maximum concentration of the pollutant in the influent is more than 1/500th of the applicable biosolids use criteria.

Based on the screening step discussed above, headworks loading analyses are only necessary for the following pollutants:

- Ammonia as N;
- Biochemical oxygen demand;
- Total suspended solids; and
- Copper.

The results of the pollutant screening are presented in **Appendix A**. All other potential POCs were either not detected, detected at levels significantly below any applicable environmental and/or operational restriction or limit, or lacked sufficient recent monitoring data to conduct the screening. Although headworks loading analyses are only necessary for the POCs listed above, it is recommended that headworks loading analyses be conducted for the other national POCs. This approach will protect the Plant from POCs that are commonly found in wastewater discharges from industrial sources.

Based on data reviewed, it was determined that sampling for the anaerobic sludge digester (except for ammonia as N) and the biosolids were not necessary because of the amount of historic data that have been collected at these locations.

PROPOSED LOCAL LIMITS SAMPLING PLAN

The use of reliable, scientifically defensible data is essential to local limits development. Based on an evaluation of existing data, additional sampling data are necessary to update/develop the City's local limits. The following local limits sampling program is proposed to collect additional data needed to complete the local limits update/ development effort. Key elements of the proposed local limits sampling program include the following:

- Pollutants of concern;
- Sampling locations and schedule; and
- Sampling and analysis procedures.

Pollutants of Concern

As discussed previously, POCs are selected for sampling, following Local Limits Guidance, for all pollutants that have the potential to interfere with one or more of the City Pretreatment Program's objectives or cause an exceedance of NPDES permit effluent limitations. The POCs were determined using screening step from the 1987 Local Limits Guidance. The following POCs were identified for the City:

- Conventional: ammonia as N, BOD, TSS
- Metals: arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, silver, zinc
- Other toxics: cyanide

Sampling Locations and Schedule

For this local limits sampling effort, wastewater quality samples will be collected during dry, normal operating conditions in the collection system and Plant influent, primary treatment effluent, final effluent, and anaerobic sludge digester. Because the City routinely collects data at some of the sampling locations, a reduced sampling frequency is proposed compared to Local Limits Guidance for a publicly-owned treatment works (POTW) of a similar size.

A general sampling schedule is provided in **Table 3**. It should be noted that some pollutants will not require additional sampling, and other pollutants are required to be sampled more frequently. The pollutant-specific sampling schedule is presented in **Appendix C**.

Table 3. Sampling Locations and Sampling Frequency

Location	Consecutive Days of Sampling		
	Conventional Pollutants	Metals and Cyanide (1)	Organics
Collection System	7	7	–
Plant Influent	7 (2)	7	–
Plant Primary Effluent	7 (3)	7 (4)	–
Plant Final Effluent	7 (2)	7	–
Plant Anaerobic Digester	2 (3)	–	–

(1) Metals are total recoverable forms of arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, silver, and zinc.

(2) BOD and TSS will not be sampled at this location.

(3) Only ammonia as N will be sampled and analyzed at this location.

(4) Metals are total recoverable forms of arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc.

Existing biosolids quality data will be used as part of this local limits update/ development effort.

Sampling and Analysis Procedures

All Plant sampling will be conducted such that wastewater is followed through the treatment process (i.e., primary treatment effluent sampling is initiated after influent sampling) according to the detention time of each unit process.

Depending on the pollutant sampled, both composite and grab samples will be collected. A summary of sample collection and analysis requirements is presented in **Table 4**. Recommended analytical methods and maximum reporting limits are provided in **Appendix B**. Sampling procedures are provided in **Appendix E**.

Table 4. Sample Collection and Analysis Requirements

Parameter	Sample Type (1)	Sample Size (2)	Container	Preservation (3)	Maximum Holding Time
Biochemical Oxygen Demand	Composite	1000 mL	HDPE	None	48 hours
Total Suspended Solids					7 days
Metals (total recoverable)	Composite	500 mL	HDPE	HNO_3 to pH<2	6 months
Ammonia as N	Grab	500 mL	HDPE	H_2SO_4 to pH<2	28 days
Cyanide	Grab	500 mL	HDPE	NaOH to pH>12	14 days
Mercury (4)	Grab	500 mL	glass (double-bagged)	HCl to pH<2	28 days

(1) 24-hour, flow-proportional composite samples will be collected at the Plant influent, Plant primary treatment effluent, and Plant final effluent. 24-hour, time-proportional composite samples will be collected in the collection system.

(2) Smaller volume size is appropriate if it meets the minimum analytical volume requirements.

(3) All samples must be iced or chilled to 0-6°C.

(4) Mercury is sampled individually at the primary treatment effluent and final effluent locations. At the collection system and influent, it is sampled and analyzed from the same bottle as the other metals.

A partial list of equipment required for sample collection is presented in **Appendix D**. All samples must be collected using clean techniques according to EPA Method 1669 (see **Appendix E**). Samples must be iced or chilled to 0-6° C, from the time of collection to delivery to the analytical laboratory, to minimize sample degradation.

All sample containers should be labeled with the following information:

- Project name;
- Sample location;
- Date of sample collection;
- Time of sample collection;
- Sample collector’s initials;
- Sample preservative; and
- Analysis to be performed.

Time of sample collection is the time that a grab sample was taken or the end of the composite period for composite samples. Samples must be preserved within 15 minutes from sample collection. Sample containers must be properly labeled prior to sample collection to expedite the sampling process as well as to ensure that the proper samples are collected. Chain-of-custody forms must be completed at the time of sampling and accompany each sampling events. Coolers for storage during transport must have sufficient cooling agents to maintain sample temperature of less than 6° C.

Composite Sampling

Prior to initiating sampling efforts, composite sampler intake tubing, peristaltic silicone pump tubing, and the intake strainer must be acid-washed to minimize the potential for contamination. Composite samplers should be calibrated to ensure accurate operation. All composite samples must be collected in clean, acid-washed borosilicate glass or high density polyethylene (HDPE) sample containers. Specific cleaning protocols to be used are included in **Appendix E**.

If possible, composite samples should be taken as 24-hour flow-proportioned samples. If flow-proportioned composite samples cannot be collected, then composite samples should be 24-hour time-proportioned samples.

Grab Sampling

Grab samples should be collected at locations close to the composite sampler intake to ensure that composite and grab samples are collected at the same location. Grab samples must be collected directly into clean, laboratory-provided sample containers. If necessary, the sample container can be fastened to a sampling grab pole. Using this sampling technique, the “pole-side” of the container must be always directed downstream of the sample container to minimize the potential for contamination from the sampling grab pole. Grab samples are associated with the composite sample removed from the sampling unit on the same day that the grab samples are collected.

Field Measurements

At the time of grab sample collection, electrical conductivity, pH, and temperature are to be measured and recorded using equipment calibrated according to instrument specifications for all locations. Field measurements must be conducted within the shortest holding time requirements prescribed for the parameter (i.e., temperature and pH).

QUALITY ASSURANCE/QUALITY CONTROL

An effective quality assurance/quality control (QA/QC) plan is implemented as part of the local limits sampling program to ensure that analytical data can be used with confidence. QA/QC procedures to be initiated include the following:

- Field controls;
- Laboratory controls;
- Sample chain-of-custody; and
- Data verification.

On days when samples are collected for QA/QC purposes, extra volume (sample or blank water) may be required for analyses. When duplicate samples are collected for QA/QC purposes, double the sample volume is required for analyses. Once the filled composite containers are retrieved from the sampler, the sample is split, adhering to clean techniques, into the appropriate sample containers as specified by the analytical method. For grab sample field duplicates, it is necessary to collect two individual grab samples. After samples are split into the appropriate containers, samples are to be packaged appropriately, iced, and delivered/shipped to the analytical laboratory.

A QA/QC schedule is provided in **Table 5**.

Table 5. Quality Assurance/Quality Control Schedule

Day	Quality Assurance/Quality Control Analyses (1)
Collection System	
Day 0	Field blank (metals)
Day 1	Field blank (cyanide)
Day 6	Field duplicate (ammonia as N, BOD, TSS, metals, cyanide)
Plant Influent	
Day 0	Field blank (metals)
Day 1	Field blank (cyanide)
Day 3	Laboratory duplicate (ammonia as N, metals, cyanide)
Day 4	MS/MSD (metals, cyanide)
Plant Primary Treatment Effluent	
Day 0	Field blank (metals)
Day 1	Field blank (mercury, cyanide)
Day 3	Field duplicate (ammonia as N, metals, mercury, cyanide)
Plant Final Effluent	
Day 0	Field blank (metals)
Day 1	Field blank (mercury, cyanide)
Day 5	MS/MSD (metals, mercury, cyanide)
Day 7	Laboratory duplicate (ammonia as N, metals, mercury, cyanide)

(1) For samples identified for site-specific field duplicates (FDU), laboratory duplicates (DU), and MS/MSD, extra sample volume may be collected and must be identified on the chain-of-custody form as the sample designated for site-specific FDU, DU, or MS/MSD. See Table C-1 for sampling schedule and sample container requirements.

Field Controls

Field controls are QA/QC procedures that are conducted prior to and during sampling until samples are delivered to the analytical laboratory in order to minimize sampling errors and potential contamination. Field controls to be initiated include the following:

- Field logs;
- Sample chain-of-custody;
- Sampling equipment cleaning;
- Clean techniques;
- Field/equipment blanks; and
- Field duplicates.

Field Logs

The purpose of field logs is to record sampling information and field observations during sampling that may explain any uncharacteristic analytical results. The field log should contain sampling information such as the date and time of sample collection, sampling team, container identification numbers, and types of samples (composite or grab) that were collected. The field log should also any field observations that are abnormal at the sampling location (color, odor, etc.). Field measurements for electrical conductivity, pH, and temperature should also be recorded in the field log.

Sample Chain-of-Custody

Sample chain-of-custody procedures include the following:

- Proper labeling of samples;
- Use of chain-of-custody forms for all samples from field to the analytical laboratory; and
- Prompt sample delivery to the laboratory.

The following notes should be added to chain-of-custody forms:

- Low detection limits for metals and cyanide;
- Detected-but-not-quantified (DNQ), or J-flag, reporting; and
- Field and laboratory duplicate and MS/MSD analyses for specific samples as noted in **Table 5**.

Sampling Equipment Cleaning

Composite containers, tubing, and lids will be cleaned by the analytical laboratory. To ensure that equipment used for sampling is clean, field/equipment blanks will be collected at the beginning of the monitoring effort to identify any potential contamination.

Clean Techniques

Clean techniques involve the use of certified clean containers for sample collection, clean powder-free nitrile gloves during sample collection and handling, acid-washed tubing for the suction line, and acid-washed silicone tubing for the peristaltic pump tubing. A discussion of clean techniques is included as **Appendix E**. Strict adherence to clean technique protocols will minimize the potential of field contamination.

Field/Equipment Blanks (FB/EB)

The purpose of field/equipment blanks is to check for potential contamination that may occur during equipment handling and sample collection. Field/equipment blanks should be collected under field conditions to best simulate field procedures. Blank water used for field/equipment blank collection should be provided by the analytical laboratory performing the blank analysis. Field/equipment blanks will be generated for metals (including mercury) and cyanide at the collection system and Plant influent, primary treatment effluent, and final effluent locations.

Because composite samplers vary in design, follow manufacturer's instruction for instrument set-up and operation. The following steps are basic recommendations for equipment blank collection prior to composite sample collection:

1. Using clean techniques, install clean silicone pump tubing into sampler peristaltic pump. Connect the intake side of the silicone tubing to the clean intake tubing.
2. Remove the end cap from the intake end of the clean intake tubing and place the intake end of the tubing inside the full laboratory-provided blank water container. Remove the end cap from the outlet side of the silicone tubing and place the outlet end of the tubing into a clean composite container.
3. Press "pump forward" on the automatic sampler. Allow pumping to continue until the blank water has been pumped through the tubing and into the composite sample container. Then press "stop".
4. Remove the outlet of the silicone tubing from the composite sample container and cover with a new glove or plastic bag. Then pour the blank water from the composite sample container into the appropriate pre-labeled sample container(s) while using clean techniques. Place the full sample container(s) on ice.
5. Return the outlet of the silicone tubing to the composite sample container. Place the inlet of the intake tubing into the next container of blank water, and proceed with Step 3.
6. After all composite equipment blanks have been collected, prepare and set-up the sampler for composite sample collection.

Field blanks are applicable for grab sample collection and should be collected on the same day that grab samples are collected. Field blanks are collected in the field by simply by pouring appropriate, laboratory-provided, blank water directly into pre-labeled grab sample container(s) while using clean techniques.

Field Duplicates (FDU)

The purpose of field duplicates is to check for constancy in field sampling procedures. Field duplicate analyses will be performed for all pollutants. Two separate sample containers will be collected for each analysis. One sample container is labeled as the regular sample while the other sample container is labeled the same with a designation of FDU to indicate that it is the field duplicate.

Laboratory Controls

The analytical laboratory should conduct QA/QC procedures including the following:

- Standard laboratory operation and calibration procedures
- Laboratory control standards (LCS/LCSD) and method blank (MB);
- Analytical batch matrix spike/matrix spike duplicate (MS/MSD); and
- Laboratory duplicate (DU) and field duplicate (FDU).

Standard Laboratory Operation and Calibration Procedures

The analytical laboratory must calibrate equipment according to standard laboratory procedures in order to prevent analytical inaccuracies.

Laboratory Control Standards (LCS/LCSD) and Method Blank (MB)

The analytical laboratory will conduct laboratory control standard and method blank (MB) analyses per analytical batch of twenty samples. LCS/LCSD analyses are intended to provide information on the accuracy and precision of the analytical method and laboratory performance.

The purpose of the method blank is to determine the presence of, if any, and extent of contamination resulting from laboratory activities. If there is contamination in the method blank, the associated data must be carefully evaluated to determine if the data are valid. The analytical batch must meet the laboratory QA/QC acceptance criteria to certify that all results within the analytical batch are accurate and acceptable.

Analytical Batch Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

The purpose of MS/MSD analyses is to check for accuracy and precision of the laboratory analyses and to demonstrate acceptable compound recovery at the analytical laboratory. Triple the normal sample volume may be required. Analytical batch MS/MSD analyses must be performed on site-specific field samples, identified in **Table 5**, and should be conducted, at a maximum, for every twenty samples for the following pollutants:

- Metals;
- Mercury; and
- Cyanide.

Laboratory Duplicate (DU) and Field Duplicate (FDU)

The purpose of the laboratory duplicate performed on site-specific sample (identified as DU) in the chain-of-custody form is to check consistency in laboratory and analytical procedures. Laboratory duplicates must be taken from the same sample container as the original sample (SA). Field duplicates (FDU) are site-specific field duplicate collected in the field and poured into a separate container (see definition of field duplicate above) and are analyzed separately from the original sample.

Data Verification

After analytical results are received from the laboratory, the data will be verified with the following procedures:

- Check the adequacy of the results obtained from the analyses of blanks, spikes, and duplicates (according to acceptability criteria set forth in *Standard Methods*);
- Check the data set for outlier values and, accordingly, request reanalysis of samples where appropriate; and
- Perform in-house verification of all analytical data results. This may include, but is not limited to:
    - Check that all samples were analyzed within the maximum holding time; and
    - Check that all laboratory QA/QC parameters meet laboratory-established criteria. Any results reported outside the QA/QC acceptance range must be qualified with a narrative explaining why the sample result is or is not acceptable.

LOCAL LIMITS DERIVATION

Industrial users discharging to POTWs may be subject to any of the following restrictions:

- Narrative discharge prohibitions;
- National USEPA categorical pretreatment standards; and/or
- POTW-specific (and possibly industry-specific) local limits.

Narrative Discharge Prohibitions

Narrative local limits provide non-numeric restrictions to protect against such problems as violations of final effluent, biosolids, or air quality standards, treatment process inhibition or upset, flow obstruction in the collection system or at the POTW, fire and explosion hazard, or work safety hazard. Narrative limits often serve as a supplement to numeric limits, or are used for parameters where technically-based numeric limits are not feasible or relevant. Narrative discharge prohibitions are typically identified in the Sewer Use Ordinance and industrial user permit.

National USEPA Categorical Pretreatment Standards

Categorical standards are predetermined discharge limitations, based upon best available technologies (BATs), which apply to specific categories of industries defined by existing federal regulations (40 CFR 405 through 471). Categorical standards are applied to the end of an industrial user's regulated process, and not necessarily at the end-of-pipe. Both categorical and local limits apply to industrial users, as appropriate.

POTW-specific Local Limits

Numeric local limits are intended to apply to all industrial users, as defined under the Pretreatment Program, unless specific exceptions can be justified. Local limit derivation is typically based on the following factors:

- Final effluent and/or receiving water quality limitations;
- In-plant inhibition and/or upset of unit processes;
- Biosolids disposal limits; and/or
- Collection system concerns (i.e., flow obstruction, corrosion, worker safety).

According to Local Limits Guidance, numeric local limits can be applied by the City to industrial users using any of the following allocation methods:

- Limits based on industrial user contribution of a POC;
- Uniform limits for all industrial users;
- Industrial user needs for POC discharge loading on a case-by-case basis;

and/or

- Other creative allocation methods.

Schedule for Local Limits Development

Local limits sampling is scheduled to be conducted in August 2019. A local limits report presenting the maximum allowable industrial loadings (MAILs) will be completed in December 2019.

REFERENCES

California Regional Water Quality Control Board Central Valley Region. Waste Discharge Requirements for the City of Davis Wastewater Treatment Plant Yolo County (NPDES NO. CA 0079049) Order No. R5-2018-0086. December 2018.

United States Environmental Protection Agency. Local Limits Development Guidance. July 2004.

United States Environmental Protection Agency. Sampling Ambient Water for Determination of Metals at EPA Water Quality Criteria Levels (Method 1669). April 1995.

APPENDIX A

Pollutants of Concern Screening

Pollutant	Reason for Not Developing MAHL/Local Limit
Conventional	
Methylene blue active substances (MBAS)	Recent influent data were not available, but the maximum influent grab sample concentration (7 mg/L) used in the 2015 Local Limits Study is significantly less than one-half of the activated sludge inhibition threshold (100 mg/L). It is unlikely that influent concentrations have changed significantly to warrant further sampling and evaluation of this pollutant for local limits development.
Sulfate as SO_4	Recent influent data were not available, but the maximum influent grab sample concentration (57 mg/L) used in the 2015 Local Limits Study is significantly less than one-quarter of the anaerobic sludge digester inhibition threshold (500 mg/L). It is unlikely that influent concentrations have changed significantly to warrant further sampling and evaluation of this pollutant for local limits development.
Sulfide as S	Recent influent data were not available, but the maximum influent grab sample concentration (5.3 mg/L) used in the 2015 Local Limits Study is less than one-quarter of the activated sludge and anaerobic sludge digester inhibition thresholds (25 and 50 mg/L, respectively). It is unlikely that influent concentrations have changed significantly to warrant further sampling and evaluation of this pollutant for local limits development.
Metals (Total Recoverable)	
Antimony	Maximum concentration in the biosolids (1.5 mg/kg) is significantly less than one-half of the applicable biosolids use criteria (500 mg/kg).
Barium	Maximum concentration in the biosolids (190 mg/kg) is significantly less than one-half of the applicable biosolids use criteria (10,000 mg/kg).
Beryllium	Maximum concentration in the biosolids (0.076 mg/kg) is significantly less than one-half of the applicable biosolids use criteria (75 mg/kg).
Chromium VI	Maximum concentration in the biosolids (4 μg/L) is significantly less than one-half of the applicable biosolids use criteria (500 μg/L). Pollutant was not detected in Plant influent at an MDL (0.05 μg/L) significantly less than one-half of the activated sludge inhibition and anaerobic digestion inhibition thresholds (1,000 μg/L and 110,000 μg/L, respectively).
Cobalt	Maximum concentration in the biosolids (2.4 mg/kg) is less than half of the applicable biosolids use criteria (8,000 mg/kg).
Thallium	Pollutant was not detected in the biosolids at an MDL (0.27 mg/kg) less than one-half of the applicable biosolids use criteria (700 mg/kg).
Vanadium	Maximum concentration in the biosolids (21 mg/kg) is significantly less than one-half of the biosolids use criteria (2,400 mg/kg).

Pollutant	Reason for Not Developing MAHL/Local Limit
Volatile Trace Organics	
1,2-Dichlorobenzene	Maximum influent grab sample concentration (<1.4 µg/L) is significantly less than one-half of the activated sludge and anaerobic digestion inhibition thresholds (5,000 µg/L and 230 µg/L, respectively).
1,3-Dichlorobenzene	Maximum influent grab sample concentration (<0.9 µg/L) is significantly less than one-half of the activated sludge inhibition threshold (5,000 µg/L).
1,4-Dichlorobenzene	Maximum influent grab sample concentration (<0.9 µg/L) is significantly less than one-half of the activated sludge and anaerobic digestion inhibition thresholds (5,000 and 1,400 µg/L, respectively).
Acrylonitrile	Maximum influent grab sample concentration (<9 µg/L) is significantly less than one-half of the anaerobic digestion inhibition threshold (5,000 µg/L).
Benzene	Maximum influent grab sample concentration (<0.9 µg/L) is significantly less than one-half of the activated sludge inhibition threshold (100,000 µg/L).
Carbon tetrachloride	Maximum influent grab sample concentration (<0.9 µg/L) is significantly less than one-half of the anaerobic digestion inhibition threshold (2,000 µg/L).
Chlorobenzene	Maximum influent grab sample concentration (<0.9 µg/L) is significantly less than one-half of the anaerobic digestion inhibition threshold 960 µg/L
Chloroform	Maximum influent grab sample concentration (3.0 µg/L) is significantly less than one-half of the anaerobic digestion inhibition threshold (1,000µg/L).
Ethylbenzene	Maximum influent grab sample concentration (<1.3 µg/L) is significantly less than one-half of the activated sludge inhibition threshold (200,000 µg/L).
Methyl chloride	Maximum influent grab sample concentration (<1.2 µg/L) is significantly less than one-half of the anaerobic digestion inhibition threshold (3,300 µg/L).
Tetrachloroethylene	Maximum influent grab sample concentration (<0.95 µg/L) is significantly less than one-half of the anaerobic digestion inhibition threshold (20,000 µg/L).
Toluene	Maximum influent grab sample concentration (<0.95 µg/L) is significantly less than one-half of the activated sludge inhibition threshold (200,000 µg/L).
Trichloroethylene	Maximum influent grab sample concentration (<1 µg/L) is significantly less than one-half of the anaerobic digestion inhibition threshold (1,000 µg/L) and 1/500th of the applicable biosolids use criteria (2,040 mg/kg).
Semi- and Non-Volatile Trace Organics	

Pollutant	Reason for Not Developing MAHL/Local Limit
1,2-Diphenylhydrazine	Maximum influent composite sample concentration (<5 µg/L) is significantly less than one-fourth of the activated sludge inhibition threshold (5,000 µg/L).
2- Chlorophenol	Maximum influent composite sample concentration (<4 µg/L) is significantly less than one-fourth of the activated sludge inhibition threshold (5,000 µg/L).
2,4-Dichlorophenol	Maximum influent composite sample concentration (<4 µg/L) is significantly less than one-fourth of the activated sludge inhibition threshold (64,000 µg/L).
2,4-Dimethylphenol	Maximum influent composite sample concentration (<4 µg/L) is significantly less than one-fourth of the activated sludge inhibition threshold (40,000 µg/L).
2,4-Dinitrotoluene	Maximum influent composite sample concentration (<4 µg/L) is significantly less than one-fourth of the activated sludge inhibition threshold (5,000 µg/L).
2,4,6-Trichlorophenol	Maximum influent composite sample concentration (<5 µg/L) is significantly less than one-fourth of the activated sludge inhibition threshold (50,000 µg/L).
Anthracene	Maximum influent composite sample concentration (<0.1 µg/L) is significantly less than one-fourth of the activated sludge inhibition threshold (500,000 µg/L).
Hexachlorobenzene	Maximum influent composite sample concentration (<4 µg/L) is significantly less than one-fourth of the activated sludge inhibition threshold (5,000 µg/L).
Naphthalene	Maximum influent composite sample concentration (<0.2 µg/L) is significantly less than one-fourth of the activated sludge inhibition threshold (500,000 µg/L).
Nitrobenzene	Maximum influent composite sample concentration (<5µg/L) is significantly less than one-fourth of the activated sludge inhibition threshold (30,000 µg/L).
Pentachlorophenol	Maximum influent composite sample concentration (<4 µg/L) is significantly less than one-fourth of the activated sludge and anaerobic digestion inhibition thresholds (950 and 200 µg/L, respectively) and is less than 1/500th of the applicable biosolids criteria (17,000 µg/kg).
Phenanthrene	Maximum influent composite sample concentration (<0.2 µg/L) is significantly less than one-fourth of the activated sludge inhibition threshold (500,000 µg/L).
Phenol	Maximum influent composite sample concentration (11 µg/L) is significantly less than one-fourth of the activated sludge inhibition threshold (50,000 µg/L).
Chlorinated Pesticides and PCBs	

Pollutant	Reason for Not Developing MAHL/Local Limit
Aldrin	Pollutant was not detected in the Plant influent at an MDL (0.01 µg/L) less than 1/500th of the applicable biosolids use criteria (1,400,000 mg/kg).
gamma-BHC	Influent composite samples were not detected at a level (0.0015 µg/L) significantly below 1/500th of the applicable biosolids use criterion (4,000 mg/kg).
Chlordane	Pollutant was not detected in the Plant influent at an MDL (0.1 µg/L) less than 1/500th of the applicable biosolids use criteria (2,500 mg/kg).
4,4’-DDT, 4,4’-DDE, 4,4’-DDD	Pollutants were not detected in the Plant influent at an MDL (0.02 µg/L) less than 1/500th of the applicable biosolids use criteria (1,000 mg/kg).
Endrin	Pollutant was not detected in the Plant influent at an MDL (0.02 µg/L) less than 1/500th of the applicable biosolids use criteria (200 mg/kg).
Dieldrin	Influent composite samples were not detected at a level (0.02 µg/L) significantly below 1/500th of the applicable biosolids use criterion (800 mg/kg).
Heptachlor	Pollutant was not detected in the Plant influent at an MDL (0.01 µg/L) less than 1/500th of the applicable biosolids use criteria (470 mg/kg).
gamma-BHC	Pollutant was not detected in the Plant influent at an MDL (0.05 µg/L), less than 1/500th of the applicable biosolids use criteria (4,000 mg/kg).
Methoxychlor	Pollutant was not detected in the Plant influent at an MDL (0.5 µg/L) less than 1/500th of the applicable biosolids use criteria (100,000 mg/kg).
PCBs	Pollutant was not detected in the Plant influent at an MDL (0.25 µg/L) less than 1/500th of the applicable biosolids use criteria (50,000 mg/kg).
Toxaphene	Pollutant was not detected in the Plant influent at an MDL (2.5 µg/L) less than 1/500th of the applicable biosolids use criteria (5,000 mg/kg).
Organophosphorus Pesticides	
Chlorpyrifos	Pollutant was not detected in the Plant influent at an MDL (0.025 µg/L) or in the Plant effluent at an MDL (0.005 µg/L) below one-half of the NPDES permit effluent limitation factor.
Diazinon	Pollutant was not detected in the Plant influent at an MDL (0.035µg/L) or in the Plant effluent at an MDL (0.007µg/L) below one-half of the NPDES permit effluent limitation factor.

APPENDIX B

Maximum Reporting Limits and Analytical Methods

Table B-1. Maximum Reporting Limits and Analytical Methods

Constituent	Reporting Limit	Units	Analytical Method
Conventional			
Ammonia as N	0.1	mg/L	SM 4500-NH_3-C
Biochemical oxygen demand (BOD)	5	mg/L	SM 5210B
Total suspended solids (TSS)	3	mg/L	SM 2540D
Metals (total recoverable)			
Arsenic	0.5	µg/L	EPA 200.8
Cadmium	0.1	µg/L	EPA 200.8
Chromium	0.5	µg/L	EPA 200.8
Copper	0.5	µg/L	EPA 200.8
Lead	0.25	µg/L	EPA 200.8
Mercury (1)	0.05	µg/L	EPA 245.1
Mercury (2)	0.0005	µg/L	EPA 1631E
Molybdenum	0.25	µg/L	EPA 200.8
Nickel	0.5	µg/L	EPA 200.8
Selenium	1	µg/L	EPA 200.8
Silver	0.1	µg/L	EPA 200.8
Zinc	1	µg/L	EPA 200.8
Other Toxics			
Cyanide	3	µg/L	SM 4500-CN-E

(1) Mercury will be analyzed using this method for the collection system and Plant influent samples.

(2) Mercury will be analyzed using this method for the Plant primary treatment effluent and final effluent samples.

