Chapter 94 Municipal Wasteload Management Report

York City Wastewater Treatment Facility
(NPDES PA0026263)
York County, Pennsylvania

January 1, 2016 through December 31, 2016

Prepared by
City of York, Pennsylvania
Department of Public Works
(Wastewater Treatment, Sanitary Sewer Maintenance, MIPP)

Outlying Municipality Information Provided by
C. S. Davidson, Inc., Dawood Engineering, Inc.,
Gannett Fleming, Inc., and James R. Holley & Associates, Inc.

March 2017

The City of York
Pennsylvania

101 South George Street ❖ PO Box 509 ❖ York PA 17405
www.yorkcity.org
Honorable C. Kim Bracey, Mayor

Veronica Chavez
Pretreatment Permit & Compliance Manager
Department of Public Works – MIPP

March 30, 2017

Mr. James Spontack
DEP Water Management Program
909 Elmerton Avenue
Harrisburg, PA 17110-8200

RE: 2016 Chapter 94 Municipal Wasteload Management Report

Dear Mr. Spontack:

As required under Pennsylvania Code Title 25 Environmental Resources Chapter 94 Municipal Wasteload Management, please find the enclosed two copies of the 2016 Municipal Wasteload Management Report for the areas tributary to the York City Wastewater Treatment Plant (NPDES PA0026263). Questions may be directed to Veronica Whaley Chavez at 717-812-1444, or vchavez@yorkcity.org.

Respectfully,

Veronica Whaley Chavez
Pretreatment Permit & Compliance Manager

Enclosures

C: file

York City WWTP
PA0026263
2016 Chapter 94 Report

Contents

Form	DEP Chapter94 Annual Report Form
Attachment 1	WWWTP hydraulic and organic loading projections - covering:
	Spreadsheet for 2012-2016 flows and 2017-2021 projected flows; line graph for 2012-2016 flows and 2017-2021 projected and flows; spreadsheet for 2012-2016 organic loadings and 2017-2021 projected loadings; line graph for 2012-2016 organic loadings and 2017-2021 organic loadings; and, discussion for the basis of the hydraulic and organic projections.
Attachment 2	Municipal Collection System Reports - covering:
	Maps showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects; list summarizing each extension or project; schedules describing how each project will be completed over time and effects; sewer system monitoring, maintenance repair and rehabilitation including routine and special activities, personnel and equipment used; infiltration/inflow monitoring.
Attachment 3	Sampling frequency, quality assurance, data analyses.
Attachment 4	List for each capacity-related bypass, SSO or surcharge event. (See Attachment 2 municipal collection system reports for discussion.)
Attachment 5	Municipal Industrial Pretreatment Program report – using USEPA Region 3 2016 annual report guidance document
Attachment 6	Solids Management Inventory
Attachment 7	Influent flow meter calibrations: 3/2/2016; and, 9/21/2016

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

For Calendar Year: 2016

☒ Permittee is owner and/or operator of a POTW or other sewage treatment facility
☐ Permittee is owner and/or operator of a collection system tributary to a POTW not owned/operated by permittee

GENERAL INFORMATION	
Permittee Name: York City Sewer Authority	Permit No.: **PA 0026263**
Mailing Address: 345 E Market St	Effective Date: 2/1/2008
City, State, Zip: York PA 17403	Expiration Date: 1/31/2013
Contact Person: Garrick Solovey	Renewal Due Date: NA- renewal pending approval
Title: Chair	Municipality: Manchester Township
Phone: 717-848-1126 ext. 2233	County: York
Email: gjsolovey@aol.com	Consultant Name: varies by municipality

CHAPTER 94 REPORT COMPONENTS

1. Attach to this report a line graph depicting the monthly average flows (expressed in MGD) for each month for the past 5 years and projecting the flows for the next 5 years. The graph must also include a line depicting the hydraulic design capacity per the WQM permit. (25 Pa. Code § 94.12(a)(1))

   Check the appropriate boxes:
   ☒ Line graph for flows attached (**Attachment 1**)
   ☐ DEP Chapter 94 Spreadsheet used (**Attachment**)
   ☐ Section 1 is not applicable (report is for a collection system).

2. Attach to this report a line graph depicting the monthly average organic loads (express as lbs BOD5/day) for each month for the past 5 years and projecting the organic loads for the next 5 years. The graph must also include a line depicting the organic design capacity of the treatment plant per the WQM permit. (25 Pa. Code § 94.12(a)(2))

   Check the appropriate boxes:
   ☒ Line graph for organic loads attached (**Attachment 1**)
   ☐ DEP Chapter 94 Spreadsheet used (**Attachment**)
   ☐ Section 2 is not applicable (report is for a collection system).

3. If the DEP Chapter 94 Spreadsheet was not used to determine projections, discuss the basis for the hydraulic and organic projections. In all cases, include a description of the time needed to expand the plant to meet the load projections, if necessary, and data used to support the projections should be included in an appendix to this report.(25 Pa. Code § 94.12(a)(3))

   See Attachment 1.

4. Attach a map showing all sewer extensions constructed within the past calendar year, sewer extensions approved or exempted in the past year in accordance with Act 537 and Chapter 71, but not yet constructed, and all known proposed projects which require public sewers but are in the preliminary planning stages. The map must be accompanied by a list summarizing each extension or project and the population to be served by the extension or project. If a sewer extension approval or proposed project includes schedules describing how the project will be completed over time, the listing should include that information and the effect this build-out-rate will have on populations served. (25 Pa. Code § 94.12(a)(4))

Check the appropriate boxes:

☒ Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (**Attachment 2**)

☒ List summarizing each extension or project attached (**Attachment 2**)

☒ Schedules describing how each project will be completed over time and effects attached (**Attachment 2**)

Comments: See Attachment 2 - municipal collection system reports.

5. Discuss the permittee's program for sewer system monitoring, maintenance, repair and rehabilitation, including routine and special activities, personnel and equipment used, sampling frequency, quality assurance, data analyses, infiltration/inflow monitoring, and, where applicable, maintenance and control of combined sewer regulators during the past year. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(5))

See Attachment 2 - summary of activities.
See Attachment 2 - municipal collection system reports.
See Attachment 3 - sampling frequency, quality assurance, data analyses.

6. Discuss the condition of the sewer system including portions of the system where conveyance capacity is being exceeded or will be exceeded in the next 5 years and portions where rehabilitation or cleaning is needed or is underway to maintain the integrity of the system and prevent or eliminate bypassing, CSOs, SSOs, excessive infiltration and other system problems. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(6))

Check the appropriate boxes:

☒ System experienced capacity-related bypassing, SSOs or surcharging during the report year. On a separate sheet, list the date, location, and reason for each bypass, SSO or surcharge event.

☐ System did not experience capacity-related bypassing, SSOs or surcharging during the report year.

Comments:
See Attachment 2 for discussions.
See Attachment 4 - (as compiled from Attachment 2 municipal collection system reports).

7. Attach a discussion on the condition of sewage pumping (pump) stations. Include a comparison of the maximum pumping rate with present maximum flows and the projected 2-year maximum flows for each station. (25 Pa. Code § 94.12(a)(7))

Check the appropriate boxes:

☐ The collection system does not contain pump stations
☒ The collection system does contain pump stations (Number – **21**)
☒ Discussion of condition of each pump station attached (**Attachment 2**) (municipal collection system reports)

8. If the sewage collection system receives industrial wastes (i.e., non-sanitary wastes), attach a report with the information listed below. (25 Pa. Code § 94.12(a)(8))

a. A copy of any ordinance or regulation governing industrial waste discharges to the sewer system or a copy of amendments adopted since the initial submission of the ordinance or regulation under Chapter 94, if it has not previously been submitted.

b. A discussion of the permittee's or municipality's program for surveillance and monitoring of industrial waste discharges into the sewer system during the past year.

c. A discussion of specific problems in the sewer system or at the plant, known or suspected to be caused by industrial waste discharges and a summary of the steps being taken to alleviate or eliminate the problems. The discussion shall include a list of industries known to be discharging wastes which create problems in the plant or in the sewer system and action taken to eliminate the problem or prevent its recurrence. The report may describe pollution prevention techniques in the summary of steps taken to alleviate current problems caused by industrial waste dischargers and in actions taken to eliminate or prevent potential or recurring problems caused by industrial waste dischargers.

Check the appropriate boxes:

☐ Industrial waste report as described in 8 a., b. and c. attached (**Attachment**)
☒ Industrial pretreatment report as required in an NPDES permit attached (**Attachment 5**)
Adheres to USEPA Region 3 2016 annual report guidance.

9. Existing or Projected Overload.

Check the appropriate boxes:

☒ This report demonstrates an existing hydraulic overload condition. (Collection system, not treatment facility, as noted in Component 6.)
☐ This report demonstrates a projected hydraulic overload condition.
☐ This report demonstrates an existing organic overload condition.
☐ This report demonstrates a projected organic overload condition.

If one or more boxes above have been checked, attach a Corrective Action Plan (CAP) to reduce or eliminate present or projected overloaded conditions under §§ 94.21 and/or 94.22 (relating to existing overload and projected overload). (25 Pa. Code § 94.12(a)(9))

☒ Corrective Action Plan attached (**Attachment 2**) See CAPs in municipal collection system reports.

10. Where required by the NPDES permit, attach a Sewage Sludge Management Inventory that demonstrates a mass balance of solids coming in and leaving the facility over the previous calendar year.

☒ Solids Management Inventory attached (**Attachment 6**)NA: SSMI not required. A SMI is required (NPDES permit Part C.III.G)

11. For facilities with CSOs and where required by the NPDES permit, attach an Annual CSO Report (including satellite combined sewer systems).

☐ Annual CSO Report attached (**Attachment**) NA

12. For POTWs, attach a calibration report documenting that flow measuring, indicating and recording equipment has been calibrated annually. (25 Pa. Code § 94.13(b))

☒ Flow calibration report attached (**Attachment 7**)

RESPONSIBLE OFFICIAL CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Garrick Solovey	Garrick J. Solovey
Name of Responsible Official	Signature
717-848-1126 ext. 2233	3/30/17
Telephone No.	Date

PREPARER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared by me or otherwise under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Veronica Chavez	
Name of Preparer	Signature
717-812-1444	March 30, 2017
Telephone No.	Date

Attachment 1

Figure 1-1: Hydraulic Loading, 2012-2021 (2017-2021 Projected)
York City Wastewater Treatment Plant

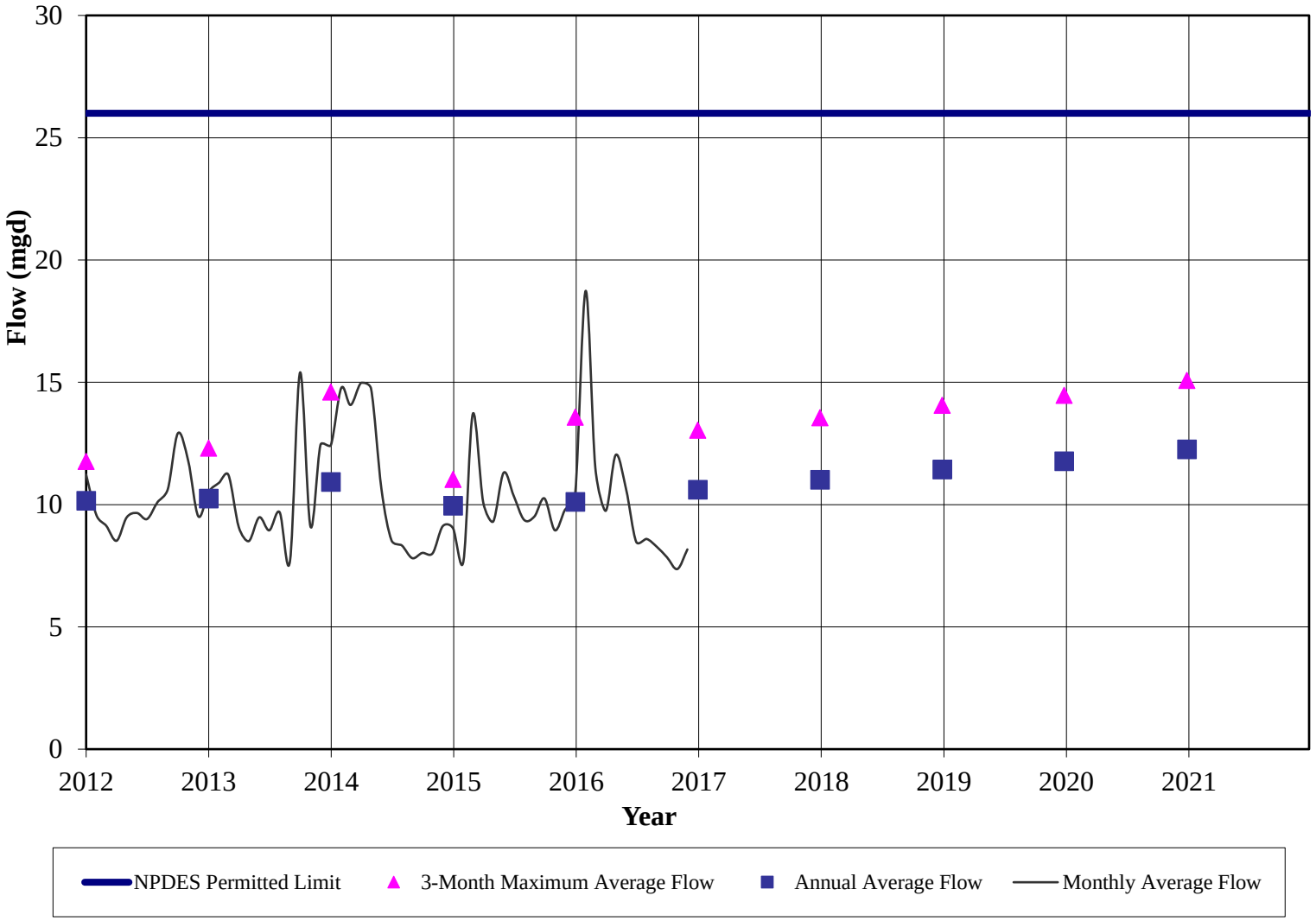

Table 1-1: 2012-2016 Historic Flows (mgd)
York City Wastewater Treatment Plant

Month	2012	2013	2014	2015	2016
January	11.224	10.517	12.428	9.029	**10.479**
February	9.560	10.891	**14.766**	7.683	**18.736**
March	9.134	11.213	**14.072**	**13.708**	**11.506**
April	8.521	9.075	**14.971**	**10.097**	9.743
May	9.473	8.506	14.743	**9.307**	12.032
June	9.654	9.478	10.647	11.301	10.618
July	9.409	8.945	8.542	10.364	8.478
August	10.095	9.688	8.330	9.378	8.595
September	**10.629**	7.696	7.810	9.513	8.268
October	**12.915**	**15.402**	8.023	10.252	7.845
November	**11.782**	**9.108**	8.008	8.949	7.364
December	9.520	**12.442**	9.113	9.779	8.166
Max. 3-Month Avg	11.775	12.317	14.603	11.037	13.574
Annual Average	10.163	10.257	10.930	9.964	10.118
Ratio	1.159	1.201	1.336	1.108	1.342
Rainfall (in)	44.67	46.12	45.61	44.48	27.75

Table 1-2: Hydraulic Loading Projection (mgd)
York City Wastewater Treatment Plant

Year	Three-Month Maximum	Average Flow	Ratio	Hydraulic Increase	Projected Average Flow*	Projected Maximum 3-Month Flow**
2012	11.775	10.163	1.159			
2013	12.317	10.257	1.201			
2014	14.603	10.930	1.336			
2015	11.037	9.964	1.108			
2016	13.574	10.118	1.342			
Five Year Average	**12.661**	**10.286**	**1.229**			
2017				0.327	10.613	13.043
2018				0.415	11.028	13.553
2019				0.414	11.442	14.061
2020				0.336	11.778	14.475
2021				0.494	12.272	15.081

*- Projected annual average flow calculated by: five-year average flow + yearly flow increases.
** - Projected maximum monthly 3-month flow calculated by: projected average flow X five-year average ratio.

NPDES flow 26.0 mgd

Figure 1-2: Organic Loading, 2012-2021 (2017-2021 Projected)
York City Wastewater Treatment Plant

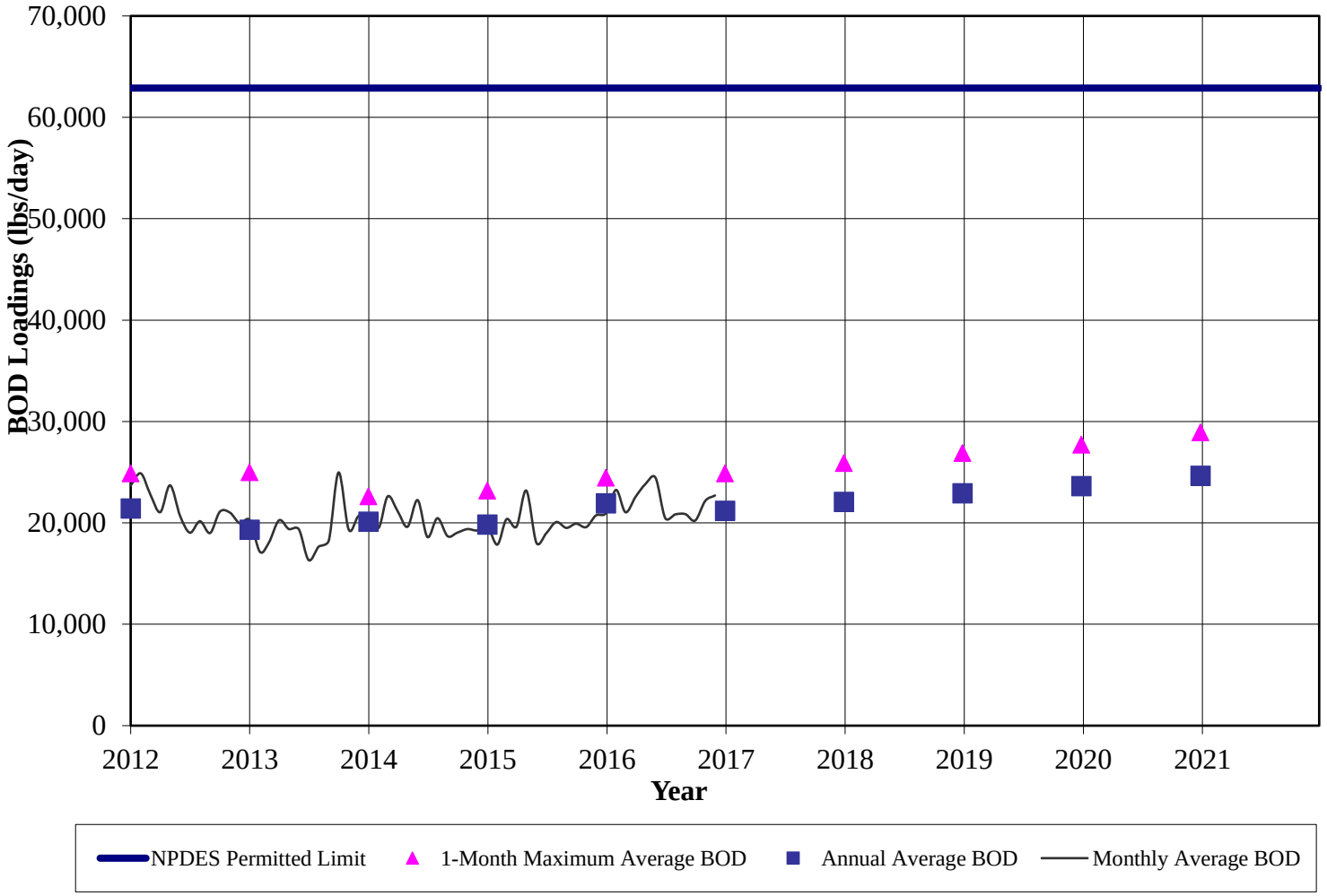

Table 1-3: 2012-2016 Historic Organic Loading (lbs/day)
York City Wastewater Treatment Plant

Month	2012	2013	2014	2015	2016
January	23,688	20,273	20,797	19,687	20,960
February	**24,885**	17,155	19,503	17,857	23,249
March	22,837	18,067	**22,619**	20,359	21,045
April	21,054	20,256	21,128	19,636	22,580
May	23,708	19,393	19,615	**23,187**	23,824
June	20,675	19,363	22,246	18,039	**24,460**
July	19,030	16,331	18,607	18,963	20,470
August	20,166	17,662	20,462	20,084	20,837
September	18,995	18,265	18,691	19,504	20,862
October	21,098	**24,977**	19,035	19,926	20,228
November	21,017	19,349	19,387	19,581	22,165
December	19,964	20,671	19,254	20,733	22,699
Maximum 1-Month Average	24,885	24,977	22,619	23,187	24,460
Annual Average	21,415	19,312	20,104	19,826	21,934
Ratio	1.162	1.293	1.125	1.170	1.115
BOD Annual Average (mg/l)	261	236	238	246	276

Table 1-4: Organic Loading Projection (lbs/day)
York City Wastewater Treatment Plant

Year	One-Month Maximum	Average Load	Ratio	Hydraulic Increase (mgd)	Projected Increase BOD*	Projected Average BOD**	Projected One Month Maximum***
2012	24,885	21,415	1.162				
2013	24,977	19,312	1.293				
2014	22,619	20,104	1.125				
2015	23,187	19,826	1.170				
2016	24,460	21,934	1.115				
Five Year Average	**24,026**	**20,518**	**1.173**				
2017				0.327	681	21,199	24,867
2018				0.415	866	22,065	25,883
2019				0.414	862	22,927	26,894
2020				0.336	701	23,628	27,717
2021				0.494	1,030	24,657	28,924

*- 8.34 X 250 mg/l X hydraulic increase.
**- Five-year average loading + cumulative addition of projected loadings.
***- Five-year average ratio X projected annual average BOD.

NPDES BOD loading 62,884 lbs/day

1.1. Hydraulic Loading Projection

The design hydraulic capacity of the plant is an average monthly flow of 26.0 mgd. Average hydraulic loadings and peak hydraulic loadings at the York City Wastewater Treatment Plant were projected for a five-year horizon. Projection results are displayed in Figure 1-1; tabular data used to generate the graph are located in Table 1-1 and Table 1-2. The methodology utilized to project flows is described below.

Daily average, monthly average and annual average flows were obtained from historic plant operation records. Flow data from the five previous years, 2012 through 2021, were used to determine an arithmetic average five-year flow in million gallons per day. This five-year average flow, 10.286 mgd, was used to project flows from 2017 through 2021. Expected total yearly hydraulic increases, obtained from municipality project lists in Attachment 2, were cumulatively added to this base five-year average flow to obtain projected annual average flows.

Three-month maximum average flows were calculated by averaging the three consecutive months of greatest flow for each year of historical data. A ratio to project three-month maximum flows was determined by arithmetically averaging the quotient of each year's historic maximum three-month average flow divided by the annual average flow. A ratio of 1.229 was obtained. The projected three-month maximum average flow is the product of the ratio and the projected annual average flow.

Figure 1-1 displays treatment plant annual and monthly average hydraulic loadings and three-month average peak hydraulic loadings for the past five years, projected hydraulic loadings over the next five years, projected peak hydraulic loading over the next five years, and the design hydraulic capacity of 26.0 mgd. In 2021 an annual average hydraulic loading of 12.272 mgd and a three-month maximum average flow of 15.081 mgd is projected (Table 1-2). A hydraulic overload is not projected to occur within the next five years.

1.2. Organic Loading Projection

The permit organic capacity of the treatment plant is 62,884 lbs/day of biochemical oxygen demand (BOD). Average organic loadings and peak organic loadings at the York City Wastewater Treatment Plant were projected for a five-year horizon. Projection results are displayed in Figure 1-2; tabular data used to generate the graph are located in Table 1-3 and Table 1-4. The methodology utilized for projecting organic loadings is described below.

Daily average, monthly average and annual average organic loadings were obtained from historic plant operations records. Organic loading data from five previous years, 2012 through 2016, were used to determine an arithmetic five-year average organic loading of 20,518 lbs/day. The projected increased BOD loading is the product of an average BOD concentration of 250 mg/l, a pounds per day conversion factor of 8.34, and the expected yearly hydraulic increase. The projection assumes a constant organic loading concentration. These results were cumulatively added to the five-year arithmetic average organic load to obtain the resultant projected annual average flows.

A ratio to project one-month maximum organic loadings was determined by averaging the quotient of each year's historic maximum one-month average loading divided by the annual average organic loading. A ratio of 1.173 was obtained. The projected one-month maximum flow is the product of the ratio and the projected annual average BOD loading.

Figure 1-2 displays treatment plant annual and monthly average organic loadings and peak organic loadings for the past five years, projected annual average organic loadings over the next five years, projected peak organic loadings over the next five years, and the permit organic capacity of 62,884 lbs/day. In 2021 an annual average organic loading of 24,657 lbs/day and a peak organic loading of

28,924 lbs/day is projected (Table 1-4). An organic overload is not projected to occur within the next five years.

Attachment 2

Summary

Manchester Township Chapter 94 Municipal Wasteload Management

North York Borough Chapter 94 Municipal Wasteload Management

Spring Garden Township Chapter 94 Municipal Wasteload Management

Springettsbury Township Chapter 94 Municipal Wasteload Management

West Manchester Township Chapter 94 Municipal Wasteload Management

West York Borough Chapter 94 Municipal Wasteload Management

City of York Chapter 94 Municipal Wasteload Management

York Township Chapter 94 Municipal Wasteload Management

1. Summary: Sewer System Monitoring, Maintenance, Repair and Rehabilitation

Applicable information regarding 2016 sewer system monitoring, maintenance, repair, and infiltration and inflow (I/I) is provided in each municipality's wasteload management report located in Attachment 2.

Each municipality performs various activities to investigate line condition and infiltration and inflow, and anticipates maintenance and repair activities. There are over 322 miles of sewer line tributary to the York City Wastewater Treatment Plant and 21 pump stations.

Manchester Township has 65.58 miles of sewer line tributary to the York City system. In 2016, 24,188 linear feet of sewer line were cleaned and 37,454 linear feet were televised (18% of the sanitary sewer system). Roots were removed from approximately 2,250 feet of line, and 158 manholes were inspected. Biannual flushing of Sewer District A, a preventative maintenance measure, occurred to minimize grease and solids build up in the line from restaurants emptying to the collector. Approximately 16 lineal feet of sewer line was replaced. The township continues to correspond with PADEP and make progress with the Manchester Interceptor work plan tasks which are related to the development and implementation of the corrective action plan (CAP) and Consent Order and Agreement (COA) to address the need to perform relief pumping in the Skyview Drive/North George Street area. The four pump stations are not expected to have an overload condition within the next two years.

North York Borough replaced 370 feet of sewer main, 210 feet of sewer laterals, and one manhole in Laurel Street due to cracks, bad joints, and root intrusion. Area 1 of the sewer system was cleaned. The borough's pump station is operating satisfactorily and an overload is not expected within the next two years.

Spring Garden Township has 53.18 miles of line tributary to the York City system. The township flushed 15,381 linear feet, and flushed and televised an additional 5,522 linear feet of pipe in 2016 representing 7% of the township's system tributary to the York City Wastewater Treatment Plant. The township repaired a portion of the Poorhouse Run interceptor. The township's three pump stations are not expected to have an overload condition within the next two years.

West Manchester Township, which has 47.60 miles of sewer and six pump stations tributary to the York City system, televised 6,615 linear feet of line and cleaned 12,642 linear feet of line in the Lincolnway service area (7% of the sewer system). In 2016, approximately 300 linear feet of sewer line was replaced due to severe root intrusion. The West Market Street pump station is no longer considered to be hydraulically overloaded by the Pennsylvania Department of Environmental Protection (PADEP). In early 2017, a portion of the Fayette Street system will be realigned to eliminate an overflow situation.

West York Borough has 10.37 miles of line tributary to the York City system. The borough entered into an agreement to transfer ownership and operation of the sewer system to The York Water Company. Closing is expected in the first quarter of 2017. There are no pump stations in the system.

York City, which has approximately 98.5 miles of sewer, cleaned 254,188 linear feet of sewer line during 2016 (49% of the sewer system). Five main repairs or replacements were completed. The pump station is operating satisfactorily and an overload is not expected within the next two years. The City of York continues to manage nineteen (19) intermunicipal flow meters and two rain gages in the sewershed system. Interceptor flow meter data are available for viewing by all connected municipalities *via* internet. Beginning in November 2016, Manchester Interceptor CAP reports were submitted jointly with City of York regarding the Manchester Interceptor upgrade. Part of the interceptor is located within the York City wastewater treatment plant, which is located in Manchester Township, owned by the York City Sewer

Authority, and operated by the City of York *via* lease agreement.

York Township has approximately 46.9 miles of sanitary sewer line and six pump stations. In 2016, 38,000 feet of main were flushed and televised in the Tyler Run drainage basin (15% of the system). Repairs in the Tyler Run basin reduced base flow by 2,000 gpd. Township staff performs routine maintenance twice weekly on the pump stations. Efforts to reduce infiltration and inflow to the Tyler Run interceptor will continue in 2017. No overloads are expected at any of the pump stations.

The York City Sewer Authority Regional Act 537 Plan was completed in 1999. The plan comprises both a Municipal Act 537 Plan for the City of York and the Regional Act 537 Plan for provision of sewage conveyance and treatment for the entire sewershed[i]. The plans address collection and conveyance condition, capacity, and infiltration and inflow reduction. Since then, municipalities have generally increased inflow and infiltration reduction activities through source identification and elimination, line replacement, and sewer system model development. The plan included 5-year, 10-year, 20-year, and ultimate buildout time horizons.

System-wide reduction of infiltration and inflow continues to be discussed at the Connected Municipality meetings. The group is comprised of City of York Sewer Authority members, representatives from municipalities that contribute flows to the treatment plant, and technical staff. As seen in individual municipal reports, models have been updated and some projects identified for infiltration/inflow reduction.

[i] 1999. Buchart Horn, Inc. York City Sewer Authority Regional Act 537 Plan. p. 2, Executive Summary.

Manchester Township Chapter 94 Municipal Wasteload Management

INTERCEPTOR AND COLLECTOR SYSTEM
TRIBUTARY TO
CITY OF YORK WASTEWATER TREATMENT FACILITY

2016 ANNUAL MUNICIPAL WASTELOAD MANAGEMENT (CHAPTER 94) REPORT TO THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

For:
MANCHESTER TOWNSHIP
3200 FARMTRAIL ROAD
YORK, PA 17406

February 8, 2017

Engineer's Project No. 0407.6.06.38.b

PREPARED BY:

C.S.Davidson, Inc.
Excellence in Civil Engineering
Consulting Civil Engineers
38 North Duke Street
York, PA 17401

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pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

Exhibit MT
February 8, 2017

For Calendar Year: 2016

for YORK CITY WASTEWATER TREATMENT FACILITY

☐ Permittee is owner and/or operator of a POTW or other sewage treatment facility
☒ Permittee is owner and/or operator of a collection system tributary to a POTW not owned/operated by permittee

GENERAL INFORMATION			
Permittee Name:	**Manchester Township**	Permit No.:	**NPDES PA-0026763**
Mailing Address:	**3200 Farmtrail Road**	Effective Date:	**February 1, 2008**
City, State, Zip:	**York, PA 17406**	Expiration Date:	**January 31, 2013**
Contact Person:	**Tim James**	Renewal Due Date:	**July 31, 2012 (under review)**
Title:	**Manager**	Municipality:	**Manchester Township**
Phone:	**(717) 764-4646**	County:	**York**
Email:	**t.james@mantwp.com**	Consultant Name:	**C.S. Davidson, Inc.**

CHAPTER 94 REPORT COMPONENTS

1. Attach to this report a line graph depicting the monthly average flows (expressed in MGD) for each month for the past 5 years and projecting the flows for the next 5 years. The graph must also include a line depicting the hydraulic design capacity per the WQM permit. (25 Pa. Code § 94.12(a)(1))

   Check the appropriate boxes:

   ☐ Line graph for flows attached (**Attachment**)
   ☐ DEP Chapter 94 Spreadsheet used (**Attachment**)
   ☒ Section 1 is not applicable (report is for a collection system).

2. Attach to this report a line graph depicting the monthly average organic loads (express as lbs BOD5/day) for each month for the past 5 years and projecting the organic loads for the next 5 years. The graph must also include a line depicting the organic design capacity of the treatment plant per the WQM permit. (25 Pa. Code § 94.12(a)(2))

   Check the appropriate boxes:

   ☐ Line graph for organic loads attached (**Attachment**)
   ☐ DEP Chapter 94 Spreadsheet used (**Attachment**)
   ☒ Section 2 is not applicable (report is for a collection system).

3. If the DEP Chapter 94 Spreadsheet was not used to determine projections, discuss the basis for the hydraulic and organic projections. In all cases, include a description of the time needed to expand the plant to meet the load projections. If necessary, and data used to support the projections should be included in an appendix to this report. (25 Pa. Code § 94.12(a)(3)) See Appendix attached (**Attachment**)

Check the appropriate box(es):

☒ Hydraulic or organic projections not applicable to collection systems.
☒ Five year flow projections attached (**Attachment MT-1**).
☐ Description for plant expansion attached (**Attachment**).
☒ No plant expansion required.

4. Attach a map showing all sewer extensions constructed within the past calendar year, sewer extensions approved or exempted in the past year in accordance with Act 537 and Chapter 71, but not yet constructed, and all known proposed projects which require public sewers but are in the preliminary planning stages. The map must be accompanied by a list summarizing each extension or project and the population to be served by the extension or project. If a sewer extension approval or proposed project includes schedules describing how the project will be completed over time, the listing should include that information and the effect this build-out-rate will have on populations served. (25 Pa. Code § 94.12(a)(4))

Check the appropriate boxes:

☒ Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (**Attachment MT-2**)
☒ List summarizing each extension or project attached (**Attachment MT-3**)
☐ Schedules describing how each project will be completed over time and effects attached (**Attachment**)
☒ None of the approved extensions show a proposed or mandated project schedule.
☒ No pipelines have existing or projected hydraulic overloads.

Comments:

5. Discuss the permittee's program for sewer system monitoring, maintenance, repair and rehabilitation, including routine and special activities, personnel and equipment used, sampling frequency, quality assurance, data analyses, infiltration/inflow monitoring, and, where applicable, maintenance and control of combined sewer regulators during the past year. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(5))

See Attachment MT-4

6. Discuss the condition of the sewer system including portions of the system where conveyance capacity is being exceeded or will be exceeded in the next 5 years and portions where rehabilitation or cleaning is needed or is underway to maintain the integrity of the system and prevent or eliminate bypassing, CSOs, SSOs, excessive infiltration and other system problems. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(6))

Check the appropriate boxes:

☒ System experienced capacity-related bypassing, SSOs or surcharging during the report year. On a separate sheet, list the date, location, and reason for each bypass, SSO or surcharge event.

☒ System did not experience capacity-related bypassing, SSOs or surcharging during the report year.

Comments:

See Attachments MT-5 and MT-7

7. Attach a discussion on the condition of sewage pumping (pump) stations. Include a comparison of the maximum pumping rate with present maximum flows and the projected 2-year maximum flows for each station. (25 Pa. Code § 94.12(a)(7))

Check the appropriate boxes:

☐ The collection system does not contain pump stations

☒ The collection system does contain pump stations (Number – **3**)

☒ Discussion of condition of each pump station attached (**Attachment MT-6**)

8. If the sewage collection system receives industrial wastes (i.e., non-sanitary wastes), attach a report with the information listed below. (25 Pa. Code § 94.12(a)(8))

   a. A copy of any ordinance or regulation governing industrial waste discharges to the sewer system or a copy of amendments adopted since the initial submission of the ordinance or regulation under Chapter 94, if it has not previously been submitted.

   b. A discussion of the permittee's or municipality's program for surveillance and monitoring of industrial waste discharges into the sewer system during the past year.

   c. A discussion of specific problems in the sewer system or at the plant, known or suspected to be caused by industrial waste discharges and a summary of the steps being taken to alleviate or eliminate the problems. The discussion shall include a list of industries known to be discharging wastes which create problems in the plant or in the sewer system and action taken to eliminate the problem or prevent its recurrence. The report may describe pollution prevention techniques in the summary of steps taken to alleviate current problems caused by industrial waste dischargers and in actions taken to eliminate or prevent potential or recurring problems caused by industrial waste dischargers.

Check the appropriate boxes:

☐ Industrial waste report as described in 8 a., b. and c. attached (**Attachment**)

☐ Industrial pretreatment report as required in an NPDES permit attached (**Attachment**)

☒ Industrial pretreatment report will be submitted by POTW Administrator

9. Existing or Projected Overload.

Check the appropriate boxes:

☐ This report demonstrates an existing hydraulic overload condition.
☐ This report demonstrates a projected hydraulic overload condition.
☐ This report demonstrates an existing organic overload condition.
☐ This report demonstrates a projected organic overload condition.

If one or more boxes above have been checked, attach a Corrective Action Plan (CAP) to reduce or eliminate present or projected overloaded conditions under §§ 94.21 and/or 94.22 (relating to existing overload and projected overload). (25 Pa. Code § 94.12(a)(9))

☒ Corrective Action Plan attached (**Attachment MT-7**)
☐ No overloads projected.

10. Where required by the NPDES permit, attach a Sewage Sludge Management inventory that demonstrates a mass balance of solids coming in and leaving the facility over the previous calendar year.

☐ Sewage Sludge Management Inventory attached (**Attachment**)
☒ No Sewage Sludge Management Inventory required for collection system.

11. For facilities with CSOs and where required by the NPDES permit, attach an Annual CSO Report (including satellite combined sewer systems).

☐ Annual CSO Report attached (**Attachment**)
☒ No Annual CSO Report required for collection system.

12. For POTWs, attach a calibration report documenting that flow measuring, indicating and recording equipment has been calibrated annually. (25 Pa. Code § 94.13(b))

☐ Flow calibration report attached (**Attachment**)
☒ No Flow calibration report required for collection system.

RESPONSIBLE OFFICIAL CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

☒ Certification not required for collection system.

Name of Responsible Official	Signature
Telephone No.	Date

PREPARER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared by me or otherwise under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Richard G. Rosh	Richard G. Rosh
Name of Preparer	Signature
(717) 846-4805	3/31/17
Telephone No.	Date

Preparer's Contact Information:

C.S. Davidson, Inc.
38 North Duke Street
York, PA 17401

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C.S. DAVIDSON, INC.

ATTACHMENT MT-1
February 8, 2017

TABULATION OF AVAILABLE
SEWER RESERVE CAPACITY

COLLECTION AND TRANSPORTATION SYSTEM
From: Manchester Township

WASTEWATER TREATMENT FACILITY
To: City of York

	2016	2017	2018	2019	2020	2021	Future Years
Existing Flow From Current Users	1,342,708	1,342,708	1,431,347	1,552,727	1,706,789	1,752,349	1,785,599
Projected Flows From Current Users	0	8,054	0	0	0	0	0
Projected Flow Increase From New Customers	0	80,585	121,380	154,062	45,560	33,250	1,130,744
Total Estimated Wastewater Flows	1,342,708	1,431,347	1,552,727	1,706,789	1,752,349	1,785,599	2,916,343
Percent Usage	55.14%	58.78%	63.77%	70.10%	71.97%	73.33%	119.77%
Total Permitted Capacity/Agreement	2,434,900	2,434,900	2,434,900	2,434,900	2,434,900	2,434,900	2,434,900
Total Amount of Available Capacity	1,092,192	1,003,553	882173	728111	682551	649301	-481443

NOTES AND ASSUMPTIONS:

(1) City Flow Meter MN-01, MN-02, MN-03 less Pine Hills Farms, plus San Carlos, Holiday Inn, and Foustown.

(2) Assumes 75% of 2016 connections (13 new EDUs 10,728 gpd) not reflected in (1) above (see Exhibit MT-B).

(3) See attached list of projected connections (Attachment MT-3).

