NPDES Compliance Sampling Inspection Report

City of Salamanca Wastewater Treatment Plant (WWTP)

299 Center Street
Salamanca, New York 14779

NPDES Permit: NY 0020508

Inspection Dates: June 21-22, 2023

Report Prepared by:

THUAN TRAN Digitally signed by THUAN TRAN Date: 2023.08.03 13:24:42 -04'00'

Thuan Tran, Physical Scientist

Report Approved by:

PHILIP COCUZZA Digitally signed by PHILIP COCUZZA Date: 2023.08.03 15:23:32 -04'00'

Phil Cocuzza, Chief
Monitoring Operations Section

1.0 OBJECTIVE

On June 21-22, 2023, the United States Environmental Protection Agency (USEPA) conducted a National Pollutant Discharge Elimination System (NPDES) Compliance Sampling Inspection (CSI) at the City of Salamanca Wastewater Treatment Plant (WWTP) in Salamanca, New York (NY). The objective of the CSI was to gather information necessary to determine if the City of Salamanca WWTP is in compliance with the requirements and limitations set forth in their NPDES Permit; NY0020508. The permit became effective on December 01, 2019 and will expire on November 30, 2024.

2.0 KEY PARTICIPANTS

Listed below are key inspection participants and contact information, grouped by organization.

U.S. Environmental Protection Agency
Thuan Tran, Lead Inspector
732-321-4455, email: tran.thuan@epa.gov
Robert Morrell, Geologist
Molly Hillenbrand, Environmental Scientist

Seneca Nation of Indians-Health System
Joel Merrill, Civil Engineer
716-945-5894 x5277, email: joel.merrill@senecahealth.org
Scott John, SNI-Utilities Director

City of Salamanca WWTP
Mark Riley, Chief WWTP Operator
716-945-1691, email: mriley@salmun.com
Dennis P. Hensel, City of Salamanca Board of Public Utilities General Manager

3.0 FACILITY DESCRIPTION

3.1 General Information

The City of Salamanca WWTP is located on the Seneca Nation Territory in Salamanca, NY, but it is operated and maintained by the City of Salamanca. The wastewater treatment plant serves the City of Salamanca and the Town of Salamanca, as well as the Casino and Jimmersontown on the Seneca Nation Territory. The facility also receives metered wastewater from the Seneca Nation owned WWTP periodically. In addition, approximately 2, 2,000-gallons of septage per week are discharged into the sewer collection system at the designated manhole on Front Avenue near the boat launch. The City of Salamanca has fifteen (15) lift stations within the sewer collection system that assist the flow of wastewater to the main pump station. The main pump station located on Front Avenue is the only station with an emergency generator. The overall characteristic of the wastewater is approximately 80% domestic, 15% commercial, and 5% industrial.

The City of Salamanca WWTP is categorized under Standard Industrial Classification (SIC) 4952 – Sewerage Systems and the North American Industry Classification System (NAICS) 221320 – Sewage Treatment Facilities.

3.2 Process Information

The City of Salamanca WWTP is permitted to treat 2.0 million gallons per day (MGD) of wastewater. The wastewater is pumped from the main pump station across the Allegheny River to the treatment plant. Preliminary treatment is provided through the mechanical bar screen to remove rags and large matters followed by the aerated grit chamber which allows heavy solids to settle out. The overflow from the aerated grit chamber continues along the Parshall Flume channel. The approaching flow is monitored by the Parshall Flume with an ultrasonic flow sensor. As the waste stream passes the Parshall Flume, it continues to the contact stabilization process to create a Mixed Liquor Suspended Solids (MLSS). As the MLSS exits the aeration tanks, it is distributed between two rectangular clarifiers for phase separation. The effluent from the clarifiers continues to the former chlorine contact chambers or polishing chambers. The effluent is disinfected through the Ultraviolet (UV) Disinfection Systems seasonally between May 15 to October 15. After the UV Disinfection Systems, the effluent free-falls into the effluent receiving pit where it is homogenized and aerated**.** The effluent continues along the discharged pipe and mixes with the Alleghany River via Outfall 001.

Sludge from the rectangular clarifiers is either returned to the contact stabilization process as Return Activated Sludge (RAS) or pumped to the Primary Aerobic Sludge Digester as Waste Activated Sludge (WAS) with the scum. The Class B aerobically digested sludge is disposed by agriculture land injection on NYSDEC permitted fields. If the digested sludge is not subsurface land injected, it is dewatered through the belt filter press. The sludge cake, between 4-5% solids, is trucked to the Chautauqua County Landfill for disposal. The filtrate from the belt filter press is directed to the treatment system ahead of the aeration tanks.

Rags and large matters from the mechanical bar screen, and grits from the aerated grit chamber are removed from the waste stream and are disposed of at the Chautauqua County Landfill. Filtrate from the mechanical bar screen and aerated grit chamber is returned to the waste stream for treatment.

3.3 Facility Self-Monitoring Information

For permit compliance, the plant operators assembled and set-up automatic samplers at the designated monitoring locations to collect 24-hour composite samples. The sample containers are provided by their respective laboratories for 5-day Biochemical Oxygen Demand (BOD_5), Total Suspended Solids (TSS), Total and Fecal Coliforms. BOD_5 and TSS samples are picked up by a currier from LEPA Testing Service in Sayre, PA. Total and fecal coliform samples are transported on ice by the plant's operators to the Cattaraugus County Health Department in Olean, NY.

The plant operators collect and analyze on-site parameters for pH, Temperature, Settleable Solids (SS) and Dissolved Oxygen (DO).