APPENDIX C

Sampling Schedule

Table C-1. Sampling Schedule

Sampling Day	Samples to Collect		Sample Containers Required [1]
	Composite	Grab	
Collection System			
Day 0	Metals (field blank) [2]		1 – 500 mL HDPE HNO_3
Day 1	BOD, TSS Metals [2]	Ammonia as N Cyanide (+field blank) Field parameters [3]	1 – 1 L HDPE 1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 2 – 500 mL HDPE NaOH
Day 2	BOD, TSS Metals [2]	Ammonia as N Cyanide Field parameters [3]	1 – 1 L HDPE 1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL HDPE NaOH
Day 3	BOD, TSS Metals [2]	Ammonia as N Cyanide Field parameters [3]	1 – 1 L HDPE 1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL HDPE NaOH
Day 4	BOD, TSS Metals [2]	Ammonia as N Cyanide Field parameters [3]	1 – 1 L HDPE 1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL HDPE NaOH
Day 5	BOD, TSS Metals [2]	Ammonia as N Cyanide Field parameters [3]	1 – 1 L HDPE 1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL HDPE NaOH
Day 6	BOD, TSS Metals [2] (+field duplicate)	Ammonia as N Cyanide (+field duplicate) Field parameters [3]	2 – 1 L HDPE 2 – 500 mL HDPE HNO_3 2 – 500 mL HDPE H_2SO_4 2 – 500 mL HDPE NaOH
Day 7	BOD, TSS Metals [2]	Ammonia as N Cyanide Field parameters [3]	1 – 1 L HDPE 1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL HDPE NaOH
Plant Influent			
Day 0	Metals (field blank) [2]		1 – 500 mL HDPE HNO_3
Day 1	Metals [2]	Ammonia as N Cyanide (+field blank) Field parameters [3]	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 2 – 500 mL HDPE NaOH
Day 2	Metals [2]	Ammonia as N Cyanide Field parameters [3]	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL HDPE NaOH
Day 3	Metals [2] (+laboratory duplicate)	Ammonia as N Cyanide Field parameters [3] (+laboratory duplicate)	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL HDPE NaOH

Sampling Day	Samples to Collect		Sample Containers Required [(1)]
	Composite	Grab	
Day 4	Metals (+MS/MSD) [(2)]	Ammonia as N Cyanide (+MS/MSD) Field parameters [(3)]	3 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 3 – 500 mL HDPE NaOH
Day 5	Metals [(2)]	Ammonia as N Cyanide Field parameters [(3)]	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL HDPE NaOH
Day 6	Metals [(2)]	Ammonia as N Cyanide Field parameters [(3)]	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL HDPE NaOH
Day 7	Metals [(2)]	Ammonia as N Cyanide Field parameters [(3)]	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL HDPE NaOH
Plant Primary Treatment Effluent			
Day 0	Metals (field blank) [(4)]		1 – 500 mL HDPE HNO_3
Day 1	Metals [(4)]	Ammonia as N Mercury (+field blank) Cyanide (+field blank) Field parameters [(3)]	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 2 – 500 mL glass HCl 2 – 500 mL HDPE NaOH
Day 2	Metals [(4)]	Ammonia as N Mercury Cyanide Field parameters [(3)]	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL glass HCl 1 – 500 mL HDPE NaOH
Day 3	Metals [(4)] (+field duplicate)	Ammonia as N Mercury (+field duplicate) Cyanide (+field duplicate) Field parameters [(3)]	2 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 2 – 500 mL glass HCl 2 – 500 mL HDPE NaOH
Day 4	Metals [(4)]	Ammonia as N Mercury Cyanide Field parameters [(3)]	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL glass HCl 1 – 500 mL HDPE NaOH
Day 5	Metals [(4)]	Ammonia as N Mercury Cyanide Field parameters [(3)]	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL glass HCl 1 – 500 mL HDPE NaOH
Day 6	Metals [(4)]	Ammonia as N Mercury Cyanide Field parameters [(3)]	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL glass HCl 1 – 500 mL HDPE NaOH
Day 7	Metals [(4)]	Ammonia as N Mercury Cyanide Field parameters [(3)]	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL glass HCl 1 – 500 mL HDPE NaOH
Plant Final Effluent			
Day 0	Metals (field blank) [(5)]		1 – 500 mL HDPE HNO_3

Sampling Day	Samples to Collect		Sample Containers Required (1)
	Composite	Grab	
Day 1	Metals (5)	Ammonia as N Mercury (+field blank) Cyanide (+field blank) Field parameters (3)	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 2 – 500 mL glass HCl 2 – 500 mL HDPE NaOH
Day 2	Metals (5)	Ammonia as N Mercury Cyanide Field parameters (3)	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL glass HCl 1 – 500 mL HDPE NaOH
Day 3	Metals (5)	Ammonia as N Mercury Cyanide Field parameters (3)	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL glass HCl 1 – 500 mL HDPE NaOH
Day 4	Metals (5)	Ammonia as N Mercury Cyanide Field parameters (3)	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL glass HCl 1 – 500 mL HDPE NaOH
Day 5	Metals (+MS/MSD) (5)	Ammonia as N Mercury (+MS/MSD) Cyanide (+MS/MSD) Field parameters (3)	3 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 3 – 500 mL glass HCl 3 – 500 mL HDPE NaOH
Day 6	Metals (5)	Ammonia as N Mercury Cyanide Field parameters (3)	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL glass HCl 1 – 500 mL HDPE NaOH
Day 7	Metals (5) (+laboratory duplicate)	Ammonia as N Mercury (+laboratory duplicate) Cyanide (+laboratory duplicate) Field parameters (3)	1 – 500 mL HDPE HNO_3 1 – 500 mL HDPE H_2SO_4 1 – 500 mL glass HCl 1 – 500 mL HDPE NaOH
Plant Anaerobic Digester Effluent			
Day 1		Ammonia as N	1 – 500 mL HDPE H_2SO_4
Day 2		Ammonia as N	1 – 500 mL HDPE H_2SO_4

(1) Sample volume and container size listed above are recommendation only. Sample size and number of containers may be reduced if the sample volume meets the minimum analytical volume criteria of the analytical laboratory.

(2) Metals (total recoverable) include arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, selenium, silver, zinc.

(3) Field parameters include electrical conductivity, pH, and temperature.

(4) Metals (total recoverable) include arsenic, cadmium, chromium, copper, lead, nickel, zinc.

(5) Metals (total recoverable) include arsenic, cadmium, chromium, copper, lead, molybdenum, nickel, selenium, silver, zinc.

APPENDIX D

Sampling Equipment List

At a minimum, the following list of equipment will be required for local limits sample collection:

- Four (4) automated peristaltic samplers for composite sample collection;
- New silicone tubing for the composite samplers;
- Strainers for influent and collection system intake tubing;
- Powder-free nitrile gloves for clean sampling; and
- Sampling containers and field blank water listed in **Tables D-1** and **D-2**.

Table D-1. Sample Container Requirements by Sampling Site

Sample Type	Pollutant	Sample Containers (1)
Collection System		
Composite (2)	BOD, TSS (+1 field duplicate)	8 – 1 L HDPE
	Metals (+1 field blank, +1 field duplicate)	9 – 500 mL HDPE HNO_3
Grab	Ammonia as N (+1 field duplicate)	8 – 500 mL HDPE H_2SO_4
	Cyanide (+1 field blank, +1 field duplicate)	9 – 500 mL HDPE NaOH
Plant Influent		
Composite (2)	Metals (+1 field blank, +1 MS/MSD, +1 laboratory duplicate)	10 – 500 mL HDPE HNO_3
Grab	Ammonia as N (+1 laboratory duplicate)	7 – 500 mL HDPE H_2SO_4
	Cyanide (+1 field blank, +1 MS/MSD, +1 laboratory duplicate)	10 – 500 mL HDPE NaOH
Plant Primary Treatment Effluent		
Composite (2)	Metals (+1 field blank, +1 field duplicate)	9 – 500 mL HDPE HNO_3
Grab	Ammonia as N (+1 field duplicate)	8 – 500 mL HDPE H_2SO_4
	Mercury (+1 field blank, +1 field duplicate)	9 – 500 mL glass HCl
	Cyanide (+1 field blank, +1 field duplicate)	9 – 500 mL HDPE NaOH
Plant Final Effluent		
Composite (2)	Metals (+1 field blank, +1 MS/MSD, +1 laboratory duplicate)	10 – 500 mL HDPE HNO_3
Grab	Ammonia as N (+1 laboratory duplicate)	7 – 500 mL HDPE H_2SO_4
	Mercury (+1 field blank, +1 MS/MSD, +1 laboratory duplicate)	10 – 500 mL glass HCl
	Cyanide (+1 field blank, +1 MS/MSD, +1 laboratory duplicate)	10 – 500 mL HDPE NaOH
Plant Anaerobic Digester Effluent		
Grab	Ammonia as N	2 – 500 mL HDPE H_2SO_4

(1) Sample volume and container size listed above are recommendation only. Sample size and number

of containers may be reduced if the sample volume meets the minimum analytical volume criteria of the analytical laboratory.

(2) Collected in a clean 10-liter borosilicate glass or high-density polyethylene (HPDE) bottle tobe split into individual sample containers.

Table D-2. Total Number of Sample Container and Blank Water Requirements

Container Type	Number	Blank Water Requirements
1 L HDPE	8	0
500 mL HDPE HNO_3	38	4
500 mL HDPE H_2SO_4	32	0
500 mL HDPE NaOH	38	4
500 mL glass HCl	19	2

APPENDIX E

Sampling Procedures

GENERAL SAMPLING PROCEDURES

All sampling will be conducted in accordance with the City's Health and Safety Plan.

"Clean sampling" techniques are required to collect and handle wastewater samples in a way that does not result in contamination, loss, or change in the chemical form of the POC. Samples are collected using rigorous protocols, based on EPA Method 1669, as summarized below:

- All sampling will be conducted by two personnel using clean-hand/dirty-hand sampling procedures.
- Samples are collected only into pre-cleaned sample containers.
- Clean, powder-free nitrile gloves are required to be worn for collection of samples for metals and organic pollutants.
- Gloves are changed whenever something not known to be clean has been touched.
- For this sampling plan, clean techniques must be employed whenever handling the composite containers, lids, suction tubing, or strainers.
- To reduce potential contamination, sample collection personnel must adhere to the following rules while collecting samples:
  - No smoking.
  - Never sample near a running vehicle. Do not park vehicles in the immediate sample collection area (even non-running vehicles).
  - Do not eat or drink during sample collection.
  - Do not breathe, sneeze, or cough in the direction of an open sample container.

SAMPLING AND HANDLING PROCEDURES

Composite Sampling Preparation and Set-up

- Composite samples will be collected with an ISCO 3700 battery-operated sampler.
- The composite sampler will be thoroughly cleaned before initial use. If conditions warrant, intake tubing may be rinsed in the field at the sampling site with laboratory-grade de-ionized water only.
- One continuous piece of new silicone tubing will be used for the pump and intake tube. The same silicone tubing will be used for the entire sampling effort and any follow-up and/or rescheduled sampling events. In the event of a rescheduled sampling event, the silicone tubing will be rinsed for three (3) minutes with laboratory-grade de-ionized water and stored in a sealed plastic bag in the laboratory refrigerator until needed.
- The sample intake tube will be as short as possible.
- An intake rinse will not be used; however a 100-count post-purge will be used.
- Metal strainers will not be used.
- Pre-cleaned certified one (1) gallon HDPE containers will be used in the composite sampler. Even if no sample is collected, the sample container will be replaced with a new sample container daily.

Daily Composite Sampling Activities

- Install new battery for sampler (if necessary).
- Remove previous day’s composite sample container and install clean composite sample container.
- Add a cooling agent (i.e., ice) into the base of the composite sampler (if necessary) to maintain sample preservation requirements. For permanent composite sampler installations, verify that refrigeration is provided.
- The actual start and stop time and number of sample aliquots collected will be noted on the chain-of-custody forms. Unusual condition(s) and flow conditions will be noted on a field log attached to the chain-of-custody form.
- Calibrate and program composite sampler. The composite sampler will be programmed using a variable collection time sequence. Set program for composite sampling. It is recommended that one aliquot be collected manually through the composite sampler before leaving the site.
- Composite samples will be split at the Plant laboratory into the appropriate sample containers. Samples will be transported to the analytical laboratory on ice in an ice chest.

- Deliver daily samples to laboratory for analyses.

Grab Sampling Procedures

- Clean sample containers provided by the laboratory will be used to collect grab sample(s). If required, a grab pole may be used for sample collection. If a grab pole is used the "pole side" of the container will remain downstream of the sample container to avoid contamination. Grab samples will be associated with the composite samples removed from the sampling unit on the same day that the grab samples are collected.
- Sample containers will be stored and transported in an ice chest.

Unusual Sampling Conditions Procedures

- If a composite sampler malfunctions or does not collect a sample, determine the cause and correct. If the cause cannot be quickly and definitively determined, use the back-up composite sampler for sample collection. Switch the intake tubing to the back-up composite sampler. Complete the chain-of-custody form as filed and note all observed conditions. Reschedule the sample collection for the following week on the same day with the same settings. Use the same intake tubing, types of containers, procedures, etc. as used during the initial sample collection events.
- If the composite sampler collects low sample volume (e.g., less than 75 percent of the sample container volume), determine the cause. If the cause cannot be determined, replace the composite sampler with the back-up composite sampler for sample collection and note on the chain-of-custody form. Switch the intake tubing to the back-up composite sampler. Complete the chain-of-custody form as filed and note all observed conditions. Reschedule the sample collection for the following week on the same day with the same settings. Use the same intake tubing, types of containers, procedures, etc. as used during the initial sample collection events. Take the available sample collected to the Plant laboratory and split into the appropriate sample containers. Determine if the sample(s) will be submitted for analyses. Composite sample analysis priority is as follows:
    - Metals
    - BOD/TSS
- In the event there is only one person at the sampling location, servicing the sample and restarting for the next sample is the priority within the time frame allotted. If warranted, grab sample(s) can be delayed to accommodate these other tasks first. Provide a note on the chain-of-custody form or field log.
- If sample is compromised during splitting at the Plant laboratory or damaged in transit, a resampling event will be scheduled for the following week (same day and settings).

Cleaning Instructions for Composite Samplers at the Plant

- Pre-cleaned certified one (1) gallon HDPE sample containers will be used. Even if no sample is collected, the sample container will be replaced with a new sample container daily.
- All tubing will be replaced with clean tubing prior to initiation of local limits sampling.
- Metal strainers will not be used.
- Sampling cup will be acid-washed with a 1% HCl solution by soaking for one hour in 1% HCl solution followed by triple rinsing with laboratory-grade de-ionized water and allowed to air-dry.
- Re-assemble sampling cup to the composite sampler prior to initial start-up.

Composite Sampler Programming and Cancellation for Flow-Weighted Sampling

This procedure is used for Manning samplers with the keypad entry system.

- Press “Flow”.
- Press “Delay Start”.
- Enter “0001” for the Inf. composite sampler. Enter “0020” for 001 – Effluent, Primary Effluent.
- Press “Start”.
- Press “Test Cycle”, then “1” (for the number of test cycles) and “Enter”. This will initiate a sampling cycle to check sampler operation.
- To cancel the sampler program, press “Reset” twice.

APPENDIX B

USEPA Default Information; Biosolids Disposal Regulations; and NPDES Permit Restrictions

United States
Environmental Protection
Agency

Office of Wastewater
Management 4203

EPA 833-R-04-002B
July 2004

Local Limits Development Guidance Appendices

POLLUTANTS REGULATED BY CATEGORICAL PRETREATMENT STANDARDS

	Aluminum Forming	Battery Manufacturing	Carbon Black Manufacturing	Centralized Waste Treatment	Coil Coating	Copper Forming	Electrical and Electronic Components	Electroplating	Feedlots	Fertilizer Manufacturing	Glass Manufacturing	Grain Mills	Ink Formulating	Inorganic Chemicals Manufacturing	Iron and Steel Manufacturing	Leather Tanning and Finishing	Metal Finishing	Metal Molding and Casting	Nonferrous Metals Form./Metal Powders	Nonferrous Metals Manufacturing	Oil and Gas	Organic Chems., Plastics, and Syn. Fibers	Paint Formulating	Paving and Roofing Materials	Pesticide Chemicals	Petroleum Refining	Pharmaceutical Manufacturing	Porcelain Enameling	Pulp, Paper, and Paperboard	Rubber Manufacturing	Soap and Detergent Manufacturing	Steam Electric Power Generating	Timber Products Processing	Transportation Equip. Cleaning	Waste Combustors
Flow Restrictions Only									X				X								X		X								X				
Ammonia (as N)										X					X				X	X						X	X								
BOD												X																							
COD														X																X					
Fluoride					X		X				X			X					X	X															
Nitrate (as N)										X																									
Oil and Grease	X		X		X	X												X						X		X				X			X		
Oil (mineral)											X																								
Organic Nitrogen (as N)										X																									
pH										X				X		X																			
Phenols															X			X		X															
Phosphorus					X					X																									
Sulfide																X																			
TSS												X																							X
1,1-Dichloroethane					X			X									X					X										X			
1,1-Dichloroethylene					X		X	X									X					X			X							X			
1,1,1-Trichloroethane					X	X	X	X									X	X				X			X							X			
1,1,2-Trichloroethane							X	X									X					X										X			
1,1,2,2-Tetra-chloroethane					X			X									X															X			
1,2-Dichlorobenzene							X	X									X					X			X		X					X			
1,2-Dichloroethane							X	X									X					X			X		X					X			
1,2-Dichloropropane								X									X					X			X							X			
1,2-Diphenyl-hydrazine	X						X	X									X															X			
1,2-trans-Dichloroethylene								X									X					X			X							X			

	Aluminum Forming	Battery Manufacturing	Carbon Black Manufacturing	Centralized Waste Treatment	Coil Coating	Copper Forming	Electrical and Electronic Components	Electroplating	Feedlots	Fertilizer Manufacturing	Glass Manufacturing	Grain Mills	Ink Formulating	Inorganic Chemicals Manufacturing	Iron and Steel Manufacturing	Leather Tanning and Finishing	Metal Finishing	Metal Molding and Casting	Nonferrous Metals Form./Metal Powders	Nonferrous Metals Manufacturing	Oil and Gas	Organic Chems., Plastics, and Syn. Fibers	Paint Formulating	Paving and Roofing Materials	Pesticide Chemicals	Petroleum Refining	Pharmaceutical Manufacturing	Porcelain Enameling	Pulp, Paper, and Paperboard	Rubber Manufacturing	Soap and Detergent Manufacturing	Steam Electric Power Generating	Timber Products Processing	Transportation Equip. Cleaning	Waste Combustors
1,2,4-Trichloro-benzene							X	X									X					X										X			
1,3-Dichloro-benzene							X	X									X					X										X			
1,3-Dichloro-propene								X									X					X			X							X			
1,4-Dichloro-benzene							X	X									X					X			X							X			
2-Chloroethyl vinyl ether (mixed)								X									X															X			
2-Chloro-naphthalene								X									X															X			
2-Chlorophenol	X						X	X									X	X														X			
2-Nitrophenol							X	X									X					X										X			
2,3-Dichloro-aniline				X																															
2,3,4,6-Tetra-chlorophenol																													X						
2,4-Dichlorophenol							X	X									X	X														X			
2,4-Dimethyl-phenol								X									X	X														X			
2,4-Dinitrophenol								X									X															X			
2,4-Dinitro-toluene	X							X									X															X			
2,4,5-Trichloro-phenol																													X						
2,4,6-Trichloro-phenol				X			X	X									X	X											X			X			
2,6-Dinitro-toluene						X		X									X															X			
3,3-Dichloro-benzidine								X									X															X			
3,4,5-Trichloro-catechol																													X						
3,4,5-Trichloro-guaiacol																													X						
3,4,6-Trichloro-catechol																													X						
3,4,6-Trichloro-guaiacol																													X						
4-Bromophenyl phenyl ether								X									X															X			

	Aluminum Forming	Battery Manufacturing	Carbon Black Manufacturing	Centralized Waste Treatment	Coil Coating	Copper Forming	Electrical and Electronic Components	Electroplating	Feedlots	Fertilizer Manufacturing	Glass Manufacturing	Grain Mills	Ink Formulating	Inorganic Chemicals Manufacturing	Iron and Steel Manufacturing	Leather Tanning and Finishing	Metal Finishing	Metal Molding and Casting	Nonferrous Metals Form./Metal Powders	Nonferrous Metals Manufacturing	Oil and Gas	Organic Chems., Plastics, and Syn. Fibers	Paint Formulating	Paving and Roofing Materials	Pesticide Chemicals	Petroleum Refining	Pharmaceutical Manufacturing	Porcelain Enameling	Pulp, Paper, and Paperboard	Rubber Manufacturing	Soap and Detergent Manufacturing	Steam Electric Power Generating	Timber Products Processing	Transportation Equip. Cleaning	Waste Combustors
4-Chlorophenyl phenyl ether								X									X															X			
4-Nitrophenol							X	X									X	X				X										X			
4,4-DDD								X									X															X			
4,4-DDE								X									X															X			
4,4-DDT								X									X															X			
4,5,6-Trichloro-quaiacol																													X						
4,6-Dinitro-o-cresol								X									X					X										X			
Acenaphthene	X							X									X	X				X										X			
Acenaphthylene	X							X									X	X														X			
Acetone																											X								
Acrolein								X									X															X			
Acrylonitrile								X									X															X			
Aldrin								X									X															X			
Alpha-BHC								X									X															X			
Alpha-endosulfan								X									X															X			
Anthracene	X					X	X	X									X	X				X										X			
Benzene						X		X									X	X				X			X		X					X			
Benzidine								X									X															X			
Benzo (b) fluoranthene	X							X									X	X														X			
Benzo (a) anthracene								X									X	X														X			
Benzo (ghi) perylene	X							X									X															X			
Benzo (a) pyrene	X							X									X	X		X												X			
Benzo (k) fluoranthene								X									X	X														X			
Beta-BHC								X									X															X			
Beta-endosulfan								X									X															X			
Bis (2-chloro-ethoxy) methane								X									X															X			
Bis (2-chloro-isopropyl) ether								X									X															X			
Bis (2-chloro-ethyl) ether					X			X									X															X			
Bis (2-ethyl-hexyl) phthalate	X			X	X		X	X									X	X				X										X			
Bromoform								X									X							X								X			

	Aluminum Forming	Battery Manufacturing	Carbon Black Manufacturing	Centralized Waste Treatment	Coil Coating	Copper Forming	Electrical and Electronic Components	Electroplating	Feedlots	Fertilizer Manufacturing	Glass Manufacturing	Grain Mills	Ink Formulating	Inorganic Chemicals Manufacturing	Iron and Steel Manufacturing	Leather Tanning and Finishing	Metal Finishing	Metal Molding and Casting	Nonferrous Metals Form./Metal Powders	Nonferrous Metals Manufacturing	Oil and Gas	Organic Chems., Plastics, and Syn. Fibers	Paint Formulating	Paving and Roofing Materials	Pesticide Chemicals	Petroleum Refining	Pharmaceutical Manufacturing	Porcelain Enameling	Pulp, Paper, and Paperboard	Rubber Manufacturing	Soap and Detergent Manufacturing	Steam Electric Power Generating	Timber Products Processing	Transportation Equip. Cleaning	Waste Combustors
Butyl benzyl phthalate					X		X	X									X	X														X			
Carbon tetrachloride							X	X									X					X			X							X			
Carbazole				X																															
Chlordane (tech. mix. & metabolites)								X									X															X			
Chlorobenzene								X									X	X				X			X		X					X			
Chlorodibromo-methane								X									X								X							X			
Chloroethane								X									X					X										X			
Chloroform					X	X	X	X									X	X				X			X		X		X			X			
Chrysene	X							X									X	X														X			
Cresol				X																															
Delta-BHC								X									X															X			
Di-n-butyl phthalate	X				X		X	X									X	X														X			
Di-n-octyl phthalate								X									X															X			
Dibenzo (a,h) anthracene	X							X									X															X			
Dichlorobromo-methane							X	X									X								X							X			
Dieldrin								X									X															X			
Diethyl phthalate	X							X									X	X				X										X			
Diethylamine																											X								
Dimethyl phthalate								X									X	X				X										X			
Endosulfan sulfate	X							X									X															X			
Endrin	X							X									X															X			
Endrin aldehyde	X							X									X															X			
Ethyl acetate																											X								
Ethylbenzene	X					X	X	X									X					X			X							X			
Fluoranthene	X			X				X									X	X				X										X		X	
Fluorene	X							X									X	X				X										X			
Gamma-BHC								X									X															X			
Heptachlor epoxide								X									X															X			
Heptachlor								X									X															X			

	Aluminum Forming	Battery Manufacturing	Carbon Black Manufacturing	Centralized Waste Treatment	Coil Coating	Copper Forming	Electrical and Electronic Components	Electroplating	Feedlots	Fertilizer Manufacturing	Glass Manufacturing	Grain Mills	Ink Formulating	Inorganic Chemicals Manufacturing	Iron and Steel Manufacturing	Leather Tanning and Finishing	Metal Finishing	Metal Molding and Casting	Nonferrous Metals Form./Metal Powders	Nonferrous Metals Manufacturing	Oil and Gas	Organic Chems., Plastics, and Syn. Fibers	Paint Formulating	Paving and Roofing Materials	Pesticide Chemicals	Petroleum Refining	Pharmaceutical Manufacturing	Porcelain Enameling	Pulp, Paper, and Paperboard	Rubber Manufacturing	Soap and Detergent Manufacturing	Steam Electric Power Generating	Timber Products Processing	Transportation Equip. Cleaning	Waste Combustors
Hexachloro-benzene								X									X			X		X										X			
Hexachlorobuta-diene								X									X															X			
Hexachlorocyclo pentadiene								X									X					X										X			
Hexachloro-ethane								X									X					X										X			
Indeno (1,2,3-cd)pyrene	X							X									X															X			
Isobutylaldehyde																											X								
Isophorone	X						X	X									X															X			
Isopropyl acetate																											X								
Isopropyl ether																											X								
Methyl formate																											X								
Methyl bromide								X									X								X							X			
Methyl cellosolve																											X								
Methyl Isobutyl Ketone																											X								
Methyl chloride								X									X					X			X							X			
Methylene chloride					X	X	X	X									X	X				X			X		X					X			
n-Amyl acetate																											X								
n-Butyl acetate																											X								
n-Decane				X																															
n-Heptane																											X								
n-Hexane																											X								
N-nitrosodi-n-propylamine								X									X		X										X			X			
N-nitrosodi-methylamine								X									X		X													X			
N-nitrosodi-phenylamine	X					X		X									X		X													X			
n-Octadecane				X																															
Naphthalene	X					X	X	X							X		X	X				X			X							X			
Nitrobenzene								X									X					X										X			
Non-polar material (SGT-HEM)																																		X	
Parachloro-metacresol	X							X									X	X														X			
PCB–1016	X							X									X															X			

	Aluminum Forming	Battery Manufacturing	Carbon Black Manufacturing	Centralized Waste Treatment	Coil Coating	Copper Forming	Electrical and Electronic Components	Electroplating	Feedlots	Fertilizer Manufacturing	Glass Manufacturing	Grain Mills	Ink Formulating	Inorganic Chemicals Manufacturing	Iron and Steel Manufacturing	Leather Tanning and Finishing	Metal Finishing	Metal Molding and Casting	Nonferrous Metals Form./Metal Powders	Nonferrous Metals Manufacturing	Oil and Gas	Organic Chems., Plastics, and Syn. Fibers	Paint Formulating	Paving and Roofing Materials	Pesticide Chemicals	Petroleum Refining	Pharmaceutical Manufacturing	Porcelain Enameling	Pulp, Paper, and Paperboard	Rubber Manufacturing	Soap and Detergent Manufacturing	Steam Electric Power Generating	Timber Products Processing	Transportation Equip. Cleaning	Waste Combustors
PCB–1221	X							X									X															X			
PCB–1232	X							X									X															X			
PCB–1242	X							X									X															X			
PCB–1248	X							X									X															X			
PCB–1254	X							X									X															X			
PCB–1260	X							X									X															X			
Pentachloro-phenol					X		X	X									X	X														X			
Phenanthrene	X				X	X		X									X	X				X										X		X	
Phenol	X						X	X									X	X														X			
Pyrene	X							X									X	X				X										X			
TCDF																													X						
Tetrachloro-catechol																													X						
Tetrachloro-ethylene	X				X		X	X							X		X	X				X			X							X			
Tetrachloro-guaiacol																													X						
Tetrahydrofuran																											X								
Toluene	X				X	X	X	X									X	X				X			X		X					X			
Toxaphene								X									X															X			
Trichloro-ethylene	X					X	X	X									X	X				X										X			
Trichlorosyringol																													X						
Triethylamine																											X								
Vinyl chloride								X									X					X										X			
Xylenes																											X								
2,3,7,8-tetrachloro-dibenzo-p-dioxin								X									X												X			X			
Organic Pesticide Active Ingredients																									X										
Antimony				X			X							X					X	X												X			
Arsenic				X			X							X						X												X	X		X
Asbestos																																X			
Barium				X																															
Beryllium																				X												X			
Cadmium		X		X			X	X						X			X		X	X												X		X	X
Chromium, Total	X	X		X	X	X	X	X						X	X	X	X		X	X						X		X		X		X	X	X	X

	Aluminum Forming	Battery Manufacturing	Carbon Black Manufacturing	Centralized Waste Treatment	Coil Coating	Copper Forming	Electrical and Electronic Components	Electroplating	Feedlots	Fertilizer Manufacturing	Glass Manufacturing	Grain Mills	Ink Formulating	Inorganic Chemicals Manufacturing	Iron and Steel Manufacturing	Leather Tanning and Finishing	Metal Finishing	Metal Molding and Casting	Nonferrous Metals Form./Metal Powders	Nonferrous Metals Manufacturing	Oil and Gas	Organic Chems., Plastics, and Syn. Fibers	Paint Formulating	Paving and Roofing Materials	Pesticide Chemicals	Petroleum Refining	Pharmaceutical Manufacturing	Porcelain Enameling	Pulp, Paper, and Paperboard	Rubber Manufacturing	Soap and Detergent Manufacturing	Steam Electric Power Generating	Timber Products Processing	Transportation Equip. Cleaning	Waste Combustors
Chromium, Hexavalent														X	X																				
Cobalt		X		X										X						X															
Copper		X		X	X	X		X						X			X	X	X	X												X	X	X	X
Cyanide, Total	X	X		X	X			X						X	X		X		X	X		X			X		X					X			
Cyanide, Amenable														X			X																		
Gold																				X															
Indium																				X															
Iron														X						X															
Lead		X		X		X	X	X						X	X		X	X	X	X		X			X			X		X		X		X	X
Manganese		X			X																														
Mercury		X		X										X						X												X		X	X
Molybdenum				X															X	X															
Nickel		X		X		X		X						X	X		X		X	X								X				X		X	
Palladium																				X															
Platinum																				X															
Selenium				X										X						X												X			
Silver		X		X				X						X			X		X	X												X			X
Tantalum																				X															
Thallium																																X			
Tin				X																X															
Titanium				X																X															X
Tungsten																				X															
Vanadium				X																															
Zinc	X	X		X	X	X	X	X						X	X		X	X	X	X		X						X	X	X		X		X	X

Source: Updated from the 1991 *National Pretreatment Program Report to Congress*, pp. 5-6.