MANCHESTER TOWNSHIP
PROJECTED CONNECTIONS TO CITY OF YORK
WASTEWATER TREATMENT PLANT

	Name & Description		Map & Parcel	Gallons Currently Reserved	All Projected Connections in Gallons per Day (GPD) 2017	2018	2019	2020	2021	2017 - 21 Subtotal	2022 - 2026	2027 - 2031	2032 - 20356	2037 + Ultimate	Points of Connection Total Gallons	Flow Meter	York City MH No.	Man Two MH No.
1	Tom Beshore Evenbreth Heights (2 EDUs @ 350 GPD)		16-16A	700	0	0	0	0	0	0	0	0	0	700	700	MN02	4	14
*2	Hoff March (Dauber Estate) 1700 North George Street (1 Comm. @ 14,600 GPD)		JH-64	14,600	350	350	7,000	6,900	0	14,600	0	0	0	0	14,600	MN02	4	14
3	Anstact Communication 3300 Ferntrail Road (1 Comm @ 350 GPD)		LH-68A	350	350	0	0	0	0	350	0	0	0	0	350	MN01	1	7
4	Addington Reserve Scott Tract (5 Users @ 350 GPD)		LH-68A	1,790	1,070	700	0	0	0	1,770	0	0	0	0	1,770	MN01	1	7
5	Butler's Property Masonic Drive & Parklyn Lane PA DEP Permit No. 6782405 (5 Acres @ 1,400 GPD/Ac.)		KH-171	7,000	350	2,580	2,580	0	0	5,510	1,490	0	0	0	7,000	MN01	1	7
6	Manchester Business Park Assoc. Farmbrook Ind. Park PA DEP Permit No. 6780405 (7.9 Acres @ 2,000 GPD/Ac.)	(4)		12,700	350	0	0	0	0	350	12,350	0	0	0	12,700	MN01	1	7
7	Wagman Properties Farmbrook Ind. Park PA DEP Permit No. 6780405 (4.89 Acres @ 2,000 GPD/Ac.)	(4)	27-7	9,796	350	0	0	0	0	350	0	9,446	0	0	9,796	MN01	1	7
8	York Industries Amelia Street (1 Ind. @ 32 GPD)		KI-231D	32	0	0	0	0	0	0	32	0	0	0	32	MN01	1	7
9	Northgate Associates 1600 N. George Street (1 Comm. @ 3,900 GPD)		8-16	3,900	350	0	0	0	0	350	3,550	0	0	0	3,900	MN02	4	14
*10	Potteiger Property (N/R) PennDot District 8-4 (1 Comm. @4,000 GPD)	(4)		2,000	350	1,000	0	0	0	1,350	0	0	650	0	2,000	MN01	1	7
11	Wilner Realty Reuse PennDOT Parcel (1 Comm. @5,000 GPD)			5,000	350	0	0	0	0	350	0	4,650	0	0	5,000	MN02	4	14
12	Wilner Realty Hotel Site (1 Comm. @ 10,000 GPD)			10,000	0	0	0	0	0	0	0	10,000	0	0	10,000	MN01	1	7

	Name & Description		Map & Parcel	Gallons Currently Reserved	All Projected Connections in Gallons per Day (GPD) 2017	2018	2019	2020	2021	2017 - '21 Subtotal	2022 - 2026	2027 - 2031	2032 - 2036	2037 + Ultimate	Points of Connection Total Gallons	Flow Meter	York City MH No.	Man Twp MH No.
13	RESERVED FOR FUTURE USE			10,000	10,000	0	0	0	0	10,000	0	0	0	0	10,000	MN01	1	7
14	Raintree Development Flow Redirection (8 EDUs @ 350 GPD)			2,800	0	0	0	0	0	0	0	2,800	0	0	2,800		1	7
15	Lutheran Social Services Paul Sprenkle Tract (7.8 Apts. @ 280 GPD)		KH-58A	8,523	8,523	0	0	0	0	9,628	0	0	0	0	8,523	MN01	1	7
16	Trout Property/Erin's Glen (3 Lots @ 350 GPD)		KH-63&63A	1,050	700	350	0	0	0	1,050	0	0	0	0	1,050	MN01	1P2-13	
17	RESERVED FOR FUTURE USE																	
18	Spring Meadows (PRD) Church Road Area (130.7 EDUs @ 350 GPD)		KH-112	48,900	350	700	700	0	0	1,750	20,000	20,000	7,150	0	48,900	MN01	1	7
19	RESERVED FOR FUTURE USE																	
20	RESERVED FOR FUTURE USE																	
*21	Henry Mohr - The Manor Group 1800 Block N. George Street (8.76 Acres @ 1000 GPD/Ac.)		KH-190	8,760	350	350	5,000	3,060	0	8,760	0	0	0	0	8,760	MN01	1	7
*22	Rutters Commercial Area Susquehanna Tr./Lightner Road (9.4 Acres @ 1000 GPD/Ac.)		KH-171A	9,350	7,000	2,350	0	0	0	9,350	0	0	0	0	9,350	MN01	1	7
23	Susquehanna Trail, LP Farmbrook Industrial Park 3300 Susquehanna Trail (1 Industrial @ 463 GPD)	(4)	27-1	463	0	0	0	0	0	0	463	0	0	0	463	MN01	1	7
24	MTMA - Act 537 500 Block Church Road - Project #2 (3 EDUs @ 350 GPD)		5-44,44B,44C	1,050	350	350	350	0	0	1,050	0	0	0	0	1,050	MN01	1	7
25	Masonic Drive Hotel, Restaurant & Bank (15 EDUs @ 350 GPD)		KH-171	5,250	700	8,500	0	0	0	4,200	1,050	0	0	0	5,250	MN01	1	7
*26	Sinking Springs Farm Office Area (4 Acres @ 1000 GPD/Ac.)		KH-175	4,000	0	0	0	0	0	0	2,000	2,000	0	0	4,000	MN01	1	7

	Name & Description		Map & Parcel	Gallons Currently Reserved	All Projected Connections in Gallons per Day (GPD): 2017	2018	2019	2020	2021	2017 - '21 Subtotal	2022 - 2026	2027 - 2031	2032 - 20356	2037 + Ultimate	Points of Connection: Total Gallons	Flow Meter	York City MH No.	Man Twp MH No.
27	Penn State Investors Bank Tract (1 EDU @ 350 GPD)		KH-16C	350	0	0	0	0	0	0	350	0	0	0	350	MN01	1	7
28	York County Solid Waste Authority Incinerator PA DEP Permit No. 8787408 (1 Ind. @ 46,932 GPD)	(8)	KI-216A	46,932	1,000	35,000	10,932	0	0	46,932	0	0	0	0	46,932	MN01	1	7
29	White Oak Associates Commercial (1 EDU @ 350 GPD)		KH-16B	350	0	0	0	0	0	0	350	0	0	0	350	MN01	1	7
30	David Fahs 500 Block Church Road (1 EDU @ 350 GPD)		LH-17B	350	350	0	0	0	0	350	0	0	0	0	350	MN01	1	7
31	RESERVED FOR FUTURE USE																	
32	Tyrone Miller (north side) (10 EDUs @ 350 GPD)		KH-02B	3,500	350	350	0	0	0	700	2,800	0	0	0	3,500	MN01	1	7
33	First Logistics Center (formerly Raintree Ind. Park) (1 IND @ 3,192 GPD)	(4)	LH-20D	3,192	3,192	0	0	0	0	3,192	0	0	0	0	3,192	MN01	1	7
34	Hunter's Hill Eye Care 2811 N. George Street (2 EDUs @ 3,500 GPD)			350	350	0	0	0	0	350	0	0	0	0	350	MN01	1	7
35	Gold's Gym Hotel 2950 N. George Street (1 Comm. @ 12,000 GPD)		9-14B	12,000	10,000	2,000	0	0	0	12,000	0	0	0	0	12,000	MN01	1	7
36	RSD Investments 3935 Farmtrail Road PA DEP Permit No. 8780408 (1 Ind. @ 685 GPD)	(4)	Z7-10	685	0	0	0	0	0	0	685	0	0	0	685	MN01	1	7
37	Wheatfield Estates Raintree Road (64 EDUs @ 350 GPD)	(4)		22,400	7,000	8,500	8,500	8,860	8,600	21,860	1,050	0	0	0	22,400	MN01	1	7
38	RESERVED FOR FUTURE USE																	
39	RESERVED FOR FUTURE USE		4-1E	350	350	0	0	0	0	350	0	0	0	0	350	MN01	1	7

	Name & Description		Map & Parcel	Gallons Currently Reserved	All Projected Connections in Gallons per Day (GPD) 2017	2018	2019	2020	2021	2017 - '21 Subtotal	2022 - 2026	2027 - 2031	2032 - 2036	2037 + Ultimate	Points of Connection Total Gallons	Flow Meter	York City MH No.	Man Twp MH No.
40	Federal Express 505 Farmbrook Drive PA DEP Permit No. 5706405 (1 Comm. @ 1,153 GPD)	(4)	27-5	1,153	350	0	0	0	0	350	1,153	0	0	0	1,503	MN01	1	7
41	Wilner Realty 301 Loucks Road North Mall Renovation (1 Comm. @ 1,770 GPD)		18-33	2,030	350	0	0	0	0	350	1,680	0	0	0	2,030	MN02	4	7
42	Central York School Dist. Roundtown School Site (Growth)		5-40	1,720	0	0	0	0	0	0	1,720	0	0	0	1,720	MN01	1	7
*43	Stewart Associates - Bull Rd. (25 acres W. of Greenbriar Rd.) (92.8 EDUs @ 350 GPD)		[illegible]	32,500	350	350	2,100	2,100	2,100	7,000	10,000	10,000	5,000	0	32,500	MN03	IP2-13	N/A
44	Central York School Dist. Hayshire School Site (Growth)		JH-115	1,558	0	0	0	0	0	0	0	1,558	0	0	1,558	MN01	IP2-13	7
*45	Craft/Hamme Church Road (6 EDUs @ 400 GPD)	(10)	JH-115	2,400	350	350	0	0	0	700	1,700	0	0	0	2,400	MN03	IP2-13	N/A
*46	MTMA - Act 537 Church Rd./Roosevelt Ave. - Project #1 (2 EDUs @ 350 GPD)	(10)		700	350	350	0	0	0	700	0	0	0	0	700	MN03	IP2-13	N/A
47	MacGregor Downs (All Phases) Brandywine Lane (3 EDUs @ 350 GPD)		40-1A	700	0	0	0	0	0	0	0	0	700	0	700	MN01	1	7
*48	Welbourne Reserve Susquehanna Trail North (450 EDUs @ 350 GPD)	(5)	LH-107 LH-108	157,580	350	7,000	7,000	7,000	7,000	28,350	52,500	52,500	25,230	0	158,580	MN01	1	7
49	PennDOT Maintenance Building 500 block of Church Road 10,350 GPD			10,350	350	0	10,000	0	0	10,350	0	0	0	0	10,350	MN01	1	7
*50	George Kain Office 2600 N. George Street (5.82 Acres @ 1000 GPD/Ac.)		3-1,1A,9A	5,820	350	0	0	0	0	350	0	0	0	5,470	5,820	MN01	1	7
51	RESERVED FOR FUTURE USE																	
52	RESERVED FOR FUTURE USE																	

	Name & Description		Map & Parcel	Gallons Currently Reserved	All Projected Connections in Gallons per Day (GPD) 2017	2018	2019	2020	2021	2017 - 21 Subtotal	2022 - 2026	2027 - 2031	2032 - 20358	2037 - Ultimate	Points of Connection Total Gallons	Flow Meter	York City MH No.	Man Tap MH No.
53	Blaine Gingerich AnnaMay Street (1 EDU @ 350 GPD)		KH-128A	350	0	0	0	0	0	0	350	0	0	0	350	MN01	1	7
54	City View Community Church Future Medical Building) (10,000 GPD)			10,000	3,500	4,600	1,900	0	0	10,000	0	0	0	0	10,000	MN03	1P2-13	7
55	RESERVED FOR FUTURE USE																	
*56	Tan Bach Industrial 3385 Susquehanna Trail (1 Industrial @ 60 GPD)	(4)	LH-20	60	0	0	0	0	0	0	60	0	0	0	60	MN01	1	7
57	Markey Industrial Park Blackbridge Road (21.89 Acres x 1,000 GPD/Ac.)	(6)	[illegible]	21,890	700	350	0	0	0	1,050	0	0	20,840	0	21,890	MN01	1	7
*58	Lenkaide Farm (100 EDUs @ 350 GPD)	(4)	LH-89	35,000	0	350	350	350	350	1,400	15,000	15,000	3,600	0	35,000	MN01	1	7
59	Tyrone Miller South Side (2 EDUs @ 350 GPD)		KH-152F	700	350	350	0	0	0	700	0	0	0	0	700	MN01	1	7
60	Kreiger Getty Oil North George Street (3 EDUs @ 350 GPD)			1,050	350	700	0	0	0	1,050	0	0	0	0	1,050	MN01	1	7
61	RESERVED FOR FUTURE USE																	
62	MTMA - Act 537 Church Road - Project #5 (8 EDUs @ 350 GPD)	(10)		2,800	0	0	0	0	0	0	2,800	0	0	0	2,800	MN03	1P2-13	7
63	Rutter's High Density 61 Acres (305 EDUs)			106,750	350	4,900	49,000	2,500	2,500	59,250	30,000	17,500	0	0	106,750	MN01	1	7
64	MTMA - Act 537 Beer Road/Susquehanna Trail (40 EDUs x 350 GPD)	(4)		14,000	0	0	0	0	0	0	14,000	0	0	0	14,000	MN01	1	7
*65	CF Property (31 AC @ 1,000 Gal/AC)	(4)	LH-29	31,000	350	350	20,000	350	350	21,400	9,600	0	0	0	31,000	MN01	1	7
66	Hummel/Poole Brandy Wine Woods (1 EDU @ 350 GPD)			350	350	0	0	0	0	350	0	0	0	0	350	MN01	1	7
67	RESERVED FOR FUTURE USE																	
*68	Stewart Associates (Ind) 20.39 AC		JH-79	1,050	350	0	0	0	0	350	0	700	0	0	1,050	MN03	1P2-13	N/A

	Name & Description		Map & Parcel	Gallons Currently Reserved	All Projected Connections in Gallons per Day (GPD) 2017	2018	2019	2020	2021	2017 - 21 Subtotal	2022 - 2026	2027 - 2031	2032 - 20356	2037 + Ultimate	Points of Connection Total Gallons	Flow Meter	York City MH No.	Man Twp MH No.
69	Highland Partnership (office)		KH-23	490	350	0	0	0	0	350	140	0	0	0	490	MN03	IP2-1	N/A
70	Dousler Park Residential (1 EDU)		KH-66,67,68	350	0	350	0	0	0	350	0	0	0	0	350	MN01	1	7
71	Don Baker Farmbrook Lane (1 EDU @ 350 GPD)	(4)	LH-89	350	0	0	0	0	0	0	350	0	0	0	350	MN01	1	7
*72	Sinking Springs Farm Residential Lots		KH-178	113,400	0	0	0	0	0	0	20,000	20,000	20,000	53,400	113,400	MN01	1	7
*73	Sinking Springs Farm Commercial Lots		KH-178	65,000	0	0	0	0	0	0	20,000	20,000	20,000	5,000	65,000	MN01	1	7
*74	Boyer Farm (Del Hauck)	(4)	LH-79	13,300	350	0	0	0	0	350	12,950	0	0	0	13,300	MN01	1	7
*75	David Fahs (Residual Lands) (58 EDUs @ 350 GPD)	(4)	LH-78	20,300	0	350	0	0	0	350	0	19,950	0	0	20,300	MN01	1	7
*76	Sceribo Industrial - Amelia Street (10 AC @ 1000 gpd/Ac)		KH-231F	10,000	350	9,300	0	0	0	9,650	350	0	0	0	10,000	MN01	1	7
*77	Shindel (366 EDUs @350 GPD)	(5)	LH-89	128,100	350	350	350	350	350	1,750	52,500	52,500	21,350	0	128,100	MN01	1	7
78	Stillmeadow Church of Nazarene		KH-167A	5,000	3,000	2,000	0	0	0	5,000	0	0	0	0	5,000	MN01	1	7
79	First Assembly of God		KH-170A	537	0	0	0	0	0	0	0	537	0	0	537	MN01	1	7
*80	Rutters Commercial (approx 80 acres)		KH-171C	80,000	5,000	5,000	5,000	5,000	5,000	25,000	25,000	25,000	5,000	0	80,000	MN01	1	7
*81	Pump Station #2 Phaseout MTMA - Project # 10	(4)		10,500	0	0	10,500	0	0	10,500	0	0	0	0	10,500	MN01	1	7
*82	Prospect Hill Cemetery		JH-170	95,000	1,050	0	0	0	0	1,050	21,050	20,000	20,000	32,900	95,000	N/A	R10-17	N/A
83	Manchester Twp. Municipal Authority 2800 Block Lewisberry Road (7 EDUs x 350 GPD)		KH-179,180,181	2,450	700	0	0	0	0	700	0	1,750	0	0	2,450	MN01	1	7
84	Shindel Farm 500 block Sinking Springs Lane (26 EDUs @ 350 GPD)			13,000	350	10,000	2,650	0	0	13,000	0	0	0	0	13,000	MN01	1	7
85	Reserved for Future Use			0	0	0	0	0	0	0	0	0	0	0	0	MN02	4	14
*86	Central School Dist.-New Middle School (77 EDUs & 350 GPD)		KH-176	26,550	0	1,050	7,000	7,000	5,000	20,050	6,500	0	0	0	26,550	MN01	1	7
87	Barry Reisler Susquehanna Trail (64 EDUs @ 350 GPD)			22,400	350	700	700	700	700	3,150	3,500	3,500	3,200	9,050	22,400			
88	MTMA - Act 537 - Project #3 Stillmeadow/Brandywine Lane (6 EDUs @ 350 GPD)			2,100	350	700	1,050	0	0	2,100	0	0	0	0	2,100	MN01	1	7

	Name & Description		Map & Parcel	Gallons Currently Reserved	All Projected Connections in Gallons per Day (GPD) 2017	2018	2019	2020	2021	2017 - '21 Subtotal	2022 - 2026	2027 - 2031	2032 - 20356	2037 + Ultimate	Points of Connection Total Gallons	Flow Meter	York City MH No.	Man Twp MH No.
89	MTWA - Act 537 - Project #7A Pine Creek/Old Mill Inn (20 EDUs @ 350 GPD)	(4)		7,000	0	0	0	0	0	0	7,000	0	0	0	7,000	MN01	1	7
90	J.G. Leasing Co., Inc. (1 EDU @ 350 GPD)	(5)	LH-58D 115-408	350	350	0	0	0	0	350	300	0	0	0	950	MN01	1	7
91	J.G. Leasing Co., Inc. Stover's Glen (8 EDUs @ 350 GPD)			2,800	350	350	350	350	350	1,750	1,050	0	0	0	2,800	MN03	1P2-13	N/A
92	1500 N. George Street Commercial Strip (5 EDUs @ 350 GPD)		KH&27	1,750	350	1,400	0	0	0	1,750	0	0	0	0	1,750	MN01	1	1
93	J.G. Leasing Co., Inc. Olive Court (1EDU @ 350 GPD)		15-408	350	0	0	0	0	0	0	350	0	0	0	350	MN03	1P2-13	N/A
94	Richard Markey Industrial Zone Susquehanna Trail (182.8 Acres @ 1,000 GALS/Ac.)	(4)	MH-27 MH-51 MH-51A MH-28	182,800	0	5,000	5,000	5,000	5,000	20,000	50,000	50,000	50,000	22,800	182,800	MN01	1	7
95	United Bio-fuels (Reardon) Farmtrail Road	(4)		10,000	350	0	0	0	0	350	0	0	9,650	0	10,000	MN01	1	7
96	Chad Rutter - 2200 Susquehanna Trail Commercial Sports Facility (30 EDUs @350 GPD)			10,350	350	10,000	0	0	0	10,350	0	0	0	0	10,350	MN01	1	7
97	Lucas & Kimberly Parkes Valley Road *(1 EDU @ 350 GPD)			350	350	0	0	0	0	350	0	0	0	0	350	MN01	1	7
98	Barkdimer 600 Block Church Road - 3 EDUs			1,050	350	700	0	0	0	1,050	0	0	0	0	1,050	MN01	1	7
99	Bollinger 600 Block Church Road - 2 EDUs			700	350	350	0	0	0	700	0	0	0	0	700	MN01	1	7
*N/A	Miscellaneous Development (3 EDUs/Yr. @ 350 GPD)			26,250	1,050	1,050	1,050	1,050	1,050	5,250	5,250	5,250	5,250	5,250	26,250	MN01	1	7
	TOTALS:			1,563,811	80,565	121,380	154,062	45,960	33,250	434,837	413,413	364,641	218,120	134,570	1,565,581			

Name & Description	Map & Parcel	Gallons Currently Reserved	All Projected Connections in Gallons per Day (GPD) 2017	2018	2019	2020	2021	2017 - '21 Subtotal	2022 - 2026	2027 - 2031	2032 - 2036	2037 + Ultimate	Points of Connection Total Gallons	Flow Meter	York City MH No.	Man Twp MH No.
NOTES:																
* No reservation agreement on file																
(4) Project is tributary to Farmbrook Industrial Park Pump Station No. 4			14,042	17,800	46,700	16,600	16,660	112,092	220,051	196,805	110,490	22,800	874,718			
(6) Project is tributary to Blackbridge Road Pump Station No. 6			1,700	35,350	10,932	0	0	47,982	0	0	20,840	0	68,822			
(10) Project tributary to Caspian Court Pump Station No. 10			700	700	0	0	0	1,400	4,500	0	0	0	6,600			
Subtotal York City MH No. 1		1,331,282	80,435	98,880	132,012	35,510	30,100	357,937	387,545	328,082	188,420	81,820	1,302,852			
Subtotal York City MH No. 4		21,230	1,350	850	7,000	6,800	0	15,800	5,230	0	0	700	21,230			
Subtotal York City MH No. IP2-1		490	350	0	0	0	0	350	140	0	0	0	490			
Subtotal York City MH No. IP9-13		46,859	2,800	3,150	2,450	2,450	2,450	13,300	15,800	12,259	5,500	0	46,859			
Subtotal York City MH No. B10-17		95,000	1,050	0	0	0	0	1,050	21,050	20,000	20,000	32,900	95,000			
Totals		1,494,861	85,885	103,380	141,482	44,860	32,550	387,937	409,913	358,341	214,920	125,520	1,466,831			

(5) Subject to rezoning.

Attachment MT-4
February 8, 2017

MANCHESTER TOWNSHIP SANITARY SEWER SYSTEM MAINTENANCE PROGRAM

2016

1. As of December 31, 2016, the Manchester Township Sanitary Sewer System consisted of 133.4 miles of sewer line and nine (9) pump stations. 45.2 miles of collector / interceptor lines and force main and three (3) pump stations are tributary to the Dover Township Wastewater Treatment Plant; 22.21 miles of collector / interceptor lines and force main, and two (2) pump stations are tributary to the Springettsbury Township Wastewater Treatment Facility; 65.58 miles of collector / interceptor lines and force main and four (4) pump stations are tributary to the York City Wastewater Treatment Plant.

2. The Manchester Township Public Works Department is comprised of eleven (11) full-time employees of which, two (2) are assigned to perform sanitary sewer related duties. They are responsible for the daily maintenance of the 133.4 miles of sewer line and the nine (9) pump stations and are supervised by the public works superintendent. They are also responsible for the field marking of sewer line location to comply with the Pennsylvania Act 172 (PA One-Call System). During 2016 they responded to 1,189 requests.

3. The sewer department employees have the following equipment at their disposal to conduct their assigned duties:
   a. 2006 Ford F-550 with a utility body (containing various hand tools and safety equipment)
   b. 1995 Ford / Peabody Myers Model 211 Vactor Truck
   c. 2011 Freightliner Sprinter Van with a Cues camera system operated by the Granite XP software package.
   d. 1994 Ratech lateral camera (for use in 4" pipe).
   e. Superior smoke blower (used to identify sources of I/I or illegal connections)
   f. Gorman–Rupp 6" Centrifugal pump (used for relief pumping and temporary backup for pump stations).
   g. RootX FDU-200 applicator to apply root control material.

4. During 2016, the sewer maintenance activities included the following:

   a. Lines tributary to the York City system – 24,188 feet of cleaning, and 37,454 feet of televising. Root cutting in 2,250 feet of sewer line.

   b. Lines tributary to the Dover Township system – 25,450 feet of cleaning and 26,359 feet of televising. Root cutting in 1,250 feet of sewer line.

   c. Lines tributary to the Springettsbury Township system – 6,000 feet of cleaning, and 12,938 feet of televising.

d. Personnel also conducted inspections of 351 manholes of which 158 manholes tributary to the York City system, 52 manholes tributary to the Springettsbury system, and 141 manholes tributary to the Dover system.

e. The sewer maintenance personnel raised or repaired sixty-one (61) manhole frames, thirty-one (31) of which were tributary to the York City system, eighteen (18) tributary to the Springettsbury system, and twelve (12) tributary to the Dover system. There were inserts installed in under 15 manhole covers to reduce infiltration. There were 8 inserts installed tributary to the York City system, 3 inserts installed tributary to the Springettsbury system and 4 installed tributary to the Dover system.

f. Personnel continue to spend considerable time checking flow conditions of the sanitary sewer interceptor line that connects Manchester Township to the York City Treatment Plant, from the Skyview Drive and North George Street area. In past years this area has required relief pumping when extreme weather conditions of heavy rain and/or snow melt occurred. There was no relief pumping required in 2016.

g. Following the relief pumping events of 2014, Manchester Township received a Notice of Violation from the PA Department of Environmental Protection for the discharge of untreated sewage into an unnamed tributary of the Codorus Creek. Representatives from the Township along with the Township's Engineer C.S.Davidson, met with PA DEP and continue to correspond on the development and implementation of a Corrective Action Plan and a Consent Order / Agreement to address and eliminate the need to perform relief pumping in the Skyview Drive/ North George Street area.

h. Prior to receiving the Notice of Violation from PA DEP, Manchester Township requested quotes from contractors to clean and televise Interceptor "A" which transports the sewer flows from the Skyview Drive/ North George Street area to the York City Treatment Plant. Due to scheduling issues with the contractor, the Manchester Township Public Works Department conducted the cleaning and televising work on approximately 2,100 feet of the interceptor. There were roots identified to be protruding into the interceptor in about a 1000' area. The roots were cut and RootX (a root inhibitor) was applied.

i. The sewer maintenance personnel monitor and clean the pump station wet wells as needed to remove any accumulation of grease that is present. An article was published in the Township's newsletter which is distributed to every residential property located in the Township to educate residents on the proper disposal of household grease. The newsletter is distributed three times a year to approximately 7,135 households.

j. During 2016, the biannual cleaning of a portion of the sewer line in sewer district "A", which is tributary to the York City system. This cleaning is done to deal with grease and solids that enter the system from the many restaurants that are connected to this collector. This preventive maintenance measure has helped

keep these lines clean and helps to prevent backups in this area, and will continue into 2017.

k. On September 26, 2003, all required information and forms were submitted to the Department of Environmental Protection to have the employees of Manchester Township, that were eligible, to be grand parented into the required certification program as a satellite sewage treatment operator. In 2016, Manchester Township had six (6) employees with certification. Three (3) of the employees have permanent certification. Training will continue for all employees as necessary to comply with the regulations to maintain the certifications.

l. The Manchester Township sewer crew personnel conducted 42 grease trap inspections at commercial establishments located within the Township. The commercial establishments were requested to provide either the manifest from the contractor that provided the grease trap cleaning service, or provide documentation that the grease trap was cleaned by company personnel.

5. In 2017, the sewer department personnel will continue to monitor flows and inspect manholes and pump stations in all sewer districts as well as cleaning and TV inspection as required. Additional time will be allocated for the televising of sewer lines during periods of significant precipitation to identify sources of I/I, including the collector lines tributary to the Skyview Drive/North George Street sewer line. Several other goals for 2016 are as following:

   a. Clean, televise, and repair as necessary, all sanitary sewer lines affected by the 2016 street and road construction schedule. Manhole adjustments and repairs to be completed as required for infiltration reduction.

   b. Continue to work with York City Wastewater Treatment personnel in identifying sources of I/I or obstructions in the main interceptor which extends from the 2100 block of North George Street in an off-street right-of-way to a connection with the York City main trunk line located at the southern end of the York City Wastewater Treatment Plant complex.

   c. Continue to TV and monitor flows from the private collection systems within Manchester Township, especially during periods of significant precipitation.

   d. Continue the biannual cleaning of the sanitary sewer line located in the Route 30 area that has a large concentration of restaurants and have the potential of depositing abnormal amounts of grease. Grease trap inspections will be conducted at the restaurants to ensure proper maintenance is being completed.

   e. Conduct smoke testing of sewer lines as a means to identify possible sources of I/I and illegal connections (as time permits).

f. Conduct inspections of properties identified to have sump pumps and / or downspouts connected to the sewer line to eliminate ground water from being pumped into the sanitary sewer system.

g. Schedule nighttime inspections of sewer lines in residential areas to identify potential sources of I/I during periods of significant precipitation.

h. Continue to inspect and apply preventive maintenance procedures to all sanitary sewer-pumping stations to ensure their continued operation.

i. Continue to train sewer department personnel in the latest equipment and safety issues that apply to the day-to-day operation of the Manchester Township sanitary sewer system and its related areas of responsibility.

j. In cooperation with Dover Township, continue to provide training to meet the continuing education requirements for the Certified Wastewater Systems Operators.

k. Conduct inspection of manholes in off street right of ways to identify possible sources of I/I. Including water tight lid conditions and manhole frames being sealed to the cone sections of the manhole.

6. During the 2016 calendar year Manchester Township and/or the Manchester Township Municipal Authority contracted private contractors to perform sewer related services as follows:

a. Fitz & Smith, Inc. replaced the following PVC sewer lines and manholes:

Bark Hill Road – 20 lineal feet of 8" PVC pipe, 6 lineal feet of 6" PVC pipe and 1 manhole

Roman Court – 20 lineal feet of 8" PVC pipe

Martingale Drive – 166 lineal feet of 8" PVC pipe

Board Road – 68 lineal feet of 8" PVC pipe

Midpine Drive- 260 lineal feet of 8" PVC pipe and 12 lineal feet of 6" PVC pipe

7. During 2016, Columbia Gas of Pennsylvania contracted with Utility Services Group to clean and televise a portion of Manchester Township's sanitary sewer lines and storm sewer lines for possible cross bore conflicts. There were no conflicts identified in the sanitary sewer lines. A report of the activities will be forwarded to the Township when the work is completed.

Manchester Township

Department of Environmental Protection

Wastewater Systems Operators Certificate Information

Grandparented Facility Id # 567443

Name	Client ID #	Certificate #	Exp. Date
Jeffrey A Beshore	235871	S13589	9/30/2019
Kenneth E Goodyear	235868	S13587	9/30/2019
*Robert M Hartman	235828	S13579	9/30/2019
Theodore R Heilman	235863	S13586	9/30/2019
*Greg A Frye	267277	S15996	3/31/2018
*Scott R Nace	267284	S15997	3/31/2018

*Employees with permanent Wastewater System, Class E, Subclass 4 certification.

End of Year Sewer Report			2016		
	York	Springetts	Dover	Year End Totals	
Lines Cleaned	24188	6675	25450	56313	
New Pipe TV"	2206.5	68	439.74	2714.24	
Old Pipe TV "I&I"	35348.45	13545.5	25820.05	74714	
Smoke Test	0	0	0	0	
Lines Root Cut	2250	0	1250	3500	
Manhole Inspections	168	57	147	372	
Manholes Repaired	33	12	19	64	
Dishpans Installed	8	3	4	15	
Laterals TV"	5	1	4	10	
Grease Trap Inspection				40	
Comments:					
FEBRUARY	FUEL LIFT PUMP REPLACED ON GENERATOR AT PUMP STATION #9				
MAY	PLC UNIT RELACED BY HYDRA- NUMATIC ON PUMP STATION #4				
JUNE	HYDRA-NUMATIC REPLACED TRANSDUCER AT PUMP STATION #4				
AUGUST	HAD MILTS REPAIR UP TO REPLACE SONIC START ON MOTOR # 2				
	AT PUMP STATION #1				
SETEMBER -NOVEMBER	SANITARY SEWER PIPE REPLACEMENTS				
A. SEPT.	MH# 128-129 MIDPINE DRIVE 260.74 FT OF 8"PVC				
B. OCT	MH # 288-289 MARTINGALE DRIVE 154 FT OF 8"PVC				
C. OCT	MH#711-712 BARK HILL ROAD 20 FT OF 8"PVC AND 5 FT OF 6" PVC				
D. OCT	MH#230-231 ROMAN COURT 16 FT OF 8"PVC				
E. NOV	MH# 115B-115C SHADY LANE 68 FT OF 8" PVC				

MANCHESTER TOWNSHIP

A. System Monitoring, Maintenance, and Repair

The sanitary sewer system maintenance program completed in 2015 is described on Attachment MT-4.

B. Collection System Condition

1. Description of System: The system tributary to York City is divided into five service areas as tabulated on Exhibit MT-C. Almost all the wastewater is monitored by the City of York at two sewage flow meter sites (MN-01 and MN-02). The Township system also transports sewage from Pine Hill Farms Apartments located in the City to the Wastewater Treatment Facility.

2. Conveyance Capacity: In 2014, Township crews performed emergency pumping operations at Skyview Drive and North George Street to prevent surcharges. In response to the submission of the 2013 Annual Wasteload Management Report (Chapter 94), on 04/25/14, PA DEP directed the Township submit a Correction Action Plan (see Exhibit MT-A). Copies of quarterly CAP submissions are included in Attachment MT-7. No bypass pumping was needed in 2015 or 2016.

3. Major Rehabilitation: In 2016, Fitz & Smith Inc. completed the following repair project.

   a. Roman Court MH 230 to MH 231 16 L.F. of 8" PVC pipe.

C. Sanitary Sewer Extensions

1. Extensions: No sanitary sewer extensions were built in 2016.

2. Proposed Projects: Some of the undeveloped areas within the Township will be served by the existing system and require only tap-ins. Several major projects are in the planning or construction stage and are indicated on Attachment MT-2 and MT-3.

D. Waste Flow Data

1. The total number of sewer connections completed in Manchester Township during each of the past five (5) years are as follows:

2012	2013	2014	2015	2016
23	17	12	15	13

2. A list of connection permits issued during 2016 is shown on Exhibit MT-B.

3. The estimated flows for the projected next five years are shown on Attachments MT-1 and MT-3.

E. Nutrient Trading Program 2003 thru 2016

1. The location of properties with onsite subsurface disposal systems repaired in 2016 is shown on Exhibit MT-D. No systems were eliminated last year.

2. Based upon 25 lbs. per year of nitrogen, the available credits through 12/31/15 are computed as follows:

2003	4 EDUs x 15 yrs. x 25 lbs.	1,500
2004	0 EDUs x 14 yrs. x 25 lbs.	0
2005	0 EDUs x 13 yrs. x 25 lbs.	0
2006	0 EDUs x 12 yrs. x 25 lbs.	0
2007	9 EDUs x 11 yrs. x 25 lbs. =	2,475
2008	2 EDUs x 10 yrs. x 25 lbs. =	500
2009	1 EDU x 9 yrs. x 25 lbs. =	225
2010	0 EDU x 8 yr. x 25 lbs. =	0
2011	2 EDU x 7 yr. x 25 lbs. =	350
2011	0 EDU x 6 yr. x 25 lbs. =	0
2012	0 EDU x 5 yr. x 25 lbs. =	0
2013	0 EDU x 4 yr. x 25 lbs. =	0
2014	0 EDU x 3 yr. x 25 lbs. =	0
2015	0 EDU x 2 yr. x 25 lbs. =	0
2016	0 EDU x 1 yr. x 25 lbs. =	0

3. However, recent regulations do not allow credits to be accumulated.

F. Connections to City of York WWTP

1. According to Township records, there are 3,959 connections to the system (see Exhibit MT-E).

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office

Exhibit MT-A
February 8, 2017

April 25, 2014

Mr. James Gross
York City York County
345 East Market Street
York, PA 17403

Re: 2013 Annual Wasteload Management Report
(Chapter 94)
York City STP
NPDES Permit No. PA0026263
York City, York County

Dear Mr. Gross:

The Department of Environmental Protection (DEP) has completed its review of your 2013 Annual Wasteload Management Report as required by 25 Pa. Code § 94.12 and has the following comments:

1) York City: The report indicates that the City uses surcharging indicators on eight manholes to monitor impact of rainfall. The manhole A40 on Codorus Creek interceptor and manholes T21 and T26 on the Tyler Run interceptor recorded surcharging on January 31, 2013. According to the Chapter 94 Regulations, the conveyance system is considered hydraulically overloaded when the flow in a portion of the sewer system exceeds its hydraulic carrying capacity. Please submit a Corrective Action Plan to eliminate the hydraulic overload in both the interceptors.

   The pumping station information is considered incomplete. The Chapter 94 Regulations require you to report the condition of the pumping stations including present maximum flows for each station, the maximum pumping rate for each station, comparison of the maximum pumping rate with present maximum flows for each station and a comparison of the maximum pumping rate with the projected two year maximum flows. Please provide this pump station information in your report.

2) Manchester Township: In October 2013 and March 2014 the Township crews pumped sewage from manhole a at the intersection of North George Street and Skyview Drive. In October 2013 the area received more than 9 inches of rain from remnants of tropical storm Karen, so we will consider this an excusable wet weather event. However, the March 2014 event indicates that the conveyance system is hydraulically overloaded. The Township needs to submit a Corrective Action Plan (CAP) to eliminate the hydraulic overload to comply with 25 Pa. Code 94.21requirement. Please submit a CAP within 30 days of receiving this letter.

8) West Manchester Township: The information in the Chapter 94 report and your consultant's letter dated March 19, 2014 indicates that the repairs completed in 2012 and 2013 have eliminated the overload at the West Market Street pump station. However we note that the flow information does not include flows from the tropical storm Karen. We will continue to monitor the progress but as of now we are taking West Market street pump station off the overloaded status.

As indicated in your consultant's letter, the Department will continue to consider the West King Street pump station hydraulically overloaded until all remaining reline work tributary to this pump station is completed and the recorded peak hourly flows are well below the new pump station capacity as will be indicated by a draw down test.

In addition to the above, we have received two complaints of sewage backs up at two separate locations in the Township. The first one is 55 S. Fayette Street and the second is 1742 Yorktown Drive. Please investigate the cause of the sewage backs-up and if necessary submit a plan & schedule to eliminate sewage backs-up at both the locations.

Please submit the requested information within 30 days of receiving this letter. The Chapter 94 report will remain in incomplete status until the requested information is submitted.

If you have any questions concerning this notice, please contact Sunil Desai at (717)705-4767 or sdesai@pa.gov.

Sincerely,

Timothy K. Wagner

Timothy K. Wagner, Chief
Planning and Finance Section
Clean Water Program

cc: Machester Twp.
York Township
Spring Garden Township
West Manchester Township
North York Borough
West York Borough
Springettsbury Township
Richard Resh, P.E.; C. S. Davidson, Inc.
Craig Wilson, P.E.; Dawood Engineering, Inc (2020 Good Hope Road, Enola, PA 17025)

MANCHESTER TOWNSHIP
2016
CONNECTIONS TO THE
YORK CITY WASTEWATER TREATMENT PLANT

ADDINGTON RESERVE
PA DEP P3-67939 - 417 3 E approved 6/17/07

C-94 #	Permit #	Name	Address	Subdivision	Dist	Plant	Units	Gallons	Month
4	2016 7	Fox Clearing LLC	3197 Hampshire Dr	AD	D	York	1	350	Apr
4	2016 19	Fox Clearing LLC	3460 E. Sorrel St.	AD	D	York	1	350	Aug
4	2016 22	Fox Clearing LLC	3217 Hampshire Dr.	AD	D	York	1	350	Sept
4	2016 25	Fox Clearing LLC	3250 Lewisberry Rd.	AD	D	York	1	350	Oct
4	2016 28	Fox Clearing LLC	3223 Hampshire Dr.	AD	D	York	1	350	Nov
						Total	5	1,750	

I-83 & Rt 30 Commercial Hotel (TRU by Hilton)
PA DEP #A3-67939-437-3E Approved 6/22/16

C-94 #	Permit #	Name	Address	Subdivision	Dist	Plant	Units	Gallons	Month
13	2016 26	Central PA Equities 22, LLC	1520 Toronita St.	MISC	B	York	1	6528	Dec

Exhibit MT-B
February 8, 2017

MANCHESTER TOWNSHIP
2016
CONNECTIONS TO THE
YORK CITY WASTEWATER TREATMENT PLANT

Spring Meadows (PRD) Church Rd Area
PA DEP # P3-67939-122 II

C-94 #	Permit #	Name	Address	Subdivision	Dist	Plant	Units	Gallons	Month
18	2016 1	Anthony & Veronica Gemma	2850 Halstead Ln.	SM	D	York	1	350	Feb

WHEATFIELD PHASE 1
PA DEP P3-67939- 419 E Approved 12/11/07

C-94 #	Permit #	Name	Address	Subdivision	Dist	Plant	Units	Gallons	Month
37	2016 8	Tri-Corner Wheatfield	3482 Fox Pointe Ln.	WF	D	York	1	350	Apr
37	2016 10	Tri-Corner Wheatfield	3446 Fox Pointe Ln.	WF	D	York	1	350	May
37	2016 14	Tri-Corner Wheatfield	3486 Fox Pointe Ln.	WF	D	York	1	350	Jun
37	2016 15	Tri-Corner Wheatfield	3466 Fox Pointe Ln.	WF	D	York	1	350	July
37	2016 18	Tri-Corner Wheatfield	3462 Fox Pointe Ln.	WF	D	York	1	350	Aug
37	2016 27	Tri-Corner Wheatfield	3476 Fox Pointe Ln.	WF	D	York	1	350	Nov
						Total	**6**	**2,100**	

2016 Total Connections	**13**	**10,728**

February 8, 2017
EXHIBIT MT-C

AS OF DECEMBER 31, 2016
TABULATION OF PUBLIC SANITARY SEWER FACILITIES
TRIBUTARY TO CITY OF YORK WWTP
IN MANCHESTER TOWNSHIP

BY SERVICE AREA

Service Areas	City MH	Total Manholes	Total Mains	Total (1) Laterals	Total Length	Total Miles	Percent of Total
A	A4	120	22,615	5,244	27,859	5.28	8.05%
B	A1	334	69,636	12,608	82,244	15.58	23.75%
D	A1	552	138,501	45,529	184,030	34.85	
D	IP2-1	22	4,058	908	4,966	0.94	
D	IP2-13	172	33,654	5,331	38,985	7.38	
Subtotals D:		746	176,213	51,768	227,981	43.18	65.84%
E	A1	17	7,909	251	8,160	1.55	2.36%
Totals:		**1,217**	**276,373**	**69,871**	**346,244**	**65.58**	**100.00%**

BY POINT OF CONNECTION

A	A4	120	22,615	5,244	27,859	5.28	8.05%
B, D, E	A1	903	216,046	58,388	274,434	51.98	79.26%
D	IP2-1	22	4,058	908	4,966	0.94	1.43%
D	IP2-13	172	33,654	5,331	38,985	7.38	11.26%
Totals:		**1,217**	**276,373**	**69,871**	**346,244**	**65.58**	**100.00%**

Notes:

(1) Pre-1999 totals based upon average lateral length of 15' per EDU. A majority of laterals are 6" diameter.