4.0 EPA SAMPLING/INSPECTION ACTIVITIES

4.1 Sampling Activities

An ISCO automatic composite sampler was programmed to take 96 sample aliquots during the 24-hour sampling event from the effluent receiving pit. The 24-hour composite sample was collected and analyzed for BOD_5 and TSS. Five (5) direct-grab samples were collected for total and fecal coliforms.

In addition, on-site grab samples were collected and analyzed for pH, Temperature, DO, SS, and Total Residual Chlorine (TRC)

All sample containers, preservation techniques and holding times were in accordance with USEPA requirements specified in 40 CFR Part 136. Signed and dated custody seals were placed across the lids and along the sides of the sample containers. The custody sealed sample containers were placed inside plastic sample bags and sealed. All samples were transported on ice to the USEPA Laboratory in Edison, New Jersey for analysis, except for total and fecal coliform samples. Due to the short holding time, these samples were contracted to Lozier Environmental Consultant, Inc., in Rochester, NY, to be analyzed.

Flow monitoring data were provided by the plant instrumentation that was calibrated on May 22, 2023.

Split samples were collected and given to the facility representative.

4.2 Inspection Activities

An NPDES CSI at the City of Salamanca WWTP was conducted on June 21-22, 2023. The inspectors met with Dennis Hensel; City of Salamanca Board of Public Utilities General Manager, Mark Riley; Chief Plant Operator, Joel Merrill; Seneca Nation of Indians-Health System Civil Engineer; and Scott John; SNI-Utilities Director. Inspector's credentials were presented, and business cards were provided during the opening conference. The facility representatives were explained that the purpose of the inspection with supporting on-site activities was to determine if the facility is in compliance with their NPDES Permit and the Federal Regulations.

The on-site supporting activities consist of collecting samples at the influent and effluent monitoring locations, observing and evaluating the monitoring locations, observing and evaluating the wastewater treatment process, observing and evaluating the flow monitoring equipment, observing and evaluating the facility sampling equipment, observing and evaluating upstream and downstream of Outfall 001 in the Allegheny River, review and evaluate the facility testing procedures for the on-site parameters, and interviewing the facility's representatives.

During the closing conference, the facility representatives were briefed on the inspection activities. On-site sample results and concerns discovered or observed during the inspection were communicated to the facility representatives.

4.3 Deviations and/or Environmental Conditions

Several operational activities were being performed at the WWTP during the inspection that could have potentially impacted the sampling event. The level of the contact stabilization process in the aeration tanks was below the discharge outlet. No incoming flow was observed entering the rectangular clarifiers. No overflow from the clarifier V-notch weirs was observed. Periodically, no discharged flow after the Ultraviolet Disinfection Systems was observed. As a result, the automatic composite sampler missed a few sample aliquots during the 24-hour sampling event. In addition, a mechanical issue was discovered from the influent automatic composite sampler on the second day of the survey.

Furthermore, the facility has not been collecting nor analyzing TRC which is a permitted parameter. Instead, the facility has been collecting and analyzing DO since switching from gas chlorination to UV disinfection in May 2021.

5.0 ANALYTICAL RESULTS

City of Salamanca WWTP – Outfall 001- Allegheny River
Inspection Dates: June 21-22, 2023

Parameters	Units	NPDES Permit Limitations	EPA Results
Flow	MGD	2.00	0.458
BOD_5	MG/L	30 – 45	14
BOD_5 Mass Loading	LBS/DAY	500 – 750	53.5
BOD_5 % Removal	% Removal	>/= 85	98
TSS	MG/L	30 – 45	10
TSS Mass Loading	LBS/DAY	500 – 750	38.2
TSS % Removal	% Removal	>/= 85	99
Fecal Coliform	#/100-ML	200 Monthly Average 400 Maximum Daily	16.6 (Average)
Total Coliform	#/100-ML	2,400 Monthly Average 5,000 Maximum Daily	201 (Geometric Mean)
pH	SU	6.0 – 9.0	6.73
TRC	MG/L	1.0	Zero
Temperature	°C	Monitor	16
Settleable Solids	ML/L	0.3	0.1
Dissolved Oxygen	MG/L	Not A Permitted Parameter	1st Run: 6.6 2nd Run: 6.8

Notes: Fecal Coliforms*: For the maximum daily effluent limitation, no more than 20% of the single samples of fecal coliform collected during any 30-day period must exceed a MPN of 400 per 100 ml.
Total Coliforms*: This average monthly effluent limitation is expressed as a geometric (or log) mean, based on a minimum of five samples collected for any 30-day period.

6.0 FINDINGS

6.1 Sampling Result Findings

The EPA analytical results obtained during this inspection are within the acceptable limits.

6.2 Inspection Findings

In addition to the analytical data, an inspection of the facility operation was conducted as discussed in Section 4.2 above. During the inspection, the following observations were noted which may contravene the requirements of the permit or the applicable regulations:

6.2.1 Permit compliance samples were collected from one of the two UV channels. According to Section 10. Monitoring and Records [40 CFR 122.41(j)] of ATTACHMENT B: STANDARD CONDITIONS in the Permit, it states, "*Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity."*

6.2.2 When running the Settleable Solids (SS) test, the facility fills the Imhoff cone to the 1-liter mark. The sample is allowed to settle for 15 minutes before gently stirring. The sample is allowed to settle for 45 minutes longer before the SS volume is recorded. This is incorrect. According to Section 3- Procedure for Settleable Solids (SM-2540 F) in Standard Methods for the Determination of Water and Wastewater; 22nd Edition-2011, it states, "*Fill an Imhoff cone to the 1-L mark with a well-mixed sample. Settle for 45 min, gently agitate sample near the sides of the cone with a rod or by spinning, settle 15 min longer, and record volume of settleable solids in the cone as milliliters per liter*."