APPENDIX G - LITERATURE INHIBITION VALUES

Pollutant	Reported Range of Activated Sludge Inhibition Threshold Levels, mg/L	References*
METALS/NONMETAL INORGANICS		
Ammonia	480	(4)
Arsenic	0.1	(1), (2), (3)
Cadmium	1 - 10	(2), (3)
Chromium (VI)	1	(2), (3)
Chromium (III)	10 - 50	(2), (3)
Chromium (Total)	1 - 100	(1)
Copper	1	(2), (1), (3)
Cyanide	0.1 - 5 5	(1), (2), (3) (1)
Iodine	10	(4)
Lead	1.0 - 5.0 10 - 100	(3) (1)
Mercury	0.1 - 1 2.5 as Hg (II)	(2), (3) (1)
Nickel	1.0 - 2.5 5	(2), (3) (1)
Sulfide	25 -30	(4)
Zinc	0.3 - 5 5 - 10	(3) (1)
ORGANICS		
Anthracene	500	(1)
Benzene	100 - 500 125 - 500	(3) (1)
2-Chlorophenol	5 20 - 200	(2) (3)
1,2 Dichlorobenzene	5	(2)
1,3 Dichlorobenzene	5	(2)
1,4 Dichlorobenzene	5	(2)
2,4-Dichlorophenol	64	(3)
2,4 Dimethylphenol	40 - 200	(3)
2,4 Dinitrotoluene	5	(2)
1,2-Diphenylhydrazine	5	(2)
Ethylbenzene	200	(3)
Hexachlorobenzene	5	(2)
Naphthalene	500 500 500	(1) (2) (3)
Nitrobenzene	30 - 500 500 500	(3) (1) (2)

Pollutant	Reported Range of Activated Sludge Inhibition Threshold Levels, mg/L	References*
Pentachlorophenol	0.95 50 75 - 150	(2) (3) (1)
Phenanthrene	500 500	(1) (2)
Phenol	50 - 200 200 200	(3) (2) (1)
Toluene	200	(3)
2,4,6 Trichlorophenol	50 - 100	(1)
Surfactants	100 - 500	(4)

Pollutant	Reported Range of Trickling Filter Inhibition Threshold Levels, mg/L	References*
Chromium (III)	3.5 - 67.6	(1)
Cyanide	30	(1)

Pollutant	Reported Range of Nitrification Inhibition Threshold Levels, mg/L	References*
METALS/NONMETAL INORGANICS		
Arsenic	1.5	(2)
Cadmium	5.2	(1), (2)
Chloride	180	(4)
Chromium (VI)	1 - 10 [as $(CrO_4)^{2-}$]	(1)
Chromium (T)	0.25 - 1.9 1 - 100 (trickling filter)	(1), (2), (3) (1)
Copper	0.05 - 0.48	(2), (3)
Cyanide	0.34 - 0.5	(2), (3)
Lead	0.5	(2), (3)
Nickel	0.25 - 0.5 5	(2), (3) (1)
Zinc	0.08 - 0.5	(2), (3)
ORGANICS		
Chloroform	10	(2)
2,4-Dichlorophenol	64	(3)
2,4-Dinitrophenol	150	(2)
Phenol	4 4 - 10	(2) (3)

Pollutant	Reported Range of Anaerobic Digestion Inhibition Threshold Levels, mg/L	References*
METALS/NONMETAL INORGANICS		
Ammonia	1500 - 8000	(4)
Arsenic	1.6	(1)
Cadmium	20	(3)
Chromium (III)	130	(3)
Chromium (VI)	110	(3)
Copper	40	(3)
Cyanide	4 - 100 1 - 4	(1) (2), (3)
Lead	340	(3)
Nickel	10 136	(2), (3) (1)
Silver	13 - 65**	(3)
Sulfate	500 - 1000	(4)
Sulfide	50 - 100	(4)
Zinc	400	(3)
ORGANICS		
Acrylonitrile	5 5	(3) (2)
Carbon Tetrachloride	2.9 - 159.4 10 - 20 2.0	(1) (3) (2)
Chlorobenzene	0.96 - 3 0.96	(1) (2)
Chloroform	1 5 - 16 10 - 16	(2) (1) (3)
1,2-Dichlorobenzene	0.23 - 3.8 0.23	(1) (2)
1,4-Dichlorobenzene	1.4 - 5.3 1.4	(1) (2)
Methyl chloride	3.3 - 536.4 100	(1) (2)
Pentachlorophenol	0.2 0.2 - 1.8	(2) (1)
Tetrachloroethylene	20	(2)
Trichloroethylene	1 - 20 20 20	(1) (2) (3)
Trichlorofluoromethane	-	(2)

* Total pollutant inhibition levels, unless otherwise indicated.
** Dissolved metal inhibition levels.

(1) Jenkins, D.I., and Associates. 1984. *Impact of Toxics on Treatment Literature Review*.

(2) Russell, L. L., C. B. Cain, and D.I. Jenkins. 1984. *Impacts of Priority Pollutants on Publicly Owned Treated Works Processes: A Literature Review*. 1984 Purdue Industrial Waste Conference.

(3) Anthony, R. M., and L. H. Briemburst. 1981. *Determining Maximum Influent Concentrations of Priority Pollutants for Treatment Plants*. Journal Water Pollution Control Federation 53(10):1457-1468.

(4) U.S. EPA. 1986, *Working Document; Interferences at Publicly Owned Treatment Works*. September 1986.

Source: *EPA's Guidance Manual on the Development and Implementation of Local Discharge Limitations Under the Pretreatment Program*, December 1987, pp. 3-44 to 3-49.

22 CA ADC § 66261.24

22 CCR § 66261.24

Cal. Admin. Code tit. 22, § 66261.24

BARCLAYS OFFICIAL CALIFORNIA CODE OF REGULATIONS
TITLE 22. SOCIAL SECURITY
DIVISION 4.5. ENVIRONMENTAL HEALTH STANDARDS FOR THE MANAGEMENT OF HAZARDOUS WASTE
CHAPTER 11. IDENTIFICATION AND LISTING OF HAZARDOUS WASTE
ARTICLE 3. CHARACTERISTICS OF HAZARDOUS WASTE
This database is current through 5/2/08, Register 2008, No. 18

§ 66261.24. Characteristic of Toxicity.

(a) A waste exhibits the characteristic of toxicity if representative samples of the waste have any of the following properties:

(1) when using the Toxicity Characteristic Leaching Procedure (TCLP), test Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, third edition and Updates (incorporated by reference in section 66260.11 of this division), the extracts from representative samples of the waste contain any of the contaminants listed in Table I of this section at a concentration equal to or greater than the respective value given in that table unless the waste is excluded from classification as a solid waste or hazardous waste or is exempted from regulation pursuant to 40 CFR section 261.4. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering using the methodology outlined in Method 1311, is considered to be the extract for the purposes of this section;

(A) a waste that exhibits the characteristic of toxicity pursuant to subsection (a)(1) of this section has the EPA Hazardous Waste Number specified in Table I of this section which corresponds to the toxic contaminant causing it to be hazardous;

(B) Table I - Maximum Concentration of Contaminants for the Toxicity Characteristic:

EPA Hazardous Waste Number	Contaminant	Chemical Abstracts Service Number	Regulatory Level Mg/l
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D019	Carbon tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03

D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	6.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol	95-48-7	200.0 [FN1]
D024	m-Cresol	108-39-4	200.0 [FN1]
D025	p-Cresol	106-44-5	200.0 [FN1]
D026	Cresol		200.0 [FN1]
D016	2,4-D	94-75-7	10.0
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-06-2	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4-Dinitrotoluene	121-14-2	0.13
D012	Endrin	72-20-8	0.02
D031	Heptachlor (and its epoxide)	76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	0.13
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D008	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	5.0 [FN2]
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	2.0
D017	2,4,5-TP (Silvex)	93-72-1	1.0
D043	Vinyl chloride	75-01-4	0.2

[FN1]1 If o-, m- and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.

[FN2]2 Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level .

(2) it contains a substance listed in subsections (a)(2)(A) or (a)(2)(B) of this section at a concentration in milligrams per liter of waste extract, as determined using the Waste Extraction Test (WET) described in Appendix II of this chapter, which equals or exceeds its listed soluble threshold limit concentration or at a concentration in milligrams per kilogram in the waste which equals or exceeds its listed total threshold limit concentration;

(A) Table II - List of Inorganic Persistent and Bioaccumulative Toxic Substances and Their Soluble Threshold Limit Concentration:

(STLC) and Total Threshold Limit Concentration (TTLC) Values.

Substance [FNa], [FNb]	STLC mg/l	TTLC Wet-Weight mg/kg
Antimony and/or antimony compounds	15	500
Arsenic and/or arsenic compounds	5.0	500
Asbestos		1.0 (as percent)
Barium and/or barium compounds (excluding barite)	100	10,000 [FNc]
Beryllium and/or beryllium compounds	0.75	75
Cadmium and/or cadmium compounds	1.0	100
Chromium (VI) compounds	5	500
Chromium and/or chromium (III) compounds	5 [FNd]	2,500
Cobalt and/or cobalt compounds	80	8,000
Copper and/or copper compounds	25	2,500
Fluoride salts	180	18,000
Lead and/or lead compounds	5.0	1,000
Mercury and/or mercury compounds	0.2	20
Molybdenum and/or molybdenum compounds	350	3,500 [FNe]
Nickel and/or nickel compounds	20	2,000
Selenium and/or selenium compounds	1.0	100
Silver and/or silver compounds	5	500
Thallium and/or thallium compounds	7.0	700
Vanadium and/or vanadium compounds	24	2,400
Zinc and/or zinc compounds	250	5,000

[FNa]a STLC and TTLC values are calculated on the concentrations of the elements, not the compounds.

[FNb]b In the case of asbestos and elemental metals, the specified concentration limits apply only if the substances are in a friable, powdered or finely divided state. Asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.In the case of asbestos and elemental metals, the specified concentration limits apply only if the substances are in a friable, powdered or finely divided state. Asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.In the case of asbestos and elemental metals, the specified concentration limits apply only if the substances are in a friable, powdered or finely divided state. Asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

[FNc]c excluding barium sulfate.

[FNd]d If the soluble chromium, as determined by the TCLP set forth in Appendix I of chapter 18 of this division, is less than 5 mg/l, and the soluble chromium, as determined by the procedures set forth in Appendix II of chapter 11, equals or exceeds 560 mg/l and the waste is not otherwise identified as a RCRA hazardous waste pursuant to section 66261.100, then the waste is a non-RCRA hazardous waste.

[FNe]e Excluding molybdenum disulfide.

(B) Table III - List of Organic Persistent and Bioaccumulative Toxic Substances and Their Soluble Threshold Limit Concentration (STLC) and Total Threshold Limit Concentration (TTLC) Values:

Substance	STLC mg/l	TTLC Wet Weight mg/kg
Aldrin	0.14	1.4
Chlordane	0.25	2.5
DDT, DDE, DDD	0.1	1.0
2,4-Dichlorophenoxyacetic acid	10	100
Dieldrin	0.8	8.0
Dioxin (2,3,7,8-TCDD)	0.001	0.01
Endrin	0.02	0.2
Heptachlor	0.47	4.7
Kepone	2.1	21
Lead compounds, organic	-	13
Lindane	0.4	4.0
Methoxychlor	10	100
Mirex	2.1	21
Pentachlorophenol	1.7	17
Polychlorinated biphenyls (PCBs)	5.0	50
Toxaphene	0.5	5
Trichloroethylene	204	2,040
2,4,5-Trichlorophenoxypropionic acid	1.0	10

(3) it has an acute oral LD_{50} less than 2,500 milligrams per kilogram;

(4) it has an acute dermal LD_{50} less than 4,300 milligrams per kilogram;

(5) it has an acute inhalation LC_{50} less than 10,000 parts per million as a gas or vapor;

(6) it has an acute aquatic 96-hour LC_{50} less than 500 milligrams per liter when measured in soft water (total hardness 40 to 48 milligrams per liter of calcium carbonate) with fathead minnows (Pimephales promelas), rainbow trout (Salmo gairdneri) or golden shiners (Notemigonus crysoleucas) according to procedures described in Part 800 of the "Standard Methods for the Examination of Water and Wastewater (16th Edition)," American Public Health Association, 1985 and "Static Acute Bioassay Procedures for Hazardous Waste Samples," California Department of Fish and Game, Water Pollution Control Laboratory, revised November 1988 (incorporated by reference, see section 66260.11), or by other test methods or test fish approved by the Department, using test samples prepared or meeting the conditions for testing as prescribed in subdivisions (c) and (d) of Appendix II of this chapter, and solubilized, suspended, dispersed or emulsified by the cited procedures or by other methods approved by the Department;

(7) it contains any of the following substances at a single or combined concentration equal to or exceeding 0.001 percent by weight:

(A) 2-Acetylaminofluorene (2-AAF);

(B) Acrylonitrile;

(C) 4-Aminodiphenyl;

(D) Benzidine and its salts;

(E) bis (Chloromethyl) ether (BCME);

(F) Methyl chloromethyl ether;

(G) 1,2-Dibromo-3-chloropropane (DBCP);

(H) 3,3'-Dichlorobenzidine and its salts (DCB);

(I) 4-Dimethylaminoazobenzene (DAB);

(J) Ethyleneimine (EL);

(K) alpha-Naphthylamine (1-NA);

(L) beta-Naphthylamine (2-NA);

(M) 4-Nitrobiphenyl (4-NBP);

(N) N-Nitrosodimethylamine (DMN);

(0) beta-Propiolactone (BPL);

(P) Vinyl chloride (VCM);

(8) it has been shown through experience or testing to pose a hazard to human health or environment because of its carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties or persistence in the environment.

(b) A waste containing one or more materials which exhibit the characteristic of toxicity because the materials have the property specified in subsection (a)(5) of this section may be classified as nonhazardous pursuant to section 66260.200 if the waste does not exhibit any other characteristic of this article and is not listed in article 4 of this chapter and its head space vapor contains no such toxic materials in concentrations exceeding their respective acute inhalation LC_{50} or their LC_{LO}. The head space vapor of a waste shall be prepared, and two milliliters of it shall be sampled using a five milliliter gas-tight syringe, according to Method 5020 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, 2nd edition, U.S. Environmental Protection Agency, 1982 (incorporated by reference, see section 66260.11). The quantity in milligrams of each material, which exhibits the characteristic of toxicity because it has the property specified in subsection (a)(5) of this section, in the sampling syringe shall be determined by comparison to liquid standard solutions according to the appropriate gas chromatographic procedures in Method 8010, 8015, 8020, 8030 or 8240 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," SW-846, 3rd edition, U.S. Environmental Protection Agency, 1986 (incorporated by reference, see section 66260.11). The concentration of each material in the head space vapor shall be calculated using the following equation:

$$C_A = \frac{Q_A}{MW} \times \frac{29.8ml}{mmole} \times \frac{1}{2 \times 10^{-6} M^3}$$

Image 1 (0.5" X 4.25") Not available for Offline Print to STP or FAX

where C (in parts per million) is the concentration of material A in head space vapor, Q (in milligrams) is the quantity of material A in sampling syringe and MW (in milligrams per millimole) is the molecular weight of material A. Where an acute inhalation LC_{50} is not available, an LC_{50} measured for another time (t) may be converted to an eight-hour value with the following equation:

Eight-hour LC_{50} = (t/8) x (t-hour LC_{50}).

(c) A waste containing one or more materials which exhibit the characteristic of toxicity because the materials have either of the properties specified in subsection (a)(3) or (a)(4) of this section may be classified as nonhazardous pursuant to section 66260.200 if the waste does not exhibit any other characteristic of this article and is not listed in article 4 of this chapter and the calculated oral LD_{50} of the waste mixture is greater than 2,500 milligrams per kilogram and the calculated dermal LD_{50} is greater than 4,300 milligrams per kilogram by the following equation:

$$\text{Calculated oral or dermal } LD_{50} = \frac{100\%}{\sum_{x=1}^{n} \frac{\%A_x}{TA_x}}$$

Image 2 (0.75" X 3.25") Not available for Offline Print to STP or FAX

where $\%A_x$ is the weight percent of each component in the waste mixture and [FNT]A_X is the acute oral or dermal LD_{50} or the acute oral LD_{LO} of each component.

Note: Authority cited: Sections 25141, 25159, 58004 and 58012, Health and Safety Code. Reference: Sections 25117, 25120.2, 25141, 25159 and 25159.5, Health and Safety Code and 40 CFR Section 261.24.

HISTORY

1. New section filed 5-24-91; effective 7-1-91 (Register 91, No. 22).

2. Amendment of table II filed 1-31-94; operative 1-31-94 (Register 94, No. 5).

3. Editorial correction of equation (Register 95, No. 36).

4. Amendment of subsection (a)(1) and Note filed 10-13-98; operative 11-12-98 (Register 98, No. 42).

5. Change without regulatory effect amending subsections (a)(3) and (c) filed 6-3-2004 pursuant to section 100, title 1, California Code of Regulations (Register 2004, No. 23).

22 CCR § 66261.24, 22 CA ADC § 66261.24
1CAC

22 CA ADC § 66261.24

END OF DOCUMENT

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

11020 Sun Center Drive, #200 Rancho Cordova, California 95670-6114
Phone (916) 464-3291 • Fax (916) 464-4645
http://www.waterboards.ca.gov/centralvalley

ORDER R5-2018-0086
NPDES NO. CA0079049

WASTE DISCHARGE REQUIREMENTS FOR THE CITY OF DAVIS WASTEWATER TREATMENT PLANT YOLO COUNTY

The following Discharger is subject to waste discharge requirements (WDR's) set forth in this Order:

Table 1. Discharger Information

Discharger	City of Davis
Name of Facility	Wastewater Treatment Plant
Facility Address	45400 County Road 28H
	Davis, CA 95616
	Yolo County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Tertiary Treated Effluent	38° 35' 24" N	121° 39' 50" W	Willow Slough Bypass
002	Tertiary Treated Effluent	38° 34' 33" N	121° 38' 02" W	Conaway Ranch Toe Drain

Table 3. Administrative Information

This Order was adopted on:	**7 December 2018**
This Order shall become effective on:	**1 February 2019**
This Order shall expire on:	**31 January 2024**
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDR's in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	**31 January 2023**
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Central Valley Region have classified this discharge as follows:	Major

I, Patrick Pulupa, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 7 December 2018.

Original Signed by

PATRICK PULUPA, Executive Officer

CONTENTS

TABLES

ATTACHMENTS

I. FACILITY INFORMATION

Information describing the City of Davis, Wastewater Treatment Plant (Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Central Valley Water Board), finds:

A. Legal Authorities. This Order serves as waste discharge requirements (WDR's) pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDR's in this Order.

B. Background and Rationale for Requirements. The Central Valley Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E and G through H are also incorporated into this Order.

C. Provisions and Requirements Implementing State Law. -provisions/requirements in subsections IV.B, IV.C, V.B, VI.C.4, and VI.C.6 are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

D. Monitoring and Reporting. 40 C.F.R. section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Central Valley Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and state requirements. The MRP is provided in Attachment E.

The technical and monitoring reports in this Order are required in accordance with Water Code section 13267, which states the following in subsection (b)(1), *"In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."*

The Discharger owns and operates the Facility subject to this Order. The monitoring reports required by this Order are necessary to determine compliance with this Order. The need for the monitoring reports is discussed in the Fact Sheet.

E. Notification of Interested Persons. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDR's for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.

F. Consideration of Public Comment. The Central Valley Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED that Waste Discharge Requirements Order R5-2013-0127-01 and Time Schedule Orders R5-2013-0128 and R5-2014-0159 are rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Central Valley Water Board from taking enforcement action for violations of the previous Order.

III. DISCHARGE PROHIBITIONS

A. Discharge of wastewater from the Facility, as the Facility is specifically described in the Fact Sheet in section II.B, in a manner different from that described in this Order is prohibited.

B. The bypass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D).

C. Neither the discharge nor its treatment shall create a nuisance as defined in section 13050 of the Water Code.

D. Discharge of waste classified as 'hazardous', as defined in the California Code of Regulations (CCR), Title 22, section 66261.1 et seq., is prohibited.

E. Average Dry Weather Flow. Discharges exceeding a combined total average dry weather flow of 7.5 million gallons per day (MGD) at Discharge Points 001 and 002 are prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Points 001 and 002

1. Final Effluent Limitations – Discharge Point 001

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001. Unless otherwise specified, compliance shall be measured at Monitoring Location EFF-001, as described in the MRP, Attachment E:

a. The Discharger shall maintain compliance with the effluent limitations specified in Table 4:

Table 4. Effluent Limitations – Discharge Point 001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Conventional Pollutants						
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	15	--	--	--
pH	standard units	--	--	--	6.5	8.0
Total Suspended Solids	mg/L	10	15	--	--	--
Non-Conventional Pollutants						
Ammonia Nitrogen, Total (as N)	mg/L[1]	1.3	1.9	--	--	--
	mg/L[2]	1.9	3.8	--	--	--
	lbs/day[1,3]	81	120	--	--	--
	lbs/day[2,3]	120	240	--	--	--

1 Applicable for discharges from 1 March through 31 October.
2 Applicable for discharges from 1 November through 29 February.
3 Based on an average dry weather flow of 7.5 MGD.

b. **Percent Removal:** The average monthly percent removal of 5-day biochemical oxygen demand (BOD_5) and total suspended solids (TSS) shall not be less than 85 percent.

c. **Acute Whole Effluent Toxicity (WET).** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

i. 70 percent, minimum for any one bioassay; and
ii. 90 percent, median for any three consecutive bioassays.

d. **Total Residual Chlorine.** Effluent total residual chlorine shall not exceed:

i. 0.011 mg/L, as a 4-day average; and
ii. 0.019 mg/L, as a 1-hour average.

Compliance shall be determined at Monitoring Location EFF-001, as described in the MRP, Attachment E.

e. **Chronic Whole Effluent Toxicity.** There shall be no chronic toxicity in the effluent discharge.

f. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed the following, with compliance measured at Monitoring Location EFF-001 as described in the MRP, Attachment E:

i. 2.2 most probable number (MPN) per 100 mL, as a 7-day median;
ii. 23 MPN/100 mL, more than once in any 30-day period; and
iii. 240 MPN/100 mL, at any time.

g. **Diazinon and Chlorpyrifos**

i. **Average Monthly Effluent Limitation (AMEL)**

$$S_{AMEL} = \frac{C_{D\ M-AVG}}{0.079} + \frac{C_{C\ M-AVG}}{0.012} \leq 1.0$$

$C_{D\ M\text{-}AVG}$ = average monthly diazinon effluent concentration in µg/L.
$C_{C\ M\text{-}AVG}$ = average monthly chlorpyrifos effluent concentration in µg/L.

ii. **Average Weekly Effluent Limitation (AWEL)**

$$S_{AWEL} = \frac{C_{D\ W-AVG}}{0.14} + \frac{C_{C\ W-AVG}}{0.021} \leq 1.0$$

$C_{D\ W-AVG}$ = average weekly diazinon effluent concentration in µg/L.
$C_{C\ W-AVG}$ = average weekly chlorpyrifos effluent concentration in µg/L.

h. **Mercury, Total.** For a calendar year, the total annual mass discharge of total mercury shall not exceed 0.46 pounds/year.

2. Final Effluent Limitations – Discharge Point 002

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 002. Unless otherwise specified, compliance shall be measured at Monitoring Location EFF-002, as described in the MRP, Attachment E:

a. The Discharger shall maintain compliance with the effluent limitations specified in Table 5:

Table 5. Effluent Limitations – Discharge Point 002

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Conventional Pollutants						
Biochemical Oxygen Demand (5-day @ 20°C)[1]	mg/L	10	15	--	--	--
pH	standard units	--	--	--	6.5	8.0
Total Suspended Solids[1]	mg/L	10	15	--	--	--
Non-Conventional Pollutants						
Ammonia Nitrogen, Total (as N)	mg/L[3]	1.5	3.9	--	--	--
	mg/L[4]	2.3	4.9	--	--	--
	lbs/day[2,3]	94	240	--	--	--
	lbs/day[2,4]	140	310	--	--	--

1 Compliance shall be measured at Monitoring Location EFF-001, as described in the MRP, Attachment E.
2 Based on an average dry weather flow of 7.5 MGD.
3 Applicable for discharges from 1 March through 31 October.
4 Applicable for discharges from 1 November through 29 February.

b. **Percent Removal:** The average monthly percent removal of 5-day biochemical oxygen demand (BOD_5) and total suspended solids (TSS) shall not be less than 85 percent. Compliance shall be measured at Monitoring Location EFF-001, as described in the MRP, Attachment E.

c. **Acute Whole Effluent Toxicity (WET).** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

i. 70 percent, minimum for any one bioassay; and
ii. 90 percent, median for any three consecutive bioassays.

d. **Total Residual Chlorine.** Effluent total residual chlorine shall not exceed:

i. 0.011 mg/L, as a 4-day average; and
ii. 0.019 mg/L, as a 1-hour average.

Compliance shall be measured at Monitoring Location EFF-001, as described in the MRP, Attachment E.

e. **Chronic Whole Effluent Toxicity.** There shall be no chronic toxicity in the effluent discharge.

f. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed the following, with compliance measured at Monitoring Location EFF-001 as described in the MRP, Attachment E:

i. 2.2 most probable number (MPN) per 100 mL, as a 7-day median;
ii. 23 MPN/100 mL, more than once in any 30-day period; and
iii. 240 MPN/100 mL, at any time.

g. **Diazinon and Chlorpyrifos**

i. **Average Monthly Effluent Limitation (AMEL)**

$$S_{AMEL} = \frac{C_{D\ M-AVG}}{0.079} + \frac{C_{C\ M-AVG}}{0.012} \leq 1.0$$

$C_{D\ M-AVG}$ = average monthly diazinon effluent concentration in µg/L.
$C_{C\ M-AVG}$ = average monthly chlorpyrifos effluent concentration in µg/L.

ii. **Average Weekly Effluent Limitation (AWEL)**

$$S_{AWEL} = \frac{C_{D\ W-AVG}}{0.14} + \frac{C_{C\ W-AVG}}{0.021} \leq 1.0$$

$C_{D\ W-AVG}$ = average weekly diazinon effluent concentration in µg/L.
$C_{C\ W-AVG}$ = average weekly chlorpyrifos effluent concentration in µg/L.

h. **Methylmercury. Effective 31 December 2030**, the effluent calendar year annual methylmercury load shall not exceed 0.17 grams, in accordance with the Delta Mercury Control Program.

3. Interim Effluent Limitations – Discharge Point 002

The Discharger shall maintain compliance with the following interim effluent limitations at Discharge Point 002, with compliance measured at Monitoring Location EFF-002 as described in the MRP, Attachment E.

a. **Mercury, Total. Effective immediately and until 30 December 2030**, the effluent calendar year annual total mercury load shall not exceed 75 grams/year. This interim effluent limitation shall apply in lieu of the final effluent limitation for methylmercury at Discharge Point 002 (section IV.A.2.h).

B. Land Discharge Specifications – Not Applicable

C. Recycling Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

The discharge shall not cause the following in Willow Slough Bypass or the Conaway Ranch Toe Drain:

1. **Bacteria.** The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of 200 MPN/100 mL, nor more than 10 percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL.

2. **Biostimulatory Substances.** Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.

APPENDIX C

Local Limits Data Summary

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Collection System	08/03/19	Ammonia as N	33	0.1	0.04	mg/L	SM 4500 NH3 B,C
Collection System	08/04/19	Ammonia as N	44	0.1	0.04	mg/L	SM 4500 NH3 B,C
Collection System	08/05/19	Ammonia as N	33	0.1	0.04	mg/L	SM 4500 NH3 B,C
Collection System	08/06/19	Ammonia as N	42	0.1	0.04	mg/L	SM 4500 NH3 B,C
Collection System	08/07/19	Ammonia as N	43	0.1	0.04	mg/L	SM 4500 NH3 B,C
Collection System	08/08/19	Ammonia as N	40	0.1	0.04	mg/L	SM 4500 NH3 B,C
Collection System	08/09/19	Ammonia as N	36	0.1	0.04	mg/L	SM 4500 NH3 B,C
Collection System	08/03/19	Arsenic	1.9	0.5	0.06	ug/L	EPA 200.8
Collection System	08/04/19	Arsenic	2.2	0.5	0.06	ug/L	EPA 200.8
Collection System	08/05/19	Arsenic	3	0.5	0.24	ug/L	EPA 200.8
Collection System	08/06/19	Arsenic	2.2	0.5	0.12	ug/L	EPA 200.8
Collection System	08/07/19	Arsenic	2.2	0.5	0.12	ug/L	EPA 200.8
Collection System	08/08/19	Arsenic	2	0.5	0.12	ug/L	EPA 200.8
Collection System	08/09/19	Arsenic	2	0.5	0.12	ug/L	EPA 200.8
Collection System	08/03/19	Biochemical Oxygen Demand	254	5	5	mg/L	SM 5210 B
Collection System	08/04/19	Biochemical Oxygen Demand	376	50	50	mg/L	SM 5210 B
Collection System	08/05/19	Biochemical Oxygen Demand	295	5	5	mg/L	SM 5210 B
Collection System	08/06/19	Biochemical Oxygen Demand	469	5	5	mg/L	SM 5210 B
Collection System	08/07/19	Biochemical Oxygen Demand	336	5	5	mg/L	SM 5210 B
Collection System	08/08/19	Biochemical Oxygen Demand	242	5	5	mg/L	SM 5210 B
Collection System	08/09/19	Biochemical Oxygen Demand	388	5	5	mg/L	SM 5210 B
Collection System	08/03/19	Cadmium	0.21	0.1	0.05	ug/L	EPA 200.8
Collection System	08/04/19	Cadmium	0.25	0.1	0.05	ug/L	EPA 200.8
Collection System	08/05/19	Cadmium	0.55	0.4	0.2	ug/L	EPA 200.8
Collection System	08/06/19	Cadmium	0.33	0.2	0.1	ug/L	EPA 200.8
Collection System	08/07/19	Cadmium	0.49	0.2	0.1	ug/L	EPA 200.8
Collection System	08/08/19	Cadmium	0.28	0.2	0.1	ug/L	EPA 200.8
Collection System	08/09/19	Cadmium	0.52	0.2	0.1	ug/L	EPA 200.8
Collection System	08/03/19	Chromium	7.5	0.5	0.05	ug/L	EPA 200.8
Collection System	08/04/19	Chromium	27	0.5	0.05	ug/L	EPA 200.8
Collection System	08/05/19	Chromium	19	0.5	0.2	ug/L	EPA 200.8
Collection System	08/06/19	Chromium	11	0.5	0.1	ug/L	EPA 200.8
Collection System	08/07/19	Chromium	15	0.5	0.1	ug/L	EPA 200.8
Collection System	08/08/19	Chromium	9.2	0.5	0.1	ug/L	EPA 200.8
Collection System	08/09/19	Chromium	9.4	0.5	0.1	ug/L	EPA 200.8
Collection System	08/03/19	Copper	51	0.5	0.15	ug/L	EPA 200.8
Collection System	08/04/19	Copper	74	0.5	0.15	ug/L	EPA 200.8
Collection System	08/05/19	Copper	130	2	0.6	ug/L	EPA 200.8
Collection System	08/06/19	Copper	89	1	0.3	ug/L	EPA 200.8
Collection System	08/07/19	Copper	50	1	0.3	ug/L	EPA 200.8
Collection System	08/08/19	Copper	80	1	0.3	ug/L	EPA 200.8
Collection System	08/09/19	Copper	65	1	0.3	ug/L	EPA 200.8
Collection System	08/03/19	Cyanide	< 0.9	3	0.9	ug/L	SM 4500 CN C/E
Collection System	08/04/19	Cyanide	< 0.9	3	0.9	ug/L	SM 4500 CN C/E
Collection System	08/05/19	Cyanide	< 0.9	3	0.9	ug/L	SM 4500 CN C/E
Collection System	08/06/19	Cyanide	< 0.9	3	0.9	ug/L	SM 4500 CN C/E
Collection System	08/07/19	Cyanide	< 0.9	3	0.9	ug/L	SM 4500 CN C/E
Collection System	08/08/19	Cyanide	< 0.9	3	0.9	ug/L	SM 4500 CN C/E
Collection System	08/09/19	Cyanide	< 0.9	3	0.9	ug/L	SM 4500 CN C/E
Collection System	08/03/19	Lead	1.8	0.25	0.06	ug/L	EPA 200.8
Collection System	08/04/19	Lead	1.9	0.25	0.06	ug/L	EPA 200.8
Collection System	08/05/19	Lead	3	0.4	0.24	ug/L	EPA 200.8
Collection System	08/06/19	Lead	2.3	0.25	0.12	ug/L	EPA 200.8
Collection System	08/07/19	Lead	2.4	0.25	0.12	ug/L	EPA 200.8
Collection System	08/08/19	Lead	1.2	0.25	0.12	ug/L	EPA 200.8
Collection System	08/09/19	Lead	2.3	0.25	0.12	ug/L	EPA 200.8
Collection System	08/03/19	Mercury	0.14	0.05	0.02	ug/L	EPA 245.1
Collection System	08/04/19	Mercury	0.15	0.05	0.02	ug/L	EPA 245.1
Collection System	08/05/19	Mercury	0.13	0.05	0.02	ug/L	EPA 245.1
Collection System	08/06/19	Mercury	0.21	0.05	0.02	ug/L	EPA 245.1
Collection System	08/07/19	Mercury	0.14	0.05	0.02	ug/L	EPA 245.1
Collection System	08/08/19	Mercury	0.23	0.05	0.02	ug/L	EPA 245.1
Collection System	08/09/19	Mercury	0.34	0.05	0.02	ug/L	EPA 245.1
Collection System	08/03/19	Molybdenum	2	0.5	0.4	ug/L	EPA 200.8
Collection System	08/04/19	Molybdenum	2.1	0.5	0.4	ug/L	EPA 200.8
Collection System	08/05/19	Molybdenum	2.4	2	1.6	ug/L	EPA 200.8
Collection System	08/06/19	Molybdenum	2.5	1	0.8	ug/L	EPA 200.8
Collection System	08/07/19	Molybdenum	1.9	1	0.8	ug/L	EPA 200.8
Collection System	08/08/19	Molybdenum	1.5	1	0.8	ug/L	EPA 200.8