MANCHESTER TOWNSHIP
2016
ON SITE SEPTIC PERMITS

Application Number	Date Issued	Name	Location	New/Repair/ Other	Status	SEO	Sewer Area
Z119978 (MT97)	11/28/16	J Gordon Gainer LLC	1825 Roosevelt Avenue	New	Open	Poe	York

Exhibit MT-D
February 8, 2017

Exhibit MT-B
(through 4th quarter 2016)

YORK CITY CONNECTIONS
2016

February 8, 2017

Street Name	# of Units	Address range	Subdivision	New Connect
Alder Wy	12	2401 - 2445	White Oak Manor	
Angel Dr.	12	1500 - 1555	Evanbreth	
Anna May St.	5	720 - 765	Roche Gardens	
Applewine Ct.	17	700 - 820	MacGregor Downs	
Arsenal Rd.	15	40 - 334		
Aslan Ct.	18	617 - 793	Debrabender	
Aslan Dr.	31	2011 - 2194	Debrander-Aslan Heights	
Barcardi Cr.	5	10 - 50	Briar Bend	
Barrister Dr.	14	2300 - 2400	Briar Bend	
Bayberry Dr.	11	500 - 555	Briar Bend	
N. Beaver St.	18	1907 - 2028	Lightner tract	
Bentley Ln.	23	2160 - 2198	Bentley Croft	
Bernays Dr.	67	1909 - 2296	Briar Bend	
Bert Ct.	9	310 - 390	Dominion	
Biscayne Ln.	10	3102 - 3196	Addington Reserve	
Blackbridge Rd.	6	2700 - 2980	Blackbridge Industrial Park	
Blackgum Ct.	2	270 - 280	Blackbridge Industrial Park	
Blackthorne Ct.	1	2645	Blackbridge Industrial Park	
Brady Rd.	20	2500 - 2667	Brookstone	
Brandywine Ln.	57	1806 - 2512		
Breezeview Dr.	19	1360 - 1510	Evanbreth	
Brian Ln.	18	1900 - 1998	Greenbriar-Stewart	
Brigadier Dr.	11	2115 - 2195	Briar Bend	
Brookfield Dr.	9	3040 - 3080	Brookfield	
Buckthorn Dr.	20	500 - 560	White Oak Manor	
Butcher Ct.	8	769 - 776	JG Leasing	
Caspian Ct.	4	1013 - 1043	Aslan Heights	
Caspian Dr.	52	901 - 1197	Aslan Heights	
Central Ave.	9	10 - 75	Aurora Heights	
Chablis Wy.	9	3434 - 3486	Vintage Acres	
Chapel Dr.	16	1480 - 1590	Evanbreth	
Chardonnay Dr.	15	3403 - 3471	Vintage Acres	
E. Cherrywine Dr.	6	901 - 997	MacGregor Downs	
Church Rd.	83	485 - 1230		
N. Circle Blvd.	7	107 - 143	Clearbrook	
Claystone Rd.	17	10 - 100	Strawberry Patch	
Clearbrook Blvd.	51	2500 - 2798	Clearbrook	
Clearsprings Blvd.	51	2810 - 2927	Clearbrook	
Clearview Dr.	11	2630 - 2700	Clearview Heights	
Coldspring Rd.	38	2515 - 2775	Stillmeadow Farms	
Cousler Cr.	19	2504 - 2594	Brandywine Crossings	
Crosslyn Dr.	19	626 - 686	Brandywine Crossings	
Dandelion Dr.	13	1000 - 1099	MacGregor Downs	
Danielle Ct.	13	200 - 272	Dominion	
Duella Ct.	13	1912 - 1975	Greenbriar-Stewart	
Duella Ct., North			Greenbriar-Stewart	
Dulcy Dr.	10	500 -550	Stillmeadow Farms	
Eastland Ave.	54	102 - 280	Mayfield	
Edmund Ave.	8	845 - 897	Aslan Heights	
Edwards Ave.	2	25 - 35	Aurora Heights	
Eleventh Ave.	8	30 - 200		
Elkridge Ln.	22	2941 - 2985	Spring Meadows	

YORK CITY CONNECTIONS
2016

(through 4th quarter 2016)

Street Name	# of Units	Address range	Subdivision	New Connect
Farmbrook Ln.	5	505 - 550		
Farmtrail Rd.	13	3100 - 3400	Farmbrook Industrial Park	
Finks Dr.	16	710 - 800	Roundtown Heights	
Flour Mill Rd., West	4	5 - 20		
Forest Hill Cr.	4	405 - 420	Skyview	
Forest Hill Rd.	11	110 - 175	Skyview	
Fox Pointe Ln.	6	3403 - 3599	Wheatfield	
Foxtail Dr.	13	621 - 686	Spring Meadows	
Frelen Rd.	8	5 - 50	Dauber	
Friesian Rd.	56	2203 - 2495	Risheleau-Chesterbrook	
Garrett Rd.	4	2655 - 2685	Clearview Heights	
Gemstone Ln.	10	3011 - 3094	Beckenham	
N. George St.	146	1500 - 2934		
Gora Rd. North	28	2505 - 2695	Dominion	
Gora Rd. South	17	1000 - 1125	Dominion	
Greenbriar Rd.	1	822	d/y	
Greenleaf Ct.	8	410 - 480	Greenleaf Manor	
Greenleaf Rd.	44	10 - 390	Woodland Hills	
Grouse Ln.	22	500 - 830	Stillmeadow Farms	
Gwen Dr.	25	200 - 395	Gwendale	
Hake St.	1	20	Mayfield	
Halstead Ln.	36	2814 - 2939	Spring Meadows	
Hampshire Dr.	4	3197 - 3223	Addington Reserve	
Harford Cr.			Spring Meadows	
Harvest Dr.	135	105 - 685	Woodmont-Brandywine Crossings	
Hayley Rd.	32	575 - 699	Dominions II	
Hearthridge Ln.	120	1001 - 1170	Dominions III	
Hedgegate Ln.	11	903 - 970	Hedgegate	
Heidelberg Ave.	20	15 - 155	Lightner tract	
Hummel Dr.	9	2526 - 2663	Brandywine Crossings	
Ironstone Dr.	2	2290 - 2298	Skyview	
James Dr.	16	100 - 185	Penn State Estates	
Jasper Ave.	11	102 - 156	Lightner tract	
Jesse Ln.	13	2107 - 2188	Briar Bend	
Karyl Ln.	14	1900 - 1989	Greenbriar-Stewart	
Keystone Dr.	2	19 - 25	Clearbrook	
Knoll Ln.	19	50 - 150	Clearbrook	
Kochencur Ln.	1	10		
Kyle Rd.	21	600 - 694	Dominions II	
Leaf St.	29	602 - 699	Brandywine Crossings	
Lehrs Dr.	16	3105 - 3235	Roundtown Heights	
Lee Ln.	1	20	White Rock	
Lewisberry Rd.	1	3240	Addington Reserve	
Lightner Rd.	15	58 - 168	Lightner tract	
W. Locust Ln.	14	10 - 215	Clearbrook	
Longview Rd.	9	21 - 68	Clearbrook	
Loucks Rd.	47	320 - 490		
Lucy Ln.	9	2153 - 2177	Aslan Heights	
Masonic Dr.	2	200 - 400	Skyview	
Maurice St.	6	715 - 760	Roche Gardens	
S. Maurice St.	40	610 - 696	Penn State Estates	
Mayfield St.	34	2300 - 2593	Mayfield-Skyview	
Meadowbrook Blvd.	46	2602 - 2925	Clearbrook	
Merlot Ct.	22	3401 - 3486	Vintage Acres	
Monya Ct.	6	110 - 160	Dominion	
Narnia Ct.	5	920 - 980	Aslan Heights	
Narnia Dr.	18	2109 - 2191	Aslan Heights	

YORK CITY CONNECTIONS
2016

(through 4th quarter 2016)

Street Name	# of Units	Address range	Subdivision	New Connect
Norman Rd.	31	500 - 655	Risheleau	
North Point Dr.	74	2242 - 2375	North Point	
Northland Ave.	35	2410 - 2612	Mayfield	
Olivia Ct.	6	812 -	Erin's Glen	
Olmstead Wy.	28	505 - 705	Penn State Estates	
Pampas Dr.	6	2505 - 2535	Stillmeadow Farms	
Parkside Ave.	8	12 - 45	Aurora Heights	
Parkwood Dr.	15	624 - 662	Brandywine Crossings	
Paul St.	4	118 - 130	Mayfield	
Penn State Dr.	8	705 - 755	Penn State Estates	
Penwood Rd.	28	105 - 171	Skyview	
Peppermill Ln.	19	400 - 490	Woodmont	
Phillip Ct.	4	2120 - 2150	Aslan Heights	
Piedmont Dr.	7	220 - 310	Gwendale	
Pin Oak Dr.	72	2407 - 2599	White Oak Manor	
N. Pine St.	6	1400 - 1417		
Point Cr.	18	257 - 280	North Point	
N. Queen St.	8	1405 - 1545		
Rillian Ln.	8	2152 - 2175	Aslan Heights	
Robin Hill Cr.	123	110 - 805	Woodmont	
Rockwood Ave.	32	100 - 132	Mayfield	
Roman Ct.	8	410 - 480	Dominion I	
Roosevelt Ave.				
Rose Ct.	5	120 - 150		
Rutland Ave.	8	2420 - 2503	Mayfield	
Ryan Run	1	555	Dominion II	
Sandalwood Ct.	14	2000 - 2070	Gwendale	
Sandstone Ln.	10	505 - 580	Beckenham	
Scotch Dr.	24	1500 - 1598	Highland Manor	
Shagbark Ct.	15	2556 - 2598	White Oak Manor	
Sinking Springs Ln.	25	537 - 797		
Skyview Dr.	145	120 - 1205	Woodland Hills	
Slater Hill Ln., East	53	2301 - 2398	Slater Hill	
Slater Hill Ln., West	28	2200 - 2257	Slater Hill	
Sloane Cr.	13	2901 - 2925	Spring Meadows	
Smile Wy.	1	1250	York City Industrial Park	
Soapstone Ln.	21	544 - 601	Beckenham	
Sonoma Ln.	13	3406 - 3474	Vintage Acres	
E. Sorrel St.	30	3320 - 3440	Addington Reserve	
Sprinkle Drive			Sprinkle Village	
State St.	1	105	Lightner tract	
Stella Ave.	7	10 - 43	Aurora Heights	
Stillmeadow Ln.			d/y	
Strawberry Ln.	2	760 - 772	MacGregor Downs	
Susquehanna Tr.			y/s	
Sweetgum Cr.	12	2452 - 2498	White Oak Manor	
Swith Ct.	8	110 - 180	Stillmeadow Farms	
Sycamore Ln.	8	172 - 204	Clearbrook	
Taft Ave.	12	15 - 151	Lightner tract	
Tara Ln.	19	2500 - 2595	Stillmeadow Farms	
Tenth Ave.	2	231 - 550		
Teslin Rd.	42	2005 - 2226	Gwendale	
Toronita St.	10	1298 - 1760		
Valley Rd.	5	506 - 535	Clearview Heights	
Village Cr., East	62	2001 - 2067	Susquehanna Village	
Village Cr., West	53	3001 - 3069	Susquehanna Village	
Villagte Wy.	77	1000 - 1106	Susquehanna Village	

YORK CITY CONNECTIONS
2016

(through 4th quarter 2016)

Street Name	# of Units	Address range	Subdivision	New Connect
Warren Rd.	4	10 - 40	Aurora Heights	
Webster Ave.	9	38 - 144	Lightner tract	
White Oak Dr.	25	105 - 170		
Wildview Ln.		3406 - 3575	Wheatfield	
Willis Run Rd.	1	135		
Willow Ridge Ct.	4	821 - 875	Asian Heights	
Willow Ridge Dr.	74	700 - 1051	Asian Heights	
Wilson Ave.	20	11 - 133	Lightner tract	
Windsor Rd.	1	3481	Aurora Heights	
Winterberry Ln.	10	2410 - 2430	White Oak Manor	
Woodbridge Cr.	3	3425 - 3430	Farmbrook Industrial Park	
Woodland Ave.	22	32 - 163	Lightner tract	
Woodland View Dr.	70	8 - 685		
Woodmont Dr.	183	2300 - 2885	Woodmont-Dominion III	
Woodward Dr.	35	1 - 89	Lightner tract	
Zoar Ave.	8	103 - 149	Lightner tract	
TOTAL UNITS	3959			

MANCHESTER TOWNSHIP
2016
SANITARY SEWER TRANSFERS AND ACQUISITIONS

TRANSFERS

FROM	TO	DATE APPROVED	FOR (location)	GPD	Treatment Area
Spring Meadows Rutters	Anthony and Veronica Gemma	2/9/16	2850 Halstead Lane	350	York
George McGee	Sarah and Kevin Brick	2/9/16	1320 Briargate Road	300	Dover
Kinsley Equities LP II	Donald and Norma Nash	5/10/16	1547 Winsford Lane	300	Dover
Kinsley Equities LP II	Gregory and Karen Paige	6/24/16	2732 Farnham Lane	300	Dover
Kinsley Equities LP II	George and Patricia Margetas	9/13/16	1528 Winsford Lane	300	Dover

ACQUISITIONS

FROM	TO	DATE APPROVED	FOR (location)	GPD	Treatment Area
Manchester Township	Clearview Associates TRU by Hilton Hotel	2/9/16	1520 Toronita Street	6,528	York
Manchester Township	Hauck Logistics, LLC	12/13/16	10 Leo Lane	300	York

MANCHESTER TOWNSHIP

A. Pump Station Condition

1. Farmbrook Industrial Pump Station (No. 4):

The Farmbrook Industrial Park Pump Station was built in 1981 (BWQM 6780405) and has a design capacity of 200 GPM. The station contains no overflows or bypasses and is equipped with a standby emergency generating unit. The standby generator was replaced in 2003. Impeller changes to the pump station were completed in 2007 to increase pumping capacity at the Farmbrook Pump Station from 191 GPM to about 300 GPM. The outside duplex pump station was replaced with a wet well mounted facility in 2011. The capacity at the new facility was field verified at 280 GPM by Township personnel on January 8, 2016. The new pump station has variable frequency drives. The initial design condition was based upon 370 GPM at 129 TDH. The future condition is 555 GPM at 144 TDH. Based on elapsed time meter records for 2016, average daily flows through this station were as follows:

280 GPM Rated in 2016	FARMTRAIL PUMP STATION (NO. 4)			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	2.02	33,936		
Average	5.03	84,504		
Maximum*	13.21	221,928	403,200	2.63

The projected 2-year flows are estimated as follows:

	2016	2017	2018	Design Capacity (GPD)
Avg. Daily Flow (GPD)	84,504	99,196	112,796	
Max. Daily Flow (GPD)	221,928	260,513	296,230	532,800
% Loading (of Design)	41.7%	48.9%	55.6%	
% Loading (of Capacity)	55.0%	64.6%	73.5%	

Peak flows at pump station increased from 148,572 GPD in 2015 to 316,512 GPD based on 18.84 hours operation/day between 02/01/16 and 02/08/16. The unusually high flow was caused by rainfall and snowmelt from 30"+ event, resulting in a Governor emergency declaration. Using the 18.84 hours of operation, results in a projected 104.8% overload in 2018. We have opted to use 13.21 hours of operation/day, the second highest hours, which occurred between 02/22/16 and 02/29/16 in the chart above. Based on the lower hours, no overload is projected at this station within the next two (2) years.

2. Blackbridge Road Pump Station (No. 6):

The Blackbridge Road Pump Station was placed into operation in 1989 (BWQM No. 6787408) and serves the York County Solid Waste and Refuse Authority's (YCSW&RA) Resource Recovery Facility. The station contains no overflows or bypasses. A generator was added by a private developer in 2003. On December 16, 2015, the pump station capacity was field verified at 307 GPM, versus its design capacity of 200 GPM. Based on elapsed time meter records for 2016 average daily flows through this station were as follows:

307 GPM Rated in 2015	BLACKBRIDGE ROAD PUMP STATION (NO. 6)			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	0.82	15,104		
Average	2.41	44,392		
Maximum	6.16	113,467	442,080	2.56

The projected 2-year flows are estimated as follows:

	2016	2017	2018	Design Capacity (GPD)
Avg. Daily Flow (GPD)	44,392	46,092	81,442	
Max. Daily Flow (GPD)	113,467	117,812	208,168	288,000
% Loading (of Design)	39.4%	40.9%	72.3%	
% Loading (of Capacity)	25.7%	26.6%	47.1%	

No overload is projected at this station within the next two (2) years.

3. Aslan Heights Pump Station (No. 9):

The Aslan Heights Pump Station (No. 9) was placed into operation in July 1997. The design capacity of the facility is 155 GPM. The pump station capacity was field verified at 232 GPM on January 15, 2014. Based on elapsed time meter records for 2016, average daily flows through this station were as follows:

232 GPM Rated in 2014	ASLAN HEIGHTS PUMP STATION (NO. 9)			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	2.19	30,485		
Average	3.35	46,632		
Maximum	8.23	114,562	334,080	2.46

The projected 2-year flows are estimated as follows:

	2016	2017	2018	Design Capacity (GPD)
Avg. Daily Flow (GPD)	46,632	46,632	46,632	
Max. Daily Flow (GPD)	114,562	114,562	114,562	223,200
% Loading (of Design)	51.3%	51.3%	51.3%	
% Loading (of Capacity)	34.3%	34.3%	34.3%	

No overload is projected at this station within the next two (2) years.

4. Caspian Drive Pump Station (No. 10):

The Aslan Heights Pump Station (No. 10) was placed into operation during October 1999, but was relocated to Caspian Drive in 2003 to serve the Bentley Croft subdivision. The design capacity of the facility is 80 GPM. The actual pumping capacity of this station was field verified on January 25, 2013 at 94 GPM. Based on elapsed time meter records for 2016, average daily flows through this station were as follows:

94 GPM Rated in 2013	CASPIAN DRIVE PUMP STATION (NO. 10)			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	3.75	21,150		
Average	6.37	35,927		
Maximum	18.12	102,197	135,360	2.84

The projected 2-year flows are estimated as follows:

	2016	2017	2018	Design Capacity (GPD)
Avg. Daily Flow (GPD)	35,927	36,627	37,327	
Max. Daily Flow (GPD)	102,197	104,188	106,179	115,200
% Loading (of Design)	88.7%	90.4%	92.2%	
% Loading (of Capacity)	75.5%	77.0%	78.4%	

No overload is projected at this station within the next two (2) years.

38 North Duke Street
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March 16, 2016

Sunil Desai, P.E., Planning and Finance Section
PA Dept. of Environmental Protection
South Central Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110-8210

RE: CAP/Status Report No. 7 (due 03/24/16)
2013/2014 Wasteload Management Report
Manchester Township, York County, PA
Engineer's Project No. 0841.6.71.00

Dear Mr. Desai,

While the Consent Order and Agreement (CO/A) is being finalized, the Township is proceeding with the work plan, as outlined on the revised schedules provided on December 23, 2015. Under the initial Phase I work plan, the temporary meter at Manhole No. 17 will remain in place and will not be removed without PA DEP approval.

Manchester Township contracted with Buchart Horn, Inc. to develop the Interceptor Capacity Study/Model. The initial Hydraulic Modeling Report was completed in December 2014 and submitted to PA DEP. Buchart Horn, Inc. completed the Hydraulic Modeling Report on September 21, 2015 and a copy was submitted for PA DEP review and comment. C.S. Davidson completed the Sewer System Evaluation Survey (SSES) Study based on the May 18, 2015 rainfall event and submitted on October 15, 2015.

In addition to the removing tree root obstructions to reduce capacity restrictions, the Manchester Township Public Works Department has performed the following tasks since our September 22, 2015 report.

1. Third party house inspections were conducted on 53 homes in October 2015. Typically, the best time to schedule appointments was during weekday evening hours to accommodate work schedules. With sunlight it was also easier to check roof leaders and area drains. With the time change, Manchester Township delayed the second group of house inspections until April 2016. A third group, if needed, will be performed in June 2016.

2. Township sewer maintenance personnel inspected 59 additional manholes this past quarter. A total of 1445 manholes have been inspected to date.

3. Manchester Township sewer maintenance personnel performed the following work since the last report:

   a. 10,632' of sewer lines televised
   b. 1,804' of sewer lines cleaned

4. All but two violations in the group of houses inspected in October 2015 have been corrected or addressed.

The Township Staff plans to perform the following tasks in the second quarter of 2016:

1. Perform additional manhole repairs, as needed.

2. Continue cleaning/televising sewers with high I/I probability as identified in the SSES Study.

3. Third party house inspections in North George Street area will begin in April in Study Areas B, D and F.

During the month of February, Manchester Township received two high water alarms at Manhole No. 31 located at the intersection of North George Street and Skyview Drive.

1. The first incident occurred on February 3, 2016 at approximately 1600 hours. Prior to the alarm the area received in excess of 2" of rain in addition to the snow melt for the "Blizzard of 2016" which dropped 30" of snow on this area on January 20 and 21, 2016. Bob Hartman and Scott Nace responded to the alarm call and monitored the flow levels until midnight at which point the flow level dropped below the alarm float level.

2. The second incident occurred on February 24, 2016 at approximately 1930 hours. Prior to this alarm the area continued to have snow melt and also received in excess of 2" of rain. Bob Hartman, Greg Frye, Ted Heilman, and Ken Goodyear responded to the call alarm, mobilized the portable pumps, and monitored the flow levels until 300 hours on February 25, 2016 at which point the flow level dropped below the alarm float level. The flow level at its highest point was within 1" of the pre-determined point in which we would have started the relief pumping operation.

The Township would like to meet with PA DEP to finalize the CO/A. If there are any questions, please contact me directly at (717)814-4540 or by email at rgr@csdavidson.com. The next status report is due June 26, 2016.

After 45 years at C.S. Davidson, Inc. I retired from full time employment on January 15, 2016. I will continue to work most Tuesdays and Wednesdays through 2016. Terry A. Myers, P. E. will be responsible to submit quarterly status reports regarding the Corrective Action Plan.

Sincerely,

C.S. Davidson, Inc.

Richard G. Resh

RGR/ems

Copy: Timothy James, Manager, Manchester Township 3200 Farmtrail Road, York PA 17406
James Gross, Director of Public Works, City of York, PO Box 509, York, PA 17405
David Shirk, P.E., Buchart-Horn, Inc., 445 W. Philadelphia St., York, PA 17401
Veronica Chavez, Pretreatment Permit & Compliance Manager, City of York
City of York WWTP – MIPP Division, 1625 Toronita Street, York, PA 17402
B. J. Treglia, P.E., C. S. Davidson, Inc.
Terry A. Myers, P.E., C. S. Davidson, Inc.
John J. Mahoney, Esquire
Siana, Bellwoar & McAndrew, LLP, 941 Pottstown Pike, Suite 200, Chester Springs, PA 19425
Larry Young, Esquire, CGA Law Firm, 135 North George Street, York, PA 17401
File

Attachment MT-7B

38 North Duke Street
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June 21, 2016

Sunil Desai, P.E., Planning and Finance Section
PA Dept. of Environmental Protection
South Central Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110-8210

RE: CAP/Progress Report No. 8 (due 06/24/16)
2013/2014 Wasteload Management Report
Manchester Township, York County, PA
Engineer's Project No. 0841.6.71.00

Dear Mr. Desai,

Victor Landis with PA DEP, submitted the latest version of Consent Order and Agreement (CO/A) to Manchester Township on May 9, 2016. Both parties plan to meet on June 27, 2016. The Manchester Township Board of Supervisors met in Executive Session on 06/14/16 to discuss the CO/A document. Under the CO/A, the Township will be required to submit a revised Corrective Action Plan (CAP) schedule within 90 days after execution of CO/A and complete construction of the North George Street Relief Interceptor within the three years.

While the CO/A is being finalized, the Township is proceeding with the work plan, as outlined on the revised schedules provided on December 23, 2015. Under the initial Phase I work plan, the temporary meter at Manhole No. 17 will remain in place and will not be removed without PA DEP approval.

Manchester Township contracted with Buchart Horn, Inc. to develop the Interceptor Capacity Study/Model. The initial Hydraulic Modeling Report was completed in December 2014 and submitted to PA DEP. Buchart Horn, Inc. completed the Hydraulic Modeling Report on September 21, 2015 and a copy was submitted for PA DEP review and comment. C.S. Davidson completed the Sewer System Evaluation Survey (SSES) Study based on the May 18, 2015 rainfall event and submitted on October 15, 2015.

In addition to the removing tree root obstructions to reduce capacity restrictions, the Manchester Township Public Works Department has performed the following tasks since our March 16, 2016 report.

1. The second phase of the third party house inspections were conducted on 48 homes in May 2016 (see Exhibit A).

2. Township sewer maintenance personnel inspected 100 additional manholes this past quarter. A total of 1545 manholes have been inspected to date.

3. Manchester Township sewer maintenance personnel performed the following work since the last report:

   a. 31,880' of sewer lines were televised
   b. 11,009' of sewer lines were cleaned

4. Additional work is outlined on Exhibit B attached.

The Township Staff plans to perform the following tasks in the third quarter of 2016:

1. Perform additional manhole repairs, as needed.

2. Continue cleaning/televising sewers with high I/I probability as identified in the SSES Study.

No high water alarms at Manhole No. 31 located at the intersection of North George Street and Skyview Drive since February 24, 2016.

If there are any questions, please contact me directly at (717)814-4540 or by email at rgr@csdavidson.com. The next progress report is due September 24, 2016.

After 45 years at C.S. Davidson, Inc. I retired from full time employment on January 15, 2016. I will continue to work most Tuesdays and Wednesdays through 2016. Terry A. Myers, P. E. will be responsible to submit quarterly status reports regarding the Corrective Action Plan.

Sincerely,

C.S. Davidson, Inc.

Richard G. Resh

RGR/ems
Enclosures
Copy: Timothy James, Manager, Manchester Township 3200 Farmtrail Road, York PA 17406
James Gross, Director of Public Works, City of York, PO Box 509, York, PA 17405
David Shirk, P.E., Buchart-Horn, Inc., 445 W. Philadelphia St., York, PA 17401
Veronica Chavez, Pretreatment Permit & Compliance Manager, City of York
City of York WWTP – MIPP Division, 1625 Toronita Street, York, PA 17402
B. J. Treglia, P.E., C. S. Davidson, Inc.
Terry A. Myers, P.E., C. S. Davidson, Inc.
John J. Mahoney, Esquire
Siana, Bellwoar & McAndrew, LLP, 941 Pottstown Pike, Suite 200, Chester Springs, PA 19425
Larry Young, Esquire, CGA Law Firm, 135 North George Street, York, PA 17401
Stacey MacNeal, Esquire, Katherman, Helm & Perry, 345 East Market Street, York, PA 17403
File

Attachment MT-7C

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September 21, 2016

Sunil Desai, P.E., Planning and Finance Section
PA Dept. of Environmental Protection
South Central Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110-8210

RE: CAP/Progress Report No. 9 (due 09/24/16)
2013/2014 Wasteload Management Report
Manchester Township, York County, PA
Engineer's Project No. 0841.6.71.00

Dear Mr. Desai,

Victor Landis with PA DEP, submitted the latest version of Consent Order and Agreement (CO/A) to Manchester Township on May 9, 2016. Both parties met on June 27, 2016 along with City of York representatives. The Manchester Township Board of Supervisors met in Executive Session on June 14, 2016 to discuss the CO/A document. Under the CO/A, the Township will be required to submit a revised Corrective Action Plan (CAP) schedule within 90 days after execution of CO/A and complete construction of the North George Street Relief Interceptor within the three years.

While the CO/A is being finalized, the Township is still proceeding with the work plan, as outlined on the revised schedules provided on December 23, 2015. As a follow-up to Mr. Landis's attached June 30, 2016 letter, the temporary meter at Manhole No. 17 has been removed.

Manchester Township contracted with Buchart Horn, Inc. to develop the Interceptor Capacity Study/Model. The initial Hydraulic Modeling Report was completed in December 2014 and submitted to PA DEP. Buchart Horn, Inc. completed the Hydraulic Modeling Report on September 21, 2015 and a copy was submitted for PA DEP review and comment. C.S. Davidson completed the Sewer System Evaluation Survey (SSES) Study based on the May 18, 2015 rainfall event and submitted on October 15, 2015.

In addition to the removing tree root obstructions to reduce capacity restrictions, the Manchester Township Public Works Department has performed the following tasks since our June 21, 2016 report.

1. Township sewer maintenance personnel inspected 104 additional manholes this past quarter. A total of 1649 manholes have been inspected to date.

2. Between June 14 and September 7, 2016, the Manchester Township sewer maintenance personnel performed the following work since the last report:

    - Cleaned 32,800 feet of sanitary sewer lines.
    - Televised 25,417 feet of sanitary sewer lines.
    - Sealed 22 manhole chimney sections with the epoxy chimney seal kits purchased from Exeter Supply.
    - Replaced 4 manhole frames that were damaged.

- Installed 6 manhole inserts.
- Televised 5 laterals.

3. No additional third party house inspections were conducted since May 2016.

In addition to Township's work above, the Columbia Gas Company contracted with Utility Services Group to clean and televise a large portion of the Township's sanitary and sewer lines to locate any possible cross bores they may have installed. We will be receiving a report from Utility Group Services Group following the completion of this work. To date the have not found any cross bores in the sanitary sewer lines or laterals. They have located 2 cross bore thru storm sewer lines.

The Township Staff plans to perform the following tasks in the fourth quarter of 2016:

1. Perform additional manhole repairs, as needed.

2. Continue cleaning/televising sewers with high I/I probability as identified in the SSES Study.

As a following to the June 27, 2016 meeting with PADEP and in response to the attached August 29, 2016 letter to James Gross, the following items have been accomplished:

- A meeting was conducted between Manchester Township, the York City Sewer Authority (YCSA), and respective legal counsels to discuss creating an agreement to commit to interceptor upgrades. At the July 28, 2016 Manchester Township Municipal Authority meeting, Solicitor MacNeal stated concern whether the YCSA will be willing to commit to anything considering the looming termination of the YCSA.
- At the August 17, 2016 YCSA meeting, they agreed to enter into an agreement with Manchester Township to complete the interceptor upgrade. The cost of the difference to construct the upgrade within the Treatment Plant is not known at this time. The YCSA will pay for the difference out of its own reserve account.
- Township Staff has given direction to initiate completion of preliminary design of the interceptor upgrade in preparation for permit application submissions to PA DEP.

No high water alarms occurred at Manhole No. 31 located at the intersection of North George Street and Skyview Drive since February 24, 2016.

If there are any questions, please contact me directly at (717)814-4540 or by email at rgr@csdavidson.com. The next progress report is due December 24, 2016.

After 45 years at C.S. Davidson, Inc. I retired from full time employment on January 15, 2016. I will continue to work most Tuesdays and Wednesdays through 2016. Beginning in 2017, Terry A. Myers, P. E. will be responsible to submit quarterly status reports regarding the Corrective Action Plan.

Sincerely,

C.S. Davidson, Inc.

Richard G. Resh

RGR/lmb

Enclosures

Copy: Timothy James, Manager, Manchester Township 3200 Farmtrail Road, York PA 17406
James Gross, Director of Public Works, City of York, PO Box 509, York, PA 17405
David Shirk, P.E., Buchart-Horn, Inc., 445 W. Philadelphia St., York, PA 17401
Veronica Chavez, Pretreatment Permit & Compliance Manager, City of York
City of York WWTP – MIPP Division, 1625 Toronita Street, York, PA 17402
B. J. Treglia, P.E., C. S. Davidson, Inc.
Terry A. Myers, P.E., C. S. Davidson, Inc.
John J. Mahoney, Esquire
Siana, Bellwoar & McAndrew, LLP, 941 Pottstown Pike, Suite 200, Chester Springs, PA 19425
Larry Young, Esquire, CGA Law Firm, 135 North George Street, York, PA 17401
Stacey MacNeal, Esquire, Katherman, Heim & Perry, 345 East Market Street, York, PA 17403
File

K:\08\157100\Correspondence\Letters-Reports\2016 09 20 Letter for Progress Report No. 9.docx

Attachment MT-7D

38 North Duke Street
York, PA 17401
(717) 846-4805
FAX (717) 846-5811

C.S.Davidson, Inc.
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November 18, 2016

Sunil Desai, P.E., Planning and Finance Section
PA Dept. of Environmental Protection
South Central Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110-8210

RE: Revised Joint CAP/Progress Report No. 9-R
2013/2014 Wasteload Management Report
Manchester Township, York County, PA
Engineer's Project No. 0841.6.71.00

Dear Mr. Desai,

As requested, CAP Progress Report No. 9 submitted on September 21, 2016, has been revised. This report is submitted jointly with the City of York. We have enclosed a letter from Buchart-Horn, Inc. outlining steps to resolve the interceptor capacity issues through the York City WWTP site. On behalf of Manchester Township, C. S. Davidson, Inc. will submit joint progress reports for both the City and the Township on a quarterly basis by 3/23, 6/23, 9/23 and 12/23 thru 2018.

Victor Landis with PA DEP, submitted the latest version of Consent Order and Agreement (CO/A) to Manchester Township on May 9, 2016. Both parties met on June 27, 2016 along with City of York representatives. The Manchester Township Board of Supervisors met in Executive Session on June 14, 2016 to discuss the CO/A document. Under the CO/A, the Township will be required to submit a revised Corrective Action Plan (CAP) schedule within 90 days after execution of CO/A and complete construction of the North George Street Relief Interceptor within three years.

While the CO/A is being finalized, the Township is still proceeding with the work plan, as outlined on the revised schedules provided on December 23, 2015. As a follow-up to Mr. Landis's attached June 30, 2016 letter, the temporary meter at Manhole No. 17 was removed on October 3, 2016.

Manchester Township contracted with Buchart Horn, Inc. to develop the Interceptor Capacity Study/Model. The initial Hydraulic Modeling Report was completed in December 2014 and submitted to PA DEP. Buchart Horn, Inc. completed the Hydraulic Modeling Report on September 21, 2015 and a copy was submitted for PA DEP review and comment. C.S. Davidson completed and submitted the Sewer System Evaluation Survey (SSES) Study on October 15, 2015. The study was based on the May 18, 2015 rainfall event.

In addition to the removing tree root obstructions to reduce capacity restrictions, the Manchester Township Public Works Department has performed the following tasks since our June 21, 2016 report.

1. Township sewer maintenance personnel inspected 104 additional manholes this past quarter. A total of 1649 manholes have been inspected to date.

2. Between June 14 and September 7, 2016, the Manchester Township sewer maintenance personnel performed the following work:

    - Cleaned 32,800 feet of sanitary sewer lines.
    - Televised 25,417 feet of sanitary sewer lines.
    - Sealed 22 manhole chimney sections with the epoxy chimney seal kits purchased from Exeter Supply.
    - Replaced 4 manhole frames that were damaged.
    - Installed 6 manhole inserts.
    - Televised 5 laterals.

3. No additional third party house inspections were conducted since May 2016.

In addition to Township's work above, the Columbia Gas Company contracted with Utility Services Group to clean and televise a large portion of the Township's sanitary and sewer lines to locate any possible cross bores they may have installed. We will be receiving a report from Utility Group Services Group following the completion of this work. To date, they have not found any cross bores in the sanitary sewer lines or laterals. They have located 6 cross bore thru storm sewer lines.

The Township Staff plans to perform the following tasks in the fourth quarter of 2016:

1. Perform additional manhole repairs, as needed.

2. Continue cleaning/televising sewers with high I/I probability as identified in the SSES Study.

As a follow-up to the June 27, 2016 meeting with PADEP and in response to the attached August 29, 2016 letter to James Gross, the following items have been accomplished:

- A meeting was conducted between Manchester Township, the York City Sewer Authority (YCSA), and respective legal counsels to discuss creating an agreement to commit to interceptor upgrades. At the July 28, 2016 Manchester Township Municipal Authority (MTMA) meeting, YCSA Solicitor MacNeal expressed concern about the YCSA committing to anything considering the possible termination of the YCSA.
- At the August 17, 2016 YCSA meeting, they agreed to enter into an agreement with Manchester Township to complete the necessary interceptor upgrade and be responsible for the additional cost caused by the piping installed in the area of the existing interceptor. The cost of the difference to construct the upgrade within the Treatment Plant is not known at this time. The YCSA will pay for the difference out of its own reserve account.
- Township Staff has given direction to initiate completion of preliminary design of the interceptor upgrade in preparation for permit application submissions to PA DEP.

No high water alarms occurred at Manhole No. 31, located at the intersection of North George Street and Skyview Drive, since February 24, 2016.

On 10/5/16, representatives from C.S. Davidson, Inc. and Buchart-Horn, Inc. met with the Manchester Township staff. Both engineering firms are working on proposal submissions to Manchester Township Municipal Authority (CSD) and York County Sewer Authority (BH) later this month. The limits of design responsibility were resolved with BH designing larger diameter sewers downstream of MH 8A and CSD designing larger diameter sewer upstream of MH *8A. There was a brief discussion about increasing the proposed pipe sizes but no decision will be made until the preliminary design has been completed and accepted.

The following schedule was tentatively developed for Manchester Township:

Description of Work	Quarter/Year
Update Preliminary Design	4th/2016
Prepare Final Design/Negotiate YCSA Agreement	1st/2017
Submit Permit Application	2nd/2017
Secure Permit Approvals	3rd/2017
Finalize Bidding Documents'	4th/2017
Solicit Bids/Finalize Bank Loan	1st/2018
Begin Construction	2nd/2018
End Construction	3rd/2018
Submit Completion Reports	4th/2018
End CAP	

If there are any questions, please contact me directly at (717)814-4540 or by email at rgr@csdavidson.com. The next progress report is due December 23, 2016.

After 45 years at C.S. Davidson, Inc., I retired from full-time employment on January 15, 2016. I will continue to work most Tuesdays and Wednesdays through 2016. Beginning in 2017, Terry A. Myers, P. E. will be responsible to submit quarterly status reports regarding the Corrective Action Plan.

Sincerely,

C.S. Davidson, Inc.

Richard G. Resh

RGR/lmb
Enclosures
Copy: Timothy James, Manager, Manchester Township 3200 Farmtrail Road, York PA 17406
James Gross, Director of Public Works, City of York, PO Box 509, York, PA 17405
David Shirk, P.E., Buchart-Horn, Inc., 445 W. Philadelphia St., York, PA 17401
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Attachment MT-7E

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York • Gettysburg • Lancaster

December 21, 2016

Sunil Desai, P.E., Planning and Finance Section
PA Dept. of Environmental Protection
South Central Regional Office
909 Elmerton Avenue
Harrisburg, PA 17110-8210

RE: Joint CAP/Progress Report No. 10 (Due 12/23/16)
2013/2014 Wasteload Management Report
Manchester Township, York County, PA
Engineer's Project No. 0841.6.71.00

Dear Mr. Desai,

This report is submitted jointly with the City of York. We have enclosed a letter from Buchart-Horn, Inc. outlining steps to resolve the interceptor capacity issues through the York City WWTP site (See Exhibit A attached). On behalf of Manchester Township, C. S. Davidson, Inc. will submit joint progress reports for both the City and the Township on a quarterly basis by 3/23, 6/23, 9/23 and 12/23 thru 2018.

Victor Landis with PA DEP, submitted the latest version of Consent Order and Agreement (CO/A) to Manchester Township on May 9, 2016. Both parties met on June 27, 2016 along with City of York representatives. The Manchester Township Board of Supervisors met in Executive Session on June 14, 2016 to discuss the CO/A document. Under the CO/A, the Township will be required to submit a revised Corrective Action Plan (CAP) schedule within 90 days after execution of CO/A and complete construction of the North George Street Relief Interceptor within three years.

While the CO/A is being finalized, the Township is still proceeding with the work plan, as outlined on the revised schedules provided on December 23, 2015. As a follow-up to Mr. Landis's attached June 30, 2016 letter, the temporary meter at Manhole No. 17 was removed on October 3, 2016.

Manchester Township contracted with Buchart Horn, Inc. to develop the Interceptor Capacity Study/Model. The initial Hydraulic Modeling Report was completed in December 2014 and submitted to PA DEP. Buchart Horn, Inc. completed the Hydraulic Modeling Report on September 21, 2015 and a copy was submitted for PA DEP review and comment. C.S. Davidson completed and submitted the Sewer System Evaluation Survey (SSES) Study on October 15, 2015. The study was based on the May 18, 2015 rainfall event.

In addition to the removing tree root obstructions to reduce capacity restrictions, the Manchester Township Public Works Department has performed the following tasks since our September 24, 2016 report.

1. Township sewer maintenance personnel inspected 88 additional manholes this past quarter. A total of 1,737 manholes have been inspected to date.

2. Between September 8 and December 16, 2016, the Manchester Township sewer maintenance personnel performed the following work:

    - Cleaned 10,025 feet of sanitary sewer lines.
    - Televised 7,299 feet of sanitary sewer lines.
    - Sealed 10 manhole chimney sections with the epoxy chimney seal kits purchased from Exeter Supply.
    - Replaced 2 manhole frames that were damaged.
    - Reset 4 manhole frames with mastic.
    - Installed 2 manhole inserts.
    - Televised 2 laterals.

3. No additional third party house inspections were conducted since May 2016.

In addition to Township's work above, the Columbia Gas Company contracted with Utility Services Group to clean and televise a large portion of the Township's sanitary and storm sewer lines to locate any possible cross bores they may have installed. We will be receiving a report from Utility Group Services Group following the completion of this work. To date, they have not found any cross bores in the sanitary sewer lines or laterals. They have located 6 cross bore in storm sewer lines.

The Township Staff plans to perform the following tasks in the first quarter of 2017:

1. Perform additional manhole repairs, as needed.

2. Continue cleaning/televising sewers with high I/I probability as identified in the SSES Study.

On 10/5/16, representatives from C.S. Davidson, Inc. and Buchart-Horn, Inc. met with the Manchester Township staff. Both engineering firms are working on proposal submissions to Manchester Township Municipal Authority (CSD) and York County Sewer Authority (BH) later this month. The limits of design responsibility were resolved with BH designing larger diameter sewers downstream of MH 8A and CSD designing larger diameter sewer upstream of MH *8A. There was a brief discussion about increasing the proposed pipe sizes but no decision will be made until the preliminary design has been completed and accepted

As a follow-up to our revised November 10, 2016 status report, C.S. Davidson, Inc. has completed the following items:

- B.J. Treglia, P.E. with C.S. Davidson, Inc. contacted L. Bryan Hoover, P.E. with Stantec, the planning consultant for PennDOT to discuss further I-83 improvements and possible roundabout at North George Street and Lightner Road. Long range plans are to widen I-83 from 4 to 6 lanes. The limits of ramp improvements at the North George Street and Arsenal Road interchanges and slope embankment changes are unknown at this time (See Exhibit B attached).
- B.J. Treglia, P.E. also contacted Robert McDowell, P.E. with Aaron Enterprises, LLC, a local contractor to discuss casing pipe sizing and boring/jacking versus micro-tunneling techniques. The initial design components are as follows:
    - 48" diameter casing pipe under Toronita Street by boring/jackin
    - 54" diameter casing pipe under I-83 by micro-tunneling
    - 54" diameter casing pipe under North George Street by micro-tunneling
- Mr. McDowell also suggested using micro-tunneling through the City WWTP site under old Blackbridge Road.
- While C.S. Davidson, Inc. has completed the attached preliminary design (see Exhibit D), the Manchester Township Municipal Authority's 12/08/16 meeting is cancelled.

- C.S. Davidson has begun to prepare right of way plans for easements across private properties and hopes to submit a preliminary Highway Occupancy Permit application to PennDOT later this month for review and comment.

On 12/08/16 and 12/13/16, respectively, the York City Sewer Authority and Manchester Township approved the attached agreement (See Exhibit C) and Escrow (See Exhibit D). The approved document is circulating for signatures. Buchart Horn, Inc. was authorized to proceed with design on 12/13/16.

No high water alarms occurred at Manhole No. 31, located at the intersection of North George Street and Skyview Drive, since February 24, 2016. The following schedule was tentatively developed for Manchester Township:

Description of Work	Targeted Quarter/Year	Project Status
Update Preliminary Design	4th/2016	completed
Prepare Final Design/Negotiate YCSA Agreement	1st/2017	
Submit Permit Application	2nd/2017	
Secure Permit Approvals	3rd/2017	
Finalize Bidding Documents'	4th/2017	
Solicit Bids/Finalize Bank Loan	1st/2018	
Begin Construction	2nd/2018	
End Construction	3rd/2018	
Submit Completion Reports	4th/2018	
End CAP		

If there are any questions, please contact me directly at (717)814-4540 or by email at rgr@csdavidson.com. The next progress report is due March 23, 2017. Beginning in 2017, Terry A. Myers, P. E. will be responsible to submit quarterly status reports regarding the Corrective Action Plan.