6.2.3 The facility is using expired pH powder pillows to make pH buffer solutions. The pH 4 powder pillows expired in February 2022. The pH 7 powder pillows expired in March 2022. The pH 10 powder pillows expired in August 2018. According to 40 CFR Part 122.41 (e) Proper Operation and Maintenance under Subpart C – Permit Condition, it states, "*The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures.* In addition, 40 CFR Part 136.7 Quality Assurance and Quality Control states, "*The permittee/laboratory shall use suitable QA/QC procedures when conducting compliance analyses with any Part 136 chemical method or any alternative method specified by the permitting authority."*

6.2.4 In calibrating the portable HACH pH meter, the facility starts the pH calibration with the 4-buffer solution, followed by the 10-buffer solution, and finally the 7-buffer solution. This is incorrect. According to Section 4 – Procedure for pH Value (SM 4500-H^+ B. Electrometric Method) in Standard Methods for the Determination of Water and Wastewater, 22nd Edition-2011, it states, *"…place in initial buffer solution,*

and set the isopotential point (4500-H+ .B.2a). Select a second buffer within 2 pH units of the sample pH and bring sample and buffer to same temperature, which may be the room temperature, a fixed temperature such as 25°C, or the temperature of a fresh sample. Remove electrodes from the first buffer, rinse thoroughly with distilled water, blot dry, and immerse in second buffer……. Remove electrodes from second buffer, rinse thoroughly with distilled water and dry electrodes as indicated above. Immerse in a third buffer below pH 10, approximately 3 pH units different from the second; the reading should be within 0.1 unit for the pH of the third buffer."

6.2.5 It was observed that the working thermometer does not have a correction factor. The last time the working thermometer was last calibrated against a certified NIST (National Institute for Standards and Technology) thermometer could not be determined. A correction factor with the necessary information should accompany the working thermometer to ensure accurate temperature readings are recorded. According to 40 CFR Part 122.41 (e) Proper Operation and Maintenance under Subpart C – Permit Condition, it states, "*The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permitted to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures.* In addition, 40 CFR Part 136.7 Quality Assurance and Quality Control states, "*The permittee/laboratory shall use suitable QA/QC procedures when conducting compliance analyses with any Part 136 chemical method or any alternative method specified by the permitting authority."*

6.2.6 The approaching flow to the Parshall Flume is turbulence. As a result, the ultrasonic flow sensor is recording higher flow. According to the ISCO Open Channel Flow Measurement Handbook, Fifth Edition, Page 73 of Chapter 4: Flumes, it states, "*The approaching flow should enter the converging section reasonably well distributed across the entrance width, and the flowlines should be essentially parallel to the flume centerline. Surges and waves of any appreciable size should be eliminated. Also, the flow at the flume entrance should be free of "white" water and free from turbulence in the form of visible surface boils*." Furthermore 40 CFR Part 122.41 (e) Proper Operation and Maintenance under Subpart C – Permit Condition, it states, "*The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permitted to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures."*

6.2.7 It was observed that the Mixed Liquor Suspended Solids (MLSS) in the aeration tanks was dark grey. The MLSS should be tan or muddy in color to ensure a healthy population of microbes. Furthermore, the DO level of 5.0 milligrams per liter (mg/L) or greater is maintained in the aeration tanks. Ideally, the DO concentration should be maintained between 1-3 mg/L. According to 40 CFR Part 122.41 (e) Proper Operation and Maintenance under Subpart C – Permit Condition, it states, "*The permittee shall at all times properly operate and maintain all facilities*

and systems of treatment and control (and related appurtenances) which are installed or used by the permitted to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures."

6.2.8 Instead of settling out in the rectangular clarifiers, pin floc was observed overflowing the V-Notch weirs into the effluent trough that leads into the polishing chambers. According to 40 CFR Part 122.41 (e) Proper Operation and Maintenance under Subpart C – Permit Condition, it states, "*The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permitted to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures."*

6.2.9 Sludge bulking and bubbles were observed rising to the surface in the polishing chambers. These are indicators of a potential septic condition. Sludge should be removed from the polishing chambers. According to 40 CFR Part 122.41 (e) Proper Operation and Maintenance under Subpart C – Permit Condition, it states, "*The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permitted to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures."*

6.2.10 Solids were observed in the approaching water column to the UV Disinfection Systems. The walls and bottom of the UV Disinfection channels were observed cover with solids and/or algae growth. To effectively inactivate microorganisms, the water column should be free of organics, colloidal/suspended solids and other material that can absorb and scatter the UV light as it passes through. According to 40 CFR Part 122.41 (e) Proper Operation and Maintenance under Subpart C – Permit Condition, it states, "*The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permitted to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures."*

6.2.11 The effluent composite sample tubing was observed to be cover with dirt and/or algae growth on the inner wall. The dirt and/or algae growth could potentially become dislodged during the purging process and become part of the sample. Hence, the analytical result could be bias high. The tubing should be cleaned or replaced. According to Part II (D)(4) of the Permit, it states, "*The Permittee shall develop and implement a quality assurance (QA) plan for laboratory analyses for effluent and/or receiving water monitoring."*

6.2.12 No calibrated working thermometer was observed inside the portable refrigerated composite sampler. The composite sample must be chilled at 6°C or less

throughout the sampling event. According to footnote 2 under Table II – Required Containers, Preservation Techniques, and Holding Times of 40 CFR Part 136, it states, " *Except where noted in this Table II and the method for the parameter, preserve each grab sample within 15 minutes of collection. For a composite sample collected with an automated sample (e.g., using a 24-hour composite sample; see 40 CFR 122(g)(7)(i) or 40 CFR part 403, appendix E), refrigerate the sample at </= 6°C during collection unless specified in this Table II or in the method(s)."*

6.2.13 Total residual chlorine (TRC) is a permitted parameter with a maximum daily effluent limit of 1.0 milligram per liter (mg/L). Samples for TRC have not been collected nor analyzed since the UV Disinfection Systems became operational in May 2021. Instead, samples for DO have been collected and analyzed which is not in the permit. According to 40 CFR Part 122.41(a), it states, *" The permittee must comply with all conditions of this permit."*

7.0 ATTACHMENTS

Attachment #1. An overview map provides a layout of the buildings on the property.