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Collection System	08/09/19	Molybdenum	1.9	1	0.8	ug/L	EPA 200.8
Collection System	08/03/19	Nickel	4	0.5	0.06	ug/L	EPA 200.8
Collection System	08/04/19	Nickel	8.4	0.5	0.06	ug/L	EPA 200.8
Collection System	08/05/19	Nickel	8.5	0.5	0.24	ug/L	EPA 200.8
Collection System	08/06/19	Nickel	7.1	0.5	0.12	ug/L	EPA 200.8
Collection System	08/07/19	Nickel	4.2	0.5	0.12	ug/L	EPA 200.8
Collection System	08/08/19	Nickel	5.2	0.5	0.12	ug/L	EPA 200.8
Collection System	08/09/19	Nickel	4.9	0.5	0.12	ug/L	EPA 200.8
Collection System	08/03/19	Selenium	J 0.99	1	0.4	ug/L	EPA 200.8
Collection System	08/04/19	Selenium	1.4	1	0.4	ug/L	EPA 200.8
Collection System	08/05/19	Selenium	2.2	2	1.6	ug/L	EPA 200.8
Collection System	08/06/19	Selenium	1.8	1	0.8	ug/L	EPA 200.8
Collection System	08/07/19	Selenium	1.2	1	0.8	ug/L	EPA 200.8
Collection System	08/08/19	Selenium	1.1	1	0.8	ug/L	EPA 200.8
Collection System	08/09/19	Selenium	1.5	1	0.8	ug/L	EPA 200.8
Collection System	08/03/19	Silver	0.26	0.1	0.02	ug/L	EPA 200.8
Collection System	08/04/19	Silver	0.24	0.1	0.02	ug/L	EPA 200.8
Collection System	08/05/19	Silver	0.79	0.4	0.08	ug/L	EPA 200.8
Collection System	08/06/19	Silver	0.36	0.2	0.04	ug/L	EPA 200.8
Collection System	08/07/19	Silver	0.22	0.2	0.04	ug/L	EPA 200.8
Collection System	08/08/19	Silver	J 0.18	0.2	0.04	ug/L	EPA 200.8
Collection System	08/09/19	Silver	0.28	0.2	0.04	ug/L	EPA 200.8
Collection System	08/03/19	Total Suspended Solids	404	6	4	mg/L	SM 2540 D
Collection System	08/04/19	Total Suspended Solids	558	6	4	mg/L	SM 2540 D
Collection System	08/05/19	Total Suspended Solids	476	6	4	mg/L	SM 2540 D
Collection System	08/06/19	Total Suspended Solids	557	10	7	mg/L	SM 2540 D
Collection System	08/07/19	Total Suspended Solids	534	6	4	mg/L	SM 2540 D
Collection System	08/08/19	Total Suspended Solids	348	6	4	mg/L	SM 2540 D
Collection System	08/09/19	Total Suspended Solids	832	12	8	mg/L	SM 2540 D
Collection System	08/03/19	Zinc	190	10	0.7	ug/L	EPA 200.8
Collection System	08/04/19	Zinc	360	10	1.4	ug/L	EPA 200.8
Collection System	08/05/19	Zinc	480	10	2.8	ug/L	EPA 200.8
Collection System	08/06/19	Zinc	370	10	1.4	ug/L	EPA 200.8
Collection System	08/07/19	Zinc	240	10	1.4	ug/L	EPA 200.8
Collection System	08/08/19	Zinc	210	10	1.4	ug/L	EPA 200.8
Collection System	08/09/19	Zinc	260	10	1.4	ug/L	EPA 200.8
Digester	08/06/19	Ammonia as N	790	21	7.1	mg/kg	EPA 350.1
Digester	08/07/19	Ammonia as N	790	21	7.1	mg/kg	EPA 350.1
Digester	10/10/18	Arsenic	100	0.5	0.12	ug/L	EPA 200.8
Digester	10/10/18	Cadmium	14	0.2	0.1	ug/L	EPA 200.8
Digester	10/10/18	Chromium	410	0.5	0.1	ug/L	EPA 200.8
Digester	10/10/18	Copper	5400	25	7.5	ug/L	EPA 200.8
Digester	10/10/18	Cyanide	7.5	3	0.9	ug/L	SM 4500 CN C/E
Digester	10/10/18	Lead	120	0.25	0.12	ug/L	EPA 200.8
Digester	10/10/18	Mercury	0.19	0.05	0.01	ug/L	EPA 245.1
Digester	10/10/18	Molybdenum	140	2.5	2	ug/L	EPA 200.8
Digester	10/10/18	Nickel	340	0.5	0.12	ug/L	EPA 200.8
Digester	10/10/18	Selenium	170	1	0.8	ug/L	EPA 200.8
Digester	10/10/18	Silver	27	0.2	0.04	ug/L	EPA 200.8
Digester	10/10/18	Zinc	12000	100	70	ug/L	EPA 200.8
Effluent 001	09/10/18	Ammonia as N	0.26	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	09/11/18	Ammonia as N	0.31	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	09/12/18	Ammonia as N	0.41	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	09/13/18	Ammonia as N	0.35	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	09/17/18	Ammonia as N	< 0.04	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	10/08/18	Ammonia as N	0.36	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	10/09/18	Ammonia as N	0.53	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	10/10/18	Ammonia as N	0.18	0.1	0.04	mg/L	SM 4500 NH3 C
Effluent 001	10/11/18	Ammonia as N	0.31	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	10/12/18	Ammonia as N	0.19	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	10/15/18	Ammonia as N	0.13	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	10/16/18	Ammonia as N	J 0.055	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	10/17/18	Ammonia as N	0.11	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	10/18/18	Ammonia as N	< 0.04	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	10/22/18	Ammonia as N	J 0.066	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	10/23/18	Ammonia as N	< 0.04	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	10/25/18	Ammonia as N	0.11	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	10/26/18	Ammonia as N	0.11	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	10/29/18	Ammonia as N	0.2	0.1	0.04	mg/L	SM 4500 NH3

Location	Sampling Date	Pollutant		Result	RL	MDL	Units	Analytical Method
Effluent 001	10/30/18	Ammonia as N		0.13	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	10/31/18	Ammonia as N		0.24	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/01/18	Ammonia as N	J	0.077	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/05/18	Ammonia as N		0.14	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/06/18	Ammonia as N	J	0.077	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/07/18	Ammonia as N		0.14	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/09/18	Ammonia as N	J	0.044	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/13/18	Ammonia as N	J	0.099	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/14/18	Ammonia as N		0.14	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/15/18	Ammonia as N		0.13	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/16/18	Ammonia as N		0.15	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/19/18	Ammonia as N		0.24	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/20/18	Ammonia as N		0.23	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/21/18	Ammonia as N		0.2	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/26/18	Ammonia as N		0.32	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/27/18	Ammonia as N		0.19	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/28/18	Ammonia as N		0.16	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	11/29/18	Ammonia as N	<	0.04	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	12/03/18	Ammonia as N		0.12	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	12/04/18	Ammonia as N		0.17	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	12/05/18	Ammonia as N		0.22	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	12/06/18	Ammonia as N		0.14	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	12/10/18	Ammonia as N		0.17	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	12/12/18	Ammonia as N		0.14	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	12/12/18	Ammonia as N		0.23	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	12/13/18	Ammonia as N	J	0.041	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	12/14/18	Ammonia as N		0.3	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	12/14/18	Ammonia as N		0.14	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	12/17/18	Ammonia as N		0.46	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	12/17/18	Ammonia as N	J	0.076	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	12/18/18	Ammonia as N		0.21	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	12/19/18	Ammonia as N	<	0.04	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	12/21/18	Ammonia as N		0.14	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/07/19	Ammonia as N		4.3	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/08/19	Ammonia as N	J	0.069	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/09/19	Ammonia as N		0.26	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/10/19	Ammonia as N		0.3	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/15/19	Ammonia as N		0.28	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/16/19	Ammonia as N		0.31	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/17/19	Ammonia as N		0.28	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/18/19	Ammonia as N		0.19	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/22/19	Ammonia as N		0.25	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/23/19	Ammonia as N	J	0.048	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/24/19	Ammonia as N		0.23	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/25/19	Ammonia as N		0.21	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/28/19	Ammonia as N		0.17	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/29/19	Ammonia as N		0.17	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/30/19	Ammonia as N		0.25	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	01/31/19	Ammonia as N		0.17	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/04/19	Ammonia as N		0.14	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/05/19	Ammonia as N		0.26	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/06/19	Ammonia as N		0.26	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/07/19	Ammonia as N		0.23	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/11/19	Ammonia as N		0.25	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/12/19	Ammonia as N		0.22	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/13/19	Ammonia as N		0.23	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/14/19	Ammonia as N		0.31	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/19/19	Ammonia as N		0.26	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/20/19	Ammonia as N		0.23	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/21/19	Ammonia as N		0.18	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/22/19	Ammonia as N		0.29	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/25/19	Ammonia as N		0.39	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/26/19	Ammonia as N		0.3	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/27/19	Ammonia as N		0.26	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	02/28/19	Ammonia as N		0.27	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	03/04/19	Ammonia as N		0.16	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	03/05/19	Ammonia as N		0.21	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	03/06/19	Ammonia as N		0.18	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	03/07/19	Ammonia as N		0.21	0.1	0.04	mg/L	SM 4500 NH3

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Effluent 001	03/11/19	Ammonia as N	0.26	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	03/12/19	Ammonia as N	0.26	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	03/13/19	Ammonia as N	0.26	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	03/14/19	Ammonia as N	0.26	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	03/18/19	Ammonia as N	0.26	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	03/19/19	Ammonia as N	0.32	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	03/20/19	Ammonia as N	0.22	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	03/21/19	Ammonia as N	0.14	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	03/25/19	Ammonia as N	0.24	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	03/26/19	Ammonia as N	0.23	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	03/27/19	Ammonia as N	0.21	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	03/28/19	Ammonia as N	0.22	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/01/19	Ammonia as N	0.34	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/02/19	Ammonia as N	0.23	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/03/19	Ammonia as N	0.22	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/04/19	Ammonia as N	0.28	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/08/19	Ammonia as N	0.24	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/09/19	Ammonia as N	0.27	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/10/19	Ammonia as N	0.23	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/11/19	Ammonia as N	0.14	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/15/19	Ammonia as N	0.28	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/16/19	Ammonia as N	0.34	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/17/19	Ammonia as N	0.29	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/19/19	Ammonia as N	0.26	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/22/19	Ammonia as N	0.19	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/23/19	Ammonia as N	0.26	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/24/19	Ammonia as N	0.19	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/25/19	Ammonia as N	0.33	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/29/19	Ammonia as N	0.18	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	04/30/19	Ammonia as N	0.43	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/01/19	Ammonia as N	0.37	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/02/19	Ammonia as N	0.27	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/06/19	Ammonia as N	0.12	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/07/19	Ammonia as N	0.28	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/08/19	Ammonia as N	0.19	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/09/19	Ammonia as N	0.12	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/13/19	Ammonia as N	0.22	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/14/19	Ammonia as N	0.34	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/15/19	Ammonia as N	0.24	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/16/19	Ammonia as N	0.39	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/20/19	Ammonia as N	0.23	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/21/19	Ammonia as N	0.26	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/22/19	Ammonia as N	0.32	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/23/19	Ammonia as N	0.21	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/28/19	Ammonia as N	0.19	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/29/19	Ammonia as N	0.48	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/30/19	Ammonia as N	0.43	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	05/31/19	Ammonia as N	0.54	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	06/03/19	Ammonia as N	0.26	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	06/04/19	Ammonia as N	0.5	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	07/08/19	Ammonia as N	0.35	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	07/09/19	Ammonia as N	0.5	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	07/10/19	Ammonia as N	0.34	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	07/11/19	Ammonia as N	0.29	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	07/15/19	Ammonia as N	0.41	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	07/16/19	Ammonia as N	0.83	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	07/17/19	Ammonia as N	0.13	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	07/18/19	Ammonia as N	0.17	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	07/22/19	Ammonia as N	0.12	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	07/23/19	Ammonia as N	0.14	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	07/24/19	Ammonia as N	0.16	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	07/25/19	Ammonia as N	0.18	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	07/29/19	Ammonia as N	0.18	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	07/30/19	Ammonia as N	0.12	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	07/31/19	Ammonia as N	0.23	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	08/01/19	Ammonia as N	0.16	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	08/04/19	Ammonia as N	0.17	0.1	0.04	mg/L	SM 4500 NH3 B,C
Effluent 001	08/05/19	Ammonia as N	0.2	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	08/06/19	Ammonia as N	0.19	0.1	0.04	mg/L	SM 4500 NH3 B,C

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Effluent 001	08/07/19	Ammonia as N	0.17	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	08/08/19	Ammonia as N	0.29	0.1	0.04	mg/L	SM 4500 NH3 B,C
Effluent 001	08/09/19	Ammonia as N	0.24	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	08/10/19	Ammonia as N	0.27	0.1	0.04	mg/L	SM 4500 NH3 B,C
Effluent 001	08/14/19	Ammonia as N	0.28	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	08/15/19	Ammonia as N	0.31	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	08/16/19	Ammonia as N	0.14	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	08/19/19	Ammonia as N	0.15	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	08/20/19	Ammonia as N	0.12	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	08/21/19	Ammonia as N	0.1	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	08/22/19	Ammonia as N	0.19	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	08/26/19	Ammonia as N	0.18	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	08/27/19	Ammonia as N	0.23	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	08/28/19	Ammonia as N	0.16	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	08/29/19	Ammonia as N	0.17	0.1	0.04	mg/L	SM 4500 NH3
Effluent 001	10/10/18	Arsenic	2.2	0.5	0.06	ug/L	EPA 200.8
Effluent 001	08/04/19	Arsenic	1.3	0.5	0.06	ug/L	EPA 200.8
Effluent 001	08/05/19	Arsenic	1.3	0.5	0.06	ug/L	EPA 200.8
Effluent 001	08/06/19	Arsenic	1.1	0.5	0.06	ug/L	EPA 200.8
Effluent 001	08/07/19	Arsenic	1.4	0.5	0.06	ug/L	EPA 200.8
Effluent 001	08/09/19	Arsenic	1.3	0.5	0.06	ug/L	EPA 200.8
Effluent 001	09/11/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	09/12/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	09/13/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	09/14/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	10/09/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	10/10/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	10/11/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	10/12/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	10/16/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	10/17/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	10/18/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	10/19/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	10/23/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	10/24/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	10/25/18	Biochemical Oxygen Demand	5	5	5	mg/L	SM 5210 B
Effluent 001	10/26/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	10/30/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	10/31/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	11/01/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	11/02/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	11/06/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	11/07/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	11/09/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	11/13/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	11/14/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	11/15/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	11/16/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	11/20/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	11/21/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	11/23/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	11/27/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	11/28/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	11/29/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	12/04/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	12/05/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	12/06/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	12/07/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	12/11/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	12/12/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	12/13/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	12/14/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	12/18/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	12/19/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	12/21/18	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	01/08/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	01/09/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	01/10/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	01/16/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Effluent 001	01/17/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	01/19/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	01/22/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	01/23/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	01/24/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	01/25/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	01/29/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	01/30/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	01/31/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/01/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/05/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/06/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/07/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/08/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/12/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/13/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/14/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/15/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/19/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/20/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/21/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/22/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/26/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/27/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	02/28/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	03/01/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	03/05/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	03/06/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	03/07/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	03/12/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	03/13/19	Biochemical Oxygen Demand	9	5	5	mg/L	SM 5210 B
Effluent 001	03/14/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	03/15/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	03/19/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	03/20/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	03/21/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	03/22/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	03/26/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	03/27/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	03/28/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	03/29/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/02/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/03/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/04/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/05/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/09/19	Biochemical Oxygen Demand	5	5	5	mg/L	SM 5210 B
Effluent 001	04/10/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/11/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/12/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/16/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/17/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/18/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/19/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/23/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/24/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/25/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/26/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	04/30/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	05/01/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	05/02/19	Biochemical Oxygen Demand	6	5	5	mg/L	SM 5210 B
Effluent 001	05/03/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	05/07/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	05/08/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	05/09/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	05/10/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	05/15/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	05/16/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	05/17/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	05/21/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Effluent 001	05/22/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	05/23/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	05/24/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	05/28/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	05/29/19	Biochemical Oxygen Demand	5	5	5	mg/L	SM 5210 B
Effluent 001	05/30/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	05/31/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	06/04/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	06/05/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	07/09/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	07/10/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	07/11/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	07/12/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	07/16/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	07/17/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	07/18/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	07/19/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	07/23/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	07/24/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	07/25/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	07/26/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	07/30/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	07/31/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	08/01/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	08/02/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	08/06/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	08/07/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	08/08/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	08/09/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	08/15/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	08/20/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	08/21/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	08/22/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	08/23/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	08/27/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	08/28/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	08/29/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	08/30/19	Biochemical Oxygen Demand	< 5	5	5	mg/L	SM 5210 B
Effluent 001	10/10/18	Cadmium	J 0.05	0.1	0.05	ug/L	EPA 200.8
Effluent 001	01/23/19	Cadmium	< 0.05	0.1	0.05	ug/L	EPA 200.8
Effluent 001	08/04/19	Cadmium	< 0.05	0.1	0.05	ug/L	EPA 200.8
Effluent 001	08/05/19	Cadmium	< 0.05	0.1	0.05	ug/L	EPA 200.8
Effluent 001	08/06/19	Cadmium	< 0.05	0.1	0.05	ug/L	EPA 200.8
Effluent 001	08/07/19	Cadmium	< 0.05	0.1	0.05	ug/L	EPA 200.8
Effluent 001	08/09/19	Cadmium	< 0.05	0.1	0.05	ug/L	EPA 200.8
Effluent 001	10/10/18	Chromium	1.5	0.5	0.05	ug/L	EPA 200.8
Effluent 001	08/04/19	Chromium	1.2	0.5	0.05	ug/L	EPA 200.8
Effluent 001	08/05/19	Chromium	1.4	0.5	0.05	ug/L	EPA 200.8
Effluent 001	08/06/19	Chromium	1.2	0.5	0.05	ug/L	EPA 200.8
Effluent 001	08/07/19	Chromium	1.4	0.5	0.05	ug/L	EPA 200.8
Effluent 001	08/09/19	Chromium	1.2	0.5	0.05	ug/L	EPA 200.8
Effluent 001	09/10/18	Copper	5.1	0.5	0.15	ug/L	EPA 200.8
Effluent 001	10/10/18	Copper	5.8	0.5	0.15	ug/L	EPA 200.8
Effluent 001	10/10/18	Copper	27	0.5	0.15	ug/L	EPA 200.8
Effluent 001	11/07/18	Copper	6.1	0.5	0.15	ug/L	EPA 200.8
Effluent 001	12/12/18	Copper	7.2	0.5	0.15	ug/L	EPA 200.8
Effluent 001	01/23/19	Copper	9	0.5	0.15	ug/L	EPA 200.8
Effluent 001	04/17/19	Copper	65	0.5	0.15	ug/L	EPA 200.8
Effluent 001	08/04/19	Copper	18	0.5	0.15	ug/L	EPA 200.8
Effluent 001	08/05/19	Copper	58	0.5	0.15	ug/L	EPA 200.8
Effluent 001	08/06/19	Copper	15	0.5	0.15	ug/L	EPA 200.8
Effluent 001	08/07/19	Copper	34	0.5	0.15	ug/L	EPA 200.8
Effluent 001	08/09/19	Copper	22	0.5	0.15	ug/L	EPA 200.8
Effluent 001	09/10/18	Cyanide	3.4	3	0.9	ug/L	SM 4500 CN C/E
Effluent 001	10/10/18	Cyanide	J 2.4	3	0.9	ug/L	SM 4500 CN C/E
Effluent 001	11/07/18	Cyanide	J 2	3	0.9	ug/L	SM 4500 CN C/E
Effluent 001	12/12/18	Cyanide	J 2.5	3	0.9	ug/L	SM 4500 CN C/E
Effluent 001	01/23/19	Cyanide	J 2.8	3	0.9	ug/L	SM 4500 CN C/E
Effluent 001	01/31/19	Cyanide	9	3	0.6	ug/L	

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Effluent 001	08/04/19	Cyanide	J 2	3	0.9	ug/L	SM 4500 CN C/E
Effluent 001	08/05/19	Cyanide	J 1.3	3	0.9	ug/L	SM 4500 CN C/E
Effluent 001	08/06/19	Cyanide	3.4	3	0.9	ug/L	SM 4500 CN C/E
Effluent 001	08/07/19	Cyanide	J 2	3	0.9	ug/L	SM 4500 CN C/E
Effluent 001	08/09/19	Cyanide	J 2.2	3	0.9	ug/L	SM 4500 CN C/E
Effluent 001	10/10/18	Lead	J 0.13	0.25	0.06	ug/L	EPA 200.8
Effluent 001	08/04/19	Lead	< 0.06	0.25	0.06	ug/L	EPA 200.8
Effluent 001	08/05/19	Lead	< 0.06	0.25	0.06	ug/L	EPA 200.8
Effluent 001	08/06/19	Lead	< 0.06	0.25	0.06	ug/L	EPA 200.8
Effluent 001	08/07/19	Lead	J 0.07	0.25	0.06	ug/L	EPA 200.8
Effluent 001	08/09/19	Lead	J 0.07	0.25	0.06	ug/L	EPA 200.8
Effluent 001	09/10/18	Mercury	0.001	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	10/10/18	Mercury	0.0008	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	11/07/18	Mercury	0.0006	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	12/12/18	Mercury	0.0007	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	01/23/19	Mercury	0.0012	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	02/13/19	Mercury	0.0015	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	03/07/19	Mercury	0.0015	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	04/17/19	Mercury	0.0015	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	07/16/19	Mercury	0.0009	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	08/04/19	Mercury	0.0007	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	08/05/19	Mercury	0.001	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	08/06/19	Mercury	0.001	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	08/07/19	Mercury	0.001	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	08/08/19	Mercury	0.0013	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	08/09/19	Mercury	0.0013	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	08/10/19	Mercury	0.001	5E-04	0.0002	ug/L	EPA 1631 E
Effluent 001	10/10/18	Molybdenum	8.4	0.5	0.4	ug/L	EPA 200.8
Effluent 001	08/04/19	Molybdenum	1.8	0.5	0.4	ug/L	EPA 200.8
Effluent 001	08/05/19	Molybdenum	1.6	0.5	0.4	ug/L	EPA 200.8
Effluent 001	08/06/19	Molybdenum	2.3	0.5	0.4	ug/L	EPA 200.8
Effluent 001	08/07/19	Molybdenum	2.4	0.5	0.4	ug/L	EPA 200.8
Effluent 001	08/09/19	Molybdenum	2.1	0.5	0.4	ug/L	EPA 200.8
Effluent 001	10/10/18	Nickel	8.4	0.5	0.06	ug/L	EPA 200.8
Effluent 001	08/04/19	Nickel	1.9	0.5	0.06	ug/L	EPA 200.8
Effluent 001	08/05/19	Nickel	2.2	0.5	0.06	ug/L	EPA 200.8
Effluent 001	08/06/19	Nickel	1.9	0.5	0.06	ug/L	EPA 200.8
Effluent 001	08/07/19	Nickel	2.4	0.5	0.06	ug/L	EPA 200.8
Effluent 001	08/09/19	Nickel	2.2	0.5	0.06	ug/L	EPA 200.8
Effluent 001	09/10/18	Selenium	1.4	1	0.3	ug/L	EPA 200.8
Effluent 001	10/10/18	Selenium	1.3	1	0.07	ug/L	EPA 200.8
Effluent 001	11/07/18	Selenium	1.3	1	0.3	ug/L	EPA 200.8
Effluent 001	12/12/18	Selenium	1.4	1	0.3	ug/L	EPA 200.8
Effluent 001	01/23/19	Selenium	2.5	1	0.03	ug/L	EPA 200.8
Effluent 001	08/04/19	Selenium	3.3	1	0.4	ug/L	EPA 200.8
Effluent 001	08/05/19	Selenium	3.6	1	0.4	ug/L	EPA 200.8
Effluent 001	08/06/19	Selenium	3	1	0.4	ug/L	EPA 200.8
Effluent 001	08/07/19	Selenium	3.6	1	0.4	ug/L	EPA 200.8
Effluent 001	08/09/19	Selenium	3.2	1	0.4	ug/L	EPA 200.8
Effluent 001	10/10/18	Silver	< 0.02	0.1	0.02	ug/L	EPA 200.8
Effluent 001	08/04/19	Silver	< 0.02	0.1	0.02	ug/L	EPA 200.8
Effluent 001	08/05/19	Silver	< 0.02	0.1	0.02	ug/L	EPA 200.8
Effluent 001	08/06/19	Silver	< 0.02	0.1	0.02	ug/L	EPA 200.8
Effluent 001	08/07/19	Silver	< 0.02	0.1	0.02	ug/L	EPA 200.8
Effluent 001	08/09/19	Silver	< 0.02	0.1	0.02	ug/L	EPA 200.8
Effluent 001	09/11/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	09/12/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	09/13/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	09/14/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	10/09/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	10/10/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	10/11/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	10/12/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	10/16/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	10/17/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	10/18/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	10/19/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	10/23/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	10/24/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Effluent 001	10/25/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	10/26/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	10/30/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	10/31/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/01/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/02/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/06/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/07/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/08/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/09/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/13/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/14/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/15/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/16/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/20/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/21/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/23/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/27/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/28/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	11/29/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	12/04/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	12/05/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	12/07/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	12/11/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	12/12/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	12/13/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	12/14/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	12/18/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	12/19/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	12/20/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	12/21/18	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	01/08/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	01/09/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	01/10/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	01/16/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	01/17/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	01/19/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	01/22/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	01/23/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	01/24/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	01/25/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	01/29/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	01/30/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	01/31/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	02/01/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	02/05/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	02/06/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	02/07/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	02/08/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	02/12/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	02/13/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	02/14/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	02/15/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	02/19/19	Total Suspended Solids	J 2.6	5	2.5	mg/L	SM 2540 D
Effluent 001	02/20/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	02/21/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	02/22/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	02/26/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	02/27/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	02/28/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	03/01/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	03/05/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	03/06/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	03/07/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	03/12/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	03/13/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	03/14/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	03/15/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	03/19/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Effluent 001	03/20/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	03/21/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	03/22/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	03/26/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	03/27/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	03/28/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	03/29/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/02/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/03/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/04/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/05/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/09/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/10/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/11/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/12/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/16/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/17/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/18/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/19/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/23/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/24/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/25/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/26/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	04/30/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/01/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/02/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/03/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/07/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/08/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/09/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/10/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/15/19	Total Suspended Solids	< 2.5		2.5	mg/L	SM 2540 D
Effluent 001	05/16/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/17/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/21/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/22/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/23/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/24/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/28/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/29/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/30/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	05/31/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	06/04/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	06/05/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	07/09/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	07/10/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	07/11/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	07/12/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	07/16/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	07/17/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	07/18/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	07/19/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	07/24/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	07/25/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	07/26/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	07/30/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	07/31/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	08/01/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	08/02/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	08/06/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	08/07/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	08/08/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	08/09/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	08/15/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	08/20/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	08/21/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	08/22/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	08/23/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	08/27/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Effluent 001	08/28/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	08/29/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	08/30/19	Total Suspended Solids	< 2.5	5	2.5	mg/L	SM 2540 D
Effluent 001	10/10/18	Zinc	51	1	0.7	ug/L	EPA 200.8
Effluent 001	08/04/19	Zinc	38	1	0.7	ug/L	EPA 200.8
Effluent 001	08/05/19	Zinc	52	1	0.7	ug/L	EPA 200.8
Effluent 001	08/06/19	Zinc	38	1	0.7	ug/L	EPA 200.8
Effluent 001	08/07/19	Zinc	48	1	0.7	ug/L	EPA 200.8
Effluent 001	08/09/19	Zinc	42	1	0.7	ug/L	EPA 200.8
Effluent 002	03/01/19	Ammonia as N	0.42	0.1	0.04	mg/L	SM 4500 NH3
Effluent 002	03/04/19	Ammonia as N	0.17	0.1	0.04	mg/L	SM 4500 NH3
Effluent 002	03/05/19	Ammonia as N	0.2	0.1	0.04	mg/L	SM 4500 NH3
Effluent 002	03/06/19	Ammonia as N	0.19	0.1	0.04	mg/L	SM 4500 NH3
Effluent 002	03/07/19	Ammonia as N	0.18	0.1	0.04	mg/L	SM 4500 NH3
Effluent 002	03/11/19	Ammonia as N	0.24	0.1	0.04	mg/L	SM 4500 NH3
Effluent 002	03/12/19	Ammonia as N	0.3	0.1	0.04	mg/L	SM 4500 NH3
Effluent 002	03/13/19	Ammonia as N	0.23	0.1	0.04	mg/L	SM 4500 NH3
Effluent 002	03/14/19	Ammonia as N	0.23	0.1	0.04	mg/L	SM 4500 NH3
Effluent 002	03/18/19	Ammonia as N	0.26	0.1	0.04	mg/L	SM 4500 NH3
Influent	08/03/19	Ammonia as N	54	0.1	0.04	mg/L	SM 4500 NH3 B,C
Influent	08/04/19	Ammonia as N	54	0.1	0.04	mg/L	SM 4500 NH3 B,C
Influent	08/05/19	Ammonia as N	43	0.1	0.04	mg/L	SM 4500 NH3 B,C
Influent	08/06/19	Ammonia as N	38	0.1	0.04	mg/L	SM 4500 NH3 B,C
Influent	08/07/19	Ammonia as N	49	0.1	0.04	mg/L	SM 4500 NH3 B,C
Influent	08/08/19	Ammonia as N	25	0.1	0.04	mg/L	SM 4500 NH3 B,C
Influent	08/09/19	Ammonia as N	49	0.1	0.04	mg/L	SM 4500 NH3 B,C
Influent	10/10/18	Arsenic	3.4	0.5	0.12	ug/L	EPA 200.8
Influent	08/03/19	Arsenic	1.7	0.5	0.06	ug/L	EPA 200.8
Influent	08/04/19	Arsenic	1.6	0.5	0.06	ug/L	EPA 200.8
Influent	08/05/19	Arsenic	1.6	0.5	0.12	ug/L	EPA 200.8
Influent	08/07/19	Arsenic	1.9	0.5	0.12	ug/L	EPA 200.8
Influent	08/08/19	Arsenic	1.6	0.5	0.06	ug/L	EPA 200.8
Influent	08/09/19	Arsenic	2	0.5	0.06	ug/L	EPA 200.8
Influent	09/04/18	Biochemical Oxygen Demand	229	5	5	mg/L	SM 5210 B
Influent	09/05/18	Biochemical Oxygen Demand	212	5	5	mg/L	SM 5210 B
Influent	09/06/18	Biochemical Oxygen Demand	183	5	5	mg/L	SM 5210 B
Influent	09/07/18	Biochemical Oxygen Demand	132	5	5	mg/L	SM 5210 B
Influent	09/12/18	Biochemical Oxygen Demand	141	5	5	mg/L	SM 5210 B
Influent	09/13/18	Biochemical Oxygen Demand	174	5	5	mg/L	SM 5210 B
Influent	09/15/18	Biochemical Oxygen Demand	200	5	5	mg/L	SM 5210 B
Influent	09/18/18	Biochemical Oxygen Demand	204	5	5	mg/L	SM 5210 B
Influent	09/19/18	Biochemical Oxygen Demand	132	5	5	mg/L	SM 5210 B
Influent	09/20/18	Biochemical Oxygen Demand	217	5	5	mg/L	SM 5210 B
Influent	09/21/18	Biochemical Oxygen Demand	170	5	5	mg/L	SM 5210 B
Influent	09/25/18	Biochemical Oxygen Demand	232	5	5	mg/L	SM 5210 B
Influent	09/26/18	Biochemical Oxygen Demand	244	5	5	mg/L	SM 5210 B
Influent	09/27/18	Biochemical Oxygen Demand	227	5	5	mg/L	SM 5210 B
Influent	09/28/18	Biochemical Oxygen Demand	200	5	5	mg/L	SM 5210 B
Influent	10/02/18	Biochemical Oxygen Demand	232	5	5	mg/L	SM 5210 B
Influent	10/03/18	Biochemical Oxygen Demand	236	5	5	mg/L	SM 5210 B
Influent	10/04/18	Biochemical Oxygen Demand	183	5	5	mg/L	SM 5210 B
Influent	10/05/18	Biochemical Oxygen Demand	265	5	5	mg/L	SM 5210 B
Influent	10/09/18	Biochemical Oxygen Demand	257	5	5	mg/L	SM 5210 B
Influent	10/10/18	Biochemical Oxygen Demand	242	5	5	mg/L	SM 5210 B
Influent	10/11/18	Biochemical Oxygen Demand	221	5	5	mg/L	SM 5210 B
Influent	10/12/18	Biochemical Oxygen Demand	204	5	5	mg/L	SM 5210 B
Influent	10/16/18	Biochemical Oxygen Demand	235	5	5	mg/L	SM 5210 B
Influent	10/17/18	Biochemical Oxygen Demand	213	5	5	mg/L	SM 5210 B
Influent	10/19/18	Biochemical Oxygen Demand	228	5	5	mg/L	SM 5210 B
Influent	10/23/18	Biochemical Oxygen Demand	292	5	5	mg/L	SM 5210 B
Influent	10/24/18	Biochemical Oxygen Demand	233	5	5	mg/L	SM 5210 B
Influent	10/25/18	Biochemical Oxygen Demand	179	5	5	mg/L	SM 5210 B
Influent	10/26/18	Biochemical Oxygen Demand	215	5	5	mg/L	SM 5210 B
Influent	10/31/18	Biochemical Oxygen Demand	256	5	5	mg/L	SM 5210 B
Influent	11/01/18	Biochemical Oxygen Demand	251	5	5	mg/L	SM 5210 B
Influent	11/02/18	Biochemical Oxygen Demand	265	5	5	mg/L	SM 5210 B
Influent	11/06/18	Biochemical Oxygen Demand	236	5	5	mg/L	SM 5210 B
Influent	11/07/18	Biochemical Oxygen Demand	199	5	5	mg/L	SM 5210 B
Influent	11/08/18	Biochemical Oxygen Demand	154	5	5	mg/L	SM 5210 B