Sincerely,

C.S. Davidson, Inc.

Richard G. Resh

RGR/ems
Enclosures
Copy: Timothy James, Manager, Manchester Township 3200 Farmtrail Road, York PA 17406
James Gross, Director of Public Works, City of York, PO Box 509, York, PA 17405
David Shirk, P.E., Buchart-Horn, Inc., 445 W. Philadelphia St., York, PA 17401
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Stacey MacNeal, Esquire, Katherman, Helm & Perry, 345 East Market Street, York, PA 17403
File

North York Borough Chapter 94 Municipal Wasteload Management

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

For Calendar Year: 2016

☐ Permittee is owner and/or operator of a POTW or other sewage treatment facility
☒ Permittee is owner and/or operator of a collection system tributary to a POTW not owned/operated by permittee

GENERAL INFORMATION			
Permittee Name:	**North York Borough**	Permit No.:	**PA Unknown**
Mailing Address:	**350 East Sixth Avenue**	Effective Date:	**n/a**
City, State, Zip:	**York, PA 17404**	Expiration Date:	**n/a**
Contact Person:	**Jack Graybill**	Renewal Due Date:	**n/a**
Title:	**Codes Officer**	Municipality:	**North York Borough**
Phone:	**717-845-3976**	County:	**York**
Email:	**boroughofnorthyork_905@comcast.net**	Consultant Name:	**James R. Holley & Assoc., Inc. Attn.: Jeff Spangler**

CHAPTER 94 REPORT COMPONENTS

1. Attach to this report a line graph depicting the monthly average flows (expressed in MGD) for each month for the past 5 years and projecting the flows for the next 5 years. The graph must also include a line depicting the hydraulic design capacity per the WQM permit. (25 Pa. Code § 94.12(a)(1))

   Check the appropriate boxes:

   ☐ Line graph for flows attached (**Attachment**)
   ☐ DEP Chapter 94 Spreadsheet used (**Attachment**)
   ☒ Section 1 is not applicable (report is for a collection system).

2. Attach to this report a line graph depicting the monthly average organic loads (express as lbs BOD5/day) for each month for the past 5 years and projecting the organic loads for the next 5 years. The graph must also include a line depicting the organic design capacity of the treatment plant per the WQM permit. (25 Pa. Code § 94.12(a)(2))

   Check the appropriate boxes:

   ☐ Line graph for organic loads attached (**Attachment**)
   ☐ DEP Chapter 94 Spreadsheet used (**Attachment**)
   ☒ Section 2 is not applicable (report is for a collection system).

3. If the DEP Chapter 94 Spreadsheet was not used to determine projections, discuss the basis for the hydraulic and organic projections. In all cases, include a description of the time needed to expand the plant to meet the load projections, if necessary, and data used to support the projections should be included in an appendix to this report. (25 Pa. Code § 94.12(a)(3))

   n/a

4. Attach a map showing all sewer extensions constructed within the past calendar year, sewer extensions approved or exempted in the past year in accordance with Act 537 and Chapter 71, but not yet constructed, and all known proposed projects which require public sewers but are in the preliminary planning stages. The map must be accompanied by a list summarizing each extension or project and the population to be served by the extension or project. If a sewer extension approval or proposed project includes schedules describing how the project will be completed over time, the listing should include that information and the effect this build-out-rate will have on populations served. (25 Pa. Code § 94.12(a)(4))

Check the appropriate boxes:

☒ Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (**Attachment NYB-1A**)

☒ List summarizing each extension or project attached (**Attachment NYB-1**)

☐ Schedules describing how each project will be completed over time and effects attached (**Attachment**)

Comments:

A map of North York Borough's collection system showing projected sewer connections for 2017-2021 is included showing the connection location of a proposed apartment complex which has been approved by DEP as an exemption (DEP Code A3-67948-006-3E). It is anticipated that construction will begin in 2017. The locations of any other isolated future connections are unknown at this time.

5. Discuss the permittee's program for sewer system monitoring, maintenance, repair and rehabilitation, including routine and special activities, personnel and equipment used, sampling frequency, quality assurance, data analyses, infiltration/inflow monitoring, and, where applicable, maintenance and control of combined sewer regulators during the past year. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(5))

See Attachment 1

6. Discuss the condition of the sewer system including portions of the system where conveyance capacity is being exceeded or will be exceeded in the next 5 years and portions where rehabilitation or cleaning is needed or is underway to maintain the integrity of the system and prevent or eliminate bypassing, CSOs, SSOs, excessive infiltration and other system problems. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(6))

Check the appropriate boxes:

☐ System experienced capacity-related bypassing, SSOs or surcharging during the report year. On a separate sheet, list the date, location, and reason for each bypass, SSO or surcharge event.

☒ System did not experience capacity-related bypassing, SSOs or surcharging during the report year.

Comments:

7. Attach a discussion on the condition of sewage pumping (pump) stations. Include a comparison of the maximum pumping rate with present maximum flows and the projected 2-year maximum flows for each station. (25 Pa. Code § 94.12(a)(7))

Check the appropriate boxes:

☐ The collection system does not contain pump stations
☒ The collection system does contain pump stations (Number – **1**)
☒ Discussion of condition of each pump station attached (**Attachment 1**)

8. If the sewage collection system receives industrial wastes (i.e., non-sanitary wastes), attach a report with the information listed below. (25 Pa. Code § 94.12(a)(8))

a. A copy of any ordinance or regulation governing industrial waste discharges to the sewer system or a copy of amendments adopted since the initial submission of the ordinance or regulation under Chapter 94, if it has not previously been submitted.

b. A discussion of the permittee's or municipality's program for surveillance and monitoring of industrial waste discharges into the sewer system during the past year.

c. A discussion of specific problems in the sewer system or at the plant, known or suspected to be caused by industrial waste discharges and a summary of the steps being taken to alleviate or eliminate the problems. The discussion shall include a list of industries known to be discharging wastes which create problems in the plant or in the sewer system and action taken to eliminate the problem or prevent its recurrence. The report may describe pollution prevention techniques in the summary of steps taken to alleviate current problems caused by industrial waste dischargers and in actions taken to eliminate or prevent potential or recurring problems caused by industrial waste dischargers.

Check the appropriate boxes:

☒ Industrial waste report as described in 8 a., b. and c. attached (**Attachment 1**)
☐ Industrial pretreatment report as required in an NPDES permit attached (**Attachment**)

9. Existing or Projected Overload.

Check the appropriate boxes:

☐ This report demonstrates an existing hydraulic overload condition.
☐ This report demonstrates a projected hydraulic overload condition.
☐ This report demonstrates an existing organic overload condition.
☐ This report demonstrates a projected organic overload condition.

If one or more boxes above have been checked, attach a Corrective Action Plan (CAP) to reduce or eliminate present or projected overloaded conditions under §§ 94.21 and/or 94.22 (relating to existing overload and projected overload). (25 Pa. Code § 94.12(a)(9))

☐ Corrective Action Plan attached (**Attachment**)

10. Where required by the NPDES permit, attach a Sewage Sludge Management inventory that demonstrates a mass balance of solids coming in and leaving the facility over the previous calendar year.

☐ Sewage Sludge Management Inventory attached (**Attachment**)

11. For facilities with CSOs and where required by the NPDES permit, attach an Annual CSO Report (including satellite combined sewer systems).

☐ Annual CSO Report attached (**Attachment**)

12. For POTWs, attach a calibration report documenting that flow measuring, indicating and recording equipment has been calibrated annually. (25 Pa. Code § 94.13(b))

☐ Flow calibration report attached (**Attachment**)

RESPONSIBLE OFFICIAL CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Vivian Amspacher, Borough Council President
Name of Responsible Official

Signature

717-845-3976
Telephone No.

2/28/17
Date

PREPARER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared by me or otherwise under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Jeffrey S. Spangler Jr., Borough Engineer
Name of Preparer

Signature

717-846-4373
Telephone No.

2/28/17
Date

James R. Holley
& Associates, Inc.

ATTACHMENT 1

February 28, 2017

CITY OF YORK - CHAPTER 94
WASTELOAD MANAGEMENT REPORT – 2016

NORTH YORK BOROUGH

A. Sewer Extensions

There were no new sewer extensions constructed during the calendar year. A proposed sewer extension was approved for a proposed apartment complex in 2016 with construction anticipated in 2017.

B. Sewer System Monitoring, Maintenance and Repair

In 2016, the Borough bid and completed a project to replace 370 feet of sewer main, 210 feet of sewer laterals and one manhole in Laurel Street because of cracks and bad joints in the existing pipe and root intrusion into the pipe.

In 2016, Area # 1 of the Borough's sewer system was cleaned, using Manchester Township's equipment and personnel. This is part of the regular sewer maintenance program established by the Borough to provide for the cleaning of each manhole section at least once every four years.

In 2017, the Borough plans on the routine cleaning of the next quarter of the sewer system using Manchester Township's equipment and personnel.

C. Conditions of Sewer System

Overall, the Borough collection system is in good operating condition. There are no portions of the system overloaded at present nor are any such conditions anticipated in the future. This is due to the fact that almost the entire Borough has been improved and there is very little area available for development. The only apparent possibility of significant increases in flow would be radical redevelopment or change in property use.

D. Pump Station

The West Sixth Avenue pumping station has been operating satisfactorily throughout 2016 without any breakdowns. Each of the dual centrifugal pumps was rated on December 31, 2002 and the average pump capacity was computed at 132 GPM. The controls are so arranged that both pumps could operate at the same time. The average flow pumped during 2016 was 4,609 GPD with the minimum being 3,080 GPD and the maximum being 9,372 GPD based on elapsed time meter records. Since the actual capacity of the station is greater than 190,080 GPD, no future overload condition is anticipated. No growth in the pump station service area is anticipated through 2018. The station does not have an overflow pipe and is equipped with a standby emergency power unit. It is in very good condition, as it is on a routine maintenance schedule which requires checking approximately once a week by North York Borough personnel. The pumps were serviced on July 14, 2016. The pump station wet well was inspected and cleaned July 26, 2016. Both of these services were completed by Manchester Township personnel. A new emergency generator was installed on November 11, 2016.

E. Waste Flow Data

1. 2016 Connections

No new connections were made to the system in 2016.

2. Waste Flow Projections

The flow from the Borough in 2016 averaged 164,158 GPD which was 11.1% lower than that of 2015. Since only one of the seven Borough connections to the trunkline is metered, these flows are based on readings from City Flow Meter NY-01 plus computed flow from the other connections that have no sewage meter. These computed flows consist of the sum of water meter readings for all commercial and industrial connections not located in the flow meter service area and 350 GPD per EDU for each residential connection in the other six service areas.

The projected growth for the next five years is shown on Exhibit No. NYB-1. The construction of an apartment complex with 105 apartment units (No. 15 on NYB-1) is proposed for 2017. The complex will have a water meter to determine flows.

The available sewer reserve capacity is shown on Exhibit No. NYB-2.

3. Sewer Connection Totals for Previous Years

The total number of sewer connections for each of the past (5) years were as follows:

2012	2013	2014	2015	2016
0	1(32units)	1(25units)	0	0

F. Industrial Wastes

Any industrial wastes are monitored and reported by the City of York Municipal Industrial Pretreatment Program (MIPP).
Copies of the Borough Ordinances regulating industrial waste discharges which were previously submitted to the City of York Municipal Industrial Pretreatment Program (MIPP) and were also previously submitted to DEP with the 2014 Chapter 94 Report submission.

James R. Holley & Assoc., Inc.

February 28, 2017

NORTH YORK BOROUGH 2016 SEWAGE FLOWS

	1ST QUARTER	2ND QUARTER	3RD QUARTER	4TH QUARTER	TOTALS	AVG (GPD)
Flow Meter NY-01	8,209,000	7,243,000	6,678,000	7,510,000	29,640,000	
Metered	618,000	695,700	503,500	570,900	2,388,100	
Unmetered	6,975,150	6,975,150	7,051,800	7,051,800	28,053,900	
TOTALS:	15,802,150	14,913,850	14,233,300	15,132,700	60,082,000	164,158

Flow meter data from City of York metering records
Water meter data provided by the York Water Company.
Unmetered data taken from City of York billing records.

James R. Holley & Assoc., Inc.

February 28, 2017

NORTH YORK BOROUGH SEWAGE PUMPING STATION 2016

Date	Pump 1		Pump 2		Total Station				
	Hour Reading	Hour Elapsed (Hr)	Hour Reading	Hour Elapsed (Hr)	Total Hours	Total Days	Avg Hours/ Day	Period Flow @ 132 gpm (Gal)	Avg. Daily Flow @ 132 gpm (Gal)
12/31/15	3644.6	1.5	216.5	2.3	3.8	6	0.6	30,096	5,016
01/06/16	3646.1	1.4	218.8	2.2	3.6	7	0.5	28,512	4,073
01/13/16	3647.5	1.7	221.0	2.1	3.8	7	0.5	30,096	4,299
01/20/16	3649.2	1.9	223.1	2.6	4.5	8	0.6	35,640	4,455
01/28/16	3651.1	2.3	225.7	3.1	5.4	7	0.8	42,768	6,110
02/04/16	3653.4	3.1	228.8	3.8	6.9	7	1.0	54,648	7,807
02/11/16	3656.5	2.6	232.6	3.2	5.8	7	0.8	45,936	6,562
02/18/16	3659.1	3.0	235.8	3.5	6.5	7	0.9	51,480	7,354
02/25/16	3662.1	3.0	239.3	4.1	7.1	6	1.2	56,232	9,372
03/02/16	3665.1	1.6	243.4	2.4	4.0	7	0.6	31,680	4,526
03/09/16	3666.7	1.3	245.8	1.5	2.8	5	0.6	22,176	4,435
03/14/16	3668.0	0.7	247.3	1.0	1.7	4	0.4	13,464	3,366
03/18/16	3668.7	1.7	248.3	2.0	3.7	5	0.7	29,304	5,861
03/23/16	3670.4	1.9	250.3	2.6	4.5	8	0.6	35,640	4,455
03/31/16	3672.3	1.7	252.9	2.1	3.8	6	0.6	30,096	5,016
04/06/16	3674.0	1.7	255.0	2.0	3.7	8	0.5	29,304	3,663
04/14/16	3675.7	1.7	257.0	1.9	3.6	7	0.5	28,512	4,073
04/21/16	3677.4	1.4	258.9	1.7	3.1	7	0.4	24,552	3,507
04/28/16	3678.8	2.0	260.6	2.7	4.7	6	0.8	37,224	6,204
05/04/16	3680.8	2.2	263.3	1.7	3.9	8	0.5	30,888	3,861
05/12/16	3683.0	2.1	265.0	3.5	5.6	8	0.7	44,352	5,544
05/20/16	3685.1	1.7	268.5	2.0	3.7	6	0.6	29,304	4,884
05/26/16	3686.8	1.6	270.5	2.0	3.6	7	0.5	28,512	4,073
06/02/16	3688.4	1.8	272.5	2.3	4.1	7	0.6	32,472	4,639
06/09/16	3690.2	1.8	274.8	2.4	4.2	7	0.6	33,264	4,752
06/16/16	3692.0	1.8	277.2	1.5	3.3	6	0.6	26,136	4,356
06/22/16	3693.8	0.6	278.7	2.4	3.0	5	0.6	23,760	4,752
06/27/16	3694.4	2.5	281.1	2.4	4.9	10	0.5	38,808	3,881
07/07/16	3696.9	1.5	283.5	2.2	3.7	8	0.5	29,304	3,663
07/15/16	3698.4	1.3	285.7	1.8	3.1	6	0.5	24,552	4,092

James R. Holley & Assoc., Inc. February 28, 2017

NORTH YORK BOROUGH SEWAGE PUMPING STATION 2016

Date	Pump 1		Pump 2		Total Station				
	Hour Reading	Hour Elapsed (Hr)	Hour Reading	Hour Elapsed (Hr)	Total Hours	Total Days	Avg Hours/ Day	Period Flow @ 132 gpm (Gal)	Avg. Daily Flow @ 132 gpm (Gal)
07/21/16	3699.7	1.5	287.5	1.9	3.4	6	0.6	26,928	4,488
07/27/16	3701.2	1.6	289.4	2.2	3.8	7	0.5	30,096	4,299
08/03/16	3702.8	1.6	291.6	2.2	3.8	7	0.5	30,096	4,299
08/10/16	3704.4	1.4	293.8	1.8	3.2	7	0.5	25,344	3,621
08/17/16	3705.8	1.7	295.6	2.5	4.2	7	0.6	33,264	4,752
08/24/16	3707.5	1.3	298.1	1.8	3.1	6	0.5	24,552	4,092
08/30/16	3708.8	1.5	299.9	2.0	3.5	7	0.5	27,720	3,960
09/06/16	3710.3	1.8	301.9	2.3	4.1	8	0.5	32,472	4,059
09/14/16	3712.1	1.5	304.2	1.9	3.4	6	0.6	26,928	4,488
09/20/16	3713.6	2.0	306.1	3.0	5.0	7	0.7	39,600	5,657
09/27/16	3715.6	1.7	309.1	1.9	3.6	8	0.5	28,512	3,564
10/05/16	3717.3	0.9	311.0	1.9	2.8	7	0.4	22,176	3,168
10/12/16	3718.2	2.2	312.9	1.9	4.1	7	0.6	32,472	4,639
10/19/16	3720.4	1.7	314.8	1.8	3.5	7	0.5	27,720	3,960
10/26/16	3722.1	1.2	316.6	1.8	3.0	6	0.5	23,760	3,960
11/01/16	3723.3	1.8	318.4	2.5	4.3	8	0.5	34,056	4,257
11/09/16	3725.1	0.8	320.9	1.3	2.1	5	0.4	16,632	3,326
11/14/16	3725.9	0.6	322.2	0.8	1.4	3	0.5	11,088	3,696
11/17/16	3726.5	1.6	323.0	2.6	4.2	7	0.6	33,264	4,752
11/24/16	3728.1	1.4	325.6	1.8	3.2	7	0.5	25,344	3,621
12/01/16	3729.5	1.7	327.4	2.5	4.2	7	0.6	33,264	4,752
12/08/16	3731.2	1.5	329.9	2.0	3.5	9	0.4	27,720	3,080
12/17/16	3732.7	1.6	331.9	2.1	3.7	5	0.7	29,304	5,861
12/22/16	3734.3	1.6	334.0	2.3	3.9	8	0.5	30,888	3,861
12/30/16	3735.9		336.3						

TOTALS	91.3		119.8	211.1	365		1,671,912	
AVERAGE PER DAY	0.25		0.33	0.58		0.58		4,609

Data from North York Borough Personnel

James R. Holley & Assoc., Inc.

February 28, 2017
EXHIBIT NO. NYB-1

NORTH YORK BOROUGH
PROJECTED CONNECTIONS TO CITY OF YORK
WASTEWATER TREATMENT PLANT

	Name & Description	Map & Parcel	All Projected Connections in gallons per Day (GPD) 2017	2018	2019	2020	2021	17-'21 Subtotal	2022 2026	2027 2031	2032 2036	2037 Ultimate	Total Gallons	Flow Meter	York City MH No.
1	New structures on existing vacant lots or apartment conversions (1 EDU/year)	varies	350	350	350	350	350	1,750	1,750	1,750	1,750	1,750	8,750	NY01	A4
2	Expansion of existing industrial or commercial uses (1 EDU/year)	varies	350	350	350	350	350	1,750	1,750	1,750	1,750	1,750	8,750	NY01	A4
3	New structures on existing vacant lots or apartment conversions	varies	0	0	0	0	0	0	0	0	0	0	0	N/A	A7
4	Expansion of existing industrial or commercial uses	varies	0	0	0	0	0	0	0	0	0	0	0	N/A	A7
5	New structures on existing vacant lots or apartment conversions (1 EDU/year)	varies	350	350	350	350	350	1,750	1,750	1,750	1,750	1,750	8,750	N/A	A9
6	Expansion of existing industrial or commercial uses	varies	0	0	0	0	0	0	0	0	0	0	0	N/A	A9
7	New structures on existing vacant lots or apartment conversions	varies	0	0	0	0	0	0	0	0	0	0	0	N/A	B10B
8	Expansion of existing industrial or commercial uses	varies	0	0	0	0	0	0	0	0	0	0	0	N/A	B10B
9	New structures on existing vacant lots or apartment conversions	varies	0	0	0	0	0	0	0	0	0	0	0	N/A	B8
10	Expansion of existing industrial or commercial uses	varies	0	0	0	0	0	0	0	0	0	0	0	N/A	B8
11	New structures on existing vacant lots or apartment conversions	varies	0	0	0	0	0	0	0	0	0	0	0	N/A	27-3:B10
12	Expansion of existing industrial or commercial uses	varies	0	0	0	0	0	0	0	0	0	0	0	N/A	27-3:B10
13	New structures on existing vacant lots or apartment conversions	varies	0	0	0	0	0	0	0	0	0	0	0	N/A	A20:A21
14	Expansion of existing industrial or commercial uses	varies	0	0	0	0	0	0	0	0	0	0	0	N/A	A20:A21
15	New apartment buildings DEP Code No. A3-67948-006-3E	Map 1 Parcel 92A	26,250	0	0	0	0	26,250	0	0	0	0	26,250	N/A	B10B
	TOTALS		27,300	1,050	1,050	1,050	1,050	31,500	5,250	5,250	5,250	5,250	52,500		

James R. Holley & Assoc., Inc.

February 28, 2017
EXHIBIT NO. NYB-2

TABULATION OF AVAILABLE
SEWER RESERVE CAPACITY

COLLECTION AND TRANSPORTATION SYSTEM
From: North York Borough

WASTEWATER TREATMENT FACILITY
To: City of York

SOURCES FOR PROJECTION	2016	2017	2018	2019	2020	2021
Existing Flow from Current Users (2)	164,158	164,158	191,458	192,508	193,558	194,608
Projected Flows from Current Users	0	0	0	0	0	0
Projected Flow Increase from New Customers (3)	0	27,300	1,050	1,050	1,050	1,050
Total Estimated Wastewater Flows	164,158	191,458	192,508	193,558	194,608	195,658
Total Permitted Capacity/Agreement (4)	531,200	531,200	531,200	531,200	531,200	531,200
Percentage Usage	30.90%	36.04%	36.24%	36.44%	36.64%	36.83%
Total Amount of Available Capacity	367,042	339,742	338,692	337,642	336,592	335,542

NOTES AND ASSUMPTIONS:

(1) Flows are in gallons per day (GPD)

(2) City Flow Meter NY-01 plus metered and unmetered flows.

(3) Projected growth - See Exhibit No. NYB-1.

(4) Per intermunicipal agreement, amendment #2, Dated September 16, 2003

Spring Garden Township Chapter 94 Municipal Wasteload Management

INTERCEPTOR AND COLLECTOR SYSTEM
TRIBUTARY TO
CITY OF YORK WASTEWATER TREATMENT FACILITY

2016 ANNUAL MUNICIPAL WASTELOAD MANAGEMENT (CHAPTER 94) REPORT TO THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

For:
SPRING GARDEN TOWNSHIP
558 SOUTH OGONTZ STREET
YORK, PA 17403-5709

January 20, 2017

Engineer's Project No. 0407.6.06.38c

PREPARED BY:

C.S.Davidson, Inc.

Excellence in Civil Engineering

Consulting Civil Engineers
38 North Duke Street
York, PA 17401

Phone: (717) 846-4805
Fax: (717) 846-5811
www.csdavidson.com

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pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

Exhibit SGT
January 20, 2017

For Calendar Year: 2016

for York City Wastewater Treatment Facility

☐ Permittee is owner and/or operator of a POTW or other sewage treatment facility
☒ Permittee is owner and/or operator of a collection system tributary to a POTW not owned/operated by permittee

GENERAL INFORMATION			
Permittee Name:	**Spring Garden Township**	Permit No.:	**NPDES PA-0026263**
Mailing Address:	**558 South Ogontz Street**	Effective Date:	**February 1, 2008**
City, State, Zip:	**York, PA 17403-5709**	Expiration Date:	**January 31, 2013**
Contact Person:	**Gregory Maust**	Renewal Due Date:	**July 31, 2012 (under review)**
Title:	**Manager**	Municipality:	**Spring Garden Township**
Phone:	**(717) 848-2858**	County:	**York**
Email:	**gmaust@sgtwp.com**	Consultant Name:	**C.S. Davidson, Inc.**

CHAPTER 94 REPORT COMPONENTS

1. Attach to this report a line graph depicting the monthly average flows (expressed in MGD) for each month for the past 5 years and projecting the flows for the next 5 years. The graph must also include a line depicting the hydraulic design capacity per the WQM permit. (25 Pa. Code § 94.12(a)(1))

   Check the appropriate boxes:
   ☐ Line graph for flows attached (**Attachment**)
   ☐ DEP Chapter 94 Spreadsheet used (**Attachment**)
   ☒ Section 1 is not applicable (report is for a collection system).

2. Attach to this report a line graph depicting the monthly average organic loads (express as lbs BOD5/day) for each month for the past 5 years and projecting the organic loads for the next 5 years. The graph must also include a line depicting the organic design capacity of the treatment plant per the WQM permit. (25 Pa. Code § 94.12(a)(2))

   Check the appropriate boxes:
   ☐ Line graph for organic loads attached (**Attachment**)
   ☐ DEP Chapter 94 Spreadsheet used (**Attachment**)
   ☒ Section 2 is not applicable (report is for a collection system).

3. If the DEP Chapter 94 Spreadsheet was not used to determine projections, discuss the basis for the hydraulic and organic projections. In all cases, include a description of the time needed to expand the plant to meet the load projections, if necessary, and data used to support the projections should be included in an appendix to this report. (25 Pa. Code § 94.12(a)(3)) See Appendix attached (**Attachment**)

Check the appropriate box(es):

- ☒ Hydraulic or organic projections not applicable to collection systems.
- ☒ Five year flow projections attached (**Attachment SGT-1**).
- ☐ Description for plant expansion attached (**Attachment**).
- ☒ No plant expansion required.

4. Attach a map showing all sewer extensions constructed within the past calendar year, sewer extensions approved or exempted in the past year in accordance with Act 537 and Chapter 71, but not yet constructed, and all known proposed projects which require public sewers but are in the preliminary planning stages. The map must be accompanied by a list summarizing each extension or project and the population to be served by the extension or project. If a sewer extension approval or proposed project includes schedules describing how the project will be completed over time, the listing should include that information and the effect this build-out-rate will have on populations served. (25 Pa. Code § 94.12(a)(4))

Check the appropriate boxes:

- ☒ Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (**Attachment SGT-2**)
- ☒ List summarizing each extension or project attached (**Attachment SGT-3**)
- ☐ Schedules describing how each project will be completed over time and effects attached (**Attachment**)
- ☒ None of the approved extensions show a proposed or mandated project schedule.
- ☐ No pipelines have existing or projected hydraulic overloads.

Comments:

5. Discuss the permittee's program for sewer system monitoring, maintenance, repair and rehabilitation, including routine and special activities, personnel and equipment used, sampling frequency, quality assurance, data analyses, infiltration/inflow monitoring, and, where applicable, maintenance and control of combined sewer regulators during the past year. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(5))

See Attachment SGT-4

6. Discuss the condition of the sewer system including portions of the system where conveyance capacity is being exceeded or will be exceeded in the next 5 years and portions where rehabilitation or cleaning is needed or is underway to maintain the integrity of the system and prevent or eliminate bypassing, CSOs, SSOs, excessive infiltration and other system problems. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(6))

Check the appropriate boxes:

☐ System experienced capacity-related bypassing, SSOs or surcharging during the report year. On a separate sheet, list the date, location, and reason for each bypass, SSO or surcharge event.

☒ System did not experience capacity-related bypassing, SSOs or surcharging during the report year.

Comments:

7. Attach a discussion on the condition of sewage pumping (pump) stations. Include a comparison of the maximum pumping rate with present maximum flows and the projected 2-year maximum flows for each station. (25 Pa. Code § 94.12(a)(7))

Check the appropriate boxes:

☐ The collection system does not contain pump stations

☒ The collection system does contain pump stations (Number – **3**)

☒ Discussion of condition of each pump station attached (**Attachment SGT-5**)

8. If the sewage collection system receives industrial wastes (i.e., non-sanitary wastes), attach a report with the information listed below. (25 Pa. Code § 94.12(a)(8))

   a. A copy of any ordinance or regulation governing industrial waste discharges to the sewer system or a copy of amendments adopted since the initial submission of the ordinance or regulation under Chapter 94, if it has not previously been submitted.

   b. A discussion of the permittee's or municipality's program for surveillance and monitoring of industrial waste discharges into the sewer system during the past year.

   c. A discussion of specific problems in the sewer system or at the plant, known or suspected to be caused by industrial waste discharges and a summary of the steps being taken to alleviate or eliminate the problems. The discussion shall include a list of industries known to be discharging wastes which create problems in the plant or in the sewer system and action taken to eliminate the problem or prevent its recurrence. The report may describe pollution prevention techniques in the summary of steps taken to alleviate current problems caused by industrial waste dischargers and in actions taken to eliminate or prevent potential or recurring problems caused by industrial waste dischargers.

Check the appropriate boxes:

☐ Industrial waste report as described in 8 a., b. and c. attached (**Attachment**)

☐ Industrial pretreatment report as required in an NPDES permit attached (**Attachment**)

☒ Industrial pretreatment report will be submitted by POTW Administrator

9. Existing or Projected Overload.

Check the appropriate boxes:

☐ This report demonstrates an existing hydraulic overload condition.
☐ This report demonstrates a projected hydraulic overload condition.
☐ This report demonstrates an existing organic overload condition.
☐ This report demonstrates a projected organic overload condition.

If one or more boxes above have been checked, attach a Corrective Action Plan (CAP) to reduce or eliminate present or projected overloaded conditions under §§ 94.21 and/or 94.22 (relating to existing overload and projected overload). (25 Pa. Code § 94.12(a)(9))

☐ Corrective Action Plan attached (**Attachment**)
☒ No overloads projected.

10. Where required by the NPDES permit, attach a Sewage Sludge Management inventory that demonstrates a mass balance of solids coming in and leaving the facility over the previous calendar year.

☐ Sewage Sludge Management Inventory attached (**Attachment**)
☒ No Sewage Sludge Management Inventory required for collection system.

11. For facilities with CSOs and where required by the NPDES permit, attach an Annual CSO Report (including satellite combined sewer systems).

☐ Annual CSO Report attached (**Attachment**)
☒ No Annual CSO Report required for collection system.

12. For POTWs, attach a calibration report documenting that flow measuring, indicating and recording equipment has been calibrated annually. (25 Pa. Code § 94.13(b))

☐ Flow calibration report attached (**Attachment**)
☒ No Flow calibration report required for collection system.

RESPONSIBLE OFFICIAL CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

☒ Certification not required for collection system.

Name of Responsible Official	Signature
Telephone No.	Date

PREPARER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared by me or otherwise under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Richard G. Rosh	Richard G. Rosh
Name of Preparer	Signature
(717) 846-4805	3/2/17
Telephone No.	Date

Preparer's Contact Information:

C.S. Davidson, Inc.
38 North Duke Street
York, PA 17401

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C.S. DAVIDSON, INC.

ATTACHMENT SGT-1
January 20, 2017

TABULATION OF AVAILABLE
SEWER RESERVE CAPACITY

COLLECTION AND TRANSPORTATION SYSTEM
From: Spring Garden Township

WASTEWATER TREATMENT FACILITY
To: City of York

	2016	2017	2018	2019	2020	2021	Future Years
Existing Flow From Current Users	1,403,591	1,403,591	1,542,804	1,651,304	1,757,804	1,944,904	2,057,254
Projected Flows From Current Users	0	8,563	0	0	0	0	0
Projected Flow Increase From New Customers	0	132,450	108,700	106,500	187,100	112,350	580,550
Total Estimated Wastewater Flows	1,403,591	1,542,604	1,651,304	1,757,804	1,944,904	2,057,254	2,637,804
Percent Usage	46.61%	51.22%	54.83%	58.37%	64.58%	68.31%	87.59%
Total Permitted Capacity/Agreement	3,011,500	3,011,500	3,011,500	3,011,500	3,011,500	3,011,500	3,011,500
Total Amount of Available Capacity	1,607,909	1,468,896	1,360,196	1,253,696	1,066,596	954,246	373,696

NOTES AND ASSUMPTIONS:

(1) City Flow Meters SG01 through SG03 plus portion of York City Meter YT01 less York Township flows through City Meters SG02 and SG03.

(2) Assumes 75% of 2016 connections (25 connections = 8,750 GPD) not reflected in (1) above.

(3) See attached list of projected connections (Attachment SGT-3).

SPRING GARDEN TOWNSHIP
PROJECTED CONNECTIONS TO CITY OF YORK
WASTEWATER TREATMENT PLANT

	Name & Description	Original Proposed Gallons	Previously Connected	Net Gallons	Map & Parcel	All Projected Connections in Gallons per Day (GPD) 2017	2018	2019	2020	2021	2017-21 Subtotal	2022 - 2026	2027 - 2031	2032 - 2036	2037 + Ultimate	Total Gallons	York City MH No.	Flow Meter
1	Sincerely Yorks Personal Care Home Third Avenue (2 EDUs @ 350 GPD)	700	0	700		700	0	0	0	0	700	0	0	0	0	700	L9-12	
2	Rutter's/Shoppes at Wyndam Aldi Richland Avenue (1 Comm. @ 30,000 GPD)	30,000	0	30,000	31&I 28&1A	18,000	12,000	0	0	0	30,000	0	0	0	0	30,000	A67	R01
4	Wyndham Hills South (1) Wyndham Drive South (75 lots @ 350 GPD)	26,350	24,600	1,750	32	700	1,050	0	0	0	1,750	0	0	0	0	1,750	T26	YT01
5	Rosemiller Farm																	
	a. Ph. 3 - Grantley Road (29 lots @ 350 GPD)	2,800	0	2,800	31	1,750	1,050	0	0	0	2,800	0	0	0	0	2,800	T26	YT01
	b. Ph. 5 - Stanross Road (8 lots @ 350 GPD)	2,800	2,450	350	111	350	0	0	0	0	350	0	0	0	0	350	T26	YT01
	c. Tract 2 - Stanross Road (1 lot @ 350 GPD)	350	0	350	118&C	350	0	0	0	0	350	0	0	0	0	350	T26	YT01
6	York College of PA Classrooms & Offices - Kings Mill & Grantley - 1,000 Student Housing - 401 West Jackson Street - 60,000 Student Housing - Richland & Country Club - 7,000	68,000	0	68,000	29-1	1,000	0	0	60,000	7,000	68,000	0				68,000	K9	
7	Mt. Rose Plaza Mt. Rose Avenue Vacant Land (11,000 GPD)	24,000	13,000	11,000	328.2	11,000	0	0	0	0	11,000	0	0	0	0	11,000	C27-16	
8	Oakridge Sanitary Sewer District DER Permit No. 6772422 (130 EDUs @ 350 GPD)	45,500	0	45,500	23	0	0	0	45,500	0	45,500	0	0	0	0	45,500	T26	YT01
9	Kirkendall (3) 702 S. Richland Avenue (2.37 EDUs @350 GPD)	8,300	0	8,300	30&1A	6,700	1,200	400	0	0	8,300	0				8,300	71	
10	Regents Glen Boxhill Estates (34 EDUs @ 350 GPD)	11,900	0	11,900	34-60A	3,500	3,500	3,500	1,400	0	11,900	0	0	0	0	11,900	A67	R01
11	Walter Kaltreider Tract 1701 S. Queen St. (Serv. Area 38 - commercial tract)	75,000	0	75,000	21-203	15,000	15,000	15,000	15,000	15,000	75,000	0	0	0	0	75,000	C39N	SG02
12	Glenn & Kathleen Collier 1.9 AC S. George Street (1 Lot @ 3,500 GPD)	3,500	0	3,500	24-104	0	0	0	0	3,500	3,500	0	0	0	0	3,500	T25	YT01

SPRING GARDEN TOWNSHIP
PROJECTED CONNECTIONS TO CITY OF YORK
WASTEWATER TREATMENT PLANT

	Name & Description		Original Proposed Gallons	Previously Connected	Net Gallons	Map & Parcel	All Projected Connections in Gallons per Day (GPD): 2017	2018	2019	2020	2021	2017-21 Subtotal	2022 - 2026	2027 - 2031	2032 - 2036	2037 + Ultimate	Total Gallons	York City M.I. No.	Flow Meter
13	Shelly Eisenrath 620 Country Club Road		350	0	350		350	0	0	0	0	350	0				350	K19	SG01
14	York College/Freshman Dorms 729 Grantley Road (York Narrow Fabrics)		15,000	0	15,000		15,000	0	0	0	0	15,000	0				15,000	K18	SG01
16	Wyndham Hills Sewer District #2																		
	a. Summit Circle South & Wyndham Dr. South (23 Lots @ 350 GPD)	(1)	4,550	0	4,550	32	1,750	1,750	1,050	0	0	4,550	0				4,550	K16	SG01
	b. Rosewood Lane & Dogwood Circle (16 Lots @ 350 GPD)	(1)	4,200	0	4,200	32	1,050	1,050	1,050	1,050	0	4,200	0				4,200	K16	SG01
	c. Southwynd (39 Lots @ 350 GPD)	(1) (2)	3,850	0	3,850	31	2,800	1,050	0	0	0	3,850	0				3,850	K16	SG01
	d. Dakota Drive (11 Lots @ 350 GPD)	(1)	1,750	0	1,750	31	1,050	700	0	0	0	1,750	0				1,750	K16	SG01
15	Penn State York Campus 1031 Edgecomb Avenue Building Additions		7,000	0	7,000	17&8	5,000	0	2,000	0	0	7,000	0				7,000	C93N	SG02A
17	Smallbrook Lane Sewer Extension (10 EDUs @ 350 GPD)		5,600	4,900	700	32	700	0	0	0	0	700	0				700	K18	SG01
18	Wyndham Hills North Side (160 EDUs @ 350 GPD)		63,000	9,800	53,200	32	3,500	3,500	3,500	3,000	3,500	17,000	18,000	17,500	700	0	53,200	K16	SG01
19	Unconnected Residential Properties and Vacant Lots Service Area Direct Connections		350	0	350	varies	350					350					350	T26	
20	Unconnected Residential Properties and Vacant Lots - Service Area 24		350	0	350	varies	350					350					350	71	
21	Unconnected Residential Properties and Vacant Lots - Service Area 25		700	350	350	varies	350	0				350					350	K8	
22	Unconnected Residential Properties and Vacant Lots - Service Area 26		350	0	350	varies	350					350					350	K14	
23	Unconnected Residential Properties and Vacant Lots - Service Area 27		11,900	2,800	9,100	varies	350	1,750	1,750	1,050	1,750	7,350	1,750				9,100	K18	SG01
24	Unconnected Residential Properties and Vacant Lots - Service Area 28		5,950	350	5,600	varies	1,050	1,050	1,050	1,050	1,050	5,250	350				5,600	K40-SD	
25	Unconnected Residential Properties and Vacant Lots - Service Area 29		6,300	1,050	5,250	varies	1,050	1,050	1,050	1,050	1,050	5,250					5,250	K40-S	
26	Unconnected Residential Properties and Vacant Lots - Service Area 31		2,100	0	2,100	varies	350	350	350	350	350	1,750	350				2,100	K20	

SPRING GARDEN TOWNSHIP
PROJECTED CONNECTIONS TO CITY OF YORK
WASTEWATER TREATMENT PLANT

	Name & Description	Original Proposed Gallons	Previously Connected	Net Gallons	Map & Parcel	All Projected Connections in Gallons per Day (GPD) 2017	2018	2019	2020	2021	2017-21 Subtotal	2022 2026	2027 2031	2032 - 2036	2037 + Ultimate	Total Gallons	York City MH No.	Flow Meter
27	Unconnected Residential Properties and Vacant Lots - Service Area 32	2,450	0	2,450	varies	350	350	350	350	350	1,750	350	350			2,450	K46	
28	Unconnected Residential Properties and Vacant Lots - Service Area 33	6,650	0	6,650	varies	1,050	1,050	1,050	1,050	1,050	5,250	1,400				6,650	SG 033	
29	Unconnected Residential Properties and Vacant Lots - Service Area 34	1,050	700	350	varies	350	0	0	0	0	350					350	C40-14	
30	Unconnected Residential Properties and Vacant Lots - Service Area 36	31,100	3,600	27,500	varies	1,750	1,750	1,750	1,750	1,750	8,750	8,750	8,750	1,400	0	27,650	C36N	SG02A
31	Unconnected Residential Properties and Vacant Lots - Service Area 37	21,000	1,400	19,600	varies	1,750	1,750	1,750	1,750	1,750	8,750	8,750	2,100			19,600	C27-10B	SC03
32	Unconnected Residential Properties and Vacant Lots - Service Area 38	350	0	350	varies	350					350					350	C27-10J	
33	Unconnected Residential Properties and Vacant Lots - Service Area 40	0	0	0	varies	0					0					0	C27-23	
34	Unconnected Residential Properties and Vacant Lots - Service Area 41	700	0	700	varies	350	350	0			700					700	C27-26	
35	Unconnected Residential Properties and Vacant Lots - Service Area 42	2,100	0	2,100	varies	350	350	350	350	350	1,750	350				2,100	L12-12	
36	Unconnected Residential Properties and Vacant Lots - Service Area 45	350	0	350	varies	350					350					350	L9-GF	
37	Unconnected Residential Properties and Vacant Lots - Service Area 47	350	0	350	varies	350					350					350	L7-16	
38	Unconnected Residential Properties and Vacant Lots - Service Area 50	2,450	0	2,450	varies	350	350	350	350	350	1,750	700				2,450	T28	YT01
39	Unconnected Residential Properties and Vacant Lots - Service Area 51	5,600	0	5,600	varies	1,050	1,050	1,050	1,050	1,050	5,250	350				5,600	T28	YT01
40	Unconnected Residential Properties and Vacant Lots - Service Area 51A	350	0	350	varies	350					350					350	T28	YT01
41	Unconnected Residential Properties and Vacant Lots - Service Area 51B	1,050	0	1,050	varies	350	350	350			1,050					1,050	T28	YT01
42	Unconnected Residential Properties and Vacant Lots - Service Area 53	8,800	0	8,800	varies	1,750	1,750	1,750	1,750	1,750	8,750	1,050				9,800	T28	YT01