Attachment #2. Wastewater is treated through a contact stabilization process at the plant.

Attachment #3. USEPA Chain of Custody for Fecal/Total Coliform Samples was submitted to Lozier Environmental Consulting, Inc. on Thursday, June 22, 2023.

Attachment #4. Lozier Environmental Consulting, Inc., Laboratory Report for Fecal/Total Coliform Samples was received on Monday, June 26, 2023.

Attachment #5. USEPA Chain of Custody for Samples was submitted to the USEPA Region 2 Laboratory in Edison, NJ on Thursday, June 22, 2023.

Attachment #6. USEPA Analytical Data Package was received on Wednesday, June 28, 2023.

8.0 PHOTOGRAPHS

Photo #1. An automatic composite sampler was set-up at the effluent receiving pit.

Photo #2. An automatic composite sampler was set-up at the influent.

Photo #3. Wastewater is pumped across the Allegheny River to the WWTP.

Photo #4. Septic waste is drained into the designated manhole near the boat launch.

Photo #5. The MLSS in the Contact Stabilization Process is dark grey in color.

Photo #6. Solids are overflowing the V-Notch weirs into the clarifier effluent trough.

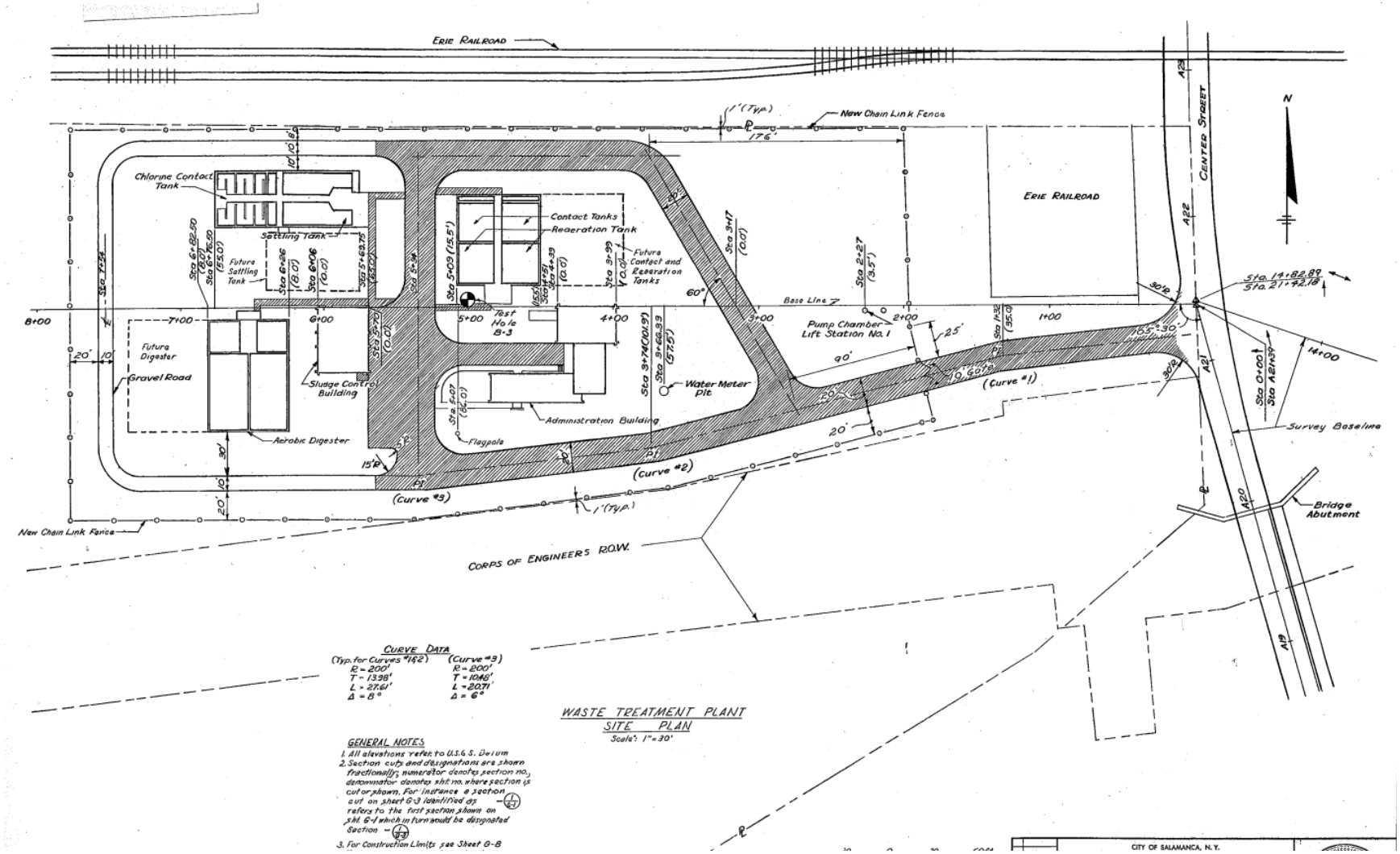
Photo #7. Floating solids are observed in the former chlorine contact chamber.