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Influent	11/09/18	Biochemical Oxygen Demand	241	5	5	mg/L	SM 5210 B
Influent	11/13/18	Biochemical Oxygen Demand	235	5	5	mg/L	SM 5210 B
Influent	11/14/18	Biochemical Oxygen Demand	239	5	5	mg/L	SM 5210 B
Influent	11/15/18	Biochemical Oxygen Demand	230	5	5	mg/L	SM 5210 B
Influent	11/20/18	Biochemical Oxygen Demand	241	5	5	mg/L	SM 5210 B
Influent	11/21/18	Biochemical Oxygen Demand	270	5	5	mg/L	SM 5210 B
Influent	11/23/18	Biochemical Oxygen Demand	260	5	5	mg/L	SM 5210 B
Influent	11/27/18	Biochemical Oxygen Demand	203	5	5	mg/L	SM 5210 B
Influent	11/28/18	Biochemical Oxygen Demand	203	5	5	mg/L	SM 5210 B
Influent	11/29/18	Biochemical Oxygen Demand	223	5	5	mg/L	SM 5210 B
Influent	11/30/18	Biochemical Oxygen Demand	245	5	5	mg/L	SM 5210 B
Influent	12/04/18	Biochemical Oxygen Demand	247	5	5	mg/L	SM 5210 B
Influent	12/05/18	Biochemical Oxygen Demand	206	5	5	mg/L	SM 5210 B
Influent	12/06/18	Biochemical Oxygen Demand	163	5	5	mg/L	SM 5210 B
Influent	12/07/18	Biochemical Oxygen Demand	223	5	5	mg/L	SM 5210 B
Influent	12/11/18	Biochemical Oxygen Demand	245	5	5	mg/L	SM 5210 B
Influent	12/12/18	Biochemical Oxygen Demand	215	5	5	mg/L	SM 5210 B
Influent	12/13/18	Biochemical Oxygen Demand	301	5	5	mg/L	SM 5210 B
Influent	12/14/18	Biochemical Oxygen Demand	265	5	5	mg/L	SM 5210 B
Influent	12/18/18	Biochemical Oxygen Demand	245	5	5	mg/L	SM 5210 B
Influent	12/19/18	Biochemical Oxygen Demand	238	5	5	mg/L	SM 5210 B
Influent	12/20/18	Biochemical Oxygen Demand	220	5	5	mg/L	SM 5210 B
Influent	12/21/18	Biochemical Oxygen Demand	263	5	5	mg/L	SM 5210 B
Influent	12/26/18	Biochemical Oxygen Demand	259	5	5	mg/L	SM 5210 B
Influent	12/27/18	Biochemical Oxygen Demand	275	5	5	mg/L	SM 5210 B
Influent	12/28/18	Biochemical Oxygen Demand	240	5	5	mg/L	SM 5210 B
Influent	01/02/19	Biochemical Oxygen Demand	254	5	5	mg/L	SM 5210 B
Influent	01/03/19	Biochemical Oxygen Demand	268	5	5	mg/L	SM 5210 B
Influent	01/04/19	Biochemical Oxygen Demand	163	5	5	mg/L	SM 5210 B
Influent	01/08/19	Biochemical Oxygen Demand	196	5	5	mg/L	SM 5210 B
Influent	01/09/19	Biochemical Oxygen Demand	191	5	5	mg/L	SM 5210 B
Influent	01/10/19	Biochemical Oxygen Demand	214	5	5	mg/L	SM 5210 B
Influent	01/11/19	Biochemical Oxygen Demand	233	5	5	mg/L	SM 5210 B
Influent	01/15/19	Biochemical Oxygen Demand	263	5	5	mg/L	SM 5210 B
Influent	01/16/19	Biochemical Oxygen Demand	215	5	5	mg/L	SM 5210 B
Influent	01/17/19	Biochemical Oxygen Demand	191	5	5	mg/L	SM 5210 B
Influent	01/18/19	Biochemical Oxygen Demand	212	5	5	mg/L	SM 5210 B
Influent	01/22/19	Biochemical Oxygen Demand	225	5	5	mg/L	SM 5210 B
Influent	01/23/19	Biochemical Oxygen Demand	224	5	5	mg/L	SM 5210 B
Influent	01/24/19	Biochemical Oxygen Demand	233	5	5	mg/L	SM 5210 B
Influent	01/25/19	Biochemical Oxygen Demand	238	5	5	mg/L	SM 5210 B
Influent	01/29/19	Biochemical Oxygen Demand	244	5	5	mg/L	SM 5210 B
Influent	01/30/19	Biochemical Oxygen Demand	180	5	5	mg/L	SM 5210 B
Influent	01/31/19	Biochemical Oxygen Demand	207	5	5	mg/L	SM 5210 B
Influent	02/01/19	Biochemical Oxygen Demand	242	5	5	mg/L	SM 5210 B
Influent	02/05/19	Biochemical Oxygen Demand	258	5	5	mg/L	SM 5210 B
Influent	02/06/19	Biochemical Oxygen Demand	196	5	5	mg/L	SM 5210 B
Influent	02/07/19	Biochemical Oxygen Demand	201	5	5	mg/L	SM 5210 B
Influent	02/08/19	Biochemical Oxygen Demand	125	5	5	mg/L	SM 5210 B
Influent	02/12/19	Biochemical Oxygen Demand	205	5	5	mg/L	SM 5210 B
Influent	02/13/19	Biochemical Oxygen Demand	212	5	5	mg/L	SM 5210 B
Influent	02/14/19	Biochemical Oxygen Demand	171	5	5	mg/L	SM 5210 B
Influent	02/15/19	Biochemical Oxygen Demand	119	5	5	mg/L	SM 5210 B
Influent	02/19/19	Biochemical Oxygen Demand	215	5	5	mg/L	SM 5210 B
Influent	02/20/19	Biochemical Oxygen Demand	212	5	5	mg/L	SM 5210 B
Influent	02/21/19	Biochemical Oxygen Demand	189	5	5	mg/L	SM 5210 B
Influent	02/22/19	Biochemical Oxygen Demand	184	5	5	mg/L	SM 5210 B
Influent	02/26/19	Biochemical Oxygen Demand	212	5	5	mg/L	SM 5210 B
Influent	02/27/19	Biochemical Oxygen Demand	171	5	5	mg/L	SM 5210 B
Influent	02/28/19	Biochemical Oxygen Demand	99	5	5	mg/L	SM 5210 B
Influent	03/01/19	Biochemical Oxygen Demand	128	5	5	mg/L	SM 5210 B
Influent	03/05/19	Biochemical Oxygen Demand	190	5	5	mg/L	SM 5210 B
Influent	03/06/19	Biochemical Oxygen Demand	163	5	5	mg/L	SM 5210 B
Influent	03/07/19	Biochemical Oxygen Demand	128	5	5	mg/L	SM 5210 B
Influent	03/08/19	Biochemical Oxygen Demand	184	5	5	mg/L	SM 5210 B
Influent	03/12/19	Biochemical Oxygen Demand	162	5	5	mg/L	SM 5210 B
Influent	03/13/19	Biochemical Oxygen Demand	157	5	5	mg/L	SM 5210 B
Influent	03/14/19	Biochemical Oxygen Demand	179	5	5	mg/L	SM 5210 B
Influent	03/15/19	Biochemical Oxygen Demand	155	5	5	mg/L	SM 5210 B

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Influent	03/19/19	Biochemical Oxygen Demand	189	5	5	mg/L	SM 5210 B
Influent	03/20/19	Biochemical Oxygen Demand	172	5	5	mg/L	SM 5210 B
Influent	03/21/19	Biochemical Oxygen Demand	168	5	5	mg/L	SM 5210 B
Influent	03/22/19	Biochemical Oxygen Demand	188	5	5	mg/L	SM 5210 B
Influent	03/26/19	Biochemical Oxygen Demand	196	5	5	mg/L	SM 5210 B
Influent	03/27/19	Biochemical Oxygen Demand	185	5	5	mg/L	SM 5210 B
Influent	03/28/19	Biochemical Oxygen Demand	171	5	5	mg/L	SM 5210 B
Influent	03/29/19	Biochemical Oxygen Demand	184	5	5	mg/L	SM 5210 B
Influent	04/02/19	Biochemical Oxygen Demand	166	5	5	mg/L	SM 5210 B
Influent	04/03/19	Biochemical Oxygen Demand	155	5	5	mg/L	SM 5210 B
Influent	04/04/19	Biochemical Oxygen Demand	179	5	5	mg/L	SM 5210 B
Influent	04/05/19	Biochemical Oxygen Demand	178	5	5	mg/L	SM 5210 B
Influent	04/09/19	Biochemical Oxygen Demand	215	5	5	mg/L	SM 5210 B
Influent	04/10/19	Biochemical Oxygen Demand	154	5	5	mg/L	SM 5210 B
Influent	04/11/19	Biochemical Oxygen Demand	181	5	5	mg/L	SM 5210 B
Influent	04/12/19	Biochemical Oxygen Demand	199	5	5	mg/L	SM 5210 B
Influent	04/16/19	Biochemical Oxygen Demand	150	5	5	mg/L	SM 5210 B
Influent	04/17/19	Biochemical Oxygen Demand	145	5	5	mg/L	SM 5210 B
Influent	04/18/19	Biochemical Oxygen Demand	154	5	5	mg/L	SM 5210 B
Influent	04/19/19	Biochemical Oxygen Demand	123	5	5	mg/L	SM 5210 B
Influent	04/23/19	Biochemical Oxygen Demand	203	5	5	mg/L	SM 5210 B
Influent	04/24/19	Biochemical Oxygen Demand	165	5	5	mg/L	SM 5210 B
Influent	04/25/19	Biochemical Oxygen Demand	158	5	5	mg/L	SM 5210 B
Influent	04/30/19	Biochemical Oxygen Demand	205	5	5	mg/L	SM 5210 B
Influent	05/01/19	Biochemical Oxygen Demand	154	5	5	mg/L	SM 5210 B
Influent	05/02/19	Biochemical Oxygen Demand	158	5	5	mg/L	SM 5210 B
Influent	05/03/19	Biochemical Oxygen Demand	118	5	5	mg/L	SM 5210 B
Influent	05/07/19	Biochemical Oxygen Demand	178	5	5	mg/L	SM 5210 B
Influent	05/08/19	Biochemical Oxygen Demand	190	5	5	mg/L	SM 5210 B
Influent	05/09/19	Biochemical Oxygen Demand	196	5	5	mg/L	SM 5210 B
Influent	05/10/19	Biochemical Oxygen Demand	189	5	5	mg/L	SM 5210 B
Influent	05/14/19	Biochemical Oxygen Demand	189	5	5	mg/L	SM 5210 B
Influent	05/15/19	Biochemical Oxygen Demand	152	5	5	mg/L	SM 5210 B
Influent	05/16/19	Biochemical Oxygen Demand	167	5	5	mg/L	SM 5210 B
Influent	05/17/19	Biochemical Oxygen Demand	177	5	5	mg/L	SM 5210 B
Influent	05/21/19	Biochemical Oxygen Demand	162	5	5	mg/L	SM 5210 B
Influent	05/22/19	Biochemical Oxygen Demand	159	5	5	mg/L	SM 5210 B
Influent	05/23/19	Biochemical Oxygen Demand	166	5	5	mg/L	SM 5210 B
Influent	05/24/19	Biochemical Oxygen Demand	159	5	5	mg/L	SM 5210 B
Influent	05/28/19	Biochemical Oxygen Demand	174	5	5	mg/L	SM 5210 B
Influent	05/29/19	Biochemical Oxygen Demand	111	5	5	mg/L	SM 5210 B
Influent	05/30/19	Biochemical Oxygen Demand	151	5	5	mg/L	SM 5210 B
Influent	05/31/19	Biochemical Oxygen Demand	180	5	5	mg/L	SM 5210 B
Influent	06/04/19	Biochemical Oxygen Demand	139	5	5	mg/L	SM 5210 B
Influent	06/05/19	Biochemical Oxygen Demand	139	5	5	mg/L	SM 5210 B
Influent	06/06/19	Biochemical Oxygen Demand	158	5	5	mg/L	SM 5210 B
Influent	06/07/19	Biochemical Oxygen Demand	173	5	5	mg/L	SM 5210 B
Influent	06/11/19	Biochemical Oxygen Demand	170	5	5	mg/L	SM 5210 B
Influent	06/12/19	Biochemical Oxygen Demand	160	5	5	mg/L	SM 5210 B
Influent	06/13/19	Biochemical Oxygen Demand	158	5	5	mg/L	SM 5210 B
Influent	06/14/19	Biochemical Oxygen Demand	185	5	5	mg/L	SM 5210 B
Influent	06/18/19	Biochemical Oxygen Demand	184	5	5	mg/L	SM 5210 B
Influent	06/19/19	Biochemical Oxygen Demand	171	5	5	mg/L	SM 5210 B
Influent	06/20/19	Biochemical Oxygen Demand	180	5	5	mg/L	SM 5210 B
Influent	06/21/19	Biochemical Oxygen Demand	154	5	5	mg/L	SM 5210 B
Influent	06/25/19	Biochemical Oxygen Demand	195	5	5	mg/L	SM 5210 B
Influent	06/26/19	Biochemical Oxygen Demand	163	5	5	mg/L	SM 5210 B
Influent	06/27/19	Biochemical Oxygen Demand	150	5	5	mg/L	SM 5210 B
Influent	06/28/19	Biochemical Oxygen Demand	148	5	5	mg/L	SM 5210 B
Influent	07/02/19	Biochemical Oxygen Demand	170	5	5	mg/L	SM 5210 B
Influent	07/03/19	Biochemical Oxygen Demand	168	5	5	mg/L	SM 5210 B
Influent	07/05/19	Biochemical Oxygen Demand	153	5	5	mg/L	SM 5210 B
Influent	07/09/19	Biochemical Oxygen Demand	201	5	5	mg/L	SM 5210 B
Influent	07/10/19	Biochemical Oxygen Demand	168	5	5	mg/L	SM 5210 B
Influent	07/11/19	Biochemical Oxygen Demand	232	5	5	mg/L	SM 5210 B
Influent	07/12/19	Biochemical Oxygen Demand	190	5	5	mg/L	SM 5210 B
Influent	07/16/19	Biochemical Oxygen Demand	165	5	5	mg/L	SM 5210 B
Influent	07/17/19	Biochemical Oxygen Demand	181	5	5	mg/L	SM 5210 B
Influent	07/18/19	Biochemical Oxygen Demand	175	5	5	mg/L	SM 5210 B

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Influent	07/19/19	Biochemical Oxygen Demand	163	5	5	mg/L	SM 5210 B
Influent	07/23/19	Biochemical Oxygen Demand	183	5	5	mg/L	SM 5210 B
Influent	07/24/19	Biochemical Oxygen Demand	185	5	5	mg/L	SM 5210 B
Influent	07/25/19	Biochemical Oxygen Demand	174	5	5	mg/L	SM 5210 B
Influent	07/26/19	Biochemical Oxygen Demand	177	5	5	mg/L	SM 5210 B
Influent	07/30/19	Biochemical Oxygen Demand	180	5	5	mg/L	SM 5210 B
Influent	07/31/19	Biochemical Oxygen Demand	177	5	5	mg/L	SM 5210 B
Influent	08/01/19	Biochemical Oxygen Demand	175	5	5	mg/L	SM 5210 B
Influent	08/02/19	Biochemical Oxygen Demand	202	5	5	mg/L	SM 5210 B
Influent	08/06/19	Biochemical Oxygen Demand	192	5	5	mg/L	SM 5210 B
Influent	08/07/19	Biochemical Oxygen Demand	184	5	5	mg/L	SM 5210 B
Influent	08/08/19	Biochemical Oxygen Demand	182	5	5	mg/L	SM 5210 B
Influent	08/09/19	Biochemical Oxygen Demand	209	5	5	mg/L	SM 5210 B
Influent	08/14/19	Biochemical Oxygen Demand	169	5	5	mg/L	SM 5210 B
Influent	08/15/19	Biochemical Oxygen Demand	131	5	5	mg/L	SM 5210 B
Influent	08/16/19	Biochemical Oxygen Demand	155	5	5	mg/L	SM 5210 B
Influent	08/20/19	Biochemical Oxygen Demand	137	5	5	mg/L	SM 5210 B
Influent	08/21/19	Biochemical Oxygen Demand	137	5	5	mg/L	SM 5210 B
Influent	08/22/19	Biochemical Oxygen Demand	170	5	5	mg/L	SM 5210 B
Influent	08/23/19	Biochemical Oxygen Demand	180	5	5	mg/L	SM 5210 B
Influent	08/27/19	Biochemical Oxygen Demand	153	5	5	mg/L	SM 5210 B
Influent	08/28/19	Biochemical Oxygen Demand	153	5	5	mg/L	SM 5210 B
Influent	08/29/19	Biochemical Oxygen Demand	186	5	5	mg/L	SM 5210 B
Influent	08/30/19	Biochemical Oxygen Demand	197	5	5	mg/L	SM 5210 B
Influent	10/10/18	Cadmium	J 0.16	0.2	0.1	ug/L	EPA 200.8
Influent	08/03/19	Cadmium	0.1	0.1	0.05	ug/L	EPA 200.8
Influent	08/04/19	Cadmium	0.1	0.1	0.05	ug/L	EPA 200.8
Influent	08/05/19	Cadmium	J 0.15	0.2	0.1	ug/L	EPA 200.8
Influent	08/07/19	Cadmium	J 0.14	0.2	0.1	ug/L	EPA 200.8
Influent	08/08/19	Cadmium	0.13	0.1	0.05	ug/L	EPA 200.8
Influent	08/09/19	Cadmium	0.23	0.1	0.05	ug/L	EPA 200.8
Influent	10/10/18	Chromium	4.5	0.5	0.1	ug/L	EPA 200.8
Influent	08/03/19	Chromium	5.6	0.5	0.05	ug/L	EPA 200.8
Influent	08/04/19	Chromium	5.1	0.5	0.05	ug/L	EPA 200.8
Influent	08/05/19	Chromium	5.9	0.5	0.1	ug/L	EPA 200.8
Influent	08/07/19	Chromium	6.4	0.5	0.1	ug/L	EPA 200.8
Influent	08/08/19	Chromium	5.8	0.5	0.05	ug/L	EPA 200.8
Influent	08/09/19	Chromium	6.5	0.5	0.05	ug/L	EPA 200.8
Influent	10/10/18	Copper	51	1	0.3	ug/L	EPA 200.8
Influent	08/03/19	Copper	180	0.5	0.15	ug/L	EPA 200.8
Influent	08/04/19	Copper	45	0.5	0.15	ug/L	EPA 200.8
Influent	08/05/19	Copper	210	1	0.3	ug/L	EPA 200.8
Influent	08/07/19	Copper	220	1	0.3	ug/L	EPA 200.8
Influent	08/08/19	Copper	46	0.5	0.15	ug/L	EPA 200.8
Influent	08/09/19	Copper	290	1	0.3	ug/L	EPA 200.8
Influent	10/10/18	Cyanide	J 1	3	0.9	ug/L	SM 4500 CN C/E
Influent	08/03/19	Cyanide	J 1.3	3	0.9	ug/L	SM 4500 CN C/E
Influent	08/04/19	Cyanide	J 1.3	3	0.9	ug/L	SM 4500 CN C/E
Influent	08/05/19	Cyanide	< 0.9	3	0.9	ug/L	SM 4500 CN C/E
Influent	08/07/19	Cyanide	J 1.3	3	0.9	ug/L	SM 4500 CN C/E
Influent	08/08/19	Cyanide	J 1.1	3	0.9	ug/L	SM 4500 CN C/E
Influent	08/09/19	Cyanide	J 1.5	3	0.9	ug/L	SM 4500 CN C/E
Influent	10/10/18	Lead	1.1	0.25	0.12	ug/L	EPA 200.8
Influent	08/03/19	Lead	0.98	0.25	0.06	ug/L	EPA 200.8
Influent	08/04/19	Lead	0.99	0.25	0.06	ug/L	EPA 200.8
Influent	08/05/19	Lead	0.93	0.25	0.12	ug/L	EPA 200.8
Influent	08/07/19	Lead	1.1	0.25	0.12	ug/L	EPA 200.8
Influent	08/08/19	Lead	0.8	0.25	0.06	ug/L	EPA 200.8
Influent	08/09/19	Lead	0.98	0.25	0.06	ug/L	EPA 200.8
Influent	10/10/18	Mercury	0.03	5E-04	0.0002	ug/L	EPA 1631 E
Influent	08/03/19	Mercury	0.09	0.05	0.02	ug/L	EPA 245.1
Influent	08/04/19	Mercury	0.05	0.05	0.02	ug/L	EPA 245.1
Influent	08/05/19	Mercury	0.1	0.05	0.02	ug/L	EPA 245.1
Influent	08/07/19	Mercury	0.1	0.05	0.02	ug/L	EPA 245.1
Influent	08/08/19	Mercury	0.073	0.05	0.02	ug/L	EPA 245.1
Influent	08/09/19	Mercury	0.11	0.05	0.02	ug/L	EPA 245.1
Influent	10/10/18	Molybdenum	8.9	0.5	0.4	ug/L	EPA 200.8
Influent	08/03/19	Molybdenum	3.2	0.5	0.4	ug/L	EPA 200.8
Influent	08/04/19	Molybdenum	2.6	0.5	0.4	ug/L	EPA 200.8

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Influent	08/05/19	Molybdenum	2.1	1	0.8	ug/L	EPA 200.8
Influent	08/07/19	Molybdenum	3.2	1	0.8	ug/L	EPA 200.8
Influent	08/08/19	Molybdenum	2.2	0.5	0.4	ug/L	EPA 200.8
Influent	08/09/19	Molybdenum	2.9	0.5	0.4	ug/L	EPA 200.8
Influent	10/10/18	Nickel	12	0.5	0.12	ug/L	EPA 200.8
Influent	08/03/19	Nickel	4.6	0.5	0.06	ug/L	EPA 200.8
Influent	08/04/19	Nickel	3.9	0.5	0.06	ug/L	EPA 200.8
Influent	08/05/19	Nickel	4.5	0.5	0.12	ug/L	EPA 200.8
Influent	08/07/19	Nickel	5.1	0.5	0.12	ug/L	EPA 200.8
Influent	08/08/19	Nickel	3.8	0.5	0.06	ug/L	EPA 200.8
Influent	08/09/19	Nickel	5.5	0.5	0.06	ug/L	EPA 200.8
Influent	10/10/18	Selenium	2.2	1	0.6	ug/L	EPA 200.8
Influent	08/03/19	Selenium	4.1	1	0.4	ug/L	EPA 200.8
Influent	08/04/19	Selenium	4.3	1	0.4	ug/L	EPA 200.8
Influent	08/05/19	Selenium	4.8	1	0.8	ug/L	EPA 200.8
Influent	08/07/19	Selenium	5.3	1	0.8	ug/L	EPA 200.8
Influent	08/08/19	Selenium	4.4	1	0.4	ug/L	EPA 200.8
Influent	08/09/19	Selenium	4.6	1	0.4	ug/L	EPA 200.8
Influent	10/10/18	Silver	0.2	0.1	0.02	ug/L	EPA 200.8
Influent	08/03/19	Silver	0.16	0.1	0.02	ug/L	EPA 200.8
Influent	08/04/19	Silver	0.22	0.1	0.02	ug/L	EPA 200.8
Influent	08/05/19	Silver	0.21	0.2	0.04	ug/L	EPA 200.8
Influent	08/07/19	Silver	J 0.19	0.2	0.04	ug/L	EPA 200.8
Influent	08/08/19	Silver	0.14	0.1	0.02	ug/L	EPA 200.8
Influent	08/09/19	Silver	0.14	0.1	0.02	ug/L	EPA 200.8
Influent	09/04/18	Total Suspended Solids	246	5	2.5	mg/L	SM 2540 D
Influent	09/05/18	Total Suspended Solids	228	5	2.5	mg/L	SM 2540 D
Influent	09/06/18	Total Suspended Solids	250	5	2.5	mg/L	SM 2540 D
Influent	09/07/18	Total Suspended Solids	222	5	2.5	mg/L	SM 2540 D
Influent	09/12/18	Total Suspended Solids	146	5	2.5	mg/L	SM 2540 D
Influent	09/13/18	Total Suspended Solids	214	5	2.5	mg/L	SM 2540 D
Influent	09/15/18	Total Suspended Solids	196	5	2.5	mg/L	SM 2540 D
Influent	09/18/18	Total Suspended Solids	258	5	2.5	mg/L	SM 2540 D
Influent	09/19/18	Total Suspended Solids	166	5	2.5	mg/L	SM 2540 D
Influent	09/20/18	Total Suspended Solids	276	5	2.5	mg/L	SM 2540 D
Influent	09/21/18	Total Suspended Solids	188	5	2.5	mg/L	SM 2540 D
Influent	09/25/18	Total Suspended Solids	304	5	2.5	mg/L	SM 2540 D
Influent	09/26/18	Total Suspended Solids	208	5	2.5	mg/L	SM 2540 D
Influent	09/27/18	Total Suspended Solids	212	5	2.5	mg/L	SM 2540 D
Influent	09/28/18	Total Suspended Solids	222	5	2.5	mg/L	SM 2540 D
Influent	10/02/18	Total Suspended Solids	264	5	2.5	mg/L	SM 2540 D
Influent	10/03/18	Total Suspended Solids	212	5	2.5	mg/L	SM 2540 D
Influent	10/04/18	Total Suspended Solids	212	5	2.5	mg/L	SM 2540 D
Influent	10/05/18	Total Suspended Solids	216	5	2.5	mg/L	SM 2540 D
Influent	10/09/18	Total Suspended Solids	264	5	2.5	mg/L	SM 2540 D
Influent	10/10/18	Total Suspended Solids	108	5	2.5	mg/L	SM 2540 D
Influent	10/11/18	Total Suspended Solids	194	5	2.5	mg/L	SM 2540 D
Influent	10/12/18	Total Suspended Solids	144	5	2.5	mg/L	SM 2540 D
Influent	10/16/18	Total Suspended Solids	248	5	2.5	mg/L	SM 2540 D
Influent	10/17/18	Total Suspended Solids	232	5	2.5	mg/L	SM 2540 D
Influent	10/19/18	Total Suspended Solids	264	5	2.5	mg/L	SM 2540 D
Influent	10/23/18	Total Suspended Solids	298	5	2.5	mg/L	SM 2540 D
Influent	10/24/18	Total Suspended Solids	242	5	2.5	mg/L	SM 2540 D
Influent	10/25/18	Total Suspended Solids	120	5	2.5	mg/L	SM 2540 D
Influent	10/26/18	Total Suspended Solids	252	5	2.5	mg/L	SM 2540 D
Influent	10/31/18	Total Suspended Solids	168	5	2.5	mg/L	SM 2540 D
Influent	11/01/18	Total Suspended Solids	180	5	2.5	mg/L	SM 2540 D
Influent	11/02/18	Total Suspended Solids	304	5	2.5	mg/L	SM 2540 D
Influent	11/06/18	Total Suspended Solids	280	5	2.5	mg/L	SM 2540 D
Influent	11/07/18	Total Suspended Solids	350	5	2.5	mg/L	SM 2540 D
Influent	11/08/18	Total Suspended Solids	224	5	2.5	mg/L	SM 2540 D
Influent	11/09/18	Total Suspended Solids	552	5	2.5	mg/L	SM 2540 D
Influent	11/13/18	Total Suspended Solids	276	5	2.5	mg/L	SM 2540 D
Influent	11/14/18	Total Suspended Solids	230	5	2.5	mg/L	SM 2540 D
Influent	11/15/18	Total Suspended Solids	234	5	2.5	mg/L	SM 2540 D
Influent	11/20/18	Total Suspended Solids	204	5	2.5	mg/L	SM 2540 D
Influent	11/21/18	Total Suspended Solids	238	5	2.5	mg/L	SM 2540 D
Influent	11/23/18	Total Suspended Solids	258	5	2.5	mg/L	SM 2540 D
Influent	11/27/18	Total Suspended Solids	328	5	2.5	mg/L	SM 2540 D