SPRING GARDEN TOWNSHIP
PROJECTED CONNECTIONS TO CITY OF YORK WASTEWATER TREATMENT PLANT

	Name & Description	Original Proposed Gallons	Previously Connected	Net Gallons	Map & Parcel	All Projected Connections in Gallons per Day (GPD) 2017	2018	2019	2020	2021	2017-21 Subtotal	2022 - 2026	2027 - 2031	2032 - 2036	2037 + Ultimate	Total Gallons	York City MH No.	Flow Meter
43	Unconnected Residential Properties and Vacant Lots - Service Area 53A	350	0	350	varies	350					350					350	T26	YT01
44	Unconnected Residential Properties and Vacant Lots - Service Area 54	350	0	350	varies	350					350					350	T26	YT01
45	Unconnected Residential Properties and Vacant Lots - Service Area 55	350	0	350	varies	350					350					350	T26	YT01
46	Miscellaneous Commercial Growth (1 EDU/year @ 350 GPD) - Area 56	9,800	0	9,800	varies	350	350	350	350	350	1,750	1,750	1,750	1,750	2,800	9,800	T26	YT01
47	Unconnected Residential Properties and Vacant Lots - Service Area 57	350	0	350	varies	350					350					350	T26	YT01
48	Miscellaneous Commercial Growth (1 EDU/year @ 350 GPD) - Area 20	9,800	0	9,800	varies	350	350	350	350	350	1,750	1,750	1,750	1,750	2,800	9,800	K26	
49	Miscellaneous Commercial Growth (1 EDU/year @ 350 GPD) - Area 33	9,800	0	9,800	varies	350	350	350	350	350	1,750	1,750	1,750	1,750	2,800	9,800	SG 633	
50	Miscellaneous Commercial Growth (1 EDU/year @ 350 GPD) - Area 35	9,800	0	9,800	varies	350	350	350	350	350	1,750	1,750	1,750	1,750	2,800	9,800	C27-108	SG03
51	Miscellaneous Industrial Growth (2 EDUs/year @ 350 GPD) - Area 40	19,600	0	19,600	varies	700	700	700	700	700	3,500	3,500	3,500	3,500	5,600	19,600	C4	
52	Miscellaneous Industrial Growth (2 EDUs/year @ 350 GPD) - Area DC	19,600	0	19,600	varies	700	700	700	700	700	3,500	3,500	3,500	3,500	5,600	19,600	A68	
53	Miscellaneous Residential Growth (2 EDUs/year @ 350 GPD) - Area 28	19,600	0	19,600	varies	700	700	700	700	700	3,500	3,500	3,500	3,500	5,600	19,600	T26	YT01
54	Miscellaneous Residential Growth (3 EDUs/year @ 350 GPD) - Area 85	29,400	0	29,400	varies	1,050	1,050	1,050	1,050	1,050	5,250	5,250	5,250	5,250	8,400	29,400	A81	
55	Miscellaneous Residential Growth (1 EDU/year @ 350 GPD) - Area 27	9,800	0	9,800	varies	350	350	350	350	350	1,750	1,750	1,750	1,750	2,800	9,800	K16	SG01
56	Miscellaneous Industrial Growth (1 EDU/year @ 350 GPD) - Area 30	9,800	0	9,800	varies	350	350	350	350	350	1,750	1,750	1,750	1,750	2,800	9,800	C27-101	
57	Wellspan 815 Indian Rock Dam Road - office - 4,600 Indian Rock Dam Road - vacant land - 3,000	9,300	1,800	7,500	2881A	0	0	7,500	0	0	7,500	0	0	0	0	7,500	K16	SG01
58	Wellspan Health S. Edgar Street	2,900	2,400	500	20415	500	0	0	0	0	500	0	0	0	0	500	C38N	SG02A
59	York Building Products Loucks Mill Road	1,500	0	1,500		300	300	300	300	300	1,500	0	0	0	0	1,500	C4	

SPRING GARDEN TOWNSHIP
PROJECTED CONNECTIONS TO CITY OF YORK
WASTEWATER TREATMENT PLANT

	Name & Description	Original Proposed Gallons	Previously Connected	Net Gallons	Map & Parcel	All Projected Connections in Gallons per Day (GPD) 2017	2018	2019	2020	2021	2017-21 Subtotal	2022 - 2026	2027 - 2031	2032 - 2036	2037 + Ultimate	Total Gallons	York City MH No.	Flow Meter
60	Amurri Stone Kings Mill Road	31,000	0	31,000		3,500	13,500	14,000	0	0	31,000	0	0	0	0	31,000	K0	
61	Kinsley Properties rear 714 Loucks Mill Road	700	0	700	1-1C	700	0	0	0	0	700	0	0	0	0	700	C4	
62	Kinsley Properties 720 Loucks Mill Road	1,750	0	1,750	1-11	1,750	0	0	0	0	1,750	0	0	0	0	1,750	C4	
63	Glen-Gery Brick 1090 E. Boundary Ave.	4,000	0	4,000	17-10	0	4,000	0	0	0	4,000	0	0	0	0	4,000	C27-108	SG08
64	Rosecroft (Terrace Condos) (100 Townhouses @ 350 GPD)	35,000	0	35,000	34&78	0	0	3,150	2,800	3,500	9,450	25,550	0	0	0	35,000	A07	RI01
65	Brookfield (49 Townhouses @ 450 GPD)	22,050	10,050	12,000		2,100	2,100	1,400	1,750	1,750	9,100	2,900	0	0	0	12,000	A07	RI01
66	Greenleigh (Fairway Villas) (92 Condos/T.Houses @ 350 GPD)	32,200	14,700	17,500	[illegible]	0	0	4,900	4,900	4,900	14,700	2,800	0	0	0	17,500	A07	RI01
67	Dale and Nancy Braugher 1248 Wilshire Drive (4 EDUs @ 350 GPD)	1,400	0	1,400	8-2A	0	0	0	0	0	0	0	1,400	0	0	1,400	A07	RI01
68	Joshua George - Virginia Avenue (1 EDU @ 350 GPD)	350	0	350		350	0	0	0	0	350	0	0	0	0	350	K16	SG01
69	MacGregor B. & Kathleen S. Jones Lot 3 - Brookie Drive (1 EDU @ 350 GPD)	350	0	350		350	0	0	0	0	350	0	0	0	0	350	K16	SG01
70	Copper Ridge (41 EDUs @ 450 GPD)	18,450	3,850	14,600		1,050	1,750	1,050	1,050	1,050	5,250	5,225	4,125	0	0	14,600	A07	RI01
71	Stonegate (Townhomes) (142 EDUs @ 350 GPD)	49,700	49,700	0	0	0	0	0	0	0	0	0	0	0	0	0	A07	RI01
72	Wellspan Properties (Medical Offices)	30,000	0	30,000	34&83	5,000	2,500	7,500	7,500	7,500	30,000	0	0	0	0	30,000	A07	RI01
73	Laroml Metals (1 Manufacturing @ 350 GPD)	350	0	350	34&10	0	0	0	0	0	0	350	0	0	0	350	A07	RI01
74	Existing Lots - Thorton (4 Single Family @ 350 GPD)	1,400	0	1,400	34&2	0	0	0	0	0	0	1,400	0	0	0	1,400	A07	RI01
75	Existing Lots - Crows Nest (14 Single Family @ 350 GPD)	4,900	0	4,900	34&3	0	0	0	0	0	0	4,900	0	0	0	4,900	A07	RI01
76	840 S. Beaver Street Extension (1 EDU @ 350 GPD)	350	0	350		0	350	0	0	0	350	0	0	0	0	350	K26	

C.S. DAVIDSON, INC.

ATTACHMENT SGT-3
January 20, 2017

SPRING GARDEN TOWNSHIP
PROJECTED CONNECTIONS TO CITY OF YORK
WASTEWATER TREATMENT PLANT

	Name & Description	Original Proposed Gallons	Previously Connected	Net Gallons	Map & Parcel	All Projected Connections in Gallons per Day (GPD) 2017	2018	2019	2020	2021	2017-21 Subtotal	2022 - 2026	2027 - 2031	2032 - 2036	2037 + Ultimate	Total Gallons	York City MH No.	Flow Meter
77	Mocosko Subdivision (45 Single Family @ 350 GPD)	1,400	0	1,400		1,400	0	0	0	0	1,400	0	0	0	0	1,400	K19	SC01
78	Starcross & Shady Dell Area (4 EDUs @ 350 GPD)	14,000	0	14,000		0	0	0	0	0	0	7,000	7,000	0	0	14,000	T26	VT01
79	Fairview Drive Extended (2 EDUs @ 350 GPD)	700	0	700		0	0	0	0	0	0	700	0	0	0	700	T26	VT01
80	Johnson Controls (40 EDUs @ 350 GPD)	84,000	0	84,000		0	21,000	18,000	18,000	15,000	72,000	12,000	0	0	0	84,000	A61	
81	York College Expansions (80 EDUs @ 350 GPD)	28,000	0	28,000		0	0	0	0	0	0	7,000	7,000	7,000	7,000	28,000	T18	
82	York Suburban School District Indian Rock Dam Expansion (20 EDUs @ 350 GPD)	7,000	0	7,000	34-0001C	0	0	0	0	3,500	3,500	0	0	3,500	0	7,000	A87	RI01
83	Pennsylvania Lines, LLC 450 Windsor Street (10 EDUs @ 350 GPD)	3,500	0	3,500	1-19	0	0	0	0	3,500	3,500	0	0	0	0	3,500	C4	
84	Loucks Mill Re LP Loucks Mill Road (10 EDUs @350 GPD)	3,500	0	3,500	1-80	0	0	0	3,500	0	3,500	0	0	0	0	3,500	C4	
85	Regents Glen Copper Beech Apts (60 EDUs @ 350 GPD)	21,000	0	21,000	34-0084	0	0	0	0	21,000	21,000	0	0	0	0	21,000	A87	RI01
86	Regents Glen Golf Course Conversion to Apts (600 EDUs @ 350 GPD)	210,000	0	210,000	34-0088	0	0	0	0	0	0	50,000	50,000	50,000	60,000	210,000	A87	RI01
N/A	Miscellaneous Development (10 EDUs/year @ 350 GPD)	87,500	0	87,500		3,500	3,500	3,500	3,500	3,500	17,500	17,500	17,500	17,500	17,500	87,500		
	TOTALS:	1,375,050	147,400	1,227,650		132,450	106,700	105,500	187,100	112,350	847,100	205,725	141,975	108,850	128,600	1,227,550		
	Tributray to Pump Station																	
(1)	Tributary to Wyndham Hills South Pump Sta.	40,700	24,600	16,100		7,350	5,600	2,100	1,050	0	16,100	0	0	0	0	16,100		
(2)	Tributary to Southwynd Pump Station	3,850	0	3,850		2,800	1,050	0	0	0	3,850	0	0	0	0	3,850		
(3)	Tributary to Richland Avenue Pump Station	8,300	0	8,300		6,700	1,200	400	0	0	8,300	0	0	0	0	8,300		
	Tributary to Manhole Number																	
	Tributary to MH A87	458,450	73,300	385,150		26,150	17,650	10,000	19,000	43,200	120,000	80,125	56,525	50,500	60,000	385,150		
	Tributary to MH A85	29,400	0	29,400		1,050	1,050	1,050	1,050	1,050	5,250	5,250	5,250	5,250	8,400	29,400		
	Tributary to MH T26	151,100	27,050	119,350		18,450	11,550	8,650	60,750	7,700	100,100	7,350	6,200	10,050	8,400	134,050		
	Tributary to MH K8	100,050	350	90,700		4,850	13,860	14,000	60,000	7,000	96,700	0	0	0	0	69,700		
	Tributary to MH C27-18	24,000	13,000	11,000		11,000	0	0	0	0	11,000	0	0	0	0	11,000		
	Tributary to MH 71	8,650	0	8,650		7,050	1,200	400	0	0	8,650	0	0	0	0	8,650		
	Tributary to MH K16	126,850	19,200	107,550		23,750	9,100	19,600	6,900	6,600	61,050	21,000	19,250	2,400	2,800	107,550		

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SPRING GARDEN TOWNSHIP
PROJECTED CONNECTIONS TO CITY OF YORK
WASTEWATER TREATMENT PLANT

Name & Description	Original Proposed Gallons	Previously Connected	Net Gallons	Map & Parcel	All Projected Connections in Gallons per Day (GPD) 2017	2018	2019	2020	2021	2017-21 Subtotal	2022 - 2026	2027 - 2031	2032 - 2036	2037 + Ultimate	Total Gallons	York City MH No.	Flow Meter
Tributary to MH C38N	118,550	8,500	110,050		22,250	16,750	18,250	15,750	16,750	91,750	6,750	6,750	1,400	0	110,050		
Tributary to MH T25	350	0	350		350	0	0	0	0	350	0	0	0	0	350		
Tributary to MH K14	350	0	350		350	0	0	0	0	350	0	0	0	0	350		
Tributary to MH K16	14,350	0	14,350		5,650	4,000	2,100	1,000	0	14,350	0	0	0	0	14,350		
Tributary to MH K4C-2D	5,850	350	5,500		1,050	1,000	1,050	1,000	1,050	5,250	350	0	0	0	5,600		
Tributary to MH K4C-6	5,300	1,050	4,250		1,050	1,000	1,050	1,000	1,050	5,250	0	0	0	0	5,250		
Tributary to MH K5C	5,300	1,050	4,250		1,050	1,000	1,050	1,000	1,050	5,250	0	0	0	0	5,250		
Tributary to MH K48	2,450	0	2,450		350	350	350	350	350	1,750	350	350	0	0	2,450		
Tributary to MH SG 033	16,450	0	16,450		1,400	1,400	1,400	1,400	1,400	7,000	3,150	1,750	1,750	2,800	16,450		
Tributary to MH C40-14	1,050	700	350		350	0	0	0	0	350	0	0	0	0	350		
Tributary to MH C27-10G	34,800	1,400	33,400		2,100	8,100	2,100	2,100	2,100	14,500	10,500	3,850	1,750	2,800	33,400		
Tributary to MH C27-10J	10,150	0	10,150		700	350	350	350	350	2,100	1,750	1,750	1,750	2,800	10,150		
Tributary to MH C27 23	0	0	0		0	0	0	0	0	0	0	0	0	0	0		
Tributary to MH C27-25	700	0	700		350	350	0	0	0	700	0	0	0	0	700		
Tributary to MH L12-17	2,100	0	2,100		350	350	350	350	350	1,750	350	0	0	0	2,100		
Tributary to MH L9-8F	350	0	350		350	0	0	0	0	350	0	0	0	0	350		
Tributary to MH L7-16	350	0	350		350	0	0	0	0	350	0	0	0	0	350		
Tributary to MH K2R	9,800	0	9,800		350	350	350	350	350	1,750	1,750	1,750	1,750	2,800	9,800		
Tributary to MH C4	23,550	0	23,050		3,450	1,000	1,000	1,000	1,000	7,450	3,500	3,500	3,500	5,600	23,550		
Tributary to MH A08	19,000	0	19,000		700	700	700	700	700	3,500	3,500	3,500	3,500	5,600	19,600		
Tributary to MH L8-12	700	0	700		700	0	0	0	0	700	0	0	0	0	700		
Tributary to MH YTC1	14,700	0	14,700		0	0	0	0	0	0	7,700	7,000	0	0	14,700		
Tributary to MH A61	84,000	0	84,000		0	21,000	18,000	18,000	15,000	72,000	12,000	0	0	0	84,000		
Tributary to MH T18	28,000	0	28,000		0	0	0	0	0	0	7,000	7,000	7,000	7,000	28,000		

CITY OF YORK

A. System Monitoring, Maintenance, and Repair

The sewer maintenance crew has three full-time employees (see Exhibit SGT-A) and is responsible for routine maintenance and repairs of the sanitary sewer system in Spring Garden Township. The major equipment that the crew has available to utilize in the maintenance of the sanitary sewers are tabulated on Exhibit SGT-B.

The sewer maintenance crew can also draw upon the manpower and equipment available from the rest of the Township public works department. Nine additional public works employees in the highway department are available to assist the sewer maintenance crew if the need arises. Additional equipment available includes a backhoe/loader, air compressor, additional dump trucks, welding and cutting equipment, and other equipment within the public works department.

The pump stations are checked each weekday by municipal personnel. Major pump station repairs are performed by Hydra-Numatic Sales Company. The Township Sewer Maintenance crew performed cleaning and flushing services in designated areas. During 2016, 15,381 L.F. of sanitary sewers were flushed (see Exhibit SGT-C) and 5,522 L.F. were flushed and televised (see Exhibit SGT-D). Next year, the Township plans to clean and flush about 20,000 L.F. of main and televise about 5,000 L.F. No Sewer System Evaluation Survey (SSES) work was performed last year.

B. Collection System Condition

1. Description of System: The system tributary to the City of York includes 53.18 miles of sewers, one inverted siphon, and three pump stations. Wastewater from these areas connects to the City system at 40 different points, three of which have sewage flow meters. The Spring Garden Township System also transports flows from several areas in York Township (39,961 gpd). Wastewater in some sections of Spring Garden Township is also transported through the York Township system and City Flow Meter No. YT-01 (157,316 gpd). Most of the Spring Garden Township system is in substantially fair operating condition, with the older areas requiring more maintenance, especially in areas with trees.

2. Conveyance Capacity: No backups occurred in 2016.

3. Sewer Repairs: In 2016, the Township's maintenance crew did no repair any sanitary sewers.

4. Major Rehabilitation: Repairs to the Poorhouse Run interceptor were designed in 2015. The interceptor repairs are broken down into two phases. The first phase is for repairs and lining of the sections of pipe immediately north of Greendale Road. The work will involve two lateral crossings of Poorhouse Run, stream bank stabilization, and encroachment within waters of the Commonwealth. The second phase will be for repairs of sections of pipe immediately south of Rathton Road. Public Opening of bids occurred November 6, 2015. On November 11, 2015, Board of Commissioners meeting, Contract No. 1 (Pipe Replacement) was awarded to Wexcon, Inc. and Contract No. 2 (Pipe Lining) was awarded to Aqua Infrastructure Rehabilitation Co. A pre-construction conference was held on December 15, 2015. Construction began in January 2016 and was completed in June, 2016.

5. Tyler Run Interceptor Improvements: On 11/17/14, representatives of Gannett Fleming did a Tyler Run Flow Modeling presentation to the York Township Water and Sewer Authority. York Township's Act 537 Plan (updated in 1999) projected flows in excess of interceptor capability by 2020. The modeling done indicates that York Township's capacity in the York City Wastewater Treatment Plan will be exceeded in the next 4 or 5 years. The York Township Water and Sewer Authority viewed charts that showed what additional capacity would be required to meet projected flows. The model also predicted surcharging and overflows and what improvements could be made to keep this from happening. Those improvements include: replacement of the existing interceptor, new parallel interceptor, new relief sewer on top of the existing interceptor and/or redirection of flow from the Spangler Meadows pump station.

Five options were shown with estimated project costs. They were as follows: Option 1 – replace with larger diameter; Option 2 – horizontal parallel sewer; Option 3 – vertical parallel sewer; Option 4 – redirect Spangler Meadows to Springettsbury and replace with larger diameter sewer; and, Option 5 – redirect Spangler Meadows to Springettsbury and horizontal parallel. Option 4 was the most cost effective at $5.3 million. The $5.3 million project cost was provided for planning purposes. There was some discussion regarding the options presented at how pipe bursting would affect the cost. The modeling indicates that an increase in pipe size is sufficient for most runs, but upsizing by 2 pipe sizes would increase the capacity of the interceptor by 50% and only increase the project costs by 10% to 15%.

On 01/19/15, the YTWSA reviewed the Tyler Run Modeling Report. It has been decided to dig up and replace the line at the same location with larger diameter facilities. Gannett Fleming reported that the Wetlands and Bog Turtle Surveys have been completed. Five small wetlands along the alignment were delineated. None of the wetlands are suitable bog turtle habitat. A permit will be needed for impacts to wetlands and where the pipe to be replaced crosses a waterway (even if it is crossing under or over a waterway contained within a culvert). Based on the anticipated impacts, the project should qualify for a General Permit GP-11 (Maintenance, Repair, and Rehabilitation) for those areas where a pipe currently exists under a wetland or waterway. If you intend to install a new pipe where one is not currently located, those should qualify for a General Permit GP-5 (Utility Crossing). Gannett Fleming will complete the Wetland and Bog Turtle Habitat Reports as soon as the survey of the waterways within the project area is complete to delineate the areas of concern. The reports will be submitted to USFWS for bog turtle clearance.

The Water and Sewer Authority authorized the remaining tasks from the March 23, 2015 Gannett Fleming proposal for Engineering Services contract to design the relief interceptor. Funding for the project will be taken from the 5 Year Capital Program. Replacement may occur between 2018 and 2020. The Township is exploring phase out of the Spangler Meadows Pump Station to redirect flow for the Tyler Run Interceptor to the Mill Creek Interceptor/Springettsbury WWTP.

York Township has completed a television inspection of the system and DVDs are under review. The area is also tributary to the Tyler Run Interceptor and is subject to the City's CAP program. The Spring Garden Township cost share has not been reviewed. Neither York Township nor YTWSA has contacted Spring Garden Township about cost sharing responsibilities.

C. Sanitary Sewer Extensions

1. Extensions: No sanitary sewer extensions were built in 2016.

2. Proposed Projects: The following project was issued a BWQM Permit in 1972, but has not been constructed:

Project Name	BWQM Permit No.	Status
Oakridge Sanitary Sewer Dist.	6772422	Delayed due to low priority rating and lack of EPA/PA DEP funds.

A feasibility study of this area is under review by the Board of Commissioners. C.S. Davidson, Inc. prepared a cost estimate for pressure sewer options with individual grinder pumps in April 2007. The location of all other proposed projects is shown on Attachment SGT-2.

D. Waste Flow Data

1. The estimated flows for the current year and the projected next five years are shown on Attachments SGT-1 and SGT-3.

2. The total number of sewer connections (see Exhibit SGT-E) completed in Spring Garden Township during the last

five years are as follows:

2012	2013	2014	2015	2016
9	18	37	45	26

E. Nutrient Trading Program 2003 thru 2016

1. Based upon 25 lbs. per year of nitrogen, the available credits through December 31, 2014 are computed as follows:

2003	21 EDUs x 14 yrs. x 25 lbs.=	7,300
2004	0 EDUs x 13 yrs. x 25 lbs.=	0
2005	5 EDUs x 12 yrs. x 25 lbs. =	1,500
2006	12 EDUs x 11 yrs. x 25 lbs. =	3,300
2007	5 EDUs x 10 yrs. x 25 lbs. =	1,250
2008	4 EDUs x 9 yrs. x 25 lbs. =	900
2009	6 EDUs x 8 yrs. x 25 lbs. =	1,200
2010	8 EDUs x 7 yrs. x 25 lbs. =	1,400
2011	7 EDUs x 6 yrs. x 25 lbs. =	1,050
2012	7 EDUs x 5 yr. x 25 lbs. =	875
2013	7 EDUs x 4 yr. x 25 lbs. =	700
2014	11 EDUs x 3 yr. x 25 lbs. =	825
2015	10 EDUs x 2 yr. x 25 lbs. =	500
2016	10 EDUs x 1 yr. x 25 lbs. =	250

F. Sewer Accounts

As of 12/31/16, Spring Garden Township has the following sewer billing accounts:

- Tributary to York City System: 4,201
- Tributary to York Township System: 241

Exhibit SGT-A
January 20, 2017

CHAPTER 94 REPORT

PERSONEL & TRAINING

2016

BRENT BARLEY
HIRE DATE – 12/01/03
POSITION – CREW LEADER
WASTEWATER ID – 267274
TRAINING

- 5/13/16 CONFINED SPACE & BUILDING GROUNDS MAINTENANCE
- 6/01/16 LTAP "MS4"
- 6/21/16 PA RURAL WATER COURSE #340
- 6/23/16 PA SAFETY DAY
- 10/11/16 LTAP STORMWATER FACILITY OPERATION & MAINTENANCE / A1
- 12/13/16 LTAP SALT & SNOW MANAGEMENT A/2

CREIG SCOTT
HIRE DATE – 10/25/04
POSITION – CREW PERSON
WASTEWATER ID – 267286
TRAINING

- 5/13/16 CONFINED SPACE & BUILDING GROUNDS MAINTENANCE
- 6/21/16 PA RURAL WATER COURSE #340
- 6/23/16 PA SAFETY DAY
- 10/23/16 LTAP STORMWATER FACILITY OPERARTION & MAINTENANCE / A1

RUSS FULLER
HIRE DATE – 7/02/07
POSITION – CREW PERSON
WASTEWATER ID – 299095
TRAINING

- 5/13/16 CONFINED SPACE & BUILDING GROUNDS MAINTENANCE
- 6/21/16 PA RURAL WATER COURSE #340
- 6/23/16 PA SAFETY DAY
- 10/23/16 LTAP STORMWATER FACILITY OPERATION & MAINTENANCE / A1

Exhibit SGT-B
January 20, 2017

CHAPTER 94 REPORT

EQUIPMENT & SEWER MAINTENANCE OPERATIONS

2016

EQUIPMENT

S-1 / CHEVY DURA MAX 3500 HD
CARRIES ALL SAFETY EQUIPMENT FOR CONFINED SPACE ENTRY
MARKING PAINT & FLAGS FOR PA ONE CALLS
SANITARY & STORM MAINTENANCE EQUIPMENT

S-2 / VAC-CON FLUSH TRUCK
MAINTENANCE OF SANITARY & STORM LINES
MAINTENANCE OF WET WELLS, MH'S, & STORM INLETS

S-3 / TV VAN
INSPECTION OF SANITARY & STORM LINES

TR-1
MOWING & CLEARING OF SANITARY & STORM R.O.W.'S

SANITARY & STORM SEWER MAINTENANCE

- INFLOW & INFILTRATION INSPECTION & DETECTION
- MAINTAINING SANITARY & STORM R.O.W.'S
- MAINTENANCE OF WET WELLS, PUMPS, & GENERATORS
- PA ONE CALLS
- LOCATING,LABELING, & INSOECTION OF STORM SEWER OUTFALLS

TOTALS FOR 2016

YORK CITY
FLUSHING – 15,385ft
TV'ING – 5,522ft

SPRINGETTSBURY TWP
FLUSHING – 15,828ft
TV'NG – 7,862ft

YORK FLUSH 2016

DATE	STREET	MH START	MH END	LENGTH	MH CONDITION	COMMENTS
1/8/2016	ALBEMARLE ST	223	224	393'	GOOD	MAINTENANCE
1/8/2016	ALBEMARLE ST	222	223	306'	GOOD	MAINTENANCE
1/8/2016	ALBEMARLE ST	221	222	113'	GOOD	MAINTENANCE
1/11/2016	ALBEMARLE ST	220	221	271'	GOOD	MAINTENANCE
14-Jan	SOUTHERN RD	325A	328	225'	GOOD	PAVING
1/15/2016	ALBEMARLE ST	217	219	270'	GOOD	MAINTENANCE
1/15/2016	ALBEMARLE ST	216	217	269'	GOOD	MAINTENANCE
1/27/2016	WOODBERRY RD	514	515	333'	GOOD	MAINTENANCE
2/2/2016	ALBEMARLE ST	217	219	270'	GOOD	MAINTENANCE
2/2/2016	ALBEMARLE ST	216	217	269'	GOOD	MAINTENANCE
2/2/2016	ALBEMARLE ST	215	216	223'	GOOD	MAINTENANCE
2/2/2016	ALBEMARLE ST	214	215	223'	GOOD	MAINTENANCE
2/19/2016	OLD ORCHARD LN	449	450	215'	GOOD	MAINTENANCE
2/22/2016	ALBEMARLE ST	219	220	270'	GOOD	MAINTENANCE
3/7/2016	ALBEMARLE ST	212	213	157'	GOOD	MAINTENANCE
3/7/2016	ALBEMARLE ST	211	212	130'	GOOD	MAINTENANCE
5/10/2016	LANCASTER AVE	176	179	294'	GOOD	MAINTENANCE
5/17/2016	CLOVER LN	581	582	120'	GOOD	MAINTENANCE
5/17/2016	CLOVER LN	580	581	120'	GOOD	MAINTENANCE
5/17/2016	CLOVER LN	582	583	130'	GOOD	MAINTENANCE
5/10/2016	SECOND AVE	84	83	272'	GOOD	MAINTENANCE
5/19/2016	HILL ST	281	282	257'	GOOD	MAINTENANCE
5/19/2016	HILL ST	280	281	200'	GOOD	MAINTENANCE
5/19/2016	MIDLAND AVE	252	253	269'	GOOD	MAINTENANCE
5/19/2016	OGONTZ ST	294	295	279'	GOOD	MAINTENANCE
5/19/2016	SPRINGDALE AVE	277	278	225'	GOOD	MAINTENANCE
5/19/2016	HOLLYWOOD R.O.W.	310	311	280'	GOOD	MAINTENANCE
5/19/2016	HOLLYWOOD TERR	320	321	368'	GOOD	MAINTENANCE
5/19/2016	GRANDVIEW RD	323	324	285'	GOOD	MAINTENANCE
5/19/2016	GLENDALE RD	534	535	400'	GOOD	MAINTENANCE
5/19/2016	GLENDALE RD	533	534	333'	GOOD	MAINTENANCE

Exhibit SGT-C
January 20, 2017

5/19/2016	GREENDALE RD	601	602 377'	GOOD	MAINTENANCE
5/19/2016	TRIHILL RD	674	675 275'	GOOD	MAINTENANCE
5/19/2016	HIGHLAND RD	742	743 310'	GOOD	MAINTENANCE
5/19/2016	SMALLBROOK LN	947	948 146'	GOOD	MAINTENANCE
5/19/2016	SMALLBROOK LN	946	947 154'	GOOD	MAINTENANCE
5/19/2016	SMALLBROOK LN	946	906 166'	GOOD	MAINTENANCE
5/19/2016	YORKSHIRE TERR	926	927 312'	GOOD	MAINTENANCE
5/19/2016	YORKSHIRE TERR	925	926 155'	GOOD	MAINTENANCE
5/19/2016	YORKSHIRE TERR	925	924 148'	GOOD	MAINTENANCE
5/19/2016	SIPHON	1353	1352 334'	GOOD	MAINTENANCE
5/19/2016	RATHON RD	625	626 186'	GOOD	MAINTENANCE
5/19/2016	RATHON RD	626	627 80'	GOOD	MAINTENANCE
6/14/2016	OGONTZ ST	159	160 269'	GOOD	MAINTENANCE
6/24/2016	SOMERSET LN	986	987 121'	GOOD	MAINTENANCE
6/24/2016	BROKIE LN	999	993 143'	GOOD	MAINTENANCE
6/24/2016	BROKIE R.O.W.	987	993 119'	GOOD	MAINTENANCE
7/5/2016	SPRINGDALE AVE	255	277 310'	GOOD	MAINTENANCE
7/5/2016	WOODBERRY RD	515	516 400'	GOOD	MAINTENANCE
7/5/2016	WOODBERRY RD	514	515 333'	GOOD	MAINTENANCE
7/6/2016	SHELBOURNE DR	752	753 300'	GOOD	MAINTENANCE
9/16/2016	EDGEHILL RD	608	609 300'	GOOD	MAINTENANCE
10/14/2016	HOFFMAN RD	552	553 375'	GOOD	MAINTENANCE
10/14/2016	HOFFMAN RD	551	552 394'	GOOD	MAINTENANCE
10/27/2016	CLOVER LN	445	448 269'	GOOD	MAINTENANCE
11/10/2016	HIGHLAND RD	742	743 310'	GOOD	PAVING
11/10/2016	HIGHLAND RD	741	742 140'	GOOD	PAVING
11/10/2016	IRVING RD	741	744 175'	GOOD	PAVING
11/10/2016	IRVING RD	744	745 177'	GOOD	PAVING
11/14/2016	IRVING RD	740	741 250'	GOOD	PAVING
11/14/2016	IRVING RD	736	740 333'	GOOD	PAVING
11/14/2016	IRVING RD	735	736 255'	GOOD	PAVING

YORK TV 2016

DATE	STREET	MH START	MH END	LENGTH	MH CONDITION	COMMENTS
1/27/2016	WOODBERRY RD	514	515	328'	GOOD	MAINTENANCE
1/8/2016	ALBEMARLE ST	223	224	313'	GOOD	PAVING
1/8/2016	ALBEMARLE ST	224	225	37'	GOOD	PAVING
1/11/2016	ALBEMARLE ST	222	223	306'	GOOD	PAVING
1/12/2016	ALBEMARLE ST	221	222	112'	GOOD	PAVING
1/14/2016	SOUTHERN RD	325A	328	214'	GOOD	PAVING
1/14/2016	ALBEMARLE ST	220	221	271'	GOOD	PAVING
1/15/2016	ALBEMARLE ST	217	219	271'	GOOD	PAVING
2/4/2016	ALBEMARLE ST	216	217	268'	GOOD	PAVING
2/18/2016	ALBEMARLE ST	215	216	271'	GOOD	PAVING
2/19/2016	ALBEMARLE ST	214	215	223'	GOOD	PAVING
3/3/2016	ALBEMARLE ST	219	220	270'	GOOD	PAVING
3/7/2016	ALBEMARLE ST	213	214	200'	GOOD	PAVING
3/7/2016	ALBEMARLE ST	212	213	116'	GOOD	PAVING
5/17/2016	CLOVER LN	581	582	121'	GOOD	MAINTENANCE
7/14/2016	MT. ROSE AVE	232	233	78'	GOOD	MAINTENANCE
6/2/2016	ELMWOOD BLVD	48	49	45'	GOOD	MAINTENANCE
6/14/2016	OGONTZ ST	159	160	269'	GOOD	MAINTENANCE
7/5/2016	WOODBERRY RD	515	516	388'	GOOD	MAINTENANCE
7/5/2016	SPRINGDALE AVE	255	277	308'	GOOD	MAINTENANCE
7/6/2016	WOODBERRY RD	514	515	329'	GOOD	MAINTENANCE
7/6/2016	COUNTRY CLUB RD	907	908	52'	GOOD	MAINTENANCE
11/11/2016	IRVING RD	744	745	177'	GOOD	PAVING
11/14/2016	IRVING RD	740	741	242'	GOOD	PAVING
11/14/2016	IRVING RD	741	742	137'	GOOD	PAVING
11/14/2016	IRVING RD	741	744	176'	GOOD	PAVING

Exhibit SGT-D
January 20, 2017

2015-051	NVR Inc/ Ryan Homes	1211 Rannoch Ln	10-Nov-15	14-Jan-16	1	350	RG Direct
2015-052	NVR Inc/ Ryan Homes	1215 Rannoch Ln	10-Nov-15	15-Jan-16	1	350	RG Direct
2015-053	NVR Inc/ Ryan Homes	1219 Rannoch Ln	10-Nov-15	14-Jan-16	1	350	RG Direct
2015-054	NVR Inc/ Ryan Homes	1223 Rannoch Ln	10-Nov-15	15-Jan-16	1	350	RG Direct
2015-055	NVR Inc/ Ryan Homes	1227 Rannoch Ln	10-Nov-15	14-Jan-16	1	350	RG Direct
2015-056	NVR Inc/ Ryan Homes	1231 Rannoch Ln	10-Nov-15	15-Jan-16	1	350	RG Direct
2015-057	NVR Inc/ Ryan Homes	1235 Rannoch Ln	10-Nov-15	14-Jan-16	1	350	RG Direct
2015-060	Shorb, Andrew & Alyssa	1300 Oakdale Dr	18-Dec-15	05-May-16	1	350	YT53D
2016-001	Sweitzer, Ryan J	1524 Old Farm Ln	20-Jan-16	22-Jan-16	1	350	37
2016-002	Hermon, Rodney & Kellee	730 Woodberry Dr	04-Feb-16	15-Feb-16	1	350	37
2016-003	NVR Inc / Ryan Homes	1289 Rannoch Ln	03-Mar-16	22-Apr-16	1	350	RG Direct
2016-004	NVR Inc / Ryan Homes	1285 Rannoch Ln	03-Mar-16	22-Apr-16	1	350	RG Direct
2016-005	NVR Inc / Ryan Homes	1281 Rannoch Ln	03-Mar-16	22-Apr-16	1	350	RG Direct
2016-006	NVR Inc / Ryan Homes	1277 Rannoch Ln	03-Mar-16	25-Apr-16	1	350	RG Direct
2016-007	NVR Inc / Ryan Homes	1273 Rannoch Ln	03-Mar-16	25-Apr-16	1	350	RG Direct
2016-008	NVR Inc / Ryan Homes	1269 Rannoch Ln	03-Mar-16	25-Apr-16	1	350	RG Direct
2016-009	NVR Inc / Ryan Homes	1265 Rannoch Ln	03-Mar-16	25-Apr-16	1	350	RG Direct
2016-010	Spangler, Dean C	1555 Clover Ln	24-Mar-16	29-Mar-16	1	350	36
2016-011	NVR Inc / Ryan Homes - model home	1407 Crest Way	24-Mar-16	23-Jun-16	1	350	RG Direct
2016-012	Bowen, Robert	1573 Clover Ln	28-Mar-16	28-Apr-16	1	350	36
2016-013	Shouck, Gary	1801 Clover Ln	21-Apr-16	20-May-16	1	350	36
2016-014	Hess, Elizabeth	591 S Ogontz St	28-Apr-16	04-May-16	1	350	SPR
2016-015	Kay, Roger R & Converse M	1520 Hillcroft Ln	13-Jul-16	19-Jul-16	1	350	36
2016-016	Hartman, Donald E & Tamara S	1507 Clover Ln	08-Jul-16	25-Jul-16	1	350	36
2016-023	NVR Inc / Ryan Homes	967 Fieldbrook Cir	15-Aug-16	12/29/2016	1	350	RG Direct
2016-024	Stetler, Rosalie F; Lynn R Allison, POA	168 Summit Dr	24-Aug-16	31-Aug-16	1	350	YT51

CITY OF YORK

A. Pump Station Condition

1. Richland Avenue Pump Station: This facility was privately owned until its adoption by Spring Garden Township in November 1990. The pump station has a design capacity of 200 GPM. This facility has no emergency standby power. The pumping capacity was field verified in December 2011 at 283 GPM. Elapsed time meter readings for 2016 indicate the following:

283	RICHLAND AVENUE PUMP STATION			
GPM Rated in 2011	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	0.07	1,189		
Average	0.12	2,038		
Maximum	0.74	12,565	407,520	6.17

The projected 2-year flows are estimated as follows:

	2016	2017	2018	Design Capacity (GPD)
Avg. Daily Flow (GPD)	2,038	8,738	9,938	
Max. Daily Flow (GPD)	12,565	53,882	61,282	288,000
% Loading (of Design)	4.4%	18.7%	21.3%	
% Loading (of Capacity)	3.1%	13.2%	15.0%	

2. Brockway Drive South Pump Station:

The Brockway Drive facility was built by private developers and adopted by the Township in 1991. The pump station has a design capacity of 175 GPM, has no overflow or bypass, and is equipped with emergency standby generator. The pumping capacity was field verified in 2015 at 196 GPM. Elapsed time meter readings for 2016 indicate the following:

196	WYNDHAM HILLS SOUTH PUMP STATION			
GPM Rated in 2015	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	4.15	48,804		
Average	5.23	61,505		
Maximum	8.64	101,606	282,240	1.65

The projected 2-year flows are estimated as follows:

	2016	2017	2018	Design Capacity (GPD)
Avg. Daily Flow (GPD)	61,505	63,605	69,205	
Max. Daily Flow (GPD)	101,606	105,076	114,327	252,000
% Loading (of Design)	40.3%	41.7%	45.4%	
% Loading (of Capacity)	36.0%	37.2%	40.5%	

3. Southwynd Pump Station:

This facility was built by the Township in 1992 on Wyndsung Drive. The pump station has a design capacity of 80 GPM, has no overflow or bypass, and is equipped with emergency standby power and elapsed time meters. The actual pumping capacity was field verified in 2016 at 95 GPM. Elapsed time meter readings for 2016 indicate the following:

95	SOUTHWYND PUMP STATION			
GPM Rated in 2015	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	0.85	4,845		
Average	1.13	6,441		
Maximum	1.69	9,633	136,800	1.50

The projected 2-year flows are estimated as follows:

	2016	2017	2018	Design Capacity (GPD)
Avg. Daily Flow (GPD)	6,441	13,141	14,191	
Max. Daily Flow (GPD)	9,633	19,653	21,224	115,200
% Loading (of Design)	8.4%	17.1%	18.4%	
% Loading (of Capacity)	7.0%	14.4%	15.5%	

4. Pump Station Maintenance and Repairs:

a. The standby generators are inspected and tested weekly.

b. Routine maintenance and repairs are outlined on Exhibit SGT-F.

Exhibit SGT-F
January 20, 2017

CHAPTER 94 REPORT

2016

PUMP STATION MAINTENANCE

RICHLAND AVE

- WEEKLY PUMP RECORDINGS
- WEEKLY BIO BUG TREATMENTS
- QUARTERLY WET WELL MAINTENANCE
- *P.S.I.* REHABED STAION, NEW PUMPS & RAILS, VAVLVE VAULT FOR BY-PASS PUMPING, SPRAY-ROC LINER, NEW HATCH, & PANAL BOX
- *LEE FENCE* INSTALLED FENCING AROUND PERIMITER

WYNDHAM HILLS S.

- WEEKLY PUMP RECORDINGS
- WEEKLY BIO BUG TREATMENTS
- QUARTERLY WET WELL & PUMP MAINTENANCE
- GENERATOR EXERCISES WEEKLY, HOURS ARE RECORDED & FLUID LEVELS ARE CHECKED
- *P.S.I.* INSTALLED NEW SOFT START TO PUMP #3

WYNDSONG DR.

- WEEKLY PUMP RECORDINGS
- WEEKLY BIO BUG TREATMENTS
- QUARTERLY WET WELL & PUMP MAINTENANCE
- GENERATOR EXERCISES WEEKLY, HOURS ARE RECORDED & FLUID LEVEVLS ARE CHECKED

Springettsbury Township Chapter 94 Municipal Wasteload Management

* Note: Detailed information regarding the Springettsbury Township wastewater treatment facility and sanitary sewer collection and conveyance systems, and compliance with Chapter 94 requirements, is located in the Springettsbury Township Wastewater Treatment Facility Chapter 94 Municipal Wasteload Management Report (NPDES PA0026808).