Photo #8. Higher flow is recorded by the ultrasonic sensor due to turbulence.

7.0 Attachments

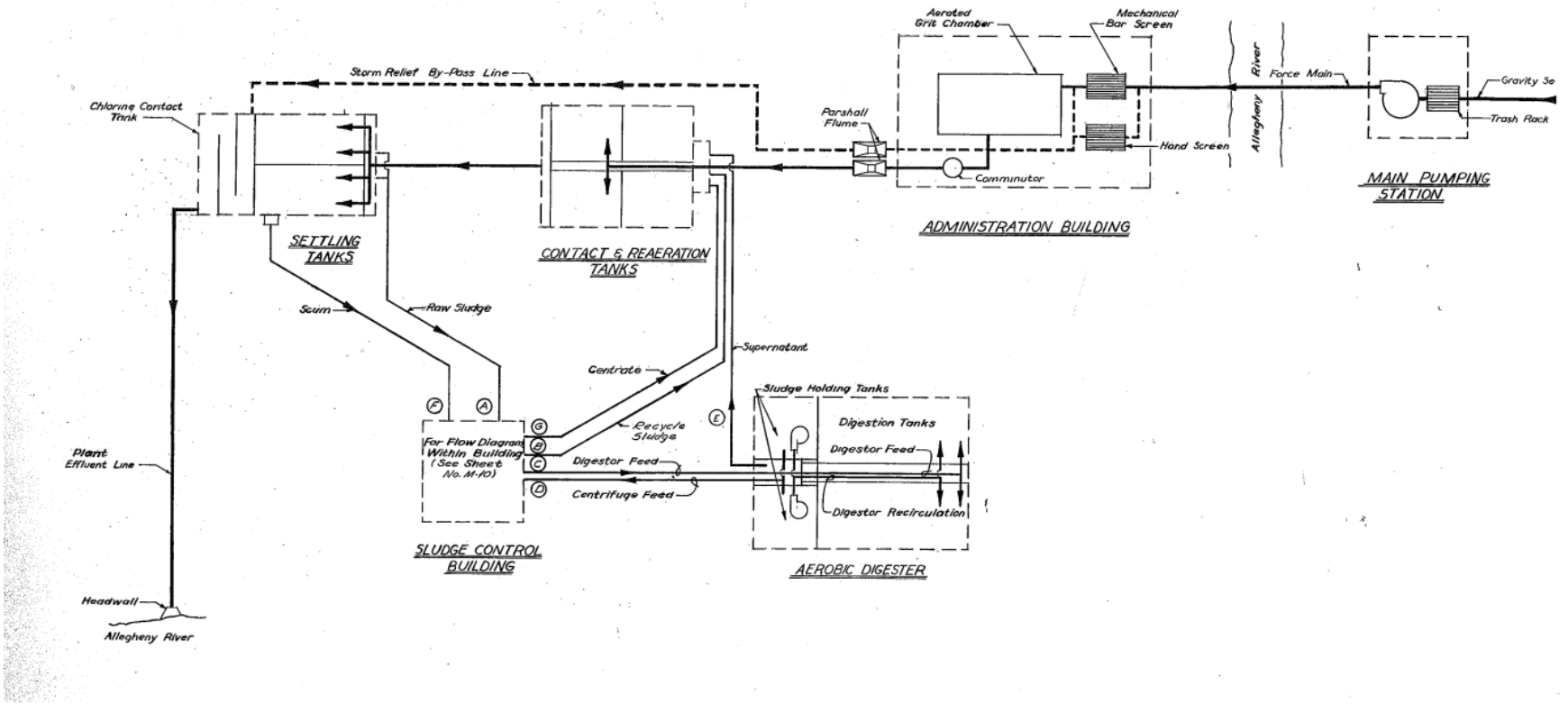
Attachment #1. The City of Salamanca WWTP is located on 299 Center Street.

City of Salamanca Wastewater Treatment Plant Property



Attachment #2. Wastewater from the servicing areas is treated by the City of Salamanca WWTP.

City of Salamanca Wastewater Treatment Plant Flow Diagram



Attachment #3. The chain of custody for total and fecal coliform samples was submitted to the contract laboratory for analysis.

US EPA REGION 2 LABORATORY

Page ____ of ___ pages

CHAIN OF CUSTODY/ FIELD DATA FORM

SURVEY NAME & LOCALITY ____ City of S WWTP

PROJECT LEADER _____ Thuan Tran

PROGRAM: SF ☐ : SITE ID _____ OPERABLE UNIT _____ PROGRAM RESULTS CODE _____

Decision	RCRA ☐	RCRA ENF ☐	NPDES ☐	SDWA ☐	AM ☐	CAA ☐	TSCA ☐	OD ☐	FIFRA ☐	CRIMINAL ENF ☐
Unit Code Y206	D210	D307	B304	C215	B224	A305	L306	B253		