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Influent	11/28/18	Total Suspended Solids	323	5	2.5	mg/L	SM 2540 D
Influent	11/29/18	Total Suspended Solids	258	5	2.5	mg/L	SM 2540 D
Influent	11/30/18	Total Suspended Solids	284	5	2.5	mg/L	SM 2540 D
Influent	12/04/18	Total Suspended Solids	218	5	2.5	mg/L	SM 2540 D
Influent	12/05/18	Total Suspended Solids	256	5	2.5	mg/L	SM 2540 D
Influent	12/06/18	Total Suspended Solids	256	5	2.5	mg/L	SM 2540 D
Influent	12/07/18	Total Suspended Solids	230	5	2.5	mg/L	SM 2540 D
Influent	12/11/18	Total Suspended Solids	264	5	2.5	mg/L	SM 2540 D
Influent	12/12/18	Total Suspended Solids	252	5	2.5	mg/L	SM 2540 D
Influent	12/13/18	Total Suspended Solids	90	5	2.5	mg/L	SM 2540 D
Influent	12/14/18	Total Suspended Solids	256	5	2.5	mg/L	SM 2540 D
Influent	12/18/18	Total Suspended Solids	246	5	2.5	mg/L	SM 2540 D
Influent	12/19/18	Total Suspended Solids	297	5	2.5	mg/L	SM 2540 D
Influent	12/20/18	Total Suspended Solids	268	5	2.5	mg/L	SM 2540 D
Influent	12/21/18	Total Suspended Solids	246	5	2.5	mg/L	SM 2540 D
Influent	12/26/18	Total Suspended Solids	288	5	2.5	mg/L	SM 2540 D
Influent	12/27/18	Total Suspended Solids	306	5	2.5	mg/L	SM 2540 D
Influent	12/28/18	Total Suspended Solids	336	5	2.5	mg/L	SM 2540 D
Influent	01/02/19	Total Suspended Solids	290	5	2.5	mg/L	SM 2540 D
Influent	01/03/19	Total Suspended Solids	264	5	2.5	mg/L	SM 2540 D
Influent	01/04/19	Total Suspended Solids	380	5	2.5	mg/L	SM 2540 D
Influent	01/08/19	Total Suspended Solids	264	5	2.5	mg/L	SM 2540 D
Influent	01/09/19	Total Suspended Solids	220	5	2.5	mg/L	SM 2540 D
Influent	01/10/19	Total Suspended Solids	252	5	2.5	mg/L	SM 2540 D
Influent	01/11/19	Total Suspended Solids	228	5	2.5	mg/L	SM 2540 D
Influent	01/15/19	Total Suspended Solids	310	5	2.5	mg/L	SM 2540 D
Influent	01/16/19	Total Suspended Solids	270	5	2.5	mg/L	SM 2540 D
Influent	01/17/19	Total Suspended Solids	262	5	2.5	mg/L	SM 2540 D
Influent	01/18/19	Total Suspended Solids	188	5	2.5	mg/L	SM 2540 D
Influent	01/22/19	Total Suspended Solids	250	5	2.5	mg/L	SM 2540 D
Influent	01/23/19	Total Suspended Solids	230	5	2.5	mg/L	SM 2540 D
Influent	01/24/19	Total Suspended Solids	260	5	2.5	mg/L	SM 2540 D
Influent	01/25/19	Total Suspended Solids	214	5	2.5	mg/L	SM 2540 D
Influent	01/29/19	Total Suspended Solids	296	5	2.5	mg/L	SM 2540 D
Influent	01/30/19	Total Suspended Solids	178	5	2.5	mg/L	SM 2540 D
Influent	01/31/19	Total Suspended Solids	272	5	2.5	mg/L	SM 2540 D
Influent	02/01/19	Total Suspended Solids	210	5	2.5	mg/L	SM 2540 D
Influent	02/05/19	Total Suspended Solids	238	5	2.5	mg/L	SM 2540 D
Influent	02/06/19	Total Suspended Solids	210	5	2.5	mg/L	SM 2540 D
Influent	02/07/19	Total Suspended Solids	214	5	2.5	mg/L	SM 2540 D
Influent	02/08/19	Total Suspended Solids	100	5	2.5	mg/L	SM 2540 D
Influent	02/12/19	Total Suspended Solids	208	5	2.5	mg/L	SM 2540 D
Influent	02/13/19	Total Suspended Solids	244	5	2.5	mg/L	SM 2540 D
Influent	02/14/19	Total Suspended Solids	186	5	2.5	mg/L	SM 2540 D
Influent	02/15/19	Total Suspended Solids	108	5	2.5	mg/L	SM 2540 D
Influent	02/19/19	Total Suspended Solids	236	5	2.5	mg/L	SM 2540 D
Influent	02/20/19	Total Suspended Solids	206	5	2.5	mg/L	SM 2540 D
Influent	02/21/19	Total Suspended Solids	192	5	2.5	mg/L	SM 2540 D
Influent	02/22/19	Total Suspended Solids	176	5	2.5	mg/L	SM 2540 D
Influent	02/26/19	Total Suspended Solids	206	5	2.5	mg/L	SM 2540 D
Influent	02/27/19	Total Suspended Solids	176	5	2.5	mg/L	SM 2540 D
Influent	02/28/19	Total Suspended Solids	102	5	2.5	mg/L	SM 2540 D
Influent	03/01/19	Total Suspended Solids	110	5	2.5	mg/L	SM 2540 D
Influent	03/05/19	Total Suspended Solids	262	5	2.5	mg/L	SM 2540 D
Influent	03/06/19	Total Suspended Solids	222	5	2.5	mg/L	SM 2540 D
Influent	03/07/19	Total Suspended Solids	178	5	2.5	mg/L	SM 2540 D
Influent	03/08/19	Total Suspended Solids	232	5	2.5	mg/L	SM 2540 D
Influent	03/12/19	Total Suspended Solids	192	5	2.5	mg/L	SM 2540 D
Influent	03/13/19	Total Suspended Solids	216	5	2.5	mg/L	SM 2540 D
Influent	03/14/19	Total Suspended Solids	210	5	2.5	mg/L	SM 2540 D
Influent	03/15/19	Total Suspended Solids	246	5	2.5	mg/L	SM 2540 D
Influent	03/19/19	Total Suspended Solids	162	5	2.5	mg/L	SM 2540 D
Influent	03/20/19	Total Suspended Solids	258	5	2.5	mg/L	SM 2540 D
Influent	03/21/19	Total Suspended Solids	208	5	2.5	mg/L	SM 2540 D
Influent	03/22/19	Total Suspended Solids	200	5	2.5	mg/L	SM 2540 D
Influent	03/26/19	Total Suspended Solids	166	5	2.5	mg/L	SM 2540 D
Influent	03/27/19	Total Suspended Solids	170	5	2.5	mg/L	SM 2540 D
Influent	03/28/19	Total Suspended Solids	188	5	2.5	mg/L	SM 2540 D
Influent	03/29/19	Total Suspended Solids	156	5	2.5	mg/L	SM 2540 D

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Influent	04/02/19	Total Suspended Solids	220	5	2.5	mg/L	SM 2540 D
Influent	04/03/19	Total Suspended Solids	180	5	2.5	mg/L	SM 2540 D
Influent	04/04/19	Total Suspended Solids	186	5	2.5	mg/L	SM 2540 D
Influent	04/05/19	Total Suspended Solids	196	5	2.5	mg/L	SM 2540 D
Influent	04/09/19	Total Suspended Solids	208	5	2.5	mg/L	SM 2540 D
Influent	04/10/19	Total Suspended Solids	136	5	2.5	mg/L	SM 2540 D
Influent	04/11/19	Total Suspended Solids	168	5	2.5	mg/L	SM 2540 D
Influent	04/12/19	Total Suspended Solids	182	5	2.5	mg/L	SM 2540 D
Influent	04/16/19	Total Suspended Solids	174	5	2.5	mg/L	SM 2540 D
Influent	04/17/19	Total Suspended Solids	174	5	2.5	mg/L	SM 2540 D
Influent	04/18/19	Total Suspended Solids	216	5	2.5	mg/L	SM 2540 D
Influent	04/19/19	Total Suspended Solids	102	5	2.5	mg/L	SM 2540 D
Influent	04/23/19	Total Suspended Solids	188	5	2.5	mg/L	SM 2540 D
Influent	04/24/19	Total Suspended Solids	202	5	2.5	mg/L	SM 2540 D
Influent	04/25/19	Total Suspended Solids	184	5	2.5	mg/L	SM 2540 D
Influent	04/30/19	Total Suspended Solids	222	5	2.5	mg/L	SM 2540 D
Influent	05/01/19	Total Suspended Solids	174	5	2.5	mg/L	SM 2540 D
Influent	05/02/19	Total Suspended Solids	110	5	2.5	mg/L	SM 2540 D
Influent	05/03/19	Total Suspended Solids	88	5	2.5	mg/L	SM 2540 D
Influent	05/07/19	Total Suspended Solids	202	5	2.5	mg/L	SM 2540 D
Influent	05/08/19	Total Suspended Solids	234	5	2.5	mg/L	SM 2540 D
Influent	05/09/19	Total Suspended Solids	262	5	2.5	mg/L	SM 2540 D
Influent	05/10/19	Total Suspended Solids	234	5	2.5	mg/L	SM 2540 D
Influent	05/14/19	Total Suspended Solids	226	5	2.5	mg/L	SM 2540 D
Influent	05/15/19	Total Suspended Solids	194	5	2.5	mg/L	SM 2540 D
Influent	05/16/19	Total Suspended Solids	204	5	2.5	mg/L	SM 2540 D
Influent	05/17/19	Total Suspended Solids	168	5	2.5	mg/L	SM 2540 D
Influent	05/21/19	Total Suspended Solids	122	5	2.5	mg/L	SM 2540 D
Influent	05/22/19	Total Suspended Solids	164	5	2.5	mg/L	SM 2540 D
Influent	05/23/19	Total Suspended Solids	208	5	2.5	mg/L	SM 2540 D
Influent	05/24/19	Total Suspended Solids	206	5	2.5	mg/L	SM 2540 D
Influent	05/28/19	Total Suspended Solids	216	5	2.5	mg/L	SM 2540 D
Influent	05/29/19	Total Suspended Solids	214	5	2.5	mg/L	SM 2540 D
Influent	05/30/19	Total Suspended Solids	200	5	2.5	mg/L	SM 2540 D
Influent	05/31/19	Total Suspended Solids	268	5	2.5	mg/L	SM 2540 D
Influent	06/04/19	Total Suspended Solids	174	5	2.5	mg/L	SM 2540 D
Influent	06/05/19	Total Suspended Solids	208	5	2.5	mg/L	SM 2540 D
Influent	06/06/19	Total Suspended Solids	202	5	2.5	mg/L	SM 2540 D
Influent	06/07/19	Total Suspended Solids	242	5	2.5	mg/L	SM 2540 D
Influent	06/11/19	Total Suspended Solids	198	5	2.5	mg/L	SM 2540 D
Influent	06/12/19	Total Suspended Solids	282	5	2.5	mg/L	SM 2540 D
Influent	06/13/19	Total Suspended Solids	168	5	2.5	mg/L	SM 2540 D
Influent	06/14/19	Total Suspended Solids	232	5	2.5	mg/L	SM 2540 D
Influent	06/18/19	Total Suspended Solids	174	5	2.5	mg/L	SM 2540 D
Influent	06/19/19	Total Suspended Solids	424	5	2.5	mg/L	SM 2540 D
Influent	06/20/19	Total Suspended Solids	178	5	2.5	mg/L	SM 2540 D
Influent	06/21/19	Total Suspended Solids	180	5	2.5	mg/L	SM 2540 D
Influent	06/25/19	Total Suspended Solids	170	5	2.5	mg/L	SM 2540 D
Influent	06/26/19	Total Suspended Solids	170	5	2.5	mg/L	SM 2540 D
Influent	06/27/19	Total Suspended Solids	166	5	2.5	mg/L	SM 2540 D
Influent	06/28/19	Total Suspended Solids	172	5	2.5	mg/L	SM 2540 D
Influent	07/02/19	Total Suspended Solids	168	5	2.5	mg/L	SM 2540 D
Influent	07/03/19	Total Suspended Solids	194	5	2.5	mg/L	SM 2540 D
Influent	07/05/19	Total Suspended Solids	180	5	2.5	mg/L	SM 2540 D
Influent	07/09/19	Total Suspended Solids	278	5	2.5	mg/L	SM 2540 D
Influent	07/10/19	Total Suspended Solids	212	5	2.5	mg/L	SM 2540 D
Influent	07/11/19	Total Suspended Solids	234	5	2.5	mg/L	SM 2540 D
Influent	07/12/19	Total Suspended Solids	186	5	2.5	mg/L	SM 2540 D
Influent	07/16/19	Total Suspended Solids	182	5	2.5	mg/L	SM 2540 D
Influent	07/17/19	Total Suspended Solids	224	5	2.5	mg/L	SM 2540 D
Influent	07/18/19	Total Suspended Solids	196	5	2.5	mg/L	SM 2540 D
Influent	07/19/19	Total Suspended Solids	198	5	2.5	mg/L	SM 2540 D
Influent	07/23/19	Total Suspended Solids	188	5	2.5	mg/L	SM 2540 D
Influent	07/24/19	Total Suspended Solids	188	5	2.5	mg/L	SM 2540 D
Influent	07/25/19	Total Suspended Solids	200	5	2.5	mg/L	SM 2540 D
Influent	07/26/19	Total Suspended Solids	106	5	2.5	mg/L	SM 2540 D
Influent	07/30/19	Total Suspended Solids	206	5	2.5	mg/L	SM 2540 D
Influent	07/31/19	Total Suspended Solids	178	5	2.5	mg/L	SM 2540 D
Influent	08/01/19	Total Suspended Solids	184	5	2.5	mg/L	SM 2540 D

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Influent	08/02/19	Total Suspended Solids	232	5	2.5	mg/L	SM 2540 D
Influent	08/06/19	Total Suspended Solids	248	5	2.5	mg/L	SM 2540 D
Influent	08/07/19	Total Suspended Solids	216	5	2.5	mg/L	SM 2540 D
Influent	08/08/19	Total Suspended Solids	210	5	2.5	mg/L	SM 2540 D
Influent	08/09/19	Total Suspended Solids	242	5	2.5	mg/L	SM 2540 D
Influent	08/14/19	Total Suspended Solids	196	5	2.5	mg/L	SM 2540 D
Influent	08/15/19	Total Suspended Solids	102	5	2.5	mg/L	SM 2540 D
Influent	08/16/19	Total Suspended Solids	186	5	2.5	mg/L	SM 2540 D
Influent	08/20/19	Total Suspended Solids	130	5	2.5	mg/L	SM 2540 D
Influent	08/21/19	Total Suspended Solids	164	5	2.5	mg/L	SM 2540 D
Influent	08/22/19	Total Suspended Solids	216	5	2.5	mg/L	SM 2540 D
Influent	08/23/19	Total Suspended Solids	212	5	2.5	mg/L	SM 2540 D
Influent	08/27/19	Total Suspended Solids	190	5	2.5	mg/L	SM 2540 D
Influent	08/28/19	Total Suspended Solids	218	5	2.5	mg/L	SM 2540 D
Influent	08/29/19	Total Suspended Solids	242	5	2.5	mg/L	SM 2540 D
Influent	08/30/19	Total Suspended Solids	238	5	2.5	mg/L	SM 2540 D
Influent	10/10/18	Zinc	150	10	1.4	ug/L	EPA 200.8
Influent	08/03/19	Zinc	180	10	0.7	ug/L	EPA 200.8
Influent	08/04/19	Zinc	150	10	0.7	ug/L	EPA 200.8
Influent	08/05/19	Zinc	180	10	1.4	ug/L	EPA 200.8
Influent	08/07/19	Zinc	190	10	1.4	ug/L	EPA 200.8
Influent	08/08/19	Zinc	120	10	0.7	ug/L	EPA 200.8
Influent	08/09/19	Zinc	200	10	0.7	ug/L	EPA 200.8
Primary Effluent	08/03/19	Ammonia as N	36	0.1	0.04	mg/L	SM 4500 NH3 B,C
Primary Effluent	08/04/19	Ammonia as N	31	0.1	0.04	mg/L	SM 4500 NH3 B,C
Primary Effluent	08/05/19	Ammonia as N	25	0.1	0.04	mg/L	SM 4500 NH3 B,C
Primary Effluent	08/06/19	Ammonia as N	25	0.1	0.04	mg/L	SM 4500 NH3 B,C
Primary Effluent	08/07/19	Ammonia as N	26	0.1	0.04	mg/L	SM 4500 NH3 B,C
Primary Effluent	08/08/19	Ammonia as N	26	0.1	0.04	mg/L	SM 4500 NH3 B,C
Primary Effluent	08/09/19	Ammonia as N	26	0.1	0.04	mg/L	SM 4500 NH3 B,C
Primary Effluent	08/03/19	Arsenic	1.5	0.5	0.06	ug/L	EPA 200.8
Primary Effluent	08/04/19	Arsenic	1.5	0.5	0.06	ug/L	EPA 200.8
Primary Effluent	08/05/19	Arsenic	1.4	0.5	0.06	ug/L	EPA 200.8
Primary Effluent	08/06/19	Arsenic	1.3	0.5	0.06	ug/L	EPA 200.8
Primary Effluent	08/07/19	Arsenic	1.6	0.5	0.12	ug/L	EPA 200.8
Primary Effluent	08/08/19	Arsenic	1.5	0.5	0.06	ug/L	EPA 200.8
Primary Effluent	08/09/19	Arsenic	1.5	0.5	0.06	ug/L	EPA 200.8
Primary Effluent	08/03/19	Cadmium	< 0.05	0.1	0.05	ug/L	EPA 200.8
Primary Effluent	08/04/19	Cadmium	< 0.05	0.1	0.05	ug/L	EPA 200.8
Primary Effluent	08/05/19	Cadmium	J 0.07	0.1	0.05	ug/L	EPA 200.8
Primary Effluent	08/06/19	Cadmium	J 0.07	0.1	0.05	ug/L	EPA 200.8
Primary Effluent	08/07/19	Cadmium	< 0.1	0.2	0.1	ug/L	EPA 200.8
Primary Effluent	08/08/19	Cadmium	J 0.07	0.1	0.05	ug/L	EPA 200.8
Primary Effluent	08/09/19	Cadmium	J 0.07	0.1	0.05	ug/L	EPA 200.8
Primary Effluent	08/03/19	Chromium	3.3	0.5	0.05	ug/L	EPA 200.8
Primary Effluent	08/04/19	Chromium	3.2	0.5	0.05	ug/L	EPA 200.8
Primary Effluent	08/05/19	Chromium	3.6	0.5	0.05	ug/L	EPA 200.8
Primary Effluent	08/06/19	Chromium	3.5	0.5	0.05	ug/L	EPA 200.8
Primary Effluent	08/07/19	Chromium	3.7	0.5	0.1	ug/L	EPA 200.8
Primary Effluent	08/08/19	Chromium	3.3	0.5	0.05	ug/L	EPA 200.8
Primary Effluent	08/09/19	Chromium	3.5	0.5	0.05	ug/L	EPA 200.8
Primary Effluent	08/03/19	Copper	29	0.5	0.15	ug/L	EPA 200.8
Primary Effluent	08/04/19	Copper	37	0.5	0.15	ug/L	EPA 200.8
Primary Effluent	08/05/19	Copper	34	0.5	0.15	ug/L	EPA 200.8
Primary Effluent	08/06/19	Copper	27	0.5	0.15	ug/L	EPA 200.8
Primary Effluent	08/07/19	Copper	33	1	0.3	ug/L	EPA 200.8
Primary Effluent	08/08/19	Copper	28	0.5	0.15	ug/L	EPA 200.8
Primary Effluent	08/09/19	Copper	27	0.5	0.15	ug/L	EPA 200.8
Primary Effluent	08/03/19	Cyanide	J 1.6	3	0.9	ug/L	SM 4500 CN C/E
Primary Effluent	08/04/19	Cyanide	J 1.3	3	0.9	ug/L	SM 4500 CN C/E
Primary Effluent	08/05/19	Cyanide	J 1.3	3	0.9	ug/L	SM 4500 CN C/E
Primary Effluent	08/06/19	Cyanide	J 1.1	3	0.9	ug/L	SM 4500 CN C/E
Primary Effluent	08/07/19	Cyanide	J 1.3	3	0.9	ug/L	SM 4500 CN C/E
Primary Effluent	08/08/19	Cyanide	J 1.1	3	0.9	ug/L	SM 4500 CN C/E
Primary Effluent	08/09/19	Cyanide	J 1.1	3	0.9	ug/L	SM 4500 CN C/E
Primary Effluent	08/03/19	Lead	0.4	0.25	0.06	ug/L	EPA 200.8
Primary Effluent	08/04/19	Lead	0.42	0.25	0.06	ug/L	EPA 200.8
Primary Effluent	08/05/19	Lead	0.42	0.25	0.06	ug/L	EPA 200.8
Primary Effluent	08/06/19	Lead	0.38	0.25	0.06	ug/L	EPA 200.8

Location	Sampling Date	Pollutant	Result	RL	MDL	Units	Analytical Method
Primary Effluent	08/07/19	Lead	0.58	0.25	0.12	ug/L	EPA 200.8
Primary Effluent	08/08/19	Lead	0.4	0.25	0.06	ug/L	EPA 200.8
Primary Effluent	08/09/19	Lead	0.42	0.25	0.06	ug/L	EPA 200.8
Primary Effluent	08/03/19	Mercury	0.0086	8E-04	0.0004	ug/L	EPA 1631 E
Primary Effluent	08/04/19	Mercury	0.0087	8E-04	0.0004	ug/L	EPA 1631 E
Primary Effluent	08/05/19	Mercury	0.0089	8E-04	0.0004	ug/L	EPA 1631 E
Primary Effluent	08/06/19	Mercury	0.0099	5E-04	0.0002	ug/L	EPA 1631 E
Primary Effluent	08/07/19	Mercury	0.011	5E-04	0.0002	ug/L	EPA 1631 E
Primary Effluent	08/08/19	Mercury	0.017	5E-04	0.0002	ug/L	EPA 1631 E
Primary Effluent	08/09/19	Mercury	0.011	5E-04	0.0002	ug/L	EPA 1631 E
Primary Effluent	08/03/19	Molybdenum	2.5	0.5	0.4	ug/L	EPA 200.8
Primary Effluent	08/04/19	Molybdenum	2.3	0.5	0.4	ug/L	EPA 200.8
Primary Effluent	08/05/19	Molybdenum	1.8	0.5	0.4	ug/L	EPA 200.8
Primary Effluent	08/06/19	Molybdenum	3.1	0.5	0.4	ug/L	EPA 200.8
Primary Effluent	08/07/19	Molybdenum	2.6	1	0.8	ug/L	EPA 200.8
Primary Effluent	08/08/19	Molybdenum	2.9	0.5	0.4	ug/L	EPA 200.8
Primary Effluent	08/09/19	Molybdenum	2.3	0.5	0.4	ug/L	EPA 200.8
Primary Effluent	08/03/19	Nickel	2.8	0.5	0.06	ug/L	EPA 200.8
Primary Effluent	08/04/19	Nickel	2.5	0.5	0.06	ug/L	EPA 200.8
Primary Effluent	08/05/19	Nickel	2.9	0.5	0.06	ug/L	EPA 200.8
Primary Effluent	08/06/19	Nickel	3	0.5	0.06	ug/L	EPA 200.8
Primary Effluent	08/07/19	Nickel	3.3	0.5	0.12	ug/L	EPA 200.8
Primary Effluent	08/08/19	Nickel	2.8	0.5	0.06	ug/L	EPA 200.8
Primary Effluent	08/09/19	Nickel	3	0.5	0.06	ug/L	EPA 200.8
Primary Effluent	08/03/19	Selenium	4.1	1	0.4	ug/L	EPA 200.8
Primary Effluent	08/04/19	Selenium	4.3	1	0.4	ug/L	EPA 200.8
Primary Effluent	08/05/19	Selenium	4.3	1	0.4	ug/L	EPA 200.8
Primary Effluent	08/06/19	Selenium	3.9	1	0.4	ug/L	EPA 200.8
Primary Effluent	08/07/19	Selenium	4.4	1	0.8	ug/L	EPA 200.8
Primary Effluent	08/08/19	Selenium	4.3	1	0.4	ug/L	EPA 200.8
Primary Effluent	08/09/19	Selenium	4.2	1	0.4	ug/L	EPA 200.8
Primary Effluent	08/03/19	Silver	0.1	0.1	0.02	ug/L	EPA 200.8
Primary Effluent	08/04/19	Silver	0.1	0.1	0.02	ug/L	EPA 200.8
Primary Effluent	08/05/19	Silver	J 0.08	0.1	0.02	ug/L	EPA 200.8
Primary Effluent	08/06/19	Silver	J 0.09	0.1	0.02	ug/L	EPA 200.8
Primary Effluent	08/07/19	Silver	J 0.11	0.2	0.04	ug/L	EPA 200.8
Primary Effluent	08/08/19	Silver	J 0.07	0.1	0.02	ug/L	EPA 200.8
Primary Effluent	08/09/19	Silver	J 0.08	0.1	0.02	ug/L	EPA 200.8
Primary Effluent	08/03/19	Zinc	74	1	0.7	ug/L	EPA 200.8
Primary Effluent	08/04/19	Zinc	75	1	0.7	ug/L	EPA 200.8
Primary Effluent	08/05/19	Zinc	74	1	0.7	ug/L	EPA 200.8
Primary Effluent	08/06/19	Zinc	63	1	0.7	ug/L	EPA 200.8
Primary Effluent	08/07/19	Zinc	71	2	1.4	ug/L	EPA 200.8
Primary Effluent	08/08/19	Zinc	60	1	0.7	ug/L	EPA 200.8
Primary Effluent	08/09/19	Zinc	67	1	0.7	ug/L	EPA 200.8

APPENDIX D

AHL Derivation Worksheets

	A	B	C	D	E
1		**Ammonia as N**			
2			Units	Calculations	Formula/Source
3	**Existing Conditions (Wastewater)**				
4		Average WWTP Influent Flow	mgd	4.99	Sep 2018-Aug 2019 Average Daily Influent Flow
5		Average WWTP Effluent Flow	mgd	5.25	Sep 2018-Aug 2019 Average Daily Effluent Flow
6		Average Industrial Flow	mgd	0.05	Estimated
7		Average Influent Concentration	mg/L	45	Oct 2017-Aug 2019 Monitoring Data
8		Average Influent Loading	lbs/day	1,600	Oct 2017-Aug 2019 Monitoring Data
9		Maximum Influent Concentration	mg/L	54	Oct 2017-Aug 2019 Monitoring Data
10		Maximum Influent Loading	lbs/day	1,900	Oct 2017-Aug 2019 Monitoring Data
11		Average Primary Effluent Concentration	mg/L	28	2019 Local Limits Monitoring
12		Average Final Effluent Concentration	mg/L	0.22	Oct 2017-Aug 2019 Monitoring Data
13		Maximum Final Effluent Concentration	mg/L	0.29	Oct 2017-Aug 2019 Monitoring Data
14		Average Non-Industrial Concentration	mg/L	39	2019 Local Limits Monitoring
15		Average Non-Industrial Loading	lbs/day	1,607	8.34*(D4-D6)*D14
16	**Removal Efficiency**				
17		In-Plant Total Removal	%	99.5%	Sep 2018-Aug 2019 Monitoring Data
18		In-Plant Primary Treatment Removal	%	37.8%	2019 Local Limits Monitoring
19	**Existing Conditions (Biosolids)**				
20		Biosolids Flow to Digester	mgd	0.02	Email Correspondence
21		Average Digester Concentration	mg/L	790	2018 Monitoring Data
22	**Treatment/Discharge Limits**				
23		Daily Maximum Discharge Limit	mg/L	-	-
24		Average Weekly Discharge Limit	mg/L	1.9	2018 NPDES Permit
25		Average Monthly Discharge Limit	mg/L	1.3	2018 NPDES Permit
26		Activated Sludge Inhibition Limit	mg/L	480	USEPA Local Limits Guidance Manual
27		Anaerobic Digestion Inhibition Limit	mg/L	1,500	USEPA Local Limits Guidance Manual
28		Plant Design Capacity	mg/L	-	-
29	**Headworks Loading Limits**				
30		Daily Maximum Discharge Loading Limit	lbs/day	-	-
31		Average Weekly Discharge Loading Limit	lbs/day	17,748	8.34*D5*D24/(1-D17)
32		Average Monthly Discharge Loading Limit	lbs/day	12,143	8.34*D5*D25/(1-D17)
33		Activated Sludge Inhibition Loading Limit	lbs/day	32,104	8.34*D4*D26/(1-D18)
34		Anaerobic Digestion Inhibition Loading Limit	lbs/day	3,038	D8*D27/D21
35		Plant Design Capacity Loading Limit	lbs/day	-	-
36	**Maximum Allowable Headworks Loading (MAHL)**				
37		**Headworks Limit**	lbs/day	**3,038**	MIN(D30:D35)
38		Basis of MAHL		Anaerobic Digestion Inhibition Loading Limit	
39	**Maximum Allowable Industrial Loading (MAIL)**				
40		Safety Factor	10%	304	C40*D37
41		**Industrial Allocation**	lbs/day	**1,127**	D37-D15-D40
42		Uniform Local Limit	mg/L	2,704	D41/D6/8.34