West Manchester Township Chapter 94 Municipal Wasteload Management

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

For Calendar Year: 2016

☐ Permittee is owner and/or operator of a POTW or other sewage treatment facility
☒ Permittee is owner and/or operator of a collection system tributary to a POTW not owned/operated by permittee

GENERAL INFORMATION			
Permittee Name:	**West Manchester Township**	Permit No.:	**PA**
Mailing Address:	**380 East Berlin Road**	Effective Date:	
City, State, Zip:	**York, PA 17408**	Expiration Date:	
Contact Person:	**Mr. Steve Callahan**	Renewal Due Date:	
Title:	**Public Works Director**	Municipality:	**West Manchester Township**
Phone:	**717-792-3505**	County:	**York**
Email:	**scallahan@wmtwp.com**	Consultant Name:	**Dawood Engineering, Inc.**

CHAPTER 94 REPORT COMPONENTS

1. Attach to this report a line graph depicting the monthly average flows (expressed in MGD) for each month for the past 5 years and projecting the flows for the next 5 years. The graph must also include a line depicting the hydraulic design capacity per the WQM permit. (25 Pa. Code § 94.12(a)(1))

   Check the appropriate boxes:
   ☐ Line graph for flows attached (**Attachment**)
   ☐ DEP Chapter 94 Spreadsheet used (**Attachment**)
   ☒ Section 1 is not applicable (report is for a collection system).

2. Attach to this report a line graph depicting the monthly average organic loads (express as lbs BOD5/day) for each month for the past 5 years and projecting the organic loads for the next 5 years. The graph must also include a line depicting the organic design capacity of the treatment plant per the WQM permit. (25 Pa. Code § 94.12(a)(2))

   Check the appropriate boxes:
   ☐ Line graph for organic loads attached (**Attachment**)
   ☐ DEP Chapter 94 Spreadsheet used (**Attachment**)
   ☒ Section 2 is not applicable (report is for a collection system).

3. If the DEP Chapter 94 Spreadsheet was not used to determine projections, discuss the basis for the hydraulic and organic projections. In all cases, include a description of the time needed to expand the plant to meet the load projections, if necessary, and data used to support the projections should be included in an appendix to this report. (25 Pa. Code § 94.12(a)(3))

   N/A Collection System only

4. Attach a map showing all sewer extensions constructed within the past calendar year, sewer extensions approved or exempted in the past year in accordance with Act 537 and Chapter 71, but not yet constructed, and all known proposed projects which require public sewers but are in the preliminary planning stages. The map must be accompanied by a list summarizing each extension or project and the population to be served by the extension or project. If a sewer extension approval or proposed project includes schedules describing how the project will be completed over time, the listing should include that information and the effect this build-out-rate will have on populations served. (25 Pa. Code § 94.12(a)(4))

Check the appropriate boxes:

- ☐ Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (**Attachment**)
- ☐ List summarizing each extension or project attached (**Attachment**)
- ☐ Schedules describing how each project will be completed over time and effects attached (**Attachment**)

Comments:

No extensions are proposed at this time.

5. Discuss the permittee's program for sewer system monitoring, maintenance, repair and rehabilitation, including routine and special activities, personnel and equipment used, sampling frequency, quality assurance, data analyses, infiltration/inflow monitoring, and, where applicable, maintenance and control of combined sewer regulators during the past year. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(5))

(See Pages 1-2 of attached report)

6. Discuss the condition of the sewer system including portions of the system where conveyance capacity is being exceeded or will be exceeded in the next 5 years and portions where rehabilitation or cleaning is needed or is underway to maintain the integrity of the system and prevent or eliminate bypassing, CSOs, SSOs, excessive infiltration and other system problems. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(6))

Check the appropriate boxes:

- ☒ System experienced capacity-related bypassing, SSOs or surcharging during the report year. On a separate sheet, list the date, location, and reason for each bypass, SSO or surcharge event.
- ☐ System did not experience capacity-related bypassing, SSOs or surcharging during the report year.

Comments:

(See Page 1 of attached report)

7. Attach a discussion on the condition of sewage pumping (pump) stations. Include a comparison of the maximum pumping rate with present maximum flows and the projected 2-year maximum flows for each station. (25 Pa. Code § 94.12(a)(7))

Check the appropriate boxes:

☐ The collection system does not contain pump stations
☒ The collection system does contain pump stations (Number – **6**)
☒ Discussion of condition of each pump station attached (**Attachment**)

8. If the sewage collection system receives industrial wastes (i.e., non-sanitary wastes), attach a report with the information listed below. (25 Pa. Code § 94.12(a)(8))

a. A copy of any ordinance or regulation governing industrial waste discharges to the sewer system or a copy of amendments adopted since the initial submission of the ordinance or regulation under Chapter 94, if it has not previously been submitted.

b. A discussion of the permittee's or municipality's program for surveillance and monitoring of industrial waste discharges into the sewer system during the past year.

c. A discussion of specific problems in the sewer system or at the plant, known or suspected to be caused by industrial waste discharges and a summary of the steps being taken to alleviate or eliminate the problems. The discussion shall include a list of industries known to be discharging wastes which create problems in the plant or in the sewer system and action taken to eliminate the problem or prevent its recurrence. The report may describe pollution prevention techniques in the summary of steps taken to alleviate current problems caused by industrial waste dischargers and in actions taken to eliminate or prevent potential or recurring problems caused by industrial waste dischargers.

Check the appropriate boxes:

☒ Industrial waste report as described in 8 a., b. and c. attached (**Attachment 2**)
☐ Industrial pretreatment report as required in an NPDES permit attached (**Attachment**)

9. Existing or Projected Overload.

Check the appropriate boxes:

☐ This report demonstrates an existing hydraulic overload condition.
☐ This report demonstrates a projected hydraulic overload condition.
☐ This report demonstrates an existing organic overload condition.
☐ This report demonstrates a projected organic overload condition.

If one or more boxes above have been checked, attach a Corrective Action Plan (CAP) to reduce or eliminate present or projected overloaded conditions under §§ 94.21 and/or 94.22 (relating to existing overload and projected overload). (25 Pa. Code § 94.12(a)(9))

☐ Corrective Action Plan attached (**Attachment**)

10. Where required by the NPDES permit, attach a Sewage Sludge Management inventory that demonstrates a mass balance of solids coming in and leaving the facility over the previous calendar year.

☐ Sewage Sludge Management Inventory attached (**Attachment**)

11. For facilities with CSOs and where required by the NPDES permit, attach an Annual CSO Report (including satellite combined sewer systems).

☐ Annual CSO Report attached (**Attachment**)

12. For POTWs, attach a calibration report documenting that flow measuring, indicating and recording equipment has been calibrated annually. (25 Pa. Code § 94.13(b))

☐ Flow calibration report attached (**Attachment**)

RESPONSIBLE OFFICIAL CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Steve Callahan, Public Works Director
Name of Responsible Official

Signature

717-792-3505
Telephone No.

2/27/2017
Date

PREPARER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared by me or otherwise under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Craig A. Wilson
Name of Preparer

Signature

717-732-8576
Telephone No.

2/27/2017
Date

2016 CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT REPORT – YORK CITY WASTEWATER TREATMENT FACILITY

West Manchester Township
York County, Pennsylvania

February 24, 2017

Prepared for:

West Manchester Township
380 East Berlin Road
York, PA 17408

Prepared by:

Dawood Engineering, Inc.
2020 Good Hope Road
Enola, PA 17025

DEI Project Number 409001.01

CITY OF YORK – CHAPTER 94
WASTELOAD MANAGEMENT REPORT – 2016

WEST MANCHESTER TOWNSHIP

A. System Monitoring, Maintenance, and Repair

The Township has the personnel and television, grouting, and flushing equipment to perform routine sanitary sewer maintenance (refer to Exhibit No. WMT-1). During 2016, 6,615 linear feet of Lincolnway area sanitary lines were televised and 12,642 linear feet were flushed by Township staff (refer to Exhibit No. WMT-2), nine (9) blockages were opened, and eight (8) clean-outs were repaired (refer to Exhibit No. WMT-4). The six (6) pumping facilities tributary to the York City system are checked at least three times per week by municipal personnel.

During 2013, a project was undertaken to extend the wet well and elevate the generator/control building of the Market Street Pump Station to prevent stormwater runoff from entering the pump station and shutting it down. This project was begun in late October and completed in the middle of December 2013. In a correspondence with PADEP dated March 19, 2014, this pump station was no longer considered hydraulically challenged.

Another project was undertaken to reline and grout a portion of the King Street Pump Station interceptor from Zarfoss Road. This project repaired approximately 2200 feet of 10" clay pipe main using cured in place pipe and joint/crack grouting to prevent infiltration into those pipes. This project was begun in December 2013 and completed in January 2014. Also during 2014, a project was undertaken to grout or line approximately 3100 feet of 8" clay pipe in Market Street. This project was begun in May and completed in September 2014.

During 2013, West Manchester Township implemented a multi-year system-wide program of televising all the Township's sanitary lines. This information will be used to prioritize and determine repairs necessary to remove infiltration. The Township is also actively inspecting manholes for evidence of infiltration.

Overflow events were reported at manhole MH-276 on Fayette Street on February 5, February 16, and February 26, 2016.

On June 21, 2012, PADEP issued a letter denying connections to the systems tributary to the Market Street and King Street Pump Stations until overloads are eliminated. As mentioned above, West Manchester Township has been active in addressing known problems as well as embarking on a televising program for areas tributary to the two pump stations to identify and locate areas of infiltration. The elevation of vital components at the Market Street Pump Station was completed in December 2013 thus removing the major source of overload to the pump station. In a correspondence from PADEP, the King Street Pump Station was determined to no longer be hydraulically overloaded.

Collection System Condition

1. Description of System

The system tributary to York City and includes 47.60 miles of sewers. Wastewater from these areas connects to the City system at five (5) different points. The bulk of the Township system discharges flows into the West York Borough system. Approximately one-half of the flow at York City Meter WY01 located on West Poplar Street is estimated to be from the Township. Wastewater flows from the Westgate area are measured at York City Meter WM01. Most of the Township system is in fair operating condition, with the older areas requiring maintenance.

2. Conveyance Capacity

A tabulation of the separate flows to West York Borough and York City appear in Exhibit No. WMT-8.

3. Major Rehabilitation

During 2013-2014, several thousand feet of vitrified clay pipe were lined or grouted to reduce some of the infiltration into the system.

The Township will continue to flush and televise the system during 2016 to assess and identify sources of inflow and infiltration to the system and to prioritize areas for replacement projects.

The Township has begun survey and design efforts to correct overflow problems on Fayette Street and Trolley Road. During 2014, landowners were contacted about the Township's proposed plan. 2015 saw the Township finalize field survey work, design, and acquisition of necessary easements at Fayette Street. The plan envisions the Fayette Street upgrade to be completed during early 2017 and Trolley Road upgrade to be completed in late 2017 or early 2018. Bids for the Fayette Street project were opened and the contract awarded in January 2017.

In 2016, approximately 300 linear feet of 8" vitrified clay main in Filbert Street was replaced with PVC to eliminate a section of pipe with severe root intrusion.

B. Pump Station Condition

1. West King Street Pump Station

This major pumping facility in the Township is located along West King Street Extended. The station (No. 1) serves most of the Lincolnway area and a small section of West York Borough. The station was replaced in 2005 and has a design capacity of 1,000 GPM. The previous overflow pipe was eliminated. The pump station is equipped with a telephone dialer system. Some minor repairs were made to the pumps and inflow meter and the pump station capacity was field rated in 2013 at 994 GPM. The meter readings for 2016 indicated the following conditions:

994 gpm Rated in 2013	WEST KING STREET PUMP STATION NO. 1			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	3.0	134,820		
Average	9.0	366,270		
Maximum	20.9	937,320	1,431,360	2.56

	2017	2018	2019	Design Capacity (GPD)
Avg. Daily Flow (GPD)	366,270	366,970	368,020	
Max. Daily Flow (GPD)	937,320	939,111	941,798	1,440,000
% Loading (of Design)	65.1%	65.2%	65.4%	
% Loading (of Capacity)	65.5%	65.6%	65.8%	

Continued improvements to the system tributary to the King Street Pump Station are ongoing. Several thousand feet of vitrified clay pipe has been lined or grouted to address I&I problems. A project will be undertaken in early 2017 to realign a portion of the system in Fayette Street to eliminate an overflow situation. The bid was awarded in January 2017.

2. Canary Circle Pump Station

This pump station and standby generator was placed into operation in April 2005 and was field rated at 135 GPM, more than its 80 GPM design capacity. Meter readings for 2016 indicated the following conditions:

135 gpm Rated in 2005	CANARY CIRCLE PUMP STATION NO. 4			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	0.57	4,629		
Average	0.87	7,044		
Maximum	1.14	9,257	194,400	1.31

	2017	2018	2019	Design Capacity (GPD)
Avg. Daily Flow (GPD)	7,044	7,044	7,044	
Max. Daily Flow (GPD)	9,257	9,257	9,257	115,200
% Loading (of Design)	8.0%	8.0%	8.0%	
% Loading (of Capacity)	4.8%	4.8%	4.8%	

No overload is projected at this station within the next two (2) years.

3. South Adams Street Pump Station

This wet well mounted pump station (No. 3) is located along Salem Road near the intersection with South Adams Street. The station was completed in 1978 and serves portions of Sanitary Sewer District No. 15 (West College Avenue area). The station has a design capacity of 80 GPM and does not have an overflow. The station has emergency standby power. The actual pumping capacity was field verified in December 2004 at 87 GPM. Meter readings for 2016 indicated the following conditions:

87 gpm Rated in 2004	SOUTH ADAMS STREET PUMP STATION NO. 2			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	1.86	9,694		
Average	2.86	14,910		
Maximum	6.86	35,794	125,280	2.40

	2017	2018	2019	Design Capacity (GPD)
Avg. Daily Flow (GPD)	14,910	15,260	15,610	
Max. Daily Flow (GPD)	35,794	36,635	37,475	115,200
% Loading (of Design)	31.1%	31.8%	32.5%	
% Loading (of Capacity)	28.6%	29.2%	29.9%	

No overload is projected at this station within the next two (2) years. The standby generator was replaced in 2004.

4. West Market Street Pump Station

The pump station is in good operating condition. Some minor pump repairs were made and this station was field rate in 2013 at 812 GPM, slightly below its design capacity of 900 GPM. A project to elevate the pump station was completed in mid-December 2013. This project elevated the top of the wet well and constructed an elevated pad for the generator and control building. These components were raised approximately 4.5' to elevated them over flood prone areas and prevent flood waters from entering the wet well and damaging the controls. Meter readings for 2016 indicate the following conditions:

812 gpm Rated in 2013	WEST MARKET STREET PUMP STATION NO. 3			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	4.0	173,040		
Average	6.4	278,032		
Maximum	14.6	630,360	1,169,280	2.27

	2017	2018	2019	Design Capacity (GPD)
Avg. Daily Flow (GPD)	278,032	281,982	295,082	
Max. Daily Flow (GPD)	630,360	639,316	669,016	1,296,000
% Loading (of Design)	48.6%	49.3%	51.6%	
% Loading (of Capacity)	53.9%	54.7%	57.2%	

No overload is projected at this station within the next two (2) years. The station has a standby generator.

5. Bull Road Pump Station

This pump station and standby generator was placed into operation in October, 1997. This station was field rated in December 2007 at 212 GPM, slightly more than its 200 GPM design capacity. Meter readings for 2016 indicated the following conditions:

212 gpm Rated in 2007	BULL ROAD PUMP STATION NO. 6			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	3.29	41,794		
Average	5.58	71,039		
Maximum	14.71	187,166	305,280	2.63

	2017	2018	2019	Design Capacity (GPD)
Avg. Daily Flow (GPD)	71,039	73,127	75,879	
Max. Daily Flow (GPD)	187,166	192,667	199,918	288,000
% Loading (of Design)	65.0%	66.9%	69.4%	
% Loading (of Capacity)	61.3%	63.1%	65.5%	

No overload is projected at this station within the next two (2) years.

6. South Salem Church Road Pump Station

This pump station and standby generator was placed into operation in October, 1999. This pump station was field rated in December 2007 at 244 gpm. Meter readings for 2016 indicate the following conditions:

244 gpm Rated in 2007	EMIG MILL PUMP STATION NO. 7			
	Hours of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	0.27	3,974		
Average	1.34	19,622		
Maximum	4.47	65,462	351,360	3.34

	2017	2018	2019	Design Capacity (GPD)
Avg. Daily Flow (GPD)	19,622	20,622	26,122	
Max. Daily Flow (GPD)	65,462	68,798	87,147	360,000
% Loading (of Design)	18.2%	19.1%	24.2%	
% Loading (of Capacity)	18.6%	19.6%	24.8%	

No overload is projected at this station within the next two (2) years.

C. Sanitary Sewer Extensions

1. Extensions: No sanitary sewer extensions were constructed during 2016.

2. Proposed Projects: All proposed projects are outlined on the attached map.

D. Waste Flow Data

1. Exhibit No. WMT-5 lists the permits issued for new connections in 2016.

2. The estimated flows for the current year and the projected next five years are shown on the attached Exhibit Nos. WMT-6 and WMT-7.

3. The total number of sewer connections completed in West Manchester Township during each of the last five (5) years are as follows:

2012	2013	2014	2015	2016
2	1	4	8	1

E. SUBSURFACE DISPOSAL SYSTEM REPAIRS

1. Thirty-one (31) on-site subsurface disposal system repairs were made during 2016 (refer to Exhibit No. WMT-11).

F. Nutrient Trading Program 2006 thru 2016

1. No properties with on-site subsurface disposal systems was eliminated in 2016 (refer to Exhibit No. WMT-10).

2. Based upon 25 lbs. per year of nitrogen, the available credits through 12/31/16 are computed as follows:

Year	EDUs	Credits Thru 12/31/16
2006	2 EDUs x 10 yrs. x 25 lbs. =	500
2007	2 EDUs x 9 yrs. x 25 lbs. =	450
2008	0 EDUs	0
2009	1 EDU x 7 yrs. x 25 lbs. =	175
2010	0 EDUs	0
2011	0 EDUs	0
2012	0 EDUs	0
2013	0 EDUs	0
2014	1 EDU x 2 yr. x 25 lbs. =	50
2015	0 EDUs	0
2016	0 EDUs	0

G. Customer Base

As of December 31, 2016, the Lincolnway system has:

Residential/Flat Rate Users:	2,165 Accounts
Non-Residential Metered Users:	317 Accounts

West Manchester Township
(717) 792-3505

380 East Berlin Road
York, Pa. 17408
fax: (717) 792-4374

Website: www.westmanchestertownship.com

E-mail: info@westmanchestertownship.com

1-12-17

SUBJECT: Sanitary Sewer System
Available Personnel & Equipment
Maintenance Repairs

To Whom It May Concern:

West Manchester Township's Sanitary Sewer System is maintained by three (3) full time employees consisting of a foreman and two laborers available for correction of stoppages and emergencies at any time. They also perform preventative maintenance work (cleaning, flushing, television, and grouting); minor repairs; and tree root removal.

Major repairs or replacement of sewer lines may be performed by sewer maintenance personnel (with assistance from road personnel) or by various contractors engaged by the Township as needed.

The Township has the following equipment for sanitary sewer maintenance:

1 ¾ Ton Pick Up Truck
1 Ton Service Truck
1 T.V. Unit in Cube Type Van with other sewer equipment
2 Electrical Sewer Rodders
1 Vector Sewer Cleaner
1 Ten Ton Dump Truck
1 Wacker
1 8" Test Plug Air Type
1 8" x 12" Plug Air Type
1 16" Plug Air Type
1 18" Plug Air Type
6 Manual Plugs from 8" to 18"
1 Gasoline Powered Blower
2 Gas Powered Sludge Pump
1 Pair Soil Pipe Cutters
1 Lateral Mini Camera

WMT-1

2016 CHAPTER 94 Report
Lincolnway Sewer System
Daily Flushing Report Report

Date	Manhole	Location	Defects/Debris	Feet	Pipe
3/16/2016	51-52	Canary Circle		137	8" VCP
	48-51	Canary Circle		127	8" VCP
	49-50	Canary Circle		197	8" VCP
	46-48	Canary Court		268	8" VCP
	48-49	Canary Circle		171	8" VCP
	44-45	Lark Drive		262	8" VCP
	41-44	Lark Drive		201	8" VCP
3/11/2016	120-121	Filbert Street		300	8" VCP
4/6/2016	42-43	Lark Drive		256	8" VCP
	41-42	Lark Drive		258	8" VCP
	58-60	Finch Drive		145	8" VCP
	58-59	Finch Drive		89	8" VCP
	57-58	Robin Road		256	8" VCP
	56-57	Robin Road		263	8" VCP
	36-56	Robin Road		265	8" VCP
	36-41	Dill Road		335	8" VCP
	39-40	Hull Road		240	8" VCP
	37-39	Robin Road		264	8" VCP
	37-38	Robin Circle		105	8" VCP

WMT-2

2016 CHAPTER 94 Report
Lincolnway Sewer System
Daily TV Report

Date	Manhole	Location	Defects/Debris	Feet	Pipe
1/14/2016	76-75	Marion Street		247	8" PVC
	75-122	Marion Street		395	8" PVC
3/2/2016	23-24	Forrest Street	Roots	328	8" VCP
	22-23	Forrest Street	Roots	389	8" VCP
3/10/2016	41-42	Lark Drive		201	8" VCP
3/15/2016	54-55	Lark Drive		315	8" VCP
	54-53	Lark Drive		285	8" VCP
7/29/2016		Mason Avenue		400	8" VCP
8/1/2016	57-58	Robin Road	Heavy Roots	260	8" VCP
8/11/2016	397-396	South Salem Church		174	8" PVC
	396-395	South Salem Church		101	8" PVC
	395-394	South Salem Church		12	8" PVC
9/15/2016	0-1	Normandie Ridge		365	8" PVC
11/2/2016	62-61	Bougher Lane		185	8" VCP
	61-59	Bougher Lane		202	8" VCP
	58-59	Bougher Lane		270	8" VCP
	58-321	Bougher Lane		312	8" VCP
	321-57	Bougher Lane		88	8" VCP
	57-27	Bougher Lane		400	8" VCP
11/3/2016	333-335	Herman Street		364	8" PVC
	335-336	Herman Street		85	8" PVC

WMT-3

2016 CHAPTER 94 Report
Lincolnway Sewer System
Sewer Stops

DATE	ADDRESS	REPAIR
2/29/2016	107 North Forest Street	Roots
7/29/2016	1938 West market Street	Roots
8/2/2016	1222 West College Street	Roots
8/11/2016	1222 West College Street	Roots
8/24/2016	1141 Margate Street	Roots
8/30/2016	3191 Robin Road	Roots
10/12/2016	2735 Quaker Court	Clogged lateral
11/28/2016	1805 Orange Street	Clog in main
12/9/2016	107 North Forest Street	Roots

WMT-4

2016 CHAPTER 94 Report
Lincolnway Sewer System
Clean-out Repairs

DATE	ADDRESS	REPAIR
2/29/2016	107 North Forest Street	two 3.5" brass plugs
7/8/2016	2735 Quaker Court	3.5" brass plug and fixed cleanout
8/22/2016	Penns Preserves	Fixed 5 cleanouts
9/16/2016	350 Canary Circle	3.5" brass plug

West Manchester Township
Lincolnway Connection Permits Issued January 1, 2016 through December 31, 2016

MUNICIPAL PERMIT NO.	APPLICANT NAME	PROPERTY LOCATION (STREET ADDRESS & SUBDIVISION)	NO. OF UNITS	ASSIGNED FLOW (GPD)
1627740	Penn Log	2690 Friends Circle – Penn's Preserve	1	350

West Manchester Township
Projected Connections to City of York
Wastewater Treatment Facility

EXHIBIT NO. WMT-6
December 31, 2016

Map ID	West King Street Pump Station No. 1	Total	2017	2018	2019	2020	2021	Future		Flow Meter	York City MH No.
9	Tuscany Tract	4,500	0	0	1,500	1,500	1,500	0		WM01	B40A
37	Federal Paper, Neiman	0	0	0	0	0	0	0		WY01	81
38	Orion West	1,750	0	350	700	350	350	0		WY01	81
	Misc. Development 2 EDU's per year 350 GPD	3,500	700	700	700	700	700	0		WY01	81
				0	0	0	0	0			
	Subtotal	**9,750**	**700**	**1,050**	**2,900**	**2,550**	**2,550**	0	**9,750**		
	South Adams Street Pump Station No. 2	**Total**	**2017**	**2018**	**2019**	**2020**	**2021**	**Future**			
	Misc. Development	1,750	350	350	350	350	350	0		N/A	76
								0			
	Subtotal	**1,750**	**350**	**350**	**350**	**350**	**350**	**0**	**1,750**		
	West Market Street Pump Station No. 3	**Total**	**2017**	**2018**	**2019**	**2020**	**2021**	**Future**			
8	Kinard Trucking	1,000	0	0	0	0	0	1,000		WM01	B40A
10	Penn's Preserve (Helm Coal)	4,550	1,750	1,050	1,050	700	0	0		WM01	B40A
12	Voith Hydro Ind. Expansion West Manchester Way	0	0	0	0	0	0	0		WM01	B40A
13	Voith Hydro Testing Lab	500	0	0	0	0	0	500		WM01	B40A
14	Pfaltzgraff West	15,500	500	5,000	5,000	4,500	500	0		WM01	B40A
15	West York Industrial Park Expansion	3,500	700	700	700	700	700	0		WM01	B40A
16	Baker Ind. Emigs Mill Road	10,000	1,000	1,000	1,000	1,000	1,000	5,000		WM01	B40A
20	Myers Farm	9,000	0	0	3,000	3,000	3,000	0			
21	J.E. Baker, Rt. 30 West	9,000	0	1,500	1,500	1,500	0	4,500		WM01	B40A
28	Berlin Court	3,500	0	3,500	0	0	0	0		WM01	B40A
29	Greenwood Road/Firestone	350	0	350	0	0	0	0		WM01	B40A
31	Voith Transmission - Rexroth Manchester Ct	0	0	0	0	0	0	0		WM01	B40A
	Subtotal	**56,900**	**3,950**	**13,100**	**12,250**	**11,400**	**5,200**	**11,000**	**56,900**		
	Emig Mill Pump Station No. 7	**Total**	**2017**	**2018**	**2019**	**2020**	**2021**	**Future**			
16	Baker Ind. Emigs Mill Road	10,000	1,000	1,000	1,000	1,000	1,000	5,000			
	Myers Farm	9,000	0	3,000	3,000	3,000	0	0			
21	J.E. Baker, Rt. 30 West	9,000	0	1,500	1,500	1,500	0	4,500			
								0			
	Subtotal	**28,000**	**1,000**	**5,500**	**5,500**	**5,500**	**1,000**	**9,500**	**28,000**		
	Bull Road Pump Station No. 6	**Total**	**2017**	**2018**	**2019**	**2020**	**2021**	**Future**			
6	UM Care/Normandie Ridge	17,250	2,088	2,752	3,784	1,462	7,164	0		WM01	B40A
								0			
	Subtotal	**17,250**	**2,088**	**2,752**	**3,784**	**1,462**	**7,164**	**0**	**17,250**		

West Manchester Township
Projected Connections to City of York
Wastewater Treatment Facility

EXHIBIT NO. WMT-6
December 31, 2016

Map ID	West King Street Pump Station No. 1	Total	2017	2018	2019	2020	2021	Future		Flow Meter	York City MH No.
	Gravity	**Total**	**2017**	**2018**	**2019**	**2020**	**2021**	**Future**			
1	West Manchester Mall Expansion	6,000	0	1,000	1,000	2,000	2,000	0		WM01	B40A
2	Winters Performance Engines	1,000	0	0	0	0	0	1,000			
3	Greens/Kemp Foods/Columbia Gas	470	0	0	0	0	0	470		WM01	B40A
4	Loucks Associates	1,000	0	0	0	0	0	1,000			
5	The Greens @ Westgate - Phase II	18,000	0	0	3,600	3,600	3,600	7,200		WM01	B40A
7	York Newspaper Company	1,000	0	0	0	0	0	1,000			
11	Carlisle Commerce Center Expansion (Behind Hoss' - White Street)	1,000	0	500	500	0	0	0		WM01	B40A
17	Delco Plaza Redevelopment	1,500	0	500	500	500	0	0		WM01	B40A
18	Cecil Grace, Marion Extended	700	0	0	0	0	0	700		WM01	B40A
19	W. Sprenkle, Carlisle Road	2,800	0	0	0	0	0	2,800		WM01	B40A
22	York Crossings Expansion	2,000	0	1,000	1,000	0	0	0		WM01	B40A
23	Leiphart	700	350	350	0	0	0	0		WM01	B40A
24	Memorial Hospital	95,000	0	40,000	0	0	0	55,000		WM01	B40A
25	Haviland Road South	2,800	350	0	0	0	0	2,450		WM01	B40A
26	Haviland Road North	1,400	0	0	0	0	0	1,400		WM01	B40A
27	Spring Street	700	0	0	350	350	0	0		WM01	B40A
30	Smyser Tract - Prof/Office	700	0	0	0	0	0	700		WM01	B40A
	West Manchester Twp. Misc. 5 EDU's per year 350 GPD	8,750	350	1,750	1,750	1,750	1,750	1,400		WM01	B40A
33	Stewart Tract/Weis Markets	6,000	0	1,500	1,500	1,500	1,500	0			
	West Manchester Twp. Misc. 1 EDU per year 350 GPD	1,750	350	350	350	350	350	0		N/A	B38
	West Manchester Township Misc. 1 EDU per year 350 GPD	1,750	350	350	350	350	350	0		WM02	71A
								0			
	Subtotal	**155,020**	**1,750**	**47,300**	**10,900**	**10,400**	**9,550**	**75,120**	**155,020**		
	Grand Total	**268,670**	**9,838**	**70,052**	**35,684**	**31,662**	**25,814**	**95,620**	**268,670**		
	Net Total	**240,670**	**8,838**	**64,552**	**30,184**	**26,162**	**24,814**	**86,120**	**240,670**		

EXHIBIT NO. WMT-7
December 31, 2016

TABULATION OF AVAILABLE
SEWER RESERVE CAPACITY

DEVELOPER PROJECTIONS

COLLECTION AND TRANSPORTATION SYSTEM
From: West Manchester Township

WASTEWATER TREATMENT FACILITY
To: City of York

SOURCES FOR PROJECTION	2016	2017	2018	2019	2020	2021	Future Years
Existing Flow From Current Users (1)	1,808,397	1,808,660	1,817,498	1,882,050	1,912,234	1,938,396	1,963,210
Projected Flows From Current Users (2)	263	0	0	0	0	0	0
Projected Flow Increase From New Customers (3)	0	8,838	64,552	30,184	26,162	24,814	86,650
Total Estimated Wastewater Flows	1,808,660	1,817,498	1,882,050	1,912,234	1,938,396	1,963,210	2,049,860
Percent Usage	53.29%	53.55%	55.45%	56.34%	57.11%	57.84%	60.39%
Total Permitted Capacity/Agreement (4)	3,394,200	3,394,200	3,394,200	3,394,200	3,394,200	3,394,200	3,394,200
Total Amount of Available Capacity	1,585,540	1,576,702	1,512,150	1,481,966	1,455,804	1,430,990	1,344,340

NOTES AND ASSUMPTIONS:

(1) Calculated Flow at City Flow Meter WY-01 based on EDUs plus non-metered points of connection plus City Flow Meter WM-01.

(2) Assumes 75% of 2016 connections (1 EDUs x 350 gpd = 350) not reflected in (1) above (Exhibit No. WMT-5)

(3) See attached list of projected connections (Exhibit No. WMT-6)

(4) Current permitted capacity is 3,394,200 gpd per intermunicipal agreement.

EXHIBIT WMT-8
DECEMBER 31, 2016

TABULATION OF WEST MANCHESTER FLOWS

	WY01 (MG)	WM01 (MG)	RI01 (MG)	Unmetered (MG)	Total Monthly (MG)	Total Daily (MG)
January	20.374	44.639	2.635	1.702	69.350	2.237
February	20.374	44.639	2.635	1.702	69.350	2.477
March	20.374	44.639	2.635	1.702	69.350	2.237
April	14.522	33.824	4.093	1.790	54.228	1.808
May	14.522	33.824	4.093	1.790	54.228	1.749
June	14.522	33.824	4.093	1.790	54.228	1.808
July	11.275	24.812	3.320	1.636	41.043	1.324
August	11.275	24.812	3.320	1.636	41.043	1.324
September	11.275	24.812	3.320	1.636	41.043	1.368
October	15.390	34.425	3.349	1.709	54.873	1.770
November	15.390	34.425	3.349	1.709	54.873	1.829
December	15.390	34.425	3.349	1.709	54.873	1.770

Average Daily Flow (gallons)	**1,808,397**

* Data From York City Flow Meter Data Provided 2/24/17
* Data For WY01 is the WMT half of the WY01 metered flow

West Manchester Township
Lincolnway Sanitary Sewer Reservations as of December 31, 2016

Name of Developer or Landowner	Location of Property	No. of EDU's Reserved
Glenlyn Enterprises	Manchester Court	1
Manchester Mall Associates, LLC	Loucks Road	160
IPT York DC LLC	West York Industrial Park Area	16.29
Westgate Plaza	Kenneth Road	1
Delco Centre	Carlisle Road	9

West Manchester Township
Discontinuing on-lot management systems and connecting to the Lincolnway sewer as of December 2016

MUNICIPAL PERMIT NO.	APPLICANT NAME	PROPERTY LOCATION (STREET ADDRESS & SUBDIVISION)	NO. OF UNITS	ASSIGNED FLOW (GPD)
		No disconnections this year.		

West Manchester Township
On-Site Septic System Repair - 2016

MUNICIPAL PERMIT NO.	ISSUE DATE	APPLICANT'S NAME	PROPERTY ADDRESS	STATUS OF REPAIRS
T 102587	8/29/11	Gary Gross	1705 Baker Road	Not Completed
Z 032951	3/15/13	J Kevin Drawbaugh	2096 Roosevelt Avenue	Not Completed
Z 170496	1/14/16	Paul Hurlbert II	1730 Woodberry Road	Completed
Z 170266	3/02/16	Cynthia Heist	885 Bairs Road	Completed
Z 170267	3/11/16	William Hickman	4330 W. Market Street	Completed
Z 163148	3/14/15	Sterling Hamm	190 Bairs Road	Completed
Z 170276	4/07/16	Melvin Wilson, Jr.	821 Smith Drive	Completed
T 170471	12/29/15	Nancy Sebastian	1015 Carlisle Road	Completed
Z 170283	5/21/16	Tim Gesford Jr.	1905 Woodberry Road	Completed
Z 177609	6/29/16	Jean Wetzel	455 Hanover Road	Completed
Z 177634	8/30/16	York Community Management	Lot 51 Lawson Mobile Home Community	Completed
Z 109075	5/03/16	York Community Management	Lot 11 & Lot 41, Lawson Mobile Home Community	Completed
Z 177635	9/07/16	Samuel Schucht	235 Rhonda Road	Completed
Z 170489	12/18/15	Yvonne Tallman Estate	260 Rhonda Road	Completed
Z 177630	9/14/16	Jeffrey B Shank	155 Margate Road	Completed
Z 177646	10/20/16	Ben Sowers	4245 W. Market Street	Not Completed
Z 177638	9/15/16	RSN Ventures LLC	4330 Briarwood Court	Completed
T 000568	9/06/15	Bonnie Carter	3130 W. College Avenue	Completed
Z 177645	10/18/16	Malz Properties	4595 Wolfs Church Road	Completed
Z 170293	8/03/16	Phillis Seelig	90 S. Alwine Avenue	Completed
Z 170480	10/27/16	York Community Management	Lot 50 & 51 Lawson Mobile Home Community	Completed
Z 163433	9/08/16	Luis Lara	310 Hanover Road	Completed
Z 177628	8/31/16	Dale Gladfelter	310 Rhonda Road	Completed
Z 170499	9/14/16	Sean Ream	846-866 Stoverstown Road	Completed
T 036358	11/17/16	Robert Krom	4170 W. Market Street	Completed
Z 107479	11/10/16	Edward Wagner Jr.	2890 W. College Avenue	Completed
Z 125277	7/20/16	Frank Quintin	65 S. Alwine Avenue	Completed
Z 125639	12/12/16	Samuel Firestone	1709 Carlisle Road	Completed
T 102101	12/09/16	Donald Nace	450 Hanover Road	Completed
Z 163063	5/12/14	SIR Property LLC	1417 Poplars Road	Completed
Z 125265	11/15/16	Iona Klepper	2270 Baker Road	Completed

Attachment #2 – Industrial Waste Report

Following this narrative is a copy of West Manchester Township's Industrial Waste Pre-Treatment Ordinance. Monitoring and surveillance of West Manchester Township's Pre-Treatment Ordinance is performed by the City of York staff so that all industrial discharges tributary to York City are held to the same level of oversight. Other than issues that may be reported by York City, there are no known problems in West Manchester Township's sewer system as a result of industrial waste discharges.

Chapter 109. SEWERS

Article IV. Lincolnway Sewer System Rules and Regulations

§ 109-35. Admission of industrial waste into system.

[Amended 5-28-1992 by Ord. No. 92-07; 3-22-2001 by Ord. No. 01-02; 3-25-2004 by Ord. No. 04-04; 10-28-2010 by Ord. No. 10-06]

A. Treatment of industrial wastes. This article sets forth uniform requirements for users of the publicly owned treatment works and enables the POTW to comply with all applicable state and federal laws, including the Clean Water Act (33 U.S.C. § 1251 et seq.) and federal pretreatment standards and requirements (Title 40 CFR Chapter I, Subchapter N). The economy and desirability of the combined treatment of industrial wastes and sanitary sewage is recognized. However, not all types and quantities of industrial wastes can be so treated. Hence it shall be the established policy of the City of York to admit those types and quantities of industrial wastes that are not harmful or damaging to the structures, processes or operation of the sewage works or are not specifically prohibited by this article. It is also recognized that to provide this service, additional facilities are required, the cost of which shall be borne by those persons receiving benefits. Additionally, the City of York and industry shall comply with federal pretreatment regulations. To correctly evaluate such users or potential users, all facilities that would otherwise be subject to categorical pretreatment regulations must submit a complete wastewater permit application at least 90 days before the commencement of operations, regardless if the facility intends to discharge wastewater or not. Each user must notify the general manager of any significant changes to the user's operations or system that might alter the nature, quality or volume of its wastewater at least 30 days before the anticipated change.

B. Approval required for industrial wastes.

(1) In order to control the admission of industrial waste, the discharge into any sanitary sewer of any industrial waste having the following characteristics shall be prohibited unless an industrial wastewater discharge permit is obtained:

(a) A daily average BOD concentration greater than 300 mg/l;

(b) A daily average suspended solids concentration greater than 350 mg/l;

(c) An average daily flow greater than 25,000 gallons per day of process wastewater;

(d) Any toxic pollutant that is found in concentrations greater than found in domestic sewage; or

(e) Any wastes which are considered by the general manager to offer possibilities of harm to structures, processes, or operation of the sewage works or to have significant impact,

either singly or in combination with other contributing industries, on the treatment process, the quality of sludge, the system's effluent quality or air emissions generated by the system;

(2) Industries defined as significant industrial users shall be permitted and/or regulated in accordance with the federal pretreatment requirements of 40 CFR Chapter I, Subchapter N. Permits shall be granted by the City of York upon the review and approval of the general manager. The City of York reserves the right to deny new or existing contributions to the system if, because of the volume or characteristics, such wastes are determined by the City of York to be detrimental to the operation of the sewage works or have the potential to cause or contribute to the violation of any laws, regulations, orders or permit conditions applicable to the City of York or the York City Sewer Authority.

C. Survey data required. All persons who are now discharging, or are planning to discharge, industrial wastes into any sanitary sewer shall upon the request of the general manager or his designee, complete and file with the general manager, a permit application which furnishes pertinent data, inclusive of quantity of flow and analysis of the industrial wastes discharged, as set forth in Subsection **L** hereof. Any person desiring to make a new connection, a new discharge, or a significant change in the volume, nature, or rate of a discharge, shall complete and file with the general manager a permit application which furnishes pertinent or predicted data inclusive of quantity of flow and an analysis of the industrial waste to be discharged into the sewage works as set forth in Subsection **L** hereof. Such permit application shall be submitted at least 120 days before the expected or change in discharge is to occur.

D. Industrial wastewater discharge permit application.

(1) In order to receive a permit to discharge wastes requiring approval under Subsection **B**, a completed permit application shall be filed with the general manager. Information required for industrial users includes, but is not limited to:

(a) Identifying and contact information, including the facility name, address, and name of operator and owner.

(b) Operation information including a description of activities, facilities and plant production processes, production rates for the types of products and or processes, number of employees, and hours of operation. A schematic process diagram, facility site plans, floor plans, mechanical plans and plumbing plans may be required.

(c) A list of any state, federal or local environmental control permits held by or for the facility.

(d) The type and amount of raw materials and chemicals used or stored at the facility and the types and quantities of wastes generated.

(e) The time and duration of discharges from all processes, and the location(s) for monitoring all wastes, including process flow measurements and wastewater flow measurement, and incoming water flow measurement and records.

(f) Results of wastewater sampling and analysis that identifies the nature and concentration (or mass) of pollutants.

(g) A baseline monitoring report if the industrial user is subject to categorical standards and a description of any best management practices that will be utilized.

(2) Any person discharging industrial wastes into any sanitary sewer at the time of passage of this article and requiring a permit shall apply within 90 days after the effective date of this article. All such persons are considered to have a valid permit until such time as the City shall act

upon the permit application. It shall be the duty of the industrial and commercial user to maintain operations in compliance with federal, state and local regulations.

(3) The applicant shall submit to the general manager with the permit application a nonrefundable permit application fee made payable to the City of York. Such fee shall be assessed in accordance with a schedule established by resolution of the Council of the City of York.

(4) No permit shall be granted to any person unless he agrees to indemnify and to save the City of York, its officers, employees and agents harmless from any and all claims, costs, damages and liabilities which may accrue or be claimed to accrue by reason of the permitted waste disposal activity. An indemnification and release shall be part of the permit application.

E. Permit conditions and contents. Industrial wastewater discharge permits shall be expressly subject to all provisions of this article and all other applicable state, federal and local regulations, and user charges and fees established by the City of York. Where federal pretreatment regulations impose additional requirements or more stringent limits than those stated in the permit, these requirements and limits become part of the permit whether or not they are stated in the permit. The City of York reserves the right to establish by ordinance or wastewater discharge permit, more stringent standards or requirements on discharges to the POTW consistent with the purpose of this article. Permits may contain, but are not limited to, the following:

(1) Limits on the average and maximum wastewater constituents and characteristics, including best management practices;

(2) Limits on average and maximum rate and time of discharge or requirements for flow regulation and equalization;

(3) Requirements for the installation and maintenance of inspection and sampling facilities and equipment, including flow measurement and other devices, and the calibration of such devices;

(4) Specifications for self-monitoring programs that may include sampling locations, frequency of sampling, number, types and standards for tests and reporting schedule;

(5) Compliance schedules;

(6) Requirements for submission of compliance reports, self-monitoring reports and technical reports or discharge reports;

(7) Requirements for maintaining and retaining records relating to wastewater discharge for a period of not less than three years, including records documenting best management practices compliance, and affording the City of York access thereto;

(8) Requirements for notification to the City of York of any new introduction of industrial wastes, potential problems or slug discharges, or substantial change in the volume or character of the industrial wastes being introduced into any sanitary sewer.