Permit #: M31965

LAB ID/ FIELD ID	# OF CONTERS	MATRIX	CHECK IF SPLIT SAMPLE	DESCRIPTION & INSTRUCTIONS INCLUDING LOCATION, ESTIMATED CONCENTRATIONS, SPECIAL REPORTING LIMITS,	Res CL Checked	Preservative (circle)	Collection Time (24hr clock) Begin	Collection Time (24hr clock) End	Collection Date mm/dd/yy
Outfall 001 1	1	A	☐	1, 290ml Sterilized plastic bottal, Fecal/total Coliform, Grab #1	☑	0 1 2 3 4 5 6 7 8 9 10		9:28	62223
2	1	A	☐	1, 290ml Sterilized plastic bottal, Fecal/total Coliform, Grab # 2	☑	0 1 2 3 4 5 6 7 8 9 10		9:43	
3	1	A	☐	1, 290ml Sterilized plastic bottal, Fecal/total Coliform, Grab #3	☑	0 1 2 3 4 5 6 7 8 9 10		9:58	
4	1	A	☐	1, 290ml Sterilized plastic bottal, Fecal/total Coliform, Grab #4	☑	0 1 2 3 4 5 6 7 8 9 10		10:13	
5	1	A	☐	1, 290ml Sterilized plastic bottal, Fecal/total Coliform, Grab #5	☑	0 1 2 3 4 5 6 7 8 9 10		10:28	
			☐		☐	0 1 2 3 4 5 6 7 8 9 10			
			☐		☐	0 1 2 3 4 5 6 7 8 9 10			
			☐		☐	0 1 2 3 4 5 6 7 8 9 10			
			☐		☐	0 1 2 3 4 5 6 7 8 9 10			
			☐		☐	0 1 2 3 4 5 6 7 8 9 10			

COMMENTS & SPECIAL REQUIREMENTS:

Sterilized Bottle Laboratory tracking # LIK0870

2.4°C

Cl_2 resid lot 022x327-KK exp 3/31/25

<0.1 (ALL)

Preservative Added & Checked

0=ice
1=H_2SO_4 pH<2
2=HNO_3 pH<2
3=HCl pH<2
4=$Na_2S_2O_3$
5=NaOH pH>9
6=Ascorbic Acid
7=FAS
8=ZnAc
9=NaOH pH>12
10=NH_4Cl

	Time	Date
Person Assuming Responsibility for Sample(s): Molly Hallenbeck	10:20	6/22/23
Relinquished By: Molly Hallenbeck / Received By: Kelsey S	1306	62223
Relinquished By: / Received By:		
Relinquished By: / Received By:		

Matrix:

A=aqueous
B=aqueous (chlorinated)
C=soil
D=sediment
E=sludge
F=multiphasic
G=solvent
H=biota
I=oil
J=other

Survey Complete? Y ☐ N ☐

NOTE: Sample "Preservative" should be "0" not "10" as shown on the chain of custody. - Thuan Tran

revised 10/25/2004

Attachment #4. Analytical data for T/F coliform samples were received from Lozier Environmental Consulting, Inc.

Lozier
Environmental Consulting, Inc.

2011 East Main Street, Rochester, New York 14609
Phone: (585) 654-9080 Fax: (585) 654-9662
www.LozierEnv.com
ELAP #11770

Client:	US EPA Laboratory Region 2 2890 Woodbridge Ave Edison, NJ 08837	**Date Received:** **Laboratory No.:** **Sample Date:** **Sample Time:**	6/22/2023 M31965 6/22/2023 09:28 - 10:28
Attn:	Molly Hillenbrand	**Report Date:**	6/26/2023
Project:	City of S WWTP		
Sampled by:	Client	**Page:**	1 of 1

SAMPLE INFORMATION

Description: Effluent Grabs **Matrix:** Non-Potable Water

LABORATORY REPORT

Lab. ID	Parameter	Method	Analysis Date	Analysis Time	Result	Units
M31965-1 Grab #1	Fecal Coliform	SM 9222D-2015	6/22/2023	15:40	**10**	CFU/100 mL
	Total Coliform	SM9222B-2015	6/22/2023	15:40	**220**	CFU/100 mL
M31965-2 Grab #2	Fecal Coliform	SM 9222D-2015	6/22/2023	15:40	**20**	CFU/100 mL
	Total Coliform	SM9222B-2015	6/22/2023	15:40	**180**	CFU/100 mL
M31965-3 Grab #3	Fecal Coliform	SM 9222D-2015	6/22/2023	16:10	**10**	CFU/100 mL
	Total Coliform	SM9222B-2015	6/22/2023	16:10	**150**	CFU/100 mL
M31965-4 Grab #4	Fecal Coliform	SM 9222D-2015	6/22/2023	16:10	**35**	CFU/100 mL
	Total Coliform	SM9222B-2015	6/22/2023	16:10	**195**	CFU/100 mL
M31965-5 Grab #5	Fecal Coliform	SM 9222D-2015	6/22/2023	16:30	**8**	CFU/100 mL
	Total Coliform	SM9222B-2015	6/22/2023	16:30	**280**	CFU/100 mL

CFU/100mL = Colony Forming Units per 100 milliliters
Detection Limit for SM9222B-2015 (Total Coliform) = 1 CFU/100 mL
Detection Limit for SM9222D-2015 (Fecal Coliform) = 1 CFU/100 mL
Chain of Custody in following pages.
Analytical results relate only to the samples received and analyzed.

Approved By: _____
Victoria Kaptein, Technical Director

Attachment #5. USEPA Chain of Custody for Samples was submitted to the USEPA Laboratory in Edison, New Jersey.