	F	G	H	I	J
1	**Biochemical Oxygen Demand (BOD)**				
2			Units	Calculations	Formula/Source
3	**Existing Conditions (Wastewater)**				
4		Average WWTP Influent Flow	mgd	4.99	Sep 2018-Aug 2019 Average Daily Influent Flow
5		Average WWTP Effluent Flow	mgd	5.25	Sep 2018-Aug 2019 Average Daily Effluent Flow
6		Average Industrial Flow	mgd	0.05	Estimated
7		Average Influent Concentration	mg/L	230	Oct 2017-Aug 2019 Monitoring Data
8		Average Influent Loading	lbs/day	8,900	Oct 2017-Aug 2019 Monitoring Data
9		Maximum Influent Concentration	mg/L	550	Oct 2017-Aug 2019 Monitoring Data
10		Maximum Influent Loading	lbs/day	18,000	Oct 2017-Aug 2019 Monitoring Data
11		Average Primary Effluent Concentration	mg/L	-	-
12		Average Final Effluent Concentration	mg/L	2.7	Oct 2017-Aug 2019 Monitoring Data
13		Maximum Final Effluent Concentration	mg/L	9.0	Oct 2017-Aug 2019 Monitoring Data
14		Average Non-Industrial Concentration	mg/L	340	2019 Local Limits Monitoring
15		Average Non-Industrial Loading	lbs/day	8,700	Influent Sources Mass Balance
16	**Removal Efficiency**				
17		In-Plant Total Removal	%	98.5%	Sep 2018-Aug 2019 Monitoring Data
18		In-Plant Primary Treatment Removal	%	-	-
19	**Existing Conditions (Biosolids)**				
20		Biosolids Flow to Digester	mgd	0.02	Email Correspondence
21		Average Digester Concentration	mg/L	-	-
22	**Treatment/Discharge Limits**				
23		Daily Maximum Discharge Limit	mg/L	-	-
24		Average Weekly Discharge Limit	mg/L	15	2018 NPDES Permit
25		Average Monthly Discharge Limit	mg/L	10	2018 NPDES Permit
26		Activated Sludge Inhibition Limit	mg/L	-	-
27		Anaerobic Digestion Inhibition Limit	mg/L	-	-
28		Plant Design Capacity	mg/L	275	Estimated Design Capacity
29	**Headworks Loading Limits**				
30		Daily Maximum Discharge Loading Limit	lbs/day	-	-
31		Average Weekly Discharge Loading Limit	lbs/day	44,964	8.34*I5*I24/(1-I17)
32		Average Monthly Discharge Loading Limit	lbs/day	29,976	8.34*I5*I25/(1-I17)
33		Activated Sludge Inhibition Loading Limit	lbs/day	-	-
34		Anaerobic Digestion Inhibition Loading Limit	lbs/day	-	-
35		Plant Design Capacity Loading Limit	lbs/day	11,445	8.34*I4*I28
36	**Maximum Allowable Headworks Loading (MAHL)**				
37		**Headworks Limit**	lbs/day	**11,445**	MIN(I30:I35)
38		Basis of MAHL		Plant Design Capacity Loading Limit	
39	**Maximum Allowable Industrial Loading (MAIL)**				
40		Safety Factor	10%	1,144	H40*I37
41		**Industrial Allocation**	lbs/day	**1,600**	I37-I15-I40
42		Uniform Local Limit	mg/L	3,837	I41/I6/8.34

	K	L	M	N	O
1	**Total Suspended Solids (TSS)**				
2			Units	Calculations	Formula/Source
3	**Existing Conditions (Wastewater)**				
4		Average WWTP Influent Flow	mgd	4.99	Sep 2018-Aug 2019 Average Daily Influent Flow
5		Average WWTP Effluent Flow	mgd	5.25	Sep 2018-Aug 2019 Average Daily Effluent Flow
6		Average Industrial Flow	mgd	0.05	Estimated
7		Average Influent Concentration	mg/L	250	Oct 2017-Aug 2019 Monitoring Data
8		Average Influent Loading	lbs/day	9,500	Oct 2017-Aug 2019 Monitoring Data
9		Maximum Influent Concentration	mg/L	670	Oct 2017-Aug 2019 Monitoring Data
10		Maximum Influent Loading	lbs/day	30,000	Oct 2017-Aug 2019 Monitoring Data
11		Average Primary Effluent Concentration	mg/L	-	-
12		Average Final Effluent Concentration	mg/L	<5	Oct 2017-Aug 2019 Monitoring Data
13		Maximum Final Effluent Concentration	mg/L	2.6	Oct 2017-Aug 2019 Monitoring Data
14		Average Non-Industrial Concentration	mg/L	530	2019 Local Limits Monitoring
15		Average Non-Industrial Loading	lbs/day	9,200	Influent Sources Mass Balance
16	**Removal Efficiency**				
17		In-Plant Total Removal	%	98.7%	Sep 2018-Aug 2019 Monitoring Data
18		In-Plant Primary Treatment Removal	%	-	-
19	**Existing Conditions (Biosolids)**				
20		Biosolids Flow to Digester	mgd	0.02	Email Correspondence
21		Average Digester Concentration	mg/L	-	-
22	**Treatment/Discharge Limits**				
23		Daily Maximum Discharge Limit	mg/L	-	-
24		Average Weekly Discharge Limit	mg/L	15	2018 NPDES Permit
25		Average Monthly Discharge Limit	mg/L	10	2018 NPDES Permit
26		Activated Sludge Inhibition Limit	mg/L	-	-
27		Anaerobic Digestion Inhibition Limit	mg/L	-	-
28		Plant Design Capacity	mg/L	275	Estimated Design Capacity
29	**Headworks Loading Limits**				
30		Daily Maximum Discharge Loading Limit	lbs/day	-	-
31		Average Weekly Discharge Loading Limit	lbs/day	51,799	8.34*N5*N24/(1-N17)
32		Average Monthly Discharge Loading Limit	lbs/day	34,533	8.34*N5*N25/(1-N17)
33		Activated Sludge Inhibition Loading Limit	lbs/day	-	-
34		Anaerobic Digestion Inhibition Loading Limit	lbs/day	-	-
35		Plant Design Capacity Loading Limit	lbs/day	11,445	8.34*N4*N28
36	**Maximum Allowable Headworks Loading (MAHL)**				
37		**Headworks Limit**	lbs/day	**11,445**	MIN(N30:N35)
38		Basis of MAHL		Plant Design Capacity Loading Limit	
39	**Maximum Allowable Industrial Loading (MAIL)**				
40		Safety Factor	10%	1,144	M40*N37
41		**Industrial Allocation**	lbs/day	**1,100**	N37-N15-N40
42		Uniform Local Limit	mg/L	2,638	N41/N6/8.34

	A	B	C	D	E
1		**Arsenic**			
2			Units	Calculations	Formula/Source
3	**Existing Conditions (Wastewater)**				
4		Average WWTP Influent Flow	mgd	4.99	Sep 2018-Aug 2019 Average Daily Influent Flow
5		Average WWTP Effluent Flow	mgd	5.25	Sep 2018-Aug 2019 Average Daily Effluent Flow
6		Average Industrial Flow	mgd	0.05	Estimated
7		Average Influent Concentration	ug/L	2.0	Sep 2018-Aug 2019 Monitoring Data
8		Average Influent Loading	lbs/day	0.069	Sep 2018-Aug 2019 Monitoring Data
9		Maximum Influent Concentration	ug/L	3.4	Sep 2018-Aug 2019 Monitoring Data
10		Maximum Influent Loading	lbs/day	0.12	Sep 2018-Aug 2019 Monitoring Data
11		Average Primary Effluent Concentration	ug/L	1.5	2019 Local Limits Monitoring
12		Average Final Effluent Concentration	ug/L	1.4	Sep 2018-Aug 2019 Monitoring Data
13		Maximum Final Effluent Concentration	ug/L	2.2	Sep 2018-Aug 2019 Monitoring Data
14		Average Non-Industrial Concentration	ug/L	2.2	2019 Local Limits Monitoring
15		Average Non-Industrial Loading	lbs/day	0.091	0.00834*(D4-D6)*D14
16	**Removal Efficiency**				
17		In-Plant Total Removal	%	24.6%	Sep 2018-Aug 2019 Monitoring Data
18		In-Plant Primary Treatment Removal	%	25.0%	2019 Local Limits Monitoring
19	**Existing Conditions (Biosolids)**				
20		Biosolids Flow to Digester	mgd	0.02	Email Correspondence
21		Biosolids Volume to Landfill, Dry	lb/day	2,700	2018 NPDES Permit
22		Percent Solids of Biosolids to Landfill	%	15.8%	Apr-Aug 2019 Biosolids Monitoring
23		Specific Gravity at Disposal Point	kg/L	1.0	Estimated
24		Average Digester Concentration	ug/L	100	2018 Monitoring Data
25		Average Biosolids Concentration, Dry	mg/kg	1	Apr-Aug 2019 Biosolids Monitoring
26	**Treatment/Discharge/Disposal Limits**				
27		Daily Maximum Discharge Limit	ug/L	-	-
28		Average Monthly Discharge Limit	ug/L	-	-
29		Average Daily Discharge Load Limit	lbs/day	-	-
30		Activated Sludge Inhibition Limit	ug/L	100	USEPA Local Limits Guidance Manual
31		Nitrification Inhibition Limit	ug/L	1,500	USEPA Local Limits Guidance Manual
32		Anaerobic Digestion Inhibition Limit	ug/L	1,600	USEPA Local Limits Guidance Manual
33		Biosolids CCR Title 22 Disposal Limit, Wet	mg/kg	500	CCR Title 22
34	**Headworks Loading Limits**				
35		Daily Maximum Discharge Loading Limit	lbs/day	-	-
36		Average Monthly Discharge Loading Limit	lbs/day	-	-
37		Average Daily Discharge Loading Limit	lbs/day	-	-
38		Activated Sludge Inhibition Loading Limit	lbs/day	5.5	0.00834*D4*D30/(1-D18)
39		Nitrification Inhibition Loading Limit	lbs/day	83	0.00834*D4*D31/(1-D18)
40		Anaerobic Digestion Inhibition Loading Limit	lbs/day	0.89	0.00834*D20*D32/D17
41		Biosolids CCR Title 22 Loading Limit	lbs/day	35	0.000001*D21*D33/D22/D17
42	**Maximum Allowable Headworks Loading (MAHL)**				
43		**Limiting MAHL**	lbs/day	**0.89**	MIN(D35:D41)
44		Basis of MAHL		Anaerobic Digestion Inhibition Loading Limit	
45	**Maximum Allowable Industrial Loading (MAIL)**				
46		Safety Factor	10%	0.089	C46*D43
47		**Industrial Allocation**	lbs/day	**0.71**	D43-D15-D46
48		Uniform Local Limit	ug/L	1,711	D47/D6/0.00834

	F	G	H	I	J
1	**Cadmium**				
2			Units	Calculations	Formula/Source
3	**Existing Conditions (Wastewater)**				
4		Average WWTP Influent Flow	mgd	4.99	Sep 2018-Aug 2019 Average Daily Influent Flow
5		Average WWTP Effluent Flow	mgd	5.25	Sep 2018-Aug 2019 Average Daily Effluent Flow
6		Average Industrial Flow	mgd	0.05	Estimated
7		Average Influent Concentration	ug/L	0.14	Sep 2018-Aug 2019 Monitoring Data
8		Average Influent Loading	lbs/day	0.0050	Sep 2018-Aug 2019 Monitoring Data
9		Maximum Influent Concentration	ug/L	0.23	Sep 2018-Aug 2019 Monitoring Data
10		Maximum Influent Loading	lbs/day	0.0080	Sep 2018-Aug 2019 Monitoring Data
11		Average Primary Effluent Concentration	ug/L	0.05	2019 Local Limits Monitoring
12		Average Final Effluent Concentration	ug/L	<0.025	Sep 2018-Aug 2019 Monitoring Data
13		Maximum Final Effluent Concentration	ug/L	<0.025	Sep 2018-Aug 2019 Monitoring Data
14		Average Non-Industrial Concentration	ug/L	0.38	2019 Local Limits Monitoring
15		Average Non-Industrial Loading	lbs/day	0.016	0.00834*(I4-I6)*I14
16	**Removal Efficiency**				
17		In-Plant Total Removal	%	78.0%	Sep 2018-Aug 2019 Monitoring Data
18		In-Plant Primary Treatment Removal	%	61.4%	2019 Local Limits Monitoring
19	**Existing Conditions (Biosolids)**				
20		Biosolids Flow to Digester	mgd	0.02	Email Correspondence
21		Biosolids Volume to Landfill, Dry	lb/day	2,700	2018 NPDES Permit
22		Percent Solids of Biosolids to Landfill	%	15.8%	Apr-Aug 2019 Biosolids Monitoring
23		Specific Gravity at Disposal Point	kg/L	1.0	Estimated
24		Average Digester Concentration	ug/L	14	2018 Monitoring Data
25		Average Biosolids Concentration, Dry	mg/kg	<0.4	Apr-Aug 2019 Biosolids Monitoring
26	**Treatment/Discharge/Disposal Limits**				
27		Daily Maximum Discharge Limit	ug/L	-	-
28		Average Monthly Discharge Limit	ug/L	-	-
29		Average Daily Discharge Load Limit	lbs/day	-	-
30		Activated Sludge Inhibition Limit	ug/L	1,000	USEPA Local Limits Guidance Manual
31		Nitrification Inhibition Limit	ug/L	5,200	USEPA Local Limits Guidance Manual
32		Anaerobic Digestion Inhibition Limit	ug/L	20,000	USEPA Local Limits Guidance Manual
33		Biosolids CCR Title 22 Disposal Limit, Wet	mg/kg	100	CCR Title 22
34	**Headworks Loading Limits**				
35		Daily Maximum Discharge Loading Limit	lbs/day	-	-
36		Average Monthly Discharge Loading Limit	lbs/day	-	-
37		Average Daily Discharge Loading Limit	lbs/day	-	-
38		Activated Sludge Inhibition Loading Limit	lbs/day	108	0.00834*I4*I30/(1-I18)
39		Nitrification Inhibition Loading Limit	lbs/day	561	0.00834*I4*I31/(1-I18)
40		Anaerobic Digestion Inhibition Loading Limit	lbs/day	3.5	0.00834*I20*I32/I17
41		Biosolids CCR Title 22 Loading Limit	lbs/day	2.2	0.000001*I21*I33/I22/I17
42	**Maximum Allowable Headworks Loading (MAHL)**				
43		**Limiting MAHL**	lbs/day	**2.2**	MIN(I35:I41)
44		Basis of MAHL		Biosolids CCR Title 22 Loading Limit	
45	**Maximum Allowable Industrial Loading (MAIL)**				
46		Safety Factor	10%	0.22	H46*I43
47		**Industrial Allocation**	lbs/day	**2.0**	I43-I15-I46
48		Uniform Local Limit	ug/L	4,691	I47/I6/0.00834

	K	L	M	N	O
1		**Chromium**			
2			Units	Calculations	Formula/Source
3	**Existing Conditions (Wastewater)**				
4		Average WWTP Influent Flow	mgd	4.99	Sep 2018-Aug 2019 Average Daily Influent Flow
5		Average WWTP Effluent Flow	mgd	5.25	Sep 2018-Aug 2019 Average Daily Effluent Flow
6		Average Industrial Flow	mgd	0.05	Estimated
7		Average Influent Concentration	ug/L	5.7	Sep 2018-Aug 2019 Monitoring Data
8		Average Influent Loading	lbs/day	0.20	Sep 2018-Aug 2019 Monitoring Data
9		Maximum Influent Concentration	ug/L	6.5	Sep 2018-Aug 2019 Monitoring Data
10		Maximum Influent Loading	lbs/day	0.22	Sep 2018-Aug 2019 Monitoring Data
11		Average Primary Effluent Concentration	ug/L	3.4	2019 Local Limits Monitoring
12		Average Final Effluent Concentration	ug/L	1.3	Sep 2018-Aug 2019 Monitoring Data
13		Maximum Final Effluent Concentration	ug/L	1.5	Sep 2018-Aug 2019 Monitoring Data
14		Average Non-Industrial Concentration	ug/L	14	2019 Local Limits Monitoring
15		Average Non-Industrial Loading	lbs/day	0.58	0.00834*(N4-N6)*N14
16	**Removal Efficiency**				
17		In-Plant Total Removal	%	76.5%	Sep 2018-Aug 2019 Monitoring Data
18		In-Plant Primary Treatment Removal	%	40.4%	2019 Local Limits Monitoring
19	**Existing Conditions (Biosolids)**				
20		Biosolids Flow to Digester	mgd	0.02	Email Correspondence
21		Biosolids Volume to Landfill, Dry	lb/day	2,700	2018 NPDES Permit
22		Percent Solids of Biosolids to Landfill	%	15.8%	Apr-Aug 2019 Biosolids Monitoring
23		Specific Gravity at Disposal Point	kg/L	1.0	Estimated
24		Average Digester Concentration	ug/L	410	2018 Monitoring Data
25		Average Biosolids Concentration, Dry	mg/kg	18	Apr-Aug 2019 Biosolids Monitoring
26	**Treatment/Discharge/Disposal Limits**				
27		Daily Maximum Discharge Limit	ug/L	-	-
28		Average Monthly Discharge Limit	ug/L	-	-
29		Average Daily Discharge Load Limit	lbs/day	-	-
30		Activated Sludge Inhibition Limit	ug/L	1,000	USEPA Local Limits Guidance Manual
31		Nitrification Inhibition Limit	ug/L	250	USEPA Local Limits Guidance Manual
32		Anaerobic Digestion Inhibition Limit	ug/L	110,000	USEPA Local Limits Guidance Manual
33		Biosolids CCR Title 22 Disposal Limit, Wet	mg/kg	500	CCR Title 22
34	**Headworks Loading Limits**				
35		Daily Maximum Discharge Loading Limit	lbs/day	-	-
36		Average Monthly Discharge Loading Limit	lbs/day	-	-
37		Average Daily Discharge Loading Limit	lbs/day	-	-
38		Activated Sludge Inhibition Loading Limit	lbs/day	69.8	0.00834*N4*N30/(1-N18)
39		Nitrification Inhibition Loading Limit	lbs/day	17.4	0.00834*N4*N31/(1-N18)
40		Anaerobic Digestion Inhibition Loading Limit	lbs/day	19.8	0.00834*N20*N32/N17
41		Biosolids CCR Title 22 Loading Limit	lbs/day	11	0.000001*N21*N33/N22/N17
42	**Maximum Allowable Headworks Loading (MAHL)**				
43		**Limiting MAHL**	lbs/day	**11**	MIN(N35:N41)
44		Basis of MAHL		Biosolids CCR Title 22 Loading Limit	
45	**Maximum Allowable Industrial Loading (MAIL)**				
46		Safety Factor	10%	1.1	M46*N43
47		**Industrial Allocation**	lbs/day	**9.5**	N43-N15-N46
48		Uniform Local Limit	ug/L	22,723	N47/N6/0.00834

	P	Q	R	S	T
1	**Copper**				
2			Units	Calculations	Formula/Source
3	**Existing Conditions (Wastewater)**				
4		Average WWTP Influent Flow	mgd	4.99	Sep 2018-Aug 2019 Average Daily Influent Flow
5		Average WWTP Effluent Flow	mgd	5.25	Sep 2018-Aug 2019 Average Daily Effluent Flow
6		Average Industrial Flow	mgd	0.05	Estimated
7		Average Influent Concentration	ug/L	150	Sep 2018-Aug 2019 Monitoring Data
8		Average Influent Loading	lbs/day	5.2	Sep 2018-Aug 2019 Monitoring Data
9		Maximum Influent Concentration	ug/L	290	Sep 2018-Aug 2019 Monitoring Data
10		Maximum Influent Loading	lbs/day	10.0	Sep 2018-Aug 2019 Monitoring Data
11		Average Primary Effluent Concentration	ug/L	31	2019 Local Limits Monitoring
12		Average Final Effluent Concentration	ug/L	29	Sep 2018-Aug 2019 Monitoring Data
13		Maximum Final Effluent Concentration	ug/L	58	Sep 2018-Aug 2019 Monitoring Data
14		Average Non-Industrial Concentration	ug/L	77	2019 Local Limits Monitoring
15		Average Non-Industrial Loading	lbs/day	3.2	0.00834*(S4-S6)*S14
16	**Removal Efficiency**				
17		In-Plant Total Removal	%	80.8%	Sep 2018-Aug 2019 Monitoring Data
18		In-Plant Primary Treatment Removal	%	79.3%	2019 Local Limits Monitoring
19	**Existing Conditions (Biosolids)**				
20		Biosolids Flow to Digester	mgd	0.02	Email Correspondence
21		Biosolids Volume to Landfill, Dry	lb/day	2,700	2018 NPDES Permit
22		Percent Solids of Biosolids to Landfill	%	15.8%	Apr-Aug 2019 Biosolids Monitoring
23		Specific Gravity at Disposal Point	kg/L	1.0	Estimated
24		Average Digester Concentration	ug/L	5,400	2018 Monitoring Data
25		Average Biosolids Concentration, Dry	mg/kg	68	Apr-Aug 2019 Biosolids Monitoring
26	**Treatment/Discharge/Disposal Limits**				
27		Daily Maximum Discharge Limit	ug/L	-	-
28		Average Monthly Discharge Limit	ug/L	-	-
29		Average Daily Discharge Load Limit	lbs/day	-	-
30		Activated Sludge Inhibition Limit	ug/L	1,000	USEPA Local Limits Guidance Manual
31		Nitrification Inhibition Limit	ug/L	50	USEPA Local Limits Guidance Manual
32		Anaerobic Digestion Inhibition Limit	ug/L	40,000	USEPA Local Limits Guidance Manual
33		Biosolids CCR Title 22 Disposal Limit, Wet	mg/kg	2,500	CCR Title 22
34	**Headworks Loading Limits**				
35		Daily Maximum Discharge Loading Limit	lbs/day	-	-
36		Average Monthly Discharge Loading Limit	lbs/day	-	-
37		Average Daily Discharge Loading Limit	lbs/day	-	-
38		Activated Sludge Inhibition Loading Limit	lbs/day	201	0.00834*S4*S30/(1-S18)
39		Nitrification Inhibition Loading Limit	lbs/day	10	0.00834*S4*S31/(1-S18)
40		Anaerobic Digestion Inhibition Loading Limit	lbs/day	6.8	0.00834*S20*S32/S17
41		Biosolids CCR Title 22 Loading Limit	lbs/day	53	0.000001*S21*S33/S22/S17
42	**Maximum Allowable Headworks Loading (MAHL)**				
43		**Limiting MAHL**	lbs/day	**6.8**	MIN(S35:S41)
44		Basis of MAHL		Anaerobic Digestion Inhibition Loading Limit	
45	**Maximum Allowable Industrial Loading (MAIL)**				
46		Safety Factor	10%	0.68	R46*S43
47		**Industrial Allocation**	lbs/day	**3.0**	S43-S15-S46
48		Uniform Local Limit	ug/L	7,101	S47/S6/0.00834

	U	V	W	X	Y
1		**Lead**			
2			Units	Calculations	Formula/Source
3	**Existing Conditions (Wastewater)**				
4		Average WWTP Influent Flow	mgd	4.99	Sep 2018-Aug 2019 Average Daily Influent Flow
5		Average WWTP Effluent Flow	mgd	5.25	Sep 2018-Aug 2019 Average Daily Effluent Flow
6		Average Industrial Flow	mgd	0.05	Estimated
7		Average Influent Concentration	ug/L	0.98	Sep 2018-Aug 2019 Monitoring Data
8		Average Influent Loading	lbs/day	0.034	Sep 2018-Aug 2019 Monitoring Data
9		Maximum Influent Concentration	ug/L	1.1	Sep 2018-Aug 2019 Monitoring Data
10		Maximum Influent Loading	lbs/day	0.038	Sep 2018-Aug 2019 Monitoring Data
11		Average Primary Effluent Concentration	ug/L	0.43	2019 Local Limits Monitoring
12		Average Final Effluent Concentration	ug/L	0.060	Sep 2018-Aug 2019 Monitoring Data
13		Maximum Final Effluent Concentration	ug/L	0.13	Sep 2018-Aug 2019 Monitoring Data
14		Average Non-Industrial Concentration	ug/L	2.1	2019 Local Limits Monitoring
15		Average Non-Industrial Loading	lbs/day	0.09	0.00834*(X4-X6)*X14
16	**Removal Efficiency**				
17		In-Plant Total Removal	%	93.8%	Sep 2018-Aug 2019 Monitoring Data
18		In-Plant Primary Treatment Removal	%	56.1%	2019 Local Limits Monitoring
19	**Existing Conditions (Biosolids)**				
20		Biosolids Flow to Digester	mgd	0.02	Email Correspondence
21		Biosolids Volume to Landfill, Dry	lb/day	2,700	2018 NPDES Permit
22		Percent Solids of Biosolids to Landfill	%	15.8%	Apr-Aug 2019 Biosolids Monitoring
23		Specific Gravity at Disposal Point	kg/L	1.0	Estimated
24		Average Digester Concentration	ug/L	120	2018 Monitoring Data
25		Average Biosolids Concentration, Dry	mg/kg	1.5	Apr-Aug 2019 Biosolids Monitoring
26	**Treatment/Discharge/Disposal Limits**				
27		Daily Maximum Discharge Limit	ug/L	-	-
28		Average Monthly Discharge Limit	ug/L	-	-
29		Average Daily Discharge Load Limit	lbs/day	-	-
30		Activated Sludge Inhibition Limit	ug/L	1,000	USEPA Local Limits Guidance Manual
31		Nitrification Inhibition Limit	ug/L	500	USEPA Local Limits Guidance Manual
32		Anaerobic Digestion Inhibition Limit	ug/L	340,000	USEPA Local Limits Guidance Manual
33		Biosolids CCR Title 22 Disposal Limit, Wet	mg/kg	1,000	CCR Title 22
34	**Headworks Loading Limits**				
35		Daily Maximum Discharge Loading Limit	lbs/day	-	-
36		Average Monthly Discharge Loading Limit	lbs/day	-	-
37		Average Daily Discharge Loading Limit	lbs/day	-	-
38		Activated Sludge Inhibition Loading Limit	lbs/day	95	0.00834*X4*X30/(1-X18)
39		Nitrification Inhibition Loading Limit	lbs/day	47	0.00834*X4*X31/(1-X18)
40		Anaerobic Digestion Inhibition Loading Limit	lbs/day	50	0.00834*X20*X32/X17
41		Biosolids CCR Title 22 Loading Limit	lbs/day	18	0.000001*X21*X33/X22/X17
42	**Maximum Allowable Headworks Loading (MAHL)**				
43		**Limiting MAHL**	lbs/day	**18**	MIN(X35:X41)
44		Basis of MAHL		Biosolids CCR Title 22 Loading Limit	
45	**Maximum Allowable Industrial Loading (MAIL)**				
46		Safety Factor	10%	1.8	W46*X43
47		**Industrial Allocation**	lbs/day	**16**	X43-X15-X46
48		Uniform Local Limit	ug/L	39,102	X47/X6/0.00834

	Z AA	AB	AC	AD
1	**Mercury**			
2		Units	Calculations	Formula/Source
3	**Existing Conditions (Wastewater)**			
4	Average WWTP Influent Flow	mgd	4.99	Sep 2018-Aug 2019 Average Daily Influent Flow
5	Average WWTP Effluent Flow	mgd	5.25	Sep 2018-Aug 2019 Average Daily Effluent Flow
6	Average Industrial Flow	mgd	0.05	Estimated
7	Average Influent Concentration	ug/L	0.079	Sep 2018-Aug 2019 Monitoring Data
8	Average Influent Loading	lbs/day	0.0028	Sep 2018-Aug 2019 Monitoring Data
9	Maximum Influent Concentration	ug/L	0.11	Sep 2018-Aug 2019 Monitoring Data
10	Maximum Influent Loading	lbs/day	0.004	Sep 2018-Aug 2019 Monitoring Data
11	Average Primary Effluent Concentration	ug/L	0.011	2019 Local Limits Monitoring
12	Average Final Effluent Concentration	ug/L	0.001	Sep 2018-Aug 2019 Monitoring Data
13	Maximum Final Effluent Concentration	ug/L	0.0013	Sep 2018-Aug 2019 Monitoring Data
14	Average Non-Industrial Concentration	ug/L	0.19	2019 Local Limits Monitoring
15	Average Non-Industrial Loading	lbs/day	0.00783	0.00834*(AC4-AC6)*AC14
16	**Removal Efficiency**			
17	In-Plant Total Removal	%	98.8%	Sep 2018-Aug 2019 Monitoring Data
18	In-Plant Primary Treatment Removal	%	86.1%	2019 Local Limits Monitoring
19	**Existing Conditions (Biosolids)**			
20	Biosolids Flow to Digester	mgd	0.02	Email Correspondence
21	Biosolids Volume to Landfill, Dry	lb/day	2,700	2018 NPDES Permit
22	Percent Solids of Biosolids to Landfill	%	15.8%	Apr-Aug 2019 Biosolids Monitoring
23	Specific Gravity at Disposal Point	kg/L	1.0	Estimated
24	Average Digester Concentration	ug/L	0.19	2018 Monitoring Data
25	Average Biosolids Concentration, Dry	mg/kg	0.13	Apr-Aug 2019 Biosolids Monitoring
26	**Treatment/Discharge/Disposal Limits**			
27	Daily Maximum Discharge Limit	ug/L	-	-
28	Average Monthly Discharge Limit	ug/L	-	-
29	Average Daily Discharge Load Limit	lbs/day	0.0013	2018 NPDES Permit
30	Activated Sludge Inhibition Limit	ug/L	100	USEPA Local Limits Guidance Manual
31	Nitrification Inhibition Limit	ug/L	-	-
32	Anaerobic Digestion Inhibition Limit	ug/L	-	-
33	Biosolids CCR Title 22 Disposal Limit, Wet	mg/kg	20	CCR Title 22
34	**Headworks Loading Limits**			
35	Daily Maximum Discharge Loading Limit	lbs/day	-	-
36	Average Monthly Discharge Loading Limit	lbs/day	-	-
37	Average Daily Discharge Loading Limit	lbs/day	0.10	AC29/(1-AC17)
38	Activated Sludge Inhibition Loading Limit	lbs/day	30	0.00834*AC4*AC30/(1-AC18)
39	Nitrification Inhibition Loading Limit	lbs/day	-	-
40	Anaerobic Digestion Inhibition Loading Limit	lbs/day	-	-
41	Biosolids CCR Title 22 Loading Limit	lbs/day	0.35	0.000001*AC21*AC33/AC22/AC17
42	**Maximum Allowable Headworks Loading (MAHL)**			
43	**Limiting MAHL**	lbs/day	**0.10**	MIN(AC35:AC41)
44	Basis of MAHL		Average Daily Discharge Loading Limit	
45	**Maximum Allowable Industrial Loading (MAIL)**			
46	Safety Factor	10%	0.010	AB46*AC43
47	**Industrial Allocation**	lbs/day	**0.086**	AC43-AC15-AC46
48	Uniform Local Limit	ug/L	205	AC47/AC6/0.00834