(9) Requirements for submission of spill prevention plans, slug discharge control plans and/or requirements to control slug discharges, and implementation of best management practices (BMPs) necessary to adequately prevent accidental, unanticipated or nonroutine discharges.

(10) Requirements for installation of means to prevent spills of hazardous materials, untreated waste, raw materials, intermediates or product into the sewage works;

(11)

Requirements for the installation of pretreatment technology, pollution control, or construction of appropriate containment devices, designed to reduce, eliminate, or prevent the introduction of pollutants into the treatment works;

(12) Requirements for the development and implementation of waste minimization plans to reduce the amount of pollutants discharged to the POTW;

(13) Other conditions as deemed appropriate by the City of York to ensure compliance with this article, and state and federal laws, rules and regulations;

(14) A statement of applicable civil and criminal penalties for violation of pretreatment standards and requirements, permit and ordinance requirements and any applicable compliance schedule.

F. Compliance with permits.

(1) Permit holders shall comply with the conditions of the permit and failure to do so constitutes a violation of this article.

(2) Should a permit holder significantly change the volume of its discharge or change its character for any reason, he shall immediately notify the general manager of such changes and the general manager may require an application for a new permit.

(3) A permit may be suspended or revoked in whole or in part, or modified, by the general manager for cause, including but not limited to the following:

(a) Violation of any terms or conditions of the permit;

(b) Obtaining the permit by misrepresentation or failure to disclose fully all relevant facts;

(c) A change in any condition, including but not limited to changes in state or federal regulations or changes in the treatment process that require either a temporary or permanent reduction or elimination of the permitted discharge.

(4) All categorical industrial users are required to be regulated in accordance with federal pretreatment regulations.

G. Permit duration and evaluation. An industrial wastewater discharge permit shall be issued for a specified time period not to exceed three years from the effective date of the permit. A wastewater discharge permit may be issued for a period less than three years at the discretion of the general manager. A permit holder shall apply for permit reissuance by submitting a complete permit application a minimum of 120 days prior to the expiration of the existing permit. The general manager will evaluate the data furnished by the user and may require additional information. The terms and conditions of the permit may be subject to modification by the City of York during the term of the permit should changes in federal pretreatment regulations occur, changes at the facility occur, or other just cause exists. Any changes or new conditions in the permit shall include a reasonable time schedule for compliance. The general manager may deny any application for a wastewater discharge permit. All wastewater discharge permits issued to a user are void upon the issuance of a new wastewater discharge permit to that user. Wastewater discharge permits shall be void upon cessation of operations.

H. Permit issuance procedures. A permit shall be issued with a minimum thirty-day comment period between the issuance date and effective date. The permit holder may submit written comments on the permit conditions during the comment period for review and response by the general manager. The permit may be modified by the general manager in response to comments. Upon the expiration of the comment period, on the effective date of the permit, the permit shall become effective, subject to the right of appeal as set forth in § **109-45.8**.

I. Permit transfer. Industrial wastewater discharge permits are issued to a specific person for a specific operation. A wastewater discharge permit shall not be reassigned, transferred, sold, applied to different premises or a new or changed operation without the written approval of the general manager.

J. Pretreatment. All persons using the sewage works shall provide wastewater treatment as required to comply with this article and with all federal pretreatment standards, requirements and prohibitions within the time limitations specified by federal regulation or other limits that may from time to time be set by regulatory agencies.

(1) Any facilities necessary for compliance shall be provided, operated, and maintained at the user's expense. Detailed plans describing such facilities and operating procedures shall be submitted to the general manager before such facilities are constructed. The submission of such plans and operating procedures shall in no way relieve the user from the responsibility of modifying such facilities as necessary to produce a discharge acceptable to the POTW under the provisions of this article.

(2) Whenever deemed necessary, the general manager may require users to restrict their discharge during peak flow periods, designate that certain wastewater be discharged only into specific sewers, relocate and/or consolidate points of discharge, separate sewage waste streams from industrial waste streams, and such other conditions as may be necessary to protect the POTW and determine the user's compliance with the requirements of this article.

(3) The general manager may require any person discharging into the POTW to install and maintain, on their property and at their expense, a suitable storage and flow-control facility to ensure equalization of flow. An individual wastewater discharge permit may be issued solely for flow equalization.

(4) Users with the potential to discharge substances harmful to the POTW, which includes the sewer system (i.e., flammable substances, corrosive substances) may be required to install and maintain detection meters or monitoring devices.

K. Certification of reports.

(1) Any person signing a permit application, baseline monitoring report, periodic self-monitoring report, questionnaire, compliance schedule, BMP submission or documentation, final compliance report, periodic compliance report, and any other required report shall make the following certification and be signed in accordance with the signatory requirements of Subsection **R**:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

(2) A facility determined to be a nonsignificant categorical industrial user by the general manager must annually submit the federally required certification statement regarding nonsignificant categorical industrial users and be signed in accordance with the signatory requirements of Subsection **R**.

L.

Sampling and analysis. The holder of an industrial wastewater discharge permit shall furnish the general manager with written and signed reports of sample analysis at a frequency specified in the industrial wastewater discharge permit. Data used to satisfy reporting requirements must be based on samples collected during the reporting period and must be representative of conditions during the reporting period.

(1) If a user monitors any regulated pollutant at the appropriate sampling location more frequently than required by the general manager, the results of the monitoring shall be submitted to the City of York.

(2) Samples to be used for surcharge purposes shall be composite samples and be representative of the discharge from the facility. Grab samples may be used for surcharge purposes where the physical setup of the facility so dictates or wastewater is collected over a period of time and is discharged as a daily basis or less frequent batch basis. Grab samples that may represent an unusual discharge from the facility may be used for surcharge purposes for the period of time and volume such discharges occurred.

(3) Wastewater monitoring and flow measurement facilities shall be properly operated, kept clean, and maintained in good working order at all times. The failure of a user to keep its monitoring facility in good working order shall not be grounds for the user to claim that sample results are unrepresentative of its discharge.

(4) Samples shall be collected, preserved and analyzed promptly, in accordance with 40 CFR Part 136 to insure accurate results. If 40 CFR Part 136 does not contain sampling or analytical techniques for the pollutant in question, or where the EPA determines that the Part 136 sampling and analytical techniques are inappropriate for the pollutant in question, sampling and analyses shall be performed by using validated analytical methods approved by the EPA. Pennsylvania laboratories or facilities that test or analyze environmental samples to demonstrate compliance with an industrial wastewater discharge permit, this article or pretreatment standard shall be in compliance with the laboratory accreditation requirements of Act 90 of 2002 (27 Pa.C.S.A. §§ 4101-4113) or the National Environmental Laboratory Accreditation Program (NELAP), relating to environmental laboratory accreditation. Laboratories or testing facilities outside of Pennsylvania that test or analyze environmental samples to demonstrate compliance with an industrial wastewater discharge permit, this article or pretreatment standard shall be in compliance with the laboratory accreditation requirements of the National Environmental Laboratory Accreditation Program (NELAP), relating to environmental laboratory accreditation.

(5) City of York representatives may sample and inspect the waste by composite sample or by grab sample in order to verify the analysis being submitted by the industry. If the results obtained by the City of York differ from those obtained by the industrial user, the City of York will notify the industrial user and conduct confirmatory sampling and/or investigate the sampling, preservation, and testing methods employed.

(6) No person shall maliciously, willfully, or negligently break, damage, destroy, uncover, deface, tamper with or prevent access to any structure, appurtenance or equipment, or other part of the POTW.

(7) If sampling performed by a user indicates a violation, the user must notify the general manager within 24 hours of becoming aware of the violation. The user shall also repeat the sampling and analysis and submit the results of the repeat analysis to the general manager within 30 days after becoming aware of the violation. Where the City of York has performed the sampling and analysis in lieu of the user, the City of York must perform the repeat sampling and analysis unless it notifies the user of the violation and requires the user to perform the repeat analysis. Resampling is not required if the City of York performs sampling

of the user between the time when the initial sampling was conducted and the time when the user or the City of York receives the results of this sampling.

M. Control manhole. Any significant industrial user, and any other industrial user that the general manager deems, discharging industrial wastes into any sanitary sewer shall construct and maintain at their expense a suitable control manhole, or manholes, downstream from any treatment storage, or other approved works, to facilitate observation, measurement and sampling of all wastes, including domestic sewage, from the establishment. The control manhole or manholes shall be placed at suitable locations to provide safe access and representative sampling. The control manhole shall comply with applicable construction standards and specifications in accordance with the general manager's requirements and shall be constructed and maintained in such a manner to enable the placement of sampling equipment and to enable the general manager to perform monitoring activities. The control manhole shall be accessible to the general manager or his representatives at all times for sampling, and shall not be obstructed or located within secure areas such that the general manager cannot gain unrestricted access.

N. Slug discharge.

(1) The person in charge of a facility shall notify the general manager or his designated representative immediately in the case of any upset, slug discharge or other discharge of unusual strength, volume, or other characteristics, whether or not such discharge is in violation of the wastewater discharge permit. In such a case, in addition to the immediate report, the user shall submit a written report within five days of the incident specifying:

(a) Description of the upset, the cause thereof and the upset's impact on a user's compliance status.

(b) Duration of noncompliance, including exact dates and times of noncompliance, and if the noncompliance continues, the time by which compliance is reasonably expected to occur.

(c) All steps taken or to be taken to reduce, eliminate and prevent recurrence of such an upset or other conditions of noncompliance.

(2) Whenever changes are made at a facility that may affect the potential for a slug discharge to occur, the user shall notify the general manager in advance, if possible, or within 24 hours of making such changes.

O. Slug discharge control plans. The general manager shall evaluate whether each significant industrial user needs a slug discharge control plan or other action to control slug discharges. Such evaluation shall occur within one year of an industrial user being identified as significant. The general manager may require any user to develop, submit for approval, and implement such a plan or take such other action that may be necessary to control slug discharges. Alternatively, the general manager may develop such a plan for any user. The POTW may choose to require a significant industrial user to take specific, preventative physical or procedural actions instead of requiring the development of a slug control plan. Such preventative actions and any slug control plan development requirements shall be included in the SIU's control mechanism. Any changes at a user's facility can cause the general manager to reevaluate the need for a slug control plan. An accidental discharge/slug discharge control plan shall address, at a minimum, the following, in addition to any other items the general manager may determine:

(1) Description of discharge practices, including nonroutine batch discharges;

(2) Description of stored chemicals;

(3)

Procedures for immediately notifying the general manager of any accidental or slug discharges, as required by Subsection **N**; and

(4) Procedures to prevent adverse impact from any accidental spills or slug discharge. Such procedures include, but are not limited to, inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site runoff, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment for emergency response.

P. Fees for sampling, analyses and inspections. The City of York or its designated agent shall inspect properties discharging waste other than domestic wastewater into the sewage works and obtain and analyze samples therefrom to enforce provisions of this article, to comply with local, state, and federal requirements, and to determine applicable surcharges. Fees for such services shall be assessed in accordance with a schedule established by administrative order based on costs. Fees for such services provided by independent laboratories shall be invoiced at cost.

Q. Spill prevention plans. Any person storing any material in excess of the threshold planning quantity established by SARA III, the Emergency Planning and Community Right-to-Know Act, shall submit a spill prevention, control and countermeasure plan addressing the potential of an accidental discharge to the sewer system to the general manager for review and approval. Any industrial user storing flowable solids in bulk in excess of 500 pounds, or any liquids in excess of 100 gallons (except for water and heating oil stored for use on the premises), shall report this to the general manager annually, including the quantity and nature of each such material, and shall develop and submit a spill prevention, control and countermeasure plan if so directed by the general manager.

R. Signatory requirements. Industrial user reports and submissions requiring signature and certification, which include, but are not limited to, permit applications, industrial questionnaires, baseline monitoring reports, compliance schedules, BMPs, final compliance reports and periodic compliance reports, shall be signed by an authorized or duly authorized representative as follows:

(1) By a responsible corporate officer, if the industrial user submitting the reports is a corporation. For the purpose of this subsection, a "responsible corporate officer" means:

(a) A president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decisionmaking functions for the corporation; or

(b) The manager of one or more manufacturing, production, or operating facilities; provided, the manager is authorized to make management decisions which govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for control mechanism requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

(2) By a general partner or proprietor if the industrial user submitting the reports is a partnership or sole proprietorship, respectively.

(3) By a duly authorized representative of the individual designated in Subsection **R(1)** or **(2)** of this section if:

(a) The authorization is made in writing by the individual described in Subsection **R(1)** or **(2)** of this section;

(b) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the industrial discharge originates, such as the position of plant manager, operator of a well, or well field superintendent, or a position of equivalent responsibility, or having overall responsibility for environmental matters for the company; and

(c) The written authorization is submitted to the general manager of the POTW.

(4) If an authorization under Subsection **R(3)** of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for environmental matters for the company, a new authorization satisfying the requirements of Subsection **R(3)** of this section must be submitted to the general manager of the POTW prior to or together with any reports to be signed by an authorized representative.

S. Hauled wastewater. The general manager may prohibit or accept the disposal of hauled industrial or nonindustrial wastewater to the POTW. In no case shall any hazardous waste as that term is defined by the Resource Conservation and Recovery Act be discharged as hauled waste.

(1) Hauled or trucked wastewater may be introduced into the POTW only at locations designated by the general manager, and at such times as are established by the general manager. The general manager may refuse a hauler or generator the ability to discharge a particular hauled wastewater load if it cannot be determined that the load will not violate the requirements of this article or any federal or state pretreatment or waste requirements, or cause interference, pass-through or biosolids contamination. The discharge of hauled wastewater is subject to all other requirements of this article and applicable state and federal laws. The general manager may develop procedures to ensure compliance with this article and state and federal requirements.

(2) The general manager may require the haulers and/or generators of hauled or trucked industrial or nonindustrial wastewater to obtain wastewater discharge permits.

(3) No individual load may be discharged into the POTW without the prior consent of the general manager. The issuance of a permit to a hauler or generator does not constitute consent to discharge nor guarantee the ability to discharge any particular load. The general manager may collect samples of each hauled load to ensure compliance with this article, any federal pretreatment standards and state and federal law. The general manager may require the industrial wastewater hauler to provide a waste analysis of any load prior to discharge.

(4) Industrial wastewater haulers must provide a waste-tracking form for every load. This form shall include, at a minimum, the name and address of the industrial waste hauler, permit number, truck identification, names and addresses of sources of waste, and volume and characteristics of waste. The form shall identify the type of industry, known or suspected waste constituents, and whether any wastes are RCRA hazardous wastes.

T. Additional measures. Whenever deemed necessary, the general manager may require users to restrict their discharges during peak flow periods, designate that certain wastewater be discharged only into specified sewers, relocate and/or consolidate points of discharge, separate sewage waste streams from industrial waste streams, and such other conditions as may be necessary to protect the POTW and/or determine the user's compliance with the requirements of this article or the user's permit.

U. Reports from unpermitted users. All industrial or commercial users not required to obtain a wastewater discharge permit shall provide appropriate reports to the general manager as the general manager may require.

V. Compliance schedules. The following conditions shall apply to a compliance schedule for meeting categorical pretreatment standards under 40 CFR 403.12:

(1) The schedule shall contain progress increments in the form of dates for the commencement and completion of major events leading to the construction and operation of additional pretreatment required for the user to meet the applicable pretreatment standards (such events include, but are not limited to, hiring an engineer, completing preliminary and final plans, executing contracts for major components, commencing and completing construction, and beginning and conducting routine operation);

(2) No increment referred above shall exceed nine months;

(3) The user shall submit a progress report to the general manager no later than 14 days following each date in the schedule and the final date of compliance including, as a minimum, whether or not it complied with the increment of progress to be met on such date and, if not, the date on which it expects to comply with this increment of progress, the reason for any delay, and the steps being taken by the user to return construction to the established schedule. In no event shall more than nine months elapse between such progress reports to the general manager.

W. Reports on compliance with categorical pretreatment standard deadline. The following conditions shall apply to a compliance schedule for meeting categorical pretreatment standards under 40 CFR 403.12:

(1) Within 90 days following the date for final compliance with applicable categorical pretreatment standards or in the case of a new source following commencement of the introduction of wastewater into the POTW, any industrial user subject to pretreatment standards and requirements shall submit to the general manager a report containing the information required for a baseline report required under 40 CFR 403.12(b)(4)-(6). For industrial users subject to equivalent mass or concentration limits established by the City of York in accordance with the requirements of 40 CFR 403.6(c), this report shall contain a reasonable measure of the user's long-term production rate. For all other industrial users subject to categorical pretreatment standards expressed in terms of allowable pollutant discharge per unit of production (or other measure of operation), this report shall include the user's actual production during the appropriate sampling period.

West York Borough Chapter 94 Municipal Wasteload Management

INTERCEPTOR AND COLLECTOR SYSTEM
TRIBUTARY TO
CITY OF YORK WASTEWATER TREATMENT FACILITY

2016 ANNUAL MUNICIPAL WASTELOAD MANAGEMENT (CHAPTER 94) REPORT TO THE PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION

For:
West York Borough
1381 West Poplar Street
West York, PA 17404

January 5, 2017

Engineer's File No. 0407.6.06.38d

PREPARED BY:

C.S.Davidson, Inc.

Excellence in Civil Engineering

Consulting Civil Engineers
38 North Duke Street
York, PA 17401

Phone: (717) 846-4805
Fax: (717) 846-5811
www.csdavidson.com

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pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

CHAPTER 94 MUNICIPAL WASTELOAD MANAGEMENT ANNUAL REPORT

Exhibit WYB
January 5, 2017

For Calendar Year: 2016

York City Wastewater Treatment Facility

☐ Permittee is owner and/or operator of a POTW or other sewage treatment facility
☒ Permittee is owner and/or operator of a collection system tributary to a POTW not owned/operated by permittee

GENERAL INFORMATION			
Permittee Name:	**West York Borough**	Permit No.:	**NPDES PA 0026263**
Mailing Address:	**1381 West Poplar Street**	Effective Date:	**February 1, 2008**
City, State, Zip:	**York, PA 17404**	Expiration Date:	**January 31, 2013**
Contact Person:	**Shawn Mauck**	Renewal Due Date:	**July 31, 2012 (Under Review)**
Title:	**Mayor**	Municipality:	**West York Borough**
Phone:	**(717) 846-8889**	County:	**York County**
Email:	**westyorkboro@gmail.com**	Consultant Name:	**C.S. Davidson, Inc.**

CHAPTER 94 REPORT COMPONENTS

1. Attach to this report a line graph depicting the monthly average flows (expressed in MGD) for each month for the past 5 years and projecting the flows for the next 5 years. The graph must also include a line depicting the hydraulic design capacity per the WQM permit. (25 Pa. Code § 94.12(a)(1))

   Check the appropriate boxes:

   ☐ Line graph for flows attached (**Attachment**)
   ☐ DEP Chapter 94 Spreadsheet used (**Attachment**)
   ☒ Section 1 is not applicable (report is for a collection system)

2. Attach to this report a line graph depicting the monthly average organic loads (express as lbs BOD5/day) for each month for the past 5 years and projecting the organic loads for the next 5 years. The graph must also include a line depicting the organic design capacity of the treatment plant per the WQM permit. (25 Pa. Code § 94.12(a)(2))

   Check the appropriate boxes:

   ☐ Line graph for organic loads attached (**Attachment**)
   ☐ DEP Chapter 94 Spreadsheet used (**Attachment**)
   ☒ Section 2 is not applicable (report is for a collection system).

3. If the DEP Chapter 94 Spreadsheet was not used to determine projections, discuss the basis for the hydraulic and organic projections. In all cases, include a description of the time needed to expand the plant to meet the load projections. If necessary, and data used to support the projections should be included in an appendix to this report. (25 Pa. Code § 94.12(a)(3)) See Appendix attached (**Attachment**)

Check the appropriate box(es):

- ☒ Hydraulic or organic projections not applicable to collection systems.
- ☒ Five year flow projections attached (**Attachment WYB-1**).
- ☐ Description for plant expansion attached (**Attachment**)
- ☐ No plant expansion required.

4. Attach a map showing all sewer extensions constructed within the past calendar year, sewer extensions approved or exempted in the past year in accordance with Act 537 and Chapter 71, but not yet constructed, and all known proposed projects which require public sewers but are in the preliminary planning stages. The map must be accompanied by a list summarizing each extension or project and the population to be served by the extension or project. If a sewer extension approval or proposed project includes schedules describing how the project will be completed over time, the listing should include that information and the effect this build-out-rate will have on populations served. (25 Pa. Code § 94.12(a)(4))

Check the appropriate boxes:

- ☒ Map showing sewer extensions constructed, approved/exempted but not yet constructed, and proposed projects attached (**Attachment WYB-2**)
- ☒ List summarizing each extension or project attached (**Attachment WYB-3**)
- ☐ Schedules describing how each project will be completed over time and effects attached (**Attachment**)
- ☒ None of the approved extensions show a proposed or mandated project schedule.
- ☒ No pipelines have existing or projected hydraulic overloads

Comments:

5. Discuss the permittee's program for sewer system monitoring, maintenance, repair and rehabilitation, including routine and special activities, personnel and equipment used, sampling frequency, quality assurance, data analyses, infiltration/inflow monitoring, and, where applicable, maintenance and control of combined sewer regulators during the past year. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(5))

See Attachment WYB-4

6. Discuss the condition of the sewer system including portions of the system where conveyance capacity is being exceeded or will be exceeded in the next 5 years and portions where rehabilitation or cleaning is needed or is underway to maintain the integrity of the system and prevent or eliminate bypassing, CSOs, SSOs, excessive infiltration and other system problems. Attach a separate sheet if necessary. (25 Pa. Code § 94.12(a)(6))

Check the appropriate boxes:

☐ System experienced capacity-related bypassing, SSOs or surcharging during the report year. On a separate sheet, list the date, location, and reason for each bypass, SSO or surcharge event.

☒ System did not experience capacity-related bypassing, SSOs or surcharging during the report year.

Comments:

See Attachment

7. Attach a discussion on the condition of sewage pumping (pump) stations. Include a comparison of the maximum pumping rate with present maximum flows and the projected 2-year maximum flows for each station. (25 Pa. Code § 94.12(a)(7))

Check the appropriate boxes:

☒ The collection system does not contain pump stations

☐ The collection system does contain pump stations (Number –)

☐ Discussion of condition of each pump station attached (**Attachment**)

8. If the sewage collection system receives industrial wastes (i.e., non-sanitary wastes), attach a report with the information listed below. (25 Pa. Code § 94.12(a)(8))

a. A copy of any ordinance or regulation governing industrial waste discharges to the sewer system or a copy of amendments adopted since the initial submission of the ordinance or regulation under Chapter 94, if it has not previously been submitted.

b. A discussion of the permittee's or municipality's program for surveillance and monitoring of industrial waste discharges into the sewer system during the past year.

c. A discussion of specific problems in the sewer system or at the plant, known or suspected to be caused by industrial waste discharges and a summary of the steps being taken to alleviate or eliminate the problems. The discussion shall include a list of industries known to be discharging wastes which create problems in the plant or in the sewer system and action taken to eliminate the problem or prevent its recurrence. The report may describe pollution prevention techniques in the summary of steps taken to alleviate current problems caused by industrial waste dischargers and in actions taken to eliminate or prevent potential or recurring problems caused by industrial waste dischargers.

Check the appropriate boxes:

☐ Industrial waste report as described in 8.a., b. and c. attached (**Attachment**)

☐ Industrial pretreatment report as required in an NPDES permit attached (**Attachment**)

☒ Industrial pretreatment report will be submitted by POTW Administrator

9. Existing or Projected Overload.

Check the appropriate boxes:

☐ This report demonstrates an existing hydraulic overload condition.
☐ This report demonstrates a projected hydraulic overload condition.
☐ This report demonstrates an existing organic overload condition.
☐ This report demonstrates a projected organic overload condition.

If one or more boxes above have been checked, attach a Corrective Action Plan (CAP) to reduce or eliminate present or projected overloaded conditions under §§ 94.21 and/or 94.22 (relating to existing overload and projected overload). (25 Pa. Code § 94.12(a)(9))

☐ Corrective Action Plan attached (**Attachment**)
☒ No overloads projected.

10. Where required by the NPDES permit, attach a Sewage Sludge Management inventory that demonstrates a mass balance of solids coming in and leaving the facility over the previous calendar year.

☐ Sewage Sludge Management Inventory attached (**Attachment**)
☒ No Sewage Sludge Management Inventory required for collection system.

11. For facilities with CSOs and where required by the NPDES permit attach an Annual CSO Report (including satellite combined sewer systems).

☐ Annual CSO Report attached (**Attachment**)
☒ No Annual CSO Report required for collection system.

12. For POTWs, attach a calibration report documenting that flow measuring, indicating and recording equipment has been calibrated annually. (25 Pa. Code § 94.13(b))

☐ Flow calibration report attached (**Attachment**)
☒ No Flow calibration report required for collection system.

RESPONSIBLE OFFICIAL CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

☒ Certification not required for collection system.

Name of Responsible Official	Signature
Telephone No.	Date

PREPARER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared by me or otherwise under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowledge of violations. See 18 Pa. C.S. § 4904 (relating to unsworn falsification).

Richard G. Resh	Richard G Resh
Name of Preparer	Signature
(717) 846-4805	3/2/17
Telephone No.	Date

Preparer's Contact Information:

C.S. Davidson, Inc.
38 North Duke Street
York, PA 17401

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C.S. DAVIDSON, INC.

ATTACHMENT WYB-1
January 5, 2017

TABULATION OF AVAILABLE
SEWER RESERVE CAPACITY

COLLECTION AND TRANSPORTATION SYSTEM
From: West York Borough

WASTEWATER TREATMENT FACILITY
To: City of York

	2016	2017	2018	2019	2020	2021	Future Years
Existing Flow From Current Users[1]	524,779	524,779	542,726	556,026	558,826	561,626	564,426
Projected Flows From Current Users[2]	0	0	0	0	0	0	0
Projected Flow Increase From New Customers[3]	0	17,947	13,300	2,800	2,800	2,800	49,700
Total Estimated Wastewater Flows	524,779	542,726	556,026	558,826	561,626	564,426	614,126
Percent Usage	43.71%	45.21%	46.32%	46.55%	46.78%	47.02%	51.16%
Total Permitted Capacity/Agreement	1,200,500	1,200,500	1,200,500	1,200,500	1,200,500	1,200,500	1,200,500
Total Amount of Available Capacity	675,721	657,774	644,474	641,674	638,874	636,074	586,374

NOTES AND ASSUMPTIONS:

(1) Percentage of City Flow Meter WY-01 based on EDUs.

(2) Assumes 75% of 2016 connections (0 EDUs @ 350 gpd) not reflected in (1) above.

(3) See attached list of projected connections (Attachment WYB-3).

WEST YORK BOROUGH
PROJECTED CONNECTIONS TO CITY OF YORK WASTEWATER TREATMENT PLANT

	Name & Description	Proposed Total Gallons	Map/ Parcel	All Projected Connections in Gallons per Day (GPD) 2017	2018	2019	2020	2021	17 - 21 Subtotal	2022-2026	2027-2031	2032-2036	2037 Ultimate	Total Gallons	Flow Meter	York City MH No.
1	Ingerman Group 1320 West Market Street 60 Apts, Restaurant, Retail & Office Space	8,147	9/001	8,147	0	0	0	0	8,147	0	0	0	0	8,147	WY01	81
2	Kinsley Equities West King Street Industrial Site (10 EDUs @ 350 GPD)	3,500	7/020	3,500	0	0	0	0	3,500	0	0	0	0	3,500	WY01	81
3	Loucks Elementary School Rehab West Philadelphia Street (10 EDUs @ 350 GPD)	3,500		3,500	0	0	0	0	3,500	0	0	0	0	3,500	WY01	81
4	Former Pfaltzgraff Plant Conversion (10 EDUs @ 350 GPD)	3,500	varies	0	3,500	0	0	0	3,500	0	0	0	0	3,500	WY01	81
5	York Corrugating Co. Expansion (10 EDUs @ 350 GPD)	3,500	varies	0	3,500	0	0	0	3,500	0	0	0	0	3,500	WY01	81
6	Rex Roth/SDR Design (10 EDUs @ 350 GPD)	3,500	varies	0	3,500	0	0	0	3,500	0	0	0	0	3,500	WY01	81
7	Elderlee, Inc. (5 EDUs @ 350 GPD)	1,750	varies	0	0	0	0	0	0	1,750	0	0	0	1,750	WY01	81
8	York Fairgrounds (5 EDUs @ 350 GPD)	1,750	varies	0	0	0	0	0	0	1,750	0	0	0	1,750	WY01	81
9	Unconnected Existing Properties (10 homes @ 350 GPD)	3,500	varies	700	700	700	700	700	3,500	0	0	0	0	3,500	WY01	81
10	Apartment Conversions (2 Units/Year @ 350 GPD)	17,500	varies	700	700	700	700	700	3,500	3,500	3,500	3,500	3,500	17,500	WY01	81
11	Commercial Industrial Site Miscellaneous Conversions (2 EDUs at 350 GPD)	19,600	varies	700	700	700	700	700	3,500	3,500	3,500	3,500	5,600	19,600	WY01	81
12	Miscellaneous New Development (2 EDUs/year @ 350 GPD)	19,600	varies	700	700	700	700	700	3,500	3,500	3,500	3,500	5,600	19,600	WY01	81
	TOTALS:	89,347		17,947	13,300	2,800	2,800	2,800	39,647	14,000	10,500	10,500	14,700	89,347		

CITY OF YORK

A. System Monitoring, Maintenance, and Repair

1. West York Borough has entered into an agreement to transfer ownership and operation of the public sewer system to The York Water Company (YWC). The agreement is subject to Public Utility Commission approval. On 08/24/16, C.S. Davidson, Inc. provided data to the YWC (see Attachment WYB-5).

   Due to the pending sale, no lines were cleaned or televised in 2016.

B. Collection System Condition

1. Description of System: The system tributary to the City of York includes 10.37 miles of vitrified clay sewers with mostly brick manholes and no pump stations. A small area in the Borough is served by West Manchester Township's West King Street Pump Station. Annual operation and maintenance costs are shared by the two municipalities. Wastewater from both municipalities is monitored by the City of York on West Poplar Street (City Flow Meter No. WY-01). The Borough's interceptor also transports flows from the Lincolnway Area of West Manchester Township. Most of the sanitary sewers are in fair to good operating condition.

2. Conveyance Capacity: No portion of the Borough collection system is expected to by hydraulically overloaded during the next five-year period.

3. Major Rehabilitation: With the completion of WWTP improvements, the York City Sewer Authority would like to focus on removing infiltration/inflow (I/I) sources to reduce peak flows to the plant. YCSA has requested outlying user municipalities voluntarily increase their I/I removal efforts.

C. Sanitary Sewer Extensions

1. Carriage Works Apartments (1320 W. Market) Final Subdivision and Land Development Plan

   a. This project contains 4.9 acres and is located south of West Market Street and east of South Highland Avenue. The developer, MBI Development Company, Inc., plans to subdivide the project site into three lots. Four of the ten vacant industrial buildings formerly known as the Keystone Weaving Mill will be renovated into 80 apartment dwelling units, office space and two restaurants.
   b. The office units and restaurant space have not been occupied.
   c. Sanitary sewer work was completed. No as-built plans have been submitted to date.
   d. The project received planning module exemption approval (DEP Code No. A3-67806-009-3E) on February 25, 2011 from PA DEP.

D. Sale of Sanitary Sewer System

1. West York Borough intends to sell the collection system to The York Water Company.

2. Negotiations are still in progress.

E. Waste Flow Data

1. The Borough office at 1700 West Philadelphia Street was moved to 1381 West Poplar Street in 2016. The transfer resulted in no increase in sewage flow.

2. The estimated flows for the current year and projected next five years are shown on the attached charts labeled Attachments. WYB-1 and WYB-3.

3. The number of sewer connections for each year of the past five years were as follows:

2012	2013	2014	2015	2016
1	0	0	0	0

F. Nutrient Trading Program 2003 thru 2016

1. No properties with on-site subsurface disposal systems were eliminated between 2003 and 2016 (zero credits).

City of York Chapter 94 Municipal Wasteload Management

CITY OF YORK - CHAPTER 94
WASTELOAD MANAGEMENT REPORT - 2016

CITY OF YORK

A. System Monitoring, Maintenance and Repairs

The Sanitary Sewer Maintenance Department is responsible for routine cleaning and maintenance as well as on-going evaluation and corrective measures. Descriptions of the Department's personnel, equipment and routine or special projects are included in the Sanitary Sewer Maintenance 2016 attachments. The long-time sewer maintenance supervisor retired in November 2016. The department is currently headed by an Acting Sewer Maintenance Supervisor. The crew has six fill-time employees. The department performs preventative maintenance activities by drainage basin. Sanitary sewer sub-basins that have suspected or historical problems are targeted, cleaned and televised. In 2016 the Department cleaned 254,185 linear feet of sewer line, which represents 49% of the sewer system

The City of York and the York City Sewer Authority developed a conveyance and collection system computer model, which is spatially referenced to the City of York's geographic information system (GIS). A total of nineteen flow meters monitor the sanitary sewer system. Six long-term flow meters are located on the following interceptors: Willis Run, Codorus Creek trunkline (2), Poor House Run, Tyler Run, and Arch Street interceptors. Thirteen meters monitor intermunicipal flows. Two permanent rain gages are located in the system, one in the northwest and another in the southeast section of the City of York, to help identify inflow and infiltration.

Flow meters are frequently checked to ensure data are obtained and recorded properly. Flow meter data, from meters located where outlying municipal flows enter the York City system, are relayed to the sewer maintenance building where the data are utilized to bill the municipalities for conveyance and treatment. The flow meters are maintained by CSL, Inc. under contract. Raw flow data is available *via* internet.

B. Collection System Condition

1. System Description: Currently, the City of York sanitary sewer system is comprised of 98.5 miles (520,238 linear feet) of sewer line with pipe diameters ranging from 8 inches to 72 inches. Older portions of the sewer system, dating to the early 1900's are comprised of vitrified clay pipe. Other sewer system materials are ductile iron pipe, reinforced concrete pipe, PVC pipe and brick (some larger diameter pipe). Manholes are either brick or pre-cast concrete with cast iron or ductile iron frames and covers. The larger diameter interceptors are: Codorus Creek, Poor House Run, Upper Codorus Creek, Willis Run, Pennsylvania Avenue, Tyler Run and Arch Street. Interceptors are mostly constructed of reinforced concrete pipe with some segments constructed with vitrified clay pipe, cast iron or ductile iron. The sanitary system is almost entirely a gravity system with one small pumping station serving nine structures on eight parcels in the York City Business and Industrial Park. Generally, the condition of the system is good.

2. Conveyance Capacity: Capacity within the system is adequate at this time. The City of York submitted a correction action plan (CAP) proposal to the Pennsylvania Department of Environmental Protection (PADEP) in mid-2014 and submitted a CAP in December 2014. The CAP updated the interceptor model using flow data from years 2009 through 2013 and a 10-year storm. A revised CAP using the 5-year storm was submitted to PADEP in February 2016. The revisions were accepted and the CAP requirement removed by PADEP for interceptors within the City of York municipality in September 2016.

Beginning in November 2016 Manchester Interceptor CAP reports were submitted jointly with City of York regarding the Manchester Interceptor upgrade. Part of the interceptor is located within the York City wastewater treatment plant. The treatment plant is located in Manchester

Township, is owned by the York City Sewer Authority, and is operated by the City of York *via* lease agreement.

3. Major Rehabilitation: Three major replacement or rehabilitation projects in occurred in 2016. In the 200 block of South Pine Street 185' of 8" TCP main and associated laterals were replaced with PVC, and one manhole was replaced. In the 100 block of South Jackson Street 355' of 8" TCP and associated laterals were replaced with PVC, and two manholes were replaced. In the block of South Penn Street just south of Stove Avenue 112' of 8" TCP and associated laterals were replaced with PVC, and a new manhole was installed.

C. Pumping Station Condition

1. York City Business and Industrial Park: The City of York has one sanitary sewer pump station that serves the northeast portion of the York City Business and Industrial Park (permit number 6778417). The pump station was installed in 1979, commenced operation in 1980, and is maintained by the City of York Sanitary Sewer Maintenance Department. The pump station is a Smith & Loveless wet well/dry well duplex pump configuration with two 310-gpm Smith & Loveless pumps. The pumps discharge to a 6-inch diameter, 1,653 linear feet force main. There is no structure or means to divert flow from the pump station to the surrounding environment. The pump station is currently programmed to run a generator/switch gear exercise once per week. The dry well pump is visited approximately once per month and checked for abnormal conditions. The propane fuel source for the emergency generator was filled in 2009: this quantity will last many years under the normal weekly generator exercise schedule.

An alarm auto-dialer was installed in 1997. The pump station is equipped with a Sensaphone 2000 alarm system that has five alarm criteria: low water alarm, high water alarm, power failure, emergency generator operating, and pump failure. Pump station data can be remotely read. All five criteria are monitored by an autodialer system that notifies sewer maintenance personnel when in alarm status. The Sensaphone 2000 system is currently set to monitor and record the status of each of the five alarm criteria every 20 minutes.

Capacity problems are not anticipated in this service area as all the parcels served by the pump station are developed and occupied. The pump station operates within design parameters and does not need to be upgraded to accommodate future flows. The pump station serves nine structures on eight parcels. Three of the nine structures have multiple, smaller incubator/start-up spaces of mixed or variable use. The occupants of the facilities have varied in business application, water use, and wastewater discharge over the years. The City of York, mainly the Sewer Maintenance Supervisor and the Municipal Industrial Pretreatment Program staff, is familiar with the tenants, their business type, and any changes that would affect water usage and, therefore, flows to the pump station.

Individual pump station run times and gallons pumped are as follows:

York City Industrial Park Pump Station		
Pump	**2016 Estimated* Meter Elapse Time**	**Gallons Pumped**
Pump 1	58.4	985,390
Pump 2	58.2	982,350
Total	**116.6**	**1,967,741**

In August 2014, the City of York installed pump runtime monitoring devices at the pump station to monitor actual runtimes. The Track-It digital data logger monitors AC power for both pumps and provides on and off date and time stamps. In 2016 the two pump data loggers failed to record data or recorded data were corrupted and could not be read. In lieu of 2016 recorded pump run times, a 5-year average run time per pump* was used in conjunction with the verified pump ratings. Based on these data, average daily flows through the pump station in 2016 are calculated as follows:

227 GPM Rated in 2014	York City Industrial Park Pump Station			
	Minutes of Operation/Day	Gallons Pumped/Day	Actual Pump Capacity (GPD)	Peaking Factor
Minimum	6.4	971		
Average	16.4	5,391		
Maximum	82.8	12,507	326,880	2.32

Please note: Operational data are in **MINUTES PER DAY.**

	2016	2017	2018	Design Capacity (GPD)
Avg. Daily Flow (GPD)	3,723	5,391	5,391	
Max. Daily Flow (GPD)	8,649	12,507	12,507	446,400
% Loading (of Design)	1.9%	2.8%	2.8%	
% Loading (of Capacity)	2.6%	1.6%	1.6%	

No overload is projected at the station within the next two (2) years.

D. Sewer Extensions

1. Extensions: There were no sewer extensions in 2016.

2. Proposed Projects: Generally, undeveloped areas within the City of York can be served by the existing system and require only tap-ins.

E. Waste Flow Data

1. Current Flows and Projected Increases: The estimated flow for the City of York was determined by subtracting combined estimated flows for the outlying municipalities from the total influent flow at the City of York Wastewater Treatment Plant. The estimated 2016 flow was 3,641,076 gpd. Anticipated flow increases for the next five years are attached in Exhibit YC-1.

2. Connections: The number of sewer connections in the City of York for each of the past five years is as follows:

2012	2013	2014	2015	2016
na	5	6	na	na

na - data not available.

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

March 27, 2017

Mr. James E. Gross
Director
Department of Public Works
101 South George Street
York, PA 17401

Reference: Collection System Review and Operations Consultation
BH No. 90015-R7

Dear Mr. Gross:

I. INSPECTION OVERVIEW

The 2016 annual sewer system review took place on March 8, 2017. Discussions of the system's operation were held with David Rudolph acting Sewer Maintenance Supervisor.

II. PUMPING STATIONS

A. Industrial Park Pump Station
   1. The pump station has been operating without trouble.
   2. The generator is exercised on a weekly basis.

III. SIPHONS

A. Siphon Observations
   1. The twelve siphons located throughout the City were not observed in during the 2016 Collection System Review.
   2. The cleaning and maintenance of the siphons continues to be a priority for the sewer maintenance.

B. Siphon Identification
   1. Wogan Road & Fireside Road, Southern
   2. Wogan Road & Fireside Road, Northern
   3. West Street & Bruce Avenue
   4. Odean Field (Bantz Field)
   5. Fahs St. at Willis Run
   6. Atlantic Avenue at Willis Run
   7. Pacific Avenue at Willis Run
   8. Kings Mill Road at Tyler Run
   9. Tyler Run Interceptor at Codorus Creek

10. Codorus Creek Interceptor at Willis Run
11. Poorhouse Run Interceptor at Codorus Creek
12. Mill Creek Sewer at Codorus Creek

IV. FLOW MONITORING

The 2013 flow metering contract with CSL Services, Inc. is in effect through June 2019. All of the the flow meter data is uploaded to a Telog website and can be viewed by the City of York and it's connected municipality partners.

A. Inter-Municipal Flow Meters
   1. The thirteen municipal flow meters are currently operating with minimal problems.

B. Main Interceptor Flow Meters
   1. In 2016 two flow meters were installed at the WWTP outfall to meter the Plant's effluent flows. These flow meters were installed to provide flow data during high flow conditions at the WWTP's main outfall.

   2. Seven main flow meters are operating with minimal problems. This includes Six interceptor flow meters, and one meter at the head works of the WWTP.

C. Rain Gauges
   1. The two rain gauges are operating with minimal problems.

V. FACILITIES

A. Sanitary Sewer Maintenance Equipment
   1. The City of York Collection System Maintenance Department owns and operates the equipment necessary to clean, inspect and maintain the sewer collection system.