US EPA REGION 2 LABORATORY

CHAIN OF CUSTODY/ FIELD DATA FORM

SURVEY NAME & LOCALITY ____ City of Salamanca WWTP

PROJECT LEADER ______ Thuan Tran

PROGRAM: SF ☐ : SITE ID ______ OPERABLE UNIT ________ PROGRAM RESULTS CODE ________

Decision Unit Code	RCRA	RCRA ENF	NPDES	SDWA	AM	CAA	TSCA	OD	FIFRA	CRIMINAL ENF
Y206	☐ D210	☐ D307	☒ B304	☐ C215	☐ B224	☐ A305	☐ L306	☐ B253	☐	☐

Permit #: NY0020508

LAB ID/ FIELD ID	# OF CONTERS	MATRIX	CHECK IF SPLIT SAMPLE	DESCRIPTION & INSTRUCTIONS INCLUDING LOCATION, ESTIMATED CONCENTRATIONS, SPECIAL REPORTING LIMITS, SPECIAL TEST REQUIREMENTS & ALIQUOTING	Res CL Checked	Preservative (circle)	Collection Time (24hr clock) Begin	End	Collection Date mm/dd/yy
Outfall 001	3	A	☒	2, 1-Liter Plastic Bottles: BOD5 - 24-Hr Comp.	☒	0	9:54AM	9:39AM	6/21-22/23
		A	☒	1, 500-ml Plastic Bottle: TSS - 24-Hr Comp.	☒	0	9:54AM	9:39AM	6/21-22/23
			☐		☐	0 1 2 3 4 5 6 7 8 9 10			
Influent	2	A	☒	1, 1-Liter Plastic Bottle: BOD5 - 24-Hr Comp.	☒	0	10:11A	9:56AM	6/21-22/23
		A	☒	1, 250-ml Plastic Bottle: TSS - 24-Hr Comp.	☒	0	10:11A	9:56AM	6/21-22/23
			☐		☐	0 1 2 3 4 5 6 7 8 9 10			
			☐		☐	0 1 2 3 4 5 6 7 8 9 10			
			☐		☐	0 1 2 3 4 5 6 7 8 9 10			
			☐		☐	0 1 2 3 4 5 6 7 8 9 10			
			☐		☐	0 1 2 3 4 5 6 7 8 9 10			

COMMENTS & SPECIAL REQUIREMENTS:

Preservative Added & Checked
0=ice
1=H2SO4 pH<2
2=HNO3 pH<2
3=HCl pH<2
4=Na2S2O3
5=NaOH pH>9
6=Ascorbic Acid
7=FAS
8=ZnAc
9=NaOH pH>12
10=NH4Cl

		Time	Date
	Person Assuming Responsibility for Sample(s): Thuan Tran	4:30PM	6/21/2023
Relinquished By: Thuan Tran	Received By: [signature]	19:00	6/22/23
Relinquished By:	Received By:		
Relinquished By:	Received By:		

Matrix:
A=aqueous
B=aqueous (chlorinated)
C=soil
D=sediment
E=sludge
F=multiphasic
G=solvent
H=biota
I=oil
J=other

Survey Complete? Y ☐ N ☐

Direct from Sampling; chilling detected. [initials]

revised 10/25/2004

Attachment #6. USEPA Analytical Data Package was received on Wednesday, June 28, 2023.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory
2890 Woodbridge Avenue
Edison , New Jersey 08837
732-906-6886 Phone
732-906-6165 Fax

June 28, 2023

Philip Cocuzza
Monitoring & Assessment Branch
LSASD/MAB
Edison, NJ 08837

RE: City of Salamanca WWTP - 2306011

Enclosed are the results of analyses for samples received by the laboratory on 06/22/2023. The signature below reflects the laboratory's approval of the reported results. If you have any questions concerning this report, please refer to Project Number 2306011 and contact the laboratory.

Sincerely,

John R. Bourbon
Chief, LSASD/LB

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: City of Salamanca WWTP - 2306011

Project Number: 2306011

Project Narrative:

The National Environmental Laboratory Accreditation Conference Institute (TNI) is a voluntary environmental laboratory accreditation association of State and Federal agencies. TNI established and promoted a National Environmental Laboratory Accreditation Program (NELAP) that provides a uniform set of standards for the generation of environmental data that are of known and defensible quality. The EPA Region 2 Laboratory is NELAP accredited. The Laboratory tests that are accredited have met all the requirements established under the TNI Standards.

Condition Comments

None

Comment(s):

The "Sample Analysis Date and Time" is included in the results section for any analyte with a prescribed holding time of 72 hours or less.

Biochemical Oxygen Demand (BOD) Analysis: Sample 2306011-02 exhibited toxicity toward the seed organisms used for BOD. This is demonstrated by increasing BOD values as sample dilution increases. Only the result for the largest sample dilution is being reported instead of the average of all acceptable dilutions; the average is used when the sample does not exhibit toxicity. Since an even higher sample dilution may have produced a higher BOD result, this sample was qualified with an “L” to indicate the result is biased low.

Data Qualifier(s):

U- The analyte was not detected at or above the Reporting Limit.
J- The identification of the analyte is acceptable; the reported value is an estimate.
K- The identification of the analyte is acceptable; the reported value may be biased high.
L- The identification of the analyte is acceptable; the reported value may be biased low.
NJ- There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification. The reported value is an estimate.

Final Report

Project: City of Salamanca WWTP - 2306011

Project Number: 2306011

Reporting Limit(s):

The Laboratory was able to achieve the appropriate limit for each analyte requested.