	AE	AF	AG	AH	AI
1		Molybdenum			
2			Units	Calculations	Formula/Source
3	**Existing Conditions (Wastewater)**				
4		Average WWTP Influent Flow	mgd	4.99	Sep 2018-Aug 2019 Average Daily Influent Flow
5		Average WWTP Effluent Flow	mgd	5.25	Sep 2018-Aug 2019 Average Daily Effluent Flow
6		Average Industrial Flow	mgd	0.05	Estimated
7		Average Influent Concentration	ug/L	3.6	Sep 2018-Aug 2019 Monitoring Data
8		Average Influent Loading	lbs/day	0.12	Sep 2018-Aug 2019 Monitoring Data
9		Maximum Influent Concentration	ug/L	8.9	Sep 2018-Aug 2019 Monitoring Data
10		Maximum Influent Loading	lbs/day	0.31	Sep 2018-Aug 2019 Monitoring Data
11		Average Primary Effluent Concentration	ug/L	2.5	2019 Local Limits Monitoring
12		Average Final Effluent Concentration	ug/L	3.1	Sep 2018-Aug 2019 Monitoring Data
13		Maximum Final Effluent Concentration	ug/L	8.4	Sep 2018-Aug 2019 Monitoring Data
14		Average Non-Industrial Concentration	ug/L	2.0	2019 Local Limits Monitoring
15		Average Non-Industrial Loading	lbs/day	0.082	0.00834*(AH4-AH6)*AH14
16	**Removal Efficiency**				
17		In-Plant Total Removal	%	8.3%	Sep 2018-Aug 2019 Monitoring Data
18		In-Plant Primary Treatment Removal	%	-	-
19	**Existing Conditions (Biosolids)**				
20		Biosolids Flow to Digester	mgd	0.02	Email Correspondence
21		Biosolids Volume to Landfill, Dry	lb/day	2,700	2018 NPDES Permit
22		Percent Solids of Biosolids to Landfill	%	15.8%	Apr-Aug 2019 Biosolids Monitoring
23		Specific Gravity at Disposal Point	kg/L	1.0	Estimated
24		Average Digester Concentration	ug/L	140	2018 Monitoring Data
25		Average Biosolids Concentration, Dry	mg/kg	2	Apr-Aug 2019 Biosolids Monitoring
26	**Treatment/Discharge/Disposal Limits**				
27		Daily Maximum Discharge Limit	ug/L	-	-
28		Average Monthly Discharge Limit	ug/L	-	-
29		Average Daily Discharge Load Limit	lbs/day	-	-
30		Activated Sludge Inhibition Limit	ug/L	-	-
31		Nitrification Inhibition Limit	ug/L	-	-
32		Anaerobic Digestion Inhibition Limit	ug/L	-	-
33		Biosolids CCR Title 22 Disposal Limit, Wet	mg/kg	3,500	CCR Title 22
34	**Headworks Loading Limits**				
35		Daily Maximum Discharge Loading Limit	lbs/day	-	-
36		Average Monthly Discharge Loading Limit	lbs/day	-	-
37		Average Daily Discharge Loading Limit	lbs/day	-	-
38		Activated Sludge Inhibition Loading Limit	lbs/day	-	-
39		Nitrification Inhibition Loading Limit	lbs/day	-	-
40		Anaerobic Digestion Inhibition Loading Limit	lbs/day	-	-
41		Biosolids CCR Title 22 Loading Limit	lbs/day	718	0.000001*AH21*AH33/AH22/AH17
42	**Maximum Allowable Headworks Loading (MAHL)**				
43		**Limiting MAHL**	lbs/day	**718**	MIN(AH35:AH41)
44		Basis of MAHL		Biosolids CCR Title 22 Loading Limit	
45	**Maximum Allowable Industrial Loading (MAIL)**				
46		Safety Factor	10%	72	AG46*AH43
47		**Industrial Allocation**	lbs/day	**646**	AH43-AH15-AH46
48		Uniform Local Limit	ug/L	1,548,842	AH47/AH6/0.00834

	AJ	AK	AL	AM	AN
1		**Nickel**			
2			Units	Calculations	Formula/Source
3	**Existing Conditions (Wastewater)**				
4		Average WWTP Influent Flow	mgd	4.99	Sep 2018-Aug 2019 Average Daily Influent Flow
5		Average WWTP Effluent Flow	mgd	5.25	Sep 2018-Aug 2019 Average Daily Effluent Flow
6		Average Industrial Flow	mgd	0.05	Estimated
7		Average Influent Concentration	ug/L	5.6	Sep 2018-Aug 2019 Monitoring Data
8		Average Influent Loading	lbs/day	0.20	Sep 2018-Aug 2019 Monitoring Data
9		Maximum Influent Concentration	ug/L	12	Sep 2018-Aug 2019 Monitoring Data
10		Maximum Influent Loading	lbs/day	0.42	Sep 2018-Aug 2019 Monitoring Data
11		Average Primary Effluent Concentration	ug/L	2.9	2019 Local Limits Monitoring
12		Average Final Effluent Concentration	ug/L	3.2	Sep 2018-Aug 2019 Monitoring Data
13		Maximum Final Effluent Concentration	ug/L	8.4	Sep 2018-Aug 2019 Monitoring Data
14		Average Non-Industrial Concentration	ug/L	6.0	2019 Local Limits Monitoring
15		Average Non-Industrial Loading	lbs/day	0.25	0.00834*(AM4-AM6)*AM14
16	**Removal Efficiency**				
17		In-Plant Total Removal	%	40.0%	Sep 2018-Aug 2019 Monitoring Data
18		In-Plant Primary Treatment Removal	%	48.2%	2019 Local Limits Monitoring
19	**Existing Conditions (Biosolids)**				
20		Biosolids Flow to Digester	mgd	0.02	Email Correspondence
21		Biosolids Volume to Landfill, Dry	lb/day	2,700	2018 NPDES Permit
22		Percent Solids of Biosolids to Landfill	%	15.8%	Apr-Aug 2019 Biosolids Monitoring
23		Specific Gravity at Disposal Point	kg/L	1.0	Estimated
24		Average Digester Concentration	ug/L	340	2018 Monitoring Data
25		Average Biosolids Concentration, Dry	mg/kg	7	Apr-Aug 2019 Biosolids Monitoring
26	**Treatment/Discharge/Disposal Limits**				
27		Daily Maximum Discharge Limit	ug/L	-	-
28		Average Monthly Discharge Limit	ug/L	-	-
29		Average Daily Discharge Load Limit	lbs/day	-	-
30		Activated Sludge Inhibition Limit	ug/L	1,000	USEPA Local Limits Guidance Manual
31		Nitrification Inhibition Limit	ug/L	500	USEPA Local Limits Guidance Manual
32		Anaerobic Digestion Inhibition Limit	ug/L	10,000	USEPA Local Limits Guidance Manual
33		Biosolids CCR Title 22 Disposal Limit, Wet	mg/kg	2,000	CCR Title 22
34	**Headworks Loading Limits**				
35		Daily Maximum Discharge Loading Limit	lbs/day	-	-
36		Average Monthly Discharge Loading Limit	lbs/day	-	-
37		Average Daily Discharge Loading Limit	lbs/day	-	-
38		Activated Sludge Inhibition Loading Limit	lbs/day	80	0.00834*AM4*AM30/(1-AM18)
39		Nitrification Inhibition Loading Limit	lbs/day	40	0.00834*AM4*AM31/(1-AM18)
40		Anaerobic Digestion Inhibition Loading Limit	lbs/day	3.4	0.00834*AM20*AM32/AM17
41		Biosolids CCR Title 22 Loading Limit	lbs/day	85	0.000001*AM21*AM33/AM22/AM17
42	**Maximum Allowable Headworks Loading (MAHL)**				
43		**Limiting MAHL**	lbs/day	**3.4**	MIN(AM35:AM41)
44		Basis of MAHL		Anaerobic Digestion Inhibition Loading Limit	
45	**Maximum Allowable Industrial Loading (MAIL)**				
46		Safety Factor	10%	0.34	AL46*AM43
47		**Industrial Allocation**	lbs/day	**2.8**	AM43-AM15-AM46
48		Uniform Local Limit	ug/L	6,832	AM47/AM6/0.00834

	AO	AP	AQ	AR	AS
1	**Selenium**				
2			Units	Calculations	Formula/Source
3	**Existing Conditions (Wastewater)**				
4		Average WWTP Influent Flow	mgd	4.99	Sep 2018-Aug 2019 Average Daily Influent Flow
5		Average WWTP Effluent Flow	mgd	5.25	Sep 2018-Aug 2019 Average Daily Effluent Flow
6		Average Industrial Flow	mgd	0.05	Estimated
7		Average Influent Concentration	ug/L	4.2	Sep 2018-Aug 2019 Monitoring Data
8		Average Influent Loading	lbs/day	0.15	Sep 2018-Aug 2019 Monitoring Data
9		Maximum Influent Concentration	ug/L	5.3	Sep 2018-Aug 2019 Monitoring Data
10		Maximum Influent Loading	lbs/day	0.18	Sep 2018-Aug 2019 Monitoring Data
11		Average Primary Effluent Concentration	ug/L	4.2	2019 Local Limits Monitoring
12		Average Final Effluent Concentration	ug/L	3.0	Sep 2018-Aug 2019 Monitoring Data
13		Maximum Final Effluent Concentration	ug/L	3.6	Sep 2018-Aug 2019 Monitoring Data
14		Average Non-Industrial Concentration	ug/L	1.5	2019 Local Limits Monitoring
15		Average Non-Industrial Loading	lbs/day	0.062	0.00834*(AR4-AR6)*AR14
16	**Removal Efficiency**				
17		In-Plant Total Removal	%	26.7%	Sep 2018-Aug 2019 Monitoring Data
18		In-Plant Primary Treatment Removal	%	-	-
19	**Existing Conditions (Biosolids)**				
20		Biosolids Flow to Digester	mgd	0.02	Email Correspondence
21		Biosolids Volume to Landfill, Dry	lb/day	2,700	2018 NPDES Permit
22		Percent Solids of Biosolids to Landfill	%	15.8%	Apr-Aug 2019 Biosolids Monitoring
23		Specific Gravity at Disposal Point	kg/L	1.0	Estimated
24		Average Digester Concentration	ug/L	170	2018 Monitoring Data
25		Average Biosolids Concentration, Dry	mg/kg	4.6	Apr-Aug 2019 Biosolids Monitoring
26	**Treatment/Discharge/Disposal Limits**				
27		Daily Maximum Discharge Limit	ug/L	-	-
28		Average Monthly Discharge Limit	ug/L	-	-
29		Average Daily Discharge Load Limit	lbs/day	-	-
30		Activated Sludge Inhibition Limit	ug/L	-	-
31		Nitrification Inhibition Limit	ug/L	-	-
32		Anaerobic Digestion Inhibition Limit	ug/L	-	-
33		Biosolids CCR Title 22 Disposal Limit, Wet	mg/kg	100	CCR Title 22
34	**Headworks Loading Limits**				
35		Daily Maximum Discharge Loading Limit	lbs/day	-	-
36		Average Monthly Discharge Loading Limit	lbs/day	-	-
37		Average Daily Discharge Loading Limit	lbs/day	-	-
38		Activated Sludge Inhibition Loading Limit	lbs/day	-	-
39		Nitrification Inhibition Loading Limit	lbs/day	-	-
40		Anaerobic Digestion Inhibition Loading Limit	lbs/day	-	-
41		Biosolids CCR Title 22 Loading Limit	lbs/day	6.4	0.000001*AR21*AR33/AR22/AR17
42	**Maximum Allowable Headworks Loading (MAHL)**				
43		**Limiting MAHL**	lbs/day	**6.4**	MIN(AR35:AR41)
44		Basis of MAHL		Biosolids CCR Title 22 Loading Limit	
45	**Maximum Allowable Industrial Loading (MAIL)**				
46		Safety Factor	10%	0.64	AQ46*AR43
47		**Industrial Allocation**	lbs/day	**5.7**	AR43-AR15-AR46
48		Uniform Local Limit	ug/L	13,683	AR47/AR6/0.00834

	AT	AU	AV	AW	AX
1	Silver				
2			Units	Calculations	Formula/Source
3	**Existing Conditions (Wastewater)**				
4		Average WWTP Influent Flow	mgd	4.99	Sep 2018-Aug 2019 Average Daily Influent Flow
5		Average WWTP Effluent Flow	mgd	5.25	Sep 2018-Aug 2019 Average Daily Effluent Flow
6		Average Industrial Flow	mgd	0.05	Estimated
7		Average Influent Concentration	ug/L	0.18	Sep 2018-Aug 2019 Monitoring Data
8		Average Influent Loading	lbs/day	0.0062	Sep 2018-Aug 2019 Monitoring Data
9		Maximum Influent Concentration	ug/L	0.22	Sep 2018-Aug 2019 Monitoring Data
10		Maximum Influent Loading	lbs/day	0.0077	Sep 2018-Aug 2019 Monitoring Data
11		Average Primary Effluent Concentration	ug/L	0.090	2019 Local Limits Monitoring
12		Average Final Effluent Concentration	ug/L	<0.02	Sep 2018-Aug 2019 Monitoring Data
13		Maximum Final Effluent Concentration	ug/L	<0.02	Sep 2018-Aug 2019 Monitoring Data
14		Average Non-Industrial Concentration	ug/L	0.33	2019 Local Limits Monitoring
15		Average Non-Industrial Loading	lbs/day	0.014	0.00834*(AW4-AW6)*AW14
16	**Removal Efficiency**				
17		In-Plant Total Removal	%	94.2%	Sep 2018-Aug 2019 Monitoring Data
18		In-Plant Primary Treatment Removal	%	-	-
19	**Existing Conditions (Biosolids)**				
20		Biosolids Flow to Digester	mgd	0.02	Email Correspondence
21		Biosolids Volume to Landfill, Dry	lb/day	2,700	2018 NPDES Permit
22		Percent Solids of Biosolids to Landfill	%	15.8%	Apr-Aug 2019 Biosolids Monitoring
23		Specific Gravity at Disposal Point	kg/L	1.0	Estimated
24		Average Digester Concentration	ug/L	27	2018 Monitoring Data
25		Average Biosolids Concentration, Dry	mg/kg	<0.4	Apr-Aug 2019 Biosolids Monitoring
26	**Treatment/Discharge/Disposal Limits**				
27		Daily Maximum Discharge Limit	ug/L	-	-
28		Average Monthly Discharge Limit	ug/L	-	-
29		Average Daily Discharge Load Limit	lbs/day	-	-
30		Activated Sludge Inhibition Limit	ug/L	-	-
31		Nitrification Inhibition Limit	ug/L	-	-
32		Anaerobic Digestion Inhibition Limit	ug/L	13,000	USEPA Local Limits Guidance Manual
33		Biosolids CCR Title 22 Disposal Limit, Wet	mg/kg	500	CCR Title 22
34	**Headworks Loading Limits**				
35		Daily Maximum Discharge Loading Limit	lbs/day	-	-
36		Average Monthly Discharge Loading Limit	lbs/day	-	-
37		Average Daily Discharge Loading Limit	lbs/day	-	-
38		Activated Sludge Inhibition Loading Limit	lbs/day	-	-
39		Nitrification Inhibition Loading Limit	lbs/day	-	-
40		Anaerobic Digestion Inhibition Loading Limit	lbs/day	1.9	0.00834*AW20*AW32/AW17
41		Biosolids CCR Title 22 Loading Limit	lbs/day	9.1	0.000001*AW21*AW33/AW22/AW17
42	**Maximum Allowable Headworks Loading (MAHL)**				
43		**Limiting MAHL**	lbs/day	**1.9**	MIN(AW35:AW41)
44		Basis of MAHL		Anaerobic Digestion Inhibition Loading Limit	
45	**Maximum Allowable Industrial Loading (MAIL)**				
46		Safety Factor	10%	0.19	AV46*AW43
47		**Industrial Allocation**	lbs/day	**1.7**	AW43-AW15-AW46
48		Uniform Local Limit	ug/L	4,066	AW47/AW6/0.00834

	AY	AZ	BA	BB	BC
1	Zinc				
2			Units	Calculations	Formula/Source
3	**Existing Conditions (Wastewater)**				
4		Average WWTP Influent Flow	mgd	4.99	Sep 2018-Aug 2019 Average Daily Influent Flow
5		Average WWTP Effluent Flow	mgd	5.25	Sep 2018-Aug 2019 Average Daily Effluent Flow
6		Average Industrial Flow	mgd	0.05	Estimated
7		Average Influent Concentration	ug/L	170	Sep 2018-Aug 2019 Monitoring Data
8		Average Influent Loading	lbs/day	5.8	Sep 2018-Aug 2019 Monitoring Data
9		Maximum Influent Concentration	ug/L	200	Sep 2018-Aug 2019 Monitoring Data
10		Maximum Influent Loading	lbs/day	6.9	Sep 2018-Aug 2019 Monitoring Data
11		Average Primary Effluent Concentration	ug/L	69	2019 Local Limits Monitoring
12		Average Final Effluent Concentration	ug/L	45	Sep 2018-Aug 2019 Monitoring Data
13		Maximum Final Effluent Concentration	ug/L	52	Sep 2018-Aug 2019 Monitoring Data
14		Average Non-Industrial Concentration	ug/L	300	2019 Local Limits Monitoring
15		Average Non-Industrial Loading	lbs/day	5.7	Influent Sources Mass Balance
16	**Removal Efficiency**				
17		In-Plant Total Removal	%	72.4%	Sep 2018-Aug 2019 Monitoring Data
18		In-Plant Primary Treatment Removal	%	59.4%	2019 Local Limits Monitoring
19	**Existing Conditions (Biosolids)**				
20		Biosolids Flow to Digester	mgd	0.02	Email Correspondence
21		Biosolids Volume to Landfill, Dry	lb/day	2,700	2018 NPDES Permit
22		Percent Solids of Biosolids to Landfill	%	15.8%	Apr-Aug 2019 Biosolids Monitoring
23		Specific Gravity at Disposal Point	kg/L	1.0	Estimated
24		Average Digester Concentration	ug/L	12,000	2018 Monitoring Data
25		Average Biosolids Concentration, Dry	mg/kg	130	Apr-Aug 2019 Biosolids Monitoring
26	**Treatment/Discharge/Disposal Limits**				
27		Daily Maximum Discharge Limit	ug/L	-	-
28		Average Monthly Discharge Limit	ug/L	-	-
29		Average Daily Discharge Load Limit	lbs/day	-	-
30		Activated Sludge Inhibition Limit	ug/L	300	USEPA Local Limits Guidance Manual
31		Nitrification Inhibition Limit	ug/L	80	USEPA Local Limits Guidance Manual
32		Anaerobic Digestion Inhibition Limit	ug/L	400,000	USEPA Local Limits Guidance Manual
33		Biosolids CCR Title 22 Disposal Limit, Wet	mg/kg	5,000	CCR Title 22
34	**Headworks Loading Limits**				
35		Daily Maximum Discharge Loading Limit	lbs/day	-	-
36		Average Monthly Discharge Loading Limit	lbs/day	-	-
37		Average Daily Discharge Loading Limit	lbs/day	-	-
38		Activated Sludge Inhibition Loading Limit	lbs/day	31	0.00834*BB4*BB30/(1-BB18)
39		Nitrification Inhibition Loading Limit	lbs/day	8.2	0.00834*BB4*BB31/(1-BB18)
40		Anaerobic Digestion Inhibition Loading Limit	lbs/day	76	0.00834*BB20*BB32/BB17
41		Biosolids CCR Title 22 Loading Limit	lbs/day	118	0.000001*BB21*BB33/BB22/BB17
42	**Maximum Allowable Headworks Loading (MAHL)**				
43		**Limiting MAHL**	lbs/day	**8.2**	MIN(BB35:BB41)
44		Basis of MAHL		Nitrification Inhibition Loading Limit	
45	**Maximum Allowable Industrial Loading (MAIL)**				
46		Safety Factor	10%	0.82	BA46*BB43
47		**Industrial Allocation**	lbs/day	**1.7**	BB43-BB15-BB46
48		Uniform Local Limit	ug/L	4,035	BB47/BB6/0.00834

	A	B	C	D	E
1	**Cyanide**				
2			Units	Calculations	Formula/Source
3	**Existing Conditions (Wastewater)**				
4		Average WWTP Influent Flow	mgd	4.99	Sep 2018-Aug 2019 Average Daily Influent Flow
5		Average WWTP Effluent Flow	mgd	5.25	Sep 2018-Aug 2019 Average Daily Effluent Flow
6		Average Industrial Flow	mgd	0.05	Estimated
7		Average Influent Concentration	ug/L	1.2	Sep 2018-Aug 2019 Monitoring Data
8		Average Influent Loading	lbs/day	0.042	Sep 2018-Aug 2019 Monitoring Data
9		Maximum Influent Concentration	ug/L	1.5	Sep 2018-Aug 2019 Monitoring Data
10		Maximum Influent Loading	lbs/day	0.05	Sep 2018-Aug 2019 Monitoring Data
11		Average Primary Effluent Concentration	ug/L	1.3	2019 Local Limits Monitoring
12		Average Final Effluent Concentration	ug/L	2.2	Sep 2018-Aug 2019 Monitoring Data
13		Maximum Final Effluent Concentration	ug/L	3.4	Sep 2018-Aug 2019 Monitoring Data
14		Average Non-Industrial Concentration	ug/L	<0.9	2019 Local Limits Monitoring
15		Average Non-Industrial Loading	lbs/day	<0.037	0.00834*(D4-D6)*D14
16	**Removal Efficiency**				
17		In-Plant Total Removal	%	-88.1%	Sep 2018-Aug 2019 Monitoring Data
18		In-Plant Primary Treatment Removal	%	-8.3%	2019 Local Limits Monitoring
19	**Existing Conditions (Biosolids)**				
20		Biosolids Flow to Digester	mgd	0.017	Email Correspondence
21		Biosolids Volume to Landfill, Dry	lb/day	2,700	2018 NPDES Permit
22		Percent Solids of Biosolids to Landfill	%	15.8%	Apr-Aug 2019 Biosolids Monitoring
23		Specific Gravity at Disposal Point	kg/L	1.0	Estimated
24		Average Digester Concentration	ug/L	7.5	2018 Monitoring Data
25		Average Biosolids Concentration, Dry	mg/kg	-	-
26	**Treatment/Discharge/Disposal Limits**				
27		Daily Maximum Discharge Limit	ug/L	-	-
28		Average Monthly Discharge Limit	ug/L	-	-
29		Average Daily Discharge Load Limit	lbs/day	-	-
30		Activated Sludge Inhibition Limit	ug/L	100	USEPA Local Limits Guidance Manual
31		Nitrification Inhibition Limit	ug/L	340	USEPA Local Limits Guidance Manual
32		Anaerobic Digestion Inhibition Limit	ug/L	1,000	USEPA Local Limits Guidance Manual
33		Biosolids CCR Title 22 Disposal Limit, Wet	mg/kg	-	-
34	**Headworks Loading Limits**				
35		Daily Maximum Discharge Loading Limit	lbs/day	-	-
36		Average Monthly Discharge Loading Limit	lbs/day	-	-
37		Average Daily Discharge Loading Limit	lbs/day	-	-
38		Activated Sludge Inhibition Loading Limit	lbs/day	3.8	0.00834*D4*D30/(1-D18)
39		Nitrification Inhibition Loading Limit	lbs/day	13	0.00834*D4*D31/(1-D18)
40		Anaerobic Digestion Inhibition Loading Limit	lbs/day	5.6	D8*D32/D24
41		Biosolids CCR Title 22 Loading Limit	lbs/day	-	-
42	**Maximum Allowable Headworks Loading (MAHL)**				
43		**Limiting MAHL**	lbs/day	**3.8**	MIN(D35:D41)
44		Basis of MAHL		Activated Sludge Inhibition Loading Limit	
45	**Maximum Allowable Industrial Loading (MAIL)**				
46		Safety Factor	10%	0.38	C46*D43
47		**Industrial Allocation**	lbs/day	**3.4**	D43-D15-D46
48		Uniform Local Limit	ug/L	8,247	D47/D6/0.00834

APPENDIX E

AHL Documentation/Assumptions

This appendix lists the source of data and assumptions used in the derivation of the City of Davis (City) Wastewater Treatment Plant (Plant) maximum allowable headworks loadings (MAHL), maximum allowable industrial loadings (MAIL), and local limits for pollutants of concern. Variations from these data sources are noted on a pollutant-by-pollutant basis. This appendix also discusses sampling and quality assurance and quality control (QA/QC) issues and addresses how these issues were handled in the development of the local limits.

For All Pollutants

- The September 2018 to August 2019 average daily influent flow was 4.99 million gallons per day (MGD).
- The September 2018 to August 2019 average daily effluent flow was 5.25 MGD.
- The estimated daily industrial flow was 0.05 MGD based on recent Pretreatment Compliance Inspection and Audit reports.
- The daily feed rate to the anaerobic sludge digesters was 0.0165 MGD based on correspondence with Plant operators.
- From the 2018 National Pollutant Discharge Elimination System (NPDES) permit (Order No. R5-2018-0086), approximately 2,700 pounds per day of biosolids (dry weight) were disposed of at the Yolo County Central Landfill.
- The average biosolids density at disposal was estimated to be 1.0 kilogram/liter (kg/L).
- Regression on order statistics (ROS) was used to estimate average pollutant concentrations and loads if there are sufficient detected data. If there were insufficient detected data to estimate the average using ROS, then the one-half of the method detection limit was used for concentrations that are non-detect. The average was then calculated based on the estimate of the one-half of the method detection limit.
- Treatment process inhibition levels from the Local Limits Guidance were used for activated sludge, nitrification, and anaerobic digestion.
- Biosolids disposal limits were from Title 22 of the California Code of Regulations.
- Effluent limitations for conventional and toxic pollutants were from the City’s 2018 NPDES permit.
- All collection system, Plant influent, Plant primary treatment effluent, Plant final effluent, and Plant anaerobic sludge digester data were from regular monitoring and/or local limits monitoring from September 2018 to August 2019.
- Biosolids disposal data were from regular biosolids monitoring in April to August 2019.
- A 10% safety factor was used in calculating all MAILs unless specified.

Conventional Pollutants

Ammonia as N

- Data were collected for the influent, primary treatment effluent, final effluent, anaerobic digester, and collection system during local limits monitoring in August

2019. Data collected from local limits monitoring were supplemented by historic data (September 2018 to August 2019) from the influent and final effluent.
- During local limits sampling, influent and effluent sampling were missed on August 6, 2020 and August 8, 2019, respectively.

Biochemical Oxygen Demand

- Historic data (June 2013 to May 2015) for the influent and final effluent were used. Collection system data were collected during local limits monitoring in 2014.
- The Plant design capacity for BOD was assumed to be 275 mg/L.
- The uncontrollable pollutant load, based on collection system monitoring, exceeded the MAHL. A review of industrial user monitoring data (2017-2019) were reviewed to evaluate the average daily load contribution from each user. The total industrial pollutant load was subtracted from the average influent load to develop a revised uncontrollable pollutant load.

Total Suspended Solids

- Historic data (June 2013 to May 2015) for the influent and final effluent were used. Collection system data were collected during local limits monitoring in 2014.
- The Plant design capacity for TSS was assumed to be 275 mg/L.
- The uncontrollable pollutant load, based on collection system monitoring, exceeded the MAHL. A review of industrial user monitoring data (2017-2019) were reviewed to evaluate the average daily load contribution from each user. The total industrial pollutant load was subtracted from the average influent load to develop a revised uncontrollable pollutant load.

Metals (Total Recoverable)

Arsenic

- Data were collected for the influent, primary treatment effluent, final effluent, anaerobic digester, and collection system during local limits monitoring in August 2019. Data collected from local limits monitoring were supplemented by historic data (September 2018 to August 2019) from the influent and final effluent.
- During local limits sampling, influent and effluent sampling were missed on August 6, 2020 and August 8, 2019, respectively.

Cadmium

- Data were collected for the influent, primary treatment effluent, final effluent, anaerobic digester, and collection system during local limits monitoring in August 2019. Data collected from local limits monitoring were supplemented by historic data (September 2018 to August 2019) from the influent and final effluent.
- During local limits sampling, influent and effluent sampling were missed on August 6, 2020 and August 8, 2019, respectively.

Chromium

- Data were collected for the influent, primary treatment effluent, final effluent, anaerobic digester, and collection system during local limits monitoring in August 2019. Data collected from local limits monitoring were supplemented by historic data (September 2018 to August 2019) from the influent and final effluent.
- During local limits sampling, influent and effluent sampling were missed on August 6, 2020 and August 8, 2019, respectively.
- The inhibition values for chromium (VI) were used to derive the MAHL if they were more stringent than the inhibition values for chromium (total).

Copper

- Data were collected for the influent, primary treatment effluent, final effluent, anaerobic digester, and collection system during local limits monitoring in August 2019. Data collected from local limits monitoring were supplemented by historic data (September 2018 to August 2019) from the influent and final effluent.
- During local limits sampling, influent and effluent sampling were missed on August 6, 2020 and August 8, 2019, respectively.

Lead

- Data were collected for the influent, primary treatment effluent, final effluent, anaerobic digester, and collection system during local limits monitoring in August 2019. Data collected from local limits monitoring were supplemented by historic data (September 2018 to August 2019) from the influent and final effluent.
- During local limits sampling, influent and effluent sampling were missed on August 6, 2020 and August 8, 2019, respectively.

Mercury

- Data were collected for the influent, primary treatment effluent, final effluent, anaerobic digester, and collection system during local limits monitoring in August 2019. Data collected from local limits monitoring were supplemented by historic data (September 2018 to August 2019) from the influent and final effluent.
- During local limits sampling, influent and effluent sampling were missed on August 6, 2020 and August 8, 2019, respectively.

Nickel

- Data were collected for the influent, primary treatment effluent, final effluent, anaerobic digester, and collection system during local limits monitoring in August 2019. Data collected from local limits monitoring were supplemented by historic data (September 2018 to August 2019) from the influent and final effluent.
- During local limits sampling, influent and effluent sampling were missed on August 6, 2020 and August 8, 2019, respectively.

Selenium

- Data were collected for the influent, primary treatment effluent, final effluent, anaerobic digester, and collection system during local limits monitoring in August 2019. Data collected from local limits monitoring were supplemented by historic data (September 2018 to August 2019) from the influent and final effluent.
- During local limits sampling, influent and effluent sampling were missed on August 6, 2020 and August 8, 2019, respectively.

Silver

- Data were collected for the influent, primary treatment effluent, final effluent, anaerobic digester, and collection system during local limits monitoring in August 2019. Data collected from local limits monitoring were supplemented by historic data (September 2018 to August 2019) from the influent and final effluent.
- During local limits sampling, influent and effluent sampling were missed on August 6, 2020 and August 8, 2019, respectively.

Zinc

- Data were collected for the influent, primary treatment effluent, final effluent, anaerobic digester, and collection system during local limits monitoring in August 2019. Data collected from local limits monitoring were supplemented by historic data (September 2018 to August 2019) from the influent and final effluent.
- During local limits sampling, influent and effluent sampling were missed on August 6, 2020 and August 8, 2019, respectively.
- The uncontrollable pollutant load, based on collection system monitoring, exceeded the MAHL. A review of industrial user monitoring data (2017-2019) were reviewed to evaluate the average daily load contribution from each user. The total industrial pollutant load was subtracted from the average influent load to develop a revised uncontrollable pollutant load.

Other Toxics

Cyanide

- Data were collected for the influent, primary treatment effluent, final effluent, anaerobic digester, and collection system during local limits monitoring in August 2019. Data collected from local limits monitoring were supplemented by historic data (September 2018 to August 2019) from the influent and final effluent.
- During local limits sampling, influent and effluent sampling were missed on August 6, 2020 and August 8, 2019, respectively.