SUMMARY REPORT FOR SAMPLES

Field ID	Laboratory ID	Matrix	Date Sampled	Date Received
Outfall 001	2306011-01	Aqueous	06/22/2023 09:39	06/22/2023 19:00
Influent	2306011-02	Aqueous	06/22/2023 09:56	06/22/2023 19:00

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: City of Salamanca WWTP - 2306011

Project Number: 2306011

SUMMARY REPORT FOR METHODS

Analysis	Method	Certification	Matrix
Biochemical Oxygen Demand	SM 5210B SOP C-21 Rev 2.8	NELAP	Aqueous
Residue, Non-Filterable	SM 2540D SOP C-33 Rev 3.8	NELAP	Aqueous

Final Report

Project: City of Salamanca WWTP - 2306011

Project Number: 2306011

Analyte	Result	Qualifier	Reporting Limit	Units	Batch	Date and Time of Analysis*
Field ID: Outfall 001			**Sample ID: 2306011-01**			
Sanitary						
Biochemical Oxygen Demand	14.0		2.00	mg/L	B306063	06/28/2023 08:22
Total Suspended Solids	10.0		10.0	mg/L	B306064	
Field ID: Influent			**Sample ID: 2306011-02**			
Sanitary						
Biochemical Oxygen Demand	705	L	2.00	mg/L	B306063	06/28/2023 08:22
Total Suspended Solids	1000		10.0	mg/L	B306064	

Final Report

Project: City of Salamanca WWTP - 2306011

Project Number: 2306011

Sanitary - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch B306063									
Blank (B306063-BLK1)									
Biochemical Oxygen Demand	--- U	2.00	mg/L						
LCS (B306063-BS1)									
Biochemical Oxygen Demand	206		mg/L	198.0		104	84.6-115.4		
LCS (B306063-BS2)									
Biochemical Oxygen Demand	193		mg/L	198.0		97.6	84.6-115.4		
LCS (B306063-BS3)									
Biochemical Oxygen Demand	171		mg/L	198.0		86.2	84.6-115.4		
Matrix Spike (B306063-MS1)	**Source: 2306011-02**								
Biochemical Oxygen Demand	853	2.00	mg/L	396.0	705	37.3	75-125		
Batch B306064									
Blank (B306064-BLK1)									
Residue, Non-Filterable	--- U	10.0	mg/L						
LCS (B306064-BS1)									
Residue, Non-Filterable	60.0	10.0	mg/L	56.20		107	85-115		
LCS Dup (B306064-BSD1)									
Residue, Non-Filterable	61.0	10.0	mg/L	56.20		109	85-115	1.65	20
Duplicate (B306064-DUP1)	**Source: 2306011-01**								
Residue, Non-Filterable	9.00	10.0	mg/L		10.0			10.5	20

NOTE: The results recorded in this report relate only to the samples as received on the date and at the time noted

8.0 Photographs

Photo #1. EPA automatic composite sampler was set-up at the effluent receiving pit.

Photo #2. EPA automatic composite sampler was set-up at the influent sampling point.

Photo #3. Wastewater is pumped from the Main Pump Station to the City of Salamanca WWTP.

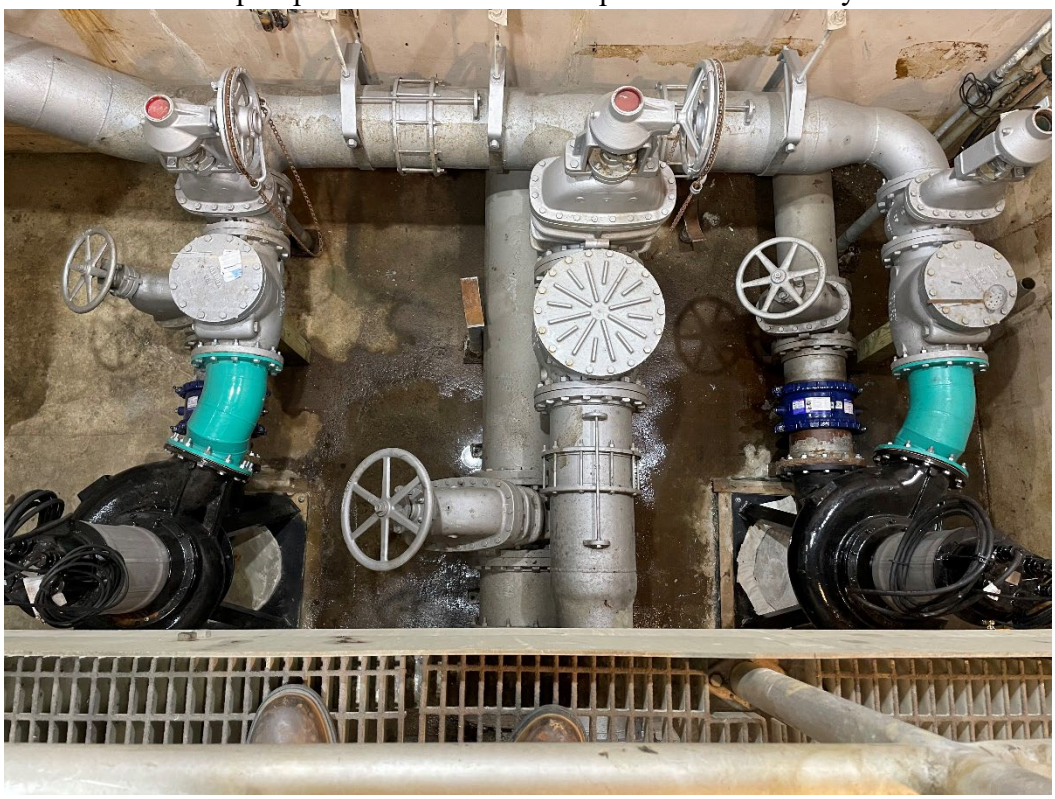


Photo #4. Septic waste is discharged into the designated sewer manhole near the boat launch.

Photo #5. The color of the MLSS in the aeration tank was observed to be dark grey.

Photo #6. Sludge and pin floc were observed overflowing into the clarifer effluent trough.

Photo #7. Solids were observed in the polishing chambers.

Photo#8. The approaching flow to the Parshall Flume was turbulence.