   2. All maintenance equipment was in working order at the time of the collection system review.

   3. The operations equipment and tools are suited to their tasks and are generally in good condition.

VI. OPERATION AND MAINTENANCE PROGRAMS

A. Sewer Cleaning
   1. The City is continuing the sewer cleaning program and is methodically cleaning all the sewer lines within the City over a several year period. The City has problem areas scheduled for cleaning on a monthly or semiannual

basis. The City cleaned 254,188 feet of sewer in 2016.

B. Trouble Spot Inspection

1. Trouble spots such as small diameter siphons and areas where roots and/or grease commonly clog the sewers are cleaned semiannually to insure regular service. The City responded to 148 sewer related actions or complaints

2. Trouble spots include the following areas:
   a. Stone Ave. - *Grease Problems*
   b. Springdale - *Root Problems*
   c. Fireside - *Root Problems*
   d. Parkway Homes - *Grease Problems*
   e. Downtown (South St., Maple St., Princess St., College Ave., and Boundary Ave. between George St. and Queen St.) - *Grease Problems*

3. Three other areas appear to be potential problem areas. The following areas are currently being cleaned on a regular basis.
   a. 216 West King St
   b. 738 Edison St
   c. South Pine St.

4. The 2015 Sanitary Sewer Improvement Project was completed in September of 2016. This project replaced sewers on South Pine Street and on East Jackson Street. The project also installed a new connection to the Upper Codorus Creek Interceptor from the sewers on South Penn Street. These improvements were designed to reduce frequent maintenance.

C. Pump Station

1. The pump station is scheduled to be checked on a monthly basis. The run times on the pumps and the one generator are reviewed for uneven use problems. The generator is automatically exercised once a week. The pump station and generator are in good working order.

D. MH & Sewer Repairs

1. Manhole frames and covers are raised or replaced on an as-needed basis. They are often raised in conjunction with street paving work within the City of York. 5 replacements or grade adjustments were made in 2016.

2. Considerable effort currently occurs in marking the underground sanitary and storm utilities per the PA One Call System. This effort has increased to include coordinating all City of York Departments that are required to mark underground utilities. The Department responded to 1,548 PA One Call requests in 2016.

3. The City has performed root removal on an as needed basis. The City is continuing to use Root X, a chemical designed to prohibit root growth in trouble areas, with good results. Root control was applied to 10 service laterals in 2016.

4. Each year the department repairs or replaces sewers mains due to damage by other utilities companies or from age and degradation. In 2016 the department performed 3 sewer replacements and 2 sewer rehabilitations.

5. CCTV inspection is regularly used by the department to identify pipe deficiencies for both the collection and conveyance system.

6. Over 2,000 Manhole inspections were performed in 2016. The inspections were used to determine overall condition of the sewer facilities and to identify potential sources of inflow and infiltration.

E. Infiltration/Inflow

1. Wastewater treatment plant flows were greater than 50 mgd occurred during the October 28 and 29, 2015 rain event. Over 3 inches of rain fell on the greater York area.

2. The most recent high flow benchmark at the WWTP is the October 2013 wet weather event. Wastewater treatment plant flows were greater than 70 mgd occurred during the October 10 and 11, 2013 rain event. Over 5 inches of rain fell on the greater York area.

F. Staffing

1. The sewer collection system staff consists of one shared secretary with the York City Electrical Bureau and six operators. The operators are divided into two units. One unit consists of one person who exclusively marks utilities for the PA One Call System. The other unit consists of five persons who conduct sewer cleaning, repairs & maintenance.

2. The Collections System Supervisor position is currently vacant. The collections system operators are being supervised by the Electrical Bureau's Supervisor.

3. Various staff members have participated in collection system operator training, confined space training, and hazardous waste operations and emergency response training.

3. There are currently no operators who are NASSCO certification for the review and prioritization of need sanitary sewer repair based on CCTV inspections.

VII. SUMMARY OR RECOMMENDATION

A. Develop an improved data records system for maintaining the collection and conveyance system operations and maintenance data. The records system should be developed to be maintained and monitored progressively by multiple individuals.
B. Continue to inspect and clean siphons throughout collection system.
C. Continue to monitor flow meters. Provide evaluation reports of flow meter data when WWTP flows exceed 50 mgd.
D. Continue to inspect and clean areas with known grease and root problems.
E. Continue to provide professional development training for the sewer collection system staff. Additional staff should be NASSCO certified for CCTV inspections.
F. Continue to perform annual CCTV inspections. CCTV inspections are a critical part of on-going maintenance.
G. The City of York needs to develop a sewer facilities renewal program. In the past four years only 652 feet of sewer mains have been replaced or repaired. There are several basins that have been identified with rehabilitation needs based on inflow during major storm events, and frequent maintenance requirements.
H. The above discussion is intended to assist York City in identifying immediate problems, preventing reoccurrence of problems, improving reoccurring maintenance problems and increasing the efficiency of collection system operations.

We encourage an interactive review of this report by everyone involved in the operation of the system.

Very truly yours,

BUCHART HORN, INC.

David W. Shirk, P.E.
Project Engineer

cc: Veronica Whaley, Industrial Pretreatment Compliance and Enforcement Officer
Paul E Gross, P.E./File

.

BUCHART HORN
ENGINEERS • ARCHITECTS • PLANNERS

March 21, 2017

Planning and Finance Section
PA DEPT of Env Protection
South Central Reginal Office
909 Elmerton Ave
Harrisburg, PA 17110-8120

Re: Joint Cap/Progress Report No.11

Dear Sirs,

As requested, this letter is a supplement to the March, 2017 Cap Progress report No. 11 submitted by C.S. Davidson Inc.

The York City Sewer Authority (YCSA) and the Manchester Township Municipal Authority have entered into an agreement for the construction of the Manchester Township Interceptor within the confines of the YCSA WWTP. The YCSA requested an engineering proposal from Buchart Horn to design and bid the portion of the interceptor downstream of manhole 8A. This proposal was executed in December of 2016.

Preliminary layouts were completed in and shown to the Authority at their March meeting. BH is continuing discussion with boring/tunneling contractors as well as pipe locating firms for complete review of the proposed routing through the most difficult areas of the design. We expect to be providing the Authority with cost estimates at the April meeting. Permit preparation is scheduled to be started in April for both York County Erosion Control and PaDEP Part II applications.

The following is YCSA's schedule to complete the improvements:

Description of work	Quarter/Year
Prepare pre-final design	1st/2017-completed
Submit permit Application	2nd/2017
Secure permit Approvals	3rd/2017
Finalize bidding documents	4th/2017
Solicit bids	1st/2018
Begin Construction	2nd/2018

If there are any questions please contact me at 717 852 1366, or by email at pgross@bucharthorn.com.

Sincerely,

BUCHART HORN, INC.

Paul E. Gross, P.E.
Project Manager

cc: Stacey MacNeal

SEWER MAINTENANCE DIVISION 2016

Sewer Maintenance completed main replacement projects on East Jackson Street between Duke and McKenzie Streets and on South Pine Street between College Avenue and Prospect Street.

The division spent considerable effort on the cleaning of sanitary sewer throughout the year. Other projects included televising sanitary sewer mains, inspection of manholes, and replacement of manhole frames and covers. The chemical root control program for laterals continued in 2016.

The division continued utilizing CSL for Intermunicipal flow monitoring. This firm collects data and prepares reports from the (20) intermunicipal flow meters (1 at the WWTP) and two rain gauges. The information was used for sewer billing and collection system capacity evaluation.

The division continued to handle all requests for PA-One Call utility markings.

Five (5) Flood Pump Stations were inspected and maintained. All stations were operational and ready for a flood emergency.

The division continues to use a database management system to track its activities.

The Sewer Emergency Response Team continued to operate for serious sewer related backups.

The division continued to update the comprehensive sewer maps and lateral detail sheets.

The Superintendent continued to work on the mapping and attribute components of the GIS system for sanitary sewers and storm sewer system. Inventory and inclusion of the storm water outfalls to the Codorus Creek and tributaries continued as part of the City's ongoing MS4 program.

The division assisted the Highway, Parks, and WWTP as needed. The Highway Bureau assisted Sewer Maintenance on several patching and manhole projects.

2016 York City SSM

LATERAL REPAIRS*

Date	Location	Action
2/5/2016	132 Springdale Rd	Repair lateral broken by Columbia Gas - 4' of TCP with 4" SDR35

SEWER MAIN INSTALLATION/REPLACEMENT*

Date	Location	Action
2/8/2016	500 block W College Av	repair collapsed/failed 6' OF 8"TCP (S&T w/ Keystone pumps) (61-4:61-3)
2/17/2016	301 S Queen St	repair failed lateral at curb (S&T w/traffic control PADOT state route)
6/27-7/27/2016	200 block S Pine St	replace 185' 8" TCP with PVC, laterals replaced with PVC, I manhole replaced
5/11-7/18/2016	100 block S Jackson St	replace 355' 8" TCP with PVC, laterals replaced, 2 manholes replaced
7/18-7/29/2016	S Penn St south of Stone Av	replace 112' 8" TCP with PVC, laterals replaced, installed 1 new manhole

Manholes Raised 2016*

Date	Location	MH ID	Action
1/29/16	Elm Terrace	B35-5H	replaced
1/29/16	State Street	C13-9	replaced
1/29/16	Tremont St	C13-17D	replaced
3/22/16	Hawthorne @ Arbor	F18-14A	raised replaced
3/22/16	Springettsbury @ Jessup	K17A	replaced

* - additional work may have been completed in the above categories that is not listed (staff turn-over).

City of York 2016 Cleaning Summary

Date	MHFROM	MHTO	Footage
1/4/2016	45-75	45-7K	266.5
1/11/2016	D29	D28	192.5
1/15/2016	61-4	61-3	271.4
1/16/2016	61-5	61-4	148.0
1/27/2016	D9-2B	D9-2A	267.4
2/3/2016	D25-20A	D25-20	284.0
2/11/2016	D9-2B	D9-2A	277.4
2/25/2016	H17-5	H17-4	105.7
2/26/2016	F15-5A	F15-5	342.3
2/26/2016	B10-31	B10-30	30.9
2/26/2016	B10-29	B10-30	18.0
2/26/2016	H17-2	H17-1	103.7
2/26/2016	B35B	B35A	67.3
2/26/2016	B36B	B36A	60.8
2/26/2016	B38-2	B38-1	77.3
2/29/2016	H13-17C	H13-17 B	125.2
2/29/2016	H13-17D	H13-17B	159.6
2/29/2016	H13-17-B	H13-17A	260.8
2/29/2016	H13-17A	H13-17	159.2
2/29/2016	H13-13A	H13-13	267.1
2/29/2016	B38-14B	H13-18I	237.3
2/29/2016	H13-18I	H13-18G	250.0
2/29/2016	H13-18H	H13-18G	69.3
2/29/2016	H13-18G	H13-18F	249.7
2/29/2016	B38-15B	H13-18K	269.4
2/29/2016	H13-18K	H13-18F	249.9
2/29/2016	B38-16B	H13-19	264.9
2/29/2016	H13-19	H13-18	320.6
2/29/2016	H13-18F	H13-18	250.0
2/29/2016	B38-17B	H13-18B	277.5
2/29/2016	H13-18B	H13-18A	283.8
2/29/2016	H13-18C	H13-18A	218.8
3/1/2016	B38-17B	B38-17A	292.3
3/1/2016	B38-17A	B38-17	300.3
3/1/2016	B38-19	B38-18	135.2
3/1/2016	B38-18	B38-17	290.6
3/1/2016	B38-16B	B38-16A	232.7
3/1/2016	B38-16A	B38-16	230.0
3/1/2016	B38-17	B38-16	235.7
3/2/2016	H13-5E	H13-5D	162.8
3/2/2016	H13-5D	H13-5C	208.5
3/2/2016	H13-5C	H13-5B	250.2
3/2/2016	H13-5B	H13-5A	163.5
3/2/2016	H13-11	H13-10	249.3
3/2/2016	H13-10	H13-9	208.7
3/2/2016	H13-9A	H13-9	146.5
3/3/2016	H13-9	H13-8	175.9
3/3/2016	H13-8	H13-7	159.8
3/3/2016	H13-7	H13-6A	162.5
3/2/2016	H13-11	H13-10	249.3
3/2/2016	H13-10	H13-9	208.7
3/2/2016	H13-9A	H13-9	146.5

Date	MHFROM	MHTO	Footage
3/3/2016	H13-9	H13-8	175.9
3/3/2016	H13-8	H13-7	159.8
3/3/2016	H13-7	H13-6A	162.5
3/3/2016	H13-6C	H13-6B	165.3
3/3/2016	H13-6B	H13-6A	166.5
3/4/2016	H17E	H17D	170.2
3/4/2016	H17D	H17C	199.3
3/4/2016	H17C	H17B	195.8
3/4/2016	H17B	H17A	250.1
3/4/2016	H17F	H17A	225.6
3/4/2016	H13-6A	H13-5	206.0
3/4/2016	H13-5A	H13-5	290.9
3/4/2016	H13-5	H13-4	223.4
3/4/2016	B38-16	B38-15	250.5
3/4/2016	B38-15B	B38-15A	240.5
3/4/2016	B38-15A	B38-15	212.8
3/4/2016	B38-15	B38-14	246.9
3/4/2016	B38-14B	B38-14A	178.8
3/4/2016	B38-14A	B38-14	173.7
3/4/2016	B38-14	B38-13	167.3
3/7/2016	B38-7H	B38-7G	286.6
3/7/2016	B38-7G	B38-7F	284.7
3/7/2016	B38-7	B38-7F	210.1
3/7/2016	B38-13	B38-12	242.0
3/7/2016	B38-12	B38-11	252.8
3/7/2016	B38-11C	B38-11A	73.3
3/7/2016	B38-11A	B38-11	97.2
3/7/2016	B38-11B	B38-11	247.2
3/7/2016	B38-7E	B38-7C	339.1
3/7/2016	B38-11B	B38-7D	146.0
3/7/2016	B38-7D	B38-7C	138.5
3/7/2016	B38-8C	B38-7B	174.5
3/7/2016	B38-7B	B38-7A	269.9
3/7/2016	B38-7A	B38-7	272.5
3/7/2016	B38-11	B38-10	316.9
3/7/2016	B38-10	B38-9	319.3
3/7/2016	B38-9A	B38-9	87.0
3/7/2016	B38-9	B38-8	143.7
3/7/2016	B38-8	B38-7	199.6
3/7/2016	B38-7I	B38-7H	232.1
3/7/2016	H13-7C	H13-7B	125.2
3/7/2016	H13-17B	H13-17A	260.8
3/7/2016	H27C	H27B	273.7
3/7/2016	H25C	H25B	55.9
3/7/2016	H25B	H25A	137.4
3/7/2016	B10-33	B10-32	50.0
3/7/2016	B10-32	B10-31	106.8
3/7/2016	H28A	B10-31	216.3
3/7/2016	B10-31	B10-30	30.9
3/7/2016	B10-30	B10-29	8.1
3/7/2016	H27B	H27A	188.5
3/7/2016	H27A	H27	200.4

City of York 2016 Cleaning Summary

Date	MHFROM	MHTO	Footage
3/7/2016	H27	H26	119.2
3/7/2016	B10-29	B10-28	108.9
3/7/2016	H26-1	H26	178.0
3/7/2016	B10-28	H26	7.2
3/7/2016	H26	H25	141.2
3/10/2016	H13-2B	H13-2A	240.6
3/10/2016	H13-2A	H13-2	209.5
3/10/2016	H13-A	H13-3	262.5
3/10/2016	H13-3A	H13-1L	188.6
3/10/2016	H13-10	H13-1L	278.7
3/10/2016	H13-1N	H13-1M	187.7
3/10/2016	H13-1M	H13-1L	204.7
3/10/2016	H13-1I	H13-1G	275.0
3/10/2016	H13-1F	H13-1D	121.0
3/10/2016	H13-1E	H13-1D	172.3
3/10/2016	H13-1D	H13-1C	235.1
3/10/2016	H13-1C	H13-1B	177.2
3/10/2016	H13-1L	H13-1K	143.2
3/10/2016	H13-1K	H13-1J	26.6
3/10/2016	H13-1B	H13-1A	136.6
3/10/2016	H13-1A	H13-1	281.2
3/10/2016	H25A	H25	248.5
3/10/2016	B10-28	B10-27	134.1
3/10/2016	B10-27	B10-26	239.2
3/10/2016	H25	H24	206.7
3/10/2016	B10-26	B10-25	168.8
3/10/2016	H24	H23	222.6
3/10/2016	B10-25	B10-24	124.3
3/10/2016	H23	H22	220.6
3/10/2016	H22	H21	209.3
3/10/2016	B10-24	B10-23	406.3
3/10/2016	H17-5	H20-4	105.7
3/10/2016	H20-4	H20-3	109.0
3/10/2016	H20-3A	H20-3	151.2
3/10/2016	H20-3	H20-2	22.4
3/10/2016	H20-2	H20-1	118.1
3/10/2016	H20-1	H20	120.1
3/10/2016	H21	H20	209.2
3/11/2016	B10-23	B10-22	138.6
3/11/2016	B10-22	B10-21	192.7
3/11/2016	H20	H19	192.7
3/11/2016	H19	H18	203.0
3/11/2016	B10-21	B10-20	183.7
3/11/2016	B10-20	B10-19	273.1
3/11/2016	B10-19	B10-18	239.2
3/11/2016	B10-18	B10-17	216.6
3/11/2016	H17-5	H17-4	223.7
3/11/2016	H17-3	H17-3	203.6
3/11/2016	H17-3	H17-2	253.0
3/11/2016	H17-2A	H17-2	76.0
3/11/2016	H17-1B	H17-1A	128.0
3/11/2016	H17-1A	H17-1	251.2
3/11/2016	H17-1C	H17-1	102.0
3/11/2016	H17-2	H17-1	26.0
3/11/2016	H17-1	H17	234.6
3/14/2016	H18	H17	253.0
3/14/2016	H17A	H17	247.1
3/14/2016	H17	H16	276.5
3/14/2016	H15D	H15C	186.1
3/14/2016	H15C	H15B	196.5
3/14/2016	H15F	H15E	120.1
3/14/2016	H15E	H15A	162.9
3/14/2016	H15B	H15A	236.8
3/14/2016	H16	H15	297.1
3/14/2016	H15A	H15	174.7
3/11/2016	B38-6B	B38-6A	49.0
3/11/2016	B38-6A	B38-6	278.8
3/11/2016	B38-6	B38-5	173.6
3/11/2016	B38-5	B38-4	176.6
3/11/2016	B38-6A	B36L	197.4
3/11/2016	B36L	B36K	174.5
3/11/2016	B36H	B36G	91.0
3/11/2016	B36G	B36F	183.0
3/11/2016	B36F	B36E	167.9
3/15/2016	B36E	B36D	178.3
3/15/2016	B35F	B35E	140.8
3/15/2016	B35E	B35D	349.5
3/15/2016	B35D	B35C	348.4
3/15/2016	B35-5H	B35-5G	214.6
3/15/2016	B35-5G	B35-5F	234.7
3/15/2016	B35-5F	B35-5B	227.9
3/15/2016	F17F	F17E	179.4
3/15/2016	F17E	F17D	111.3
3/15/2016	F17D	F17C	254.5
3/15/2016	F17C	F17B	133.9
3/15/2016	F17B	F17A	92.5
3/15/2016	F17A	F17	238.8
3/15/2016	H13-2B	H13-2A	240.6
3/15/2016	H13-2A	H13-2	209.5
3/15/2016	H15	H14	246.9
3/15/2016	H14	H13	247.1
3/15/2016	B10-35E	B10-35D	239.6
3/15/2016	B10-35D	B10-35C	164.1
3/15/2016	B10-35F	B10-35C	145.9
3/15/2016	B10-35C	B10-35B	152.2
3/15/2016	B10-35B	B10-35A	97.6
3/15/2016	B10-38C	B10-38A	122.0
3/15/2016	B10-38B	B10-38A	120.3
3/15/2016	B10-38A	B10-38	157.1
3/15/2016	H35C	H35B	306.1
3/15/2016	H35B	H35A	51.7
3/15/2016	H35A	B10-38	122.5
3/16/2016	H26-12	H26-11	134.2
3/16/2016	H26-11A	H26-11	44.9

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Date	MHFROM	MHTO	Footage
3/16/2016	H26-11	H26-10	47.4
3/16/2016	H26-10	H26-9	54.6
3/16/2016	H26-9	H26-8	120.7
3/16/2016	H26-7E	H26-7D	70.0
3/16/2016	H26-7C	H26-7B	104.6
3/16/2016	H26-7D	H26-7A	158.6
3/16/2016	H26-7B	H26-7A	109.1
3/16/2016	H26-7A	H26-7	58.1
3/16/2016	H26-8	H26-7	113.9
3/16/2016	B35-5D	B35-5C	47.0
3/16/2016	F15C	F15B	243.6
3/16/2016	F15B	F15A	165.7
3/16/2016	F15A	F15A-1	76.0
3/16/2016	F15A-1	F15	225.2
3/16/2016	B38-14	B38-13	167.3
3/17/2016	B38-4A	B38-4	145.8
3/17/2016	B38-4	B38-3	214.8
3/17/2016	B38-3	B36I	154.5
3/17/2016	B36I	B36H	201.1
3/17/2016	B36K	B36J	181.1
3/17/2016	B36J	B36H	170.0
3/17/2016	B38-3	B38-2	287.5
3/17/2016	B38-8	B38-7	199.6
3/17/2016	B38-7	B38-6	177.7
3/17/2016	H13-1H	H13-1G	92.4
3/17/2016	H13-1G	H13-1F	185.5
3/22/2016	C27-34C	C27-34	185.7
3/22/2016	B20-8A	B20-8	134.4
3/22/2016	B20-8	B20-7	259.9
3/22/2016	B20-7A	B20-7	148.8
3/22/2016	B20-7	B20-6	150.3
3/22/2016	B20-5A	B20-5	193.1
3/22/2016	B20-6	B20-5	179.5
3/22/2016	30-7C	30-7B	126.2
3/22/2016	30-7B	30-7A	217.0
3/22/2016	30-10	30-9	372.8
3/22/2016	30-9	30-8	166.7
3/22/2016	30-8	30-8A	189.7
3/23/2016	H26-7	H26-6	128.0
3/23/2016	H26-6	H26-5	89.8
3/23/2016	H26-5	H26-4	119.6
3/23/2016	H26-4	H26-3	125.6
3/23/2016	H26-3	H26-2	181.8
3/23/2016	H26-2	H26-1	8.7
3/23/2016	B10-38	B10-37	162.1
3/23/2016	B0-37	B10-36	166.8
3/23/2016	B10-36	B10-35	80.0
3/23/2016	B10-35A	B10-35	222.8
3/23/2016	B10-35	B10-34	256.1
3/23/2016	B10-34A	B10-34	228.5
3/23/2016	B10-34A	B10-33	150.3
3/24/2016	30-8	30-7	194.3
3/24/2016	30-7	30-7A	344.3
3/24/2016	30-7	30-6	136.7
3/24/2016	30-6	30-5	223.4
3/24/2016	30-5	30-5A	299.7
3/29/2016	F1-7	F1-6	253.1
3/29/2016	F1-6	F1-5	256.1
3/29/2016	F1-5	F1-4	251.5
3/29/2016	F1-4	F1-3	250.4
3/29/2016	F1-3	F1-2	221.4
3/29/2016	F1-2D	F1-2C	191.3
3/29/2016	F1-2C	F1-2B	274.2
3/29/2016	F1-2B	F1-2A	351.6
3/29/2016	F1-2E	F1-2A	81.3
3/29/2016	F1-2A	F1-2	261.8
3/30/2016	B35-14	B35-13	103.6
3/30/2016	B35-13	B35-12	96.7
3/30/2016	B35-12	B35-11	59.5
3/30/2016	B35-11	B35-10	210.8
3/30/2016	B35-10	B35-9	273.6
3/30/2016	B35-9	B35-8	179.2
3/30/2016	B35-8	B35-7	188.7
3/30/2016	B35-6C	B35-6B	200.0
3/30/2016	B35-6B	B35-6A	200.7
3/30/2016	B35-6A	B35-6	168.3
3/30/2016	B35-7	B35-6	285.2
3/30/2016	B35-6D	B35-6	290.3
3/30/2016	B35-5E	B35-5D	211.7
3/30/2016	B35-6	B35-5	315.8
3/30/2016	B35-5C	B35-5B	204.5
3/30/2016	B35-5A-1	B35-5A	246.7
3/30/2016	B35-5A	B35-5	253.1
3/30/2016	B35-5	B35-4	144.2
3/30/2016	F1-1B	F1-1A	256.0
3/30/2016	F1-1A	F1-1	242.1
3/30/2016	F1-2	F1-1	176.4
3/30/2016	F5A	F5	209.2
3/30/2016	F5-1	F5	273.2
3/30/2016	F6	F5	219.8
3/30/2016	F5	F4	220.1
3/30/2016	F4A	F4	50.9
3/30/2016	F4	F3	145.5
3/30/2016	F3	F2	84.9
3/30/2016	F2	F1	283.5
3/30/2016	F1A	F1	238.2
3/30/2016	F1-1	F1	244.4
3/30/2016	F12E	F12D	170.0
3/30/2016	F12D	F12B	223.1
3/30/2016	F12C	F12B	203.7
3/30/2016	F12B	F12A	166.7
3/31/2016	F12A	F12	300.1
3/31/2016	43-10D	43-10B	197.3
3/31/2016	43-10C	43-10B	312.0

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Date	MHFROM	MHTO	Footage
3/31/2016	43-12	43-11	283.4
3/31/2016	43-10B	43-10A	212.4
3/31/2016	43-10A	43-10	40.0
3/31/2016	43-11	43-10	303.9
3/31/2016	43-10	43-9	218.8
3/31/2016	43-9	43-8	199.3
3/31/2016	43-8	43-7	20.8
3/31/2016	43-6	43-5	317.7
3/31/2016	43-5	43-4	322.9
3/31/2016	43-4	43-3	320.0
3/31/2016	43-3	43-2	350.1
3/31/2016	43-2	43-1	353.6
3/31/2016	B35-4B	B35-4A	340.8
3/31/2016	B35-4A	B35-4	340.6
3/31/2016	43-6D	43-6C	341.0
3/31/2016	43-6C	43-6B	205.4
3/31/2016	43-6B	43-6A	277.0
3/31/2016	43-6E	43-6A	171.9
3/31/2016	43-6A	43-6	267.4
3/31/2016	43-7	43-6	435.7
4/1/2016	45-7K	45-7J	266.5
4/1/2016	45-7J	45-7I	299.7
4/1/2016	45-7I	45-7H	225.5
4/1/2016	45-7H	45-7G	234.8
4/1/2016	45-7G	45-7F	215.7
4/1/2016	45-7F	45-7E	225.5
4/4/2016	K2-5-4C	K2-5-4B	267.7
4/1/2016	42C	42B	340.3
4/1/2016	42B	42A	199.9
4/1/2016	42A	42	140.6
4/5/2016	45-17	45-16	244.9
4/5/2016	45-16	45-15	234.7
4/5/2016	45-15A	45-15	113.8
4/5/2016	45-15	45-14	10.2
4/5/2016	45-14	45-13	142.4
4/5/2016	45-13	45-12	279
4/5/2016	45-12	45-11	269.3
4/5/2016	45-11	45-10	247.8
4/5/2016	45-7D	45-7C	104.4
4/5/2016	45-7E	45-7C	269.3
4/6/2016	H1H	H1G	97.6
4/6/2016	H1G	H1F	143
4/6/2016	H1F	H1E	137.7
4/6/2016	H1E	H1	203.1
4/6/2016	H1D	H1C	110.8
4/6/2016	H1C	H1B	174
4/6/2016	H1B	H1A	278.5
4/6/2016	H1A	H1	248.2
4/6/2016	H7D	H7C	262.5
4/6/2016	H2B	H2A	257.7
4/6/2016	H2-3	H2-2	249.6
4/6/2016	H2-2	H2-1	250.1

Date	MHFROM	MHTO	Footage
4/6/2016	H2-1A	H2-1	84.6
4/6/2016	76-4H	76-4F	149.1
4/6/2016	76-4G-1	76-4G	65
4/6/2016	76-4G	76-4F	188.5
4/6/2016	76-4I	76-4F	337.1
4/6/2016	76-4F	76-4E	261.8
4/6/2016	76-4K	76-4J	257.7
4/6/2016	76-4J	76-4E	103.9
4/8/2016	C8-5G	C8-5F	98.3
4/8/2016	76-4E	76-4D	95
4/8/2016	76-4D	76-4C	188.9
4/8/2016	76-4C	76-4B	200.4
4/8/2016	76-4B	76-4A	248.8
4/8/2016	76-4A	76-4	251.5
4/11/2016	C8-5F	C8-5G	98.3
4/11/2016	C8-5D	C8-D5	237.4
4/11/2016	C8-5C	C8-5D	192.1
4/11/2016	C8-5C	C8-5K	147.5
3/29/2016	H13-18F	H13-18	250
4/12/2016	H13-18C1	H13-18C	165.3
4/12/2016	H13-18C1	H13-18A	218.8
4/12/2016	H13-18B	H13-18A	283.3
4/12/2016	H13-18A	H13-18	251.2
4/12/2016	H13-18H	H13-18G	69.3
4/12/2016	H13-18G	H13-18F	249.7
4/12/2016	H13-18F	H13-18	250
4/12/2016	H13-18	H13-17	249.5
4/12/2016	45-10	45-9	246.8
4/12/2016	45-9	45-8	176.7
4/12/2016	45-8	45-7	110.4
4/12/2016	45-7	45-6	170
4/13/2016	45-6	45-5	313.6
4/13/2016	45-5A	45-5	146.2
4/13/2016	45-5	45-4	220.9
4/13/2016	45-4	45-3	213.5
4/13/2016	45-3	45-2	165.9
4/13/2016	45-2	45-1	88.5
4/13/2016	45-1	45.0	31.9
4/13/2016	45A	45.0	42.3
4/13/2016	B18D	B18C	192.3
4/13/2016	B18C	B18B	183.6
4/13/2016	B18B	B18A	179.3
4/13/2016	B18E	B18A	117.9
4/13/2016	B18I	B18H	172.7
4/13/2016	B18H	B18G	240.9
4/13/2016	B18G	B18F	256.5
4/13/2016	B18F	B18-1A	250.3
4/13/2016	B18A	B18-1A	160
4/14/2016	B20I	B20H	291.7
4/14/2016	B20H	B20G	91.4
4/14/2016	B20K	B20J	158.4
4/14/2016	B20J	B20G	157.3

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Date	MHFROM	MHTO	Footage
4/14/2016	B20G	B20F	165.5
4/14/2016	B20F	B20E	144.1
4/14/2016	B20M	B20E	310.7
4/14/2016	B20L	B20E	329.5
4/15/2016	B20E	B20D	154.8
4/15/2016	B20D	B20C	230.1
4/15/2016	B20C	B20A	253.5
4/15/2016	F10E	F10B	109.4
4/15/2016	F10D	F10C	59.7
4/15/2016	F10C	F10B	358.7
4/15/2016	F10B	F10A	107.7
4/15/2016	F10F	F10A	132.6
4/15/2016	F10A	F10	192.7
4/18/2016	46-4D	46-4C	189.1
4/18/2016	46-4C	46-4B	159.5
4/18/2016	46-4E	46-4B	194.5
4/18/2016	46-4B	46-4A	141.2
4/18/2016	46-4F	46-4A	158.8
4/18/2016	46-4A	46-3	411.9
4/18/2016	46-8	46-7	338.6
4/18/2016	46-7	46-6	372
4/18/2016	46-6	46-5	349
4/18/2016	59-9	59-8	103.5
4/18/2016	59-8	59-7	300.1
4/20/2016	B35-BJ	B35-5I	228.6
4/20/2016	B35-5I	B35-5B	60
4/20/2016	59-7	59-6	253.7
4/20/2016	59-6	59-5	274.6
4/20/2016	59-5C	59-5B	97.1
4/20/2016	59-5B	59-5A	263.1
4/20/2016	59-5E	59-5D	130.7
4/20/2016	59-5D	59-5A	200
4/20/2016	59-5A	59-5	82.1
4/20/2016	59-5	59-4	242.1
4/20/2016	59-4	59-3	313.8
4/20/2016	59-3A	59-3	265.9
4/20/2016	59-3	59-2	323.5
4/20/2016	59-2	59-2A	23.9
4/20/2016	59-2E	59-2C	80.9
4/20/2016	59-2D	59-2C	110
4/20/2016	59-2C	59-2B	111.1
4/21/2016	59-2F	59-2B	174.8
4/21/2016	59-2B	59-2A	307.5
4/25/2016	D27I	D30A	260.9
4/25/2016	D30A	D27A	243.9
4/25/2016	D27A	D27	36.9
4/25/2016	D27	D26	264.6
4/25/2016	D26	D25	282.3
4/25/2016	55-6B	55-6A	301.2
4/25/2016	55-6C	55-6A	120.3
4/25/2016	55-6A	55-6	231.6
4/25/2016	K2-5E	K2-5B	299
4/25/2016	K2-5B	K2-5A	268.8
4/25/2016	K2-5A	K2-5	107
4/25/2016	K2-5-1	K2-5	186.2
4/25/2016	K2-2I	K2-2H	275.2
4/25/2016	D33	D32	256.5
4/25/2016	K2-5-1A	K2-5-1	247.2
4/26/2016	48-6	48-5	290.2
4/26/2016	48-5	48-4	324.8
4/26/2016	48-4	48-3	301.8
4/27/2016	C50	C49	179.2
4/27/2016	C49	C48	156.4
4/27/2016	C48	C47	144.7
4/27/2016	C47C	C47A	170.5
4/27/2016	C47A	C47	189.6
4/27/2016	C47	C46-1	93.4
4/27/2016	C46-1	C46	130.5
4/27/2016	C46A	C46	223.2
4/28/2016	K12-17	K12-17	353
4/28/2016	K12-16B	K12-16A	147.8
4/28/2016	K12-16A	K12-16	300.6
4/28/2016	K12-16C	K12-16	252.4
4/28/2016	K12-16	K12-15	274.4
4/28/2016	K12-15B	K12-15A	98.3
4/28/2016	K12-15A	K12-15	303.2
5/4/2016	K12-14G	K12-14F	212.5
5/4/2016	K12-14F	K12-14E	254.9
5/4/2016	K12-14E	K12-14D	336.7
5/4/2016	K12-14D	K12-14C	273.4
5/4/2016	K12-14C	K12-14B	269.5
5/4/2016	K12-14B	K12-14A	204.9
5/4/2016	K12-14A	K12-14	295
5/4/2016	K12-15	K12-14	263
5/4/2016	D26-30A	D26-30	271.4
5/4/2016	K40-3B	K4-3A	215.4
5/4/2016	K40-3A	K40-3	250.3
5/4/2016	K40-2B	K40-2B	233.3
5/4/2016	K40-2A	K40-2B	245.6
5/4/2016	K40-3	K40-2	184.5
5/9/2016	C15-16C	C15-16B	101.1
5/9/2016	C15-16B	C15-16A	234.6
5/9/2016	C15-16A	C15-16	224.9
5/9/2016	C15-11F	C15-11E	301.1
5/9/2016	C15-11G	C15-11E	125.6
5/9/2016	C15-11E	C15-11D	235
5/9/2016	C15-11D	C15-11C	247.2
5/11/2006	C15-11H	C15-11B	277.1
5/11/2006	C15-11C	C15-11B	139.3
5/11/2006	C15-11B	C15-11A	525.3
5/11/2006	C15-11K	C15-11J	146.1
5/11/2006	C15-11J	C15-11I	201.4
5/11/2006	C15-11I	C15-11A	183.9
5/11/2006	C17-2M	C17-2L	301.3

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Date	MHFROM	MHTO	Footage
5/11/2006	C17-2L	C17-2K	282.8
5/12/2016	C17-2K	C17-2J	316.7
5/12/2016	C17-2J	C17-2I	298.7
5/12/2016	C17-14	C17-13	322.4
5/12/2016	C17-13	C17-12	304.4
5/12/2016	F15-7-3A	F15-7-3	224.9
5/12/2016	F15-7-3B	F15-7-3	104.3
5/12/2016	F15-7-4	F15-7-3	203
5/12/2016	F15-7-3	F15-7-2	146.8
5/12/2016	F15-7-2A	F15-7-2	324.5
5/12/2016	F15-7-2	F15-7-1	123.8
5/12/2016	F31	F30	204.8
5/12/2016	F30A	F30	165.8
5/12/2016	F29C	F29B	217.5
5/12/2016	F29B	F29A	221.2
5/12/2016	F29A	F29	211
5/12/2016	F30A	F29	206.5
5/16/2016	H13-14	H13-13	235.5
5/13/2016	C20-3C	C20-3B	
5/16/2016	C17-3N	C17-3M	228.9
5/16/2016	C17-3M	C17-3L	131.5
5/16/2016	C17-3K	C17-3J	117.4
5/16/2016	C17-3J	C17-3I	207.5
5/16/2016	C17-3I	C17-3H	9
5/16/2016	C17-3P	C17-3O	112.9
5/16/2016	C17-3O	C17-3L	80.1
5/16/2016	C17-3L	C17-3F	246.8
5/16/2016	C17-3F	C17-3I	50
5/16/2016	C17-3E1	C17-3E	259.7
5/16/2016	C17-3F	C17-3E	257.3
5/16/2016	C17-3R	C17-3Q	101.7
5/16/2016	C17-3Q	C17-3D	278.8
5/16/2016	C17-3E	C17-3D	128.4
5/16/2016	C17-14	C17-13	322.4
5/16/2016	C17-13	C17-12	304.4
5/16/2016	C17-12	C17-11	297.7
5/16/2016	C17-11	C17-10	305.5
5/12/2016	F12-1E	F12-1A	317.1
5/19/2016	76-2D1	76-2D	213.5
5/19/2016	65-5A	65-5	128.8
5/19/2016	65-6	65-5	470.4
5/19/2016	65-5	65-4	116
5/19/2016	65-4	65-3	166.6
5/19/2016	65-3	65-2	152.7
5/19/2016	65-2	65-1	147
5/19/2016	76F	76E	225.1
5/19/2016	76E	76D	225.1
5/19/2016	76D	76C	81.5
5/19/2016	76C	76B	306.8
5/19/2016	F1A	F1	238.2
5/16/2016	F21-6	F21-5	205.1
5/16/2016	F24	F23	436.1
5/16/2016	F23A	F23	227.7
5/16/2016	F23	F22	309.8
5/18/2016	C15-9-6	C15-9-3	217.5
5/18/2016	C15-9-5	C15-9-4	235.2
5/18/2016	C15-9-4	C15-9-3	64.9
5/18/2016	C15-9-3	C15-9-2	94.9
5/18/2016	C15-9-2	C15-9-1	34.5
5/18/2016	C15-9-1A	C15-9-1	507.7
5/25/2016	C15-18	C15-17	255.9
5/25/2016	C15-17	C15-16	255.4
5/25/2016	C15-16	C15-15	37.5
5/25/2016	C15-15	C15-14	380.8
5/25/2016	C15-14B	C15-14A	87.8
5/25/2016	C15-14A	C15-14	163.7
5/25/2016	C15-14	C15-13	347.9
5/25/2016	C15-7E	C15-7D	236.6
5/25/2016	C15-7D	C15-7B	134.5
5/25/2016	C15-7B	C15-7A	141.8
5/25/2016	C15-7A	C15-7	50.4
5/25/2016	C15-7C	C15-7B	332.1
5/25/2016	C15-9D	C15-9C	288.9
5/25/2016	C15-9C	C15-9B	362.7
5/25/2016	C15-7F	C15-7E	41.6
5/25/2016	L9-4G	L9-4F	201.6
5/25/2016	L9-4F	L9-4H	337.0
5/25/2016	L7-11F	L7-11E	202.3
5/25/2016	L7-11E	L7-11D	156.5
5/25/2016	L7-11D	L7-11G	165.5
5/25/2016	L7-11G	L9-4D	178.9
5/25/2016	L9-4F	L9-4E	208.0
5/25/2016	L9-4E	L9-4D	193.3
5/23/2016	D27-I	D30A	260.9
5/23/2016	D30A	D27A	243.9
5/23/2016	C15-20	C15-19	256.1
5/23/2016	C15-19	C15-18	243.6
5/31/2016	L9-4D	L9-4C	251.5
5/31/2016	L9-4C	L9-4B	255.4
5/31/2016	L9-4K	L9-4B	294.4
5/31/2016	L9-4B	L9-4A	391.3
5/31/2016	L9-4A	L9-4	252.8
5/31/2016	L9-4I	L9-4H	142.8
5/31/2016	L9-4H	L9-4	79.6
5/31/2016	C21-2I	C21-2H	147.2
5/31/2016	C21-2H	C21-2G	153.1
5/31/2016	C21-2G	C21-2C	192.5
5/31/2016	C21-2D	C21-2C	55.8
5/31/2016	C27-7D	C27-7C	390.9
5/31/2016	C27-7C	C27-7B	20.3
5/31/2016	C27-7B*	C27-7B	267.7
5/31/2016	C27-7B	C27-7A	189.2
5/31/2016	C27-7A	C27-7	221.1
5/31/2016	C27-10G	C27-10D	319.7

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Date	MHFROM	MHTO	Footage
5/31/2016	C27-10N	C27-10D	260.5
5/31/2016	C27-10F	C27-10E	207.4
5/31/2016	C27-10E	C27-10D	192.0
5/31/2016	C27-10D	C27-10C	158.6
5/31/2016	C27-10C	C27-10A	246.2
5/31/2016	C27-10B	C27-10A	286.8
5/31/2016	C27-7H	C27-10-0	192.4
5/31/2016	C27-10-0	C27-9	213.4
6/1/2016	C21-2C	C21-2B	162.2
6/1/2016	C21-2K	C21-2J	165.8
6/1/2016	C21-2J	C21-2B	158.3
6/1/2016	C21-2B	21-2A	363.3
6/1/2016	C21-2A	C21-2	401.6
6/1/2016	K2-2L	K2-2K	340.4
6/1/2016	C27-13F	C27-13E	182.6
6/1/2016	C27-13E	C27-13D	150.1
6/1/2016	C27-13D	C27-13C	191.6
6/1/2016	C27-13C	C27-13B	16.8
6/1/2016	C27-13B	C27-13A	190.0
6/1/2016	C27-13A	C27-13	198.5
6/2/2016	L9-7D	L9-7C	189.9
6/2/2016	L9-7C	L9-7B	253.7
6/2/2016	L9-7B	L9-7A	299.8
6/2/2016	L9-7	L18	236.0
6/2/2016	B36G	B36F	183.0
6/2/2016	B36F	B36E	167.9
6/2/2016	C13-1F	C13-1E	33.4
6/2/2016	C13-1E	C13-1D	91.8
6/2/2016	C13-1C	C13-1D	70.0
6/2/2016	C13-1D	C13-1C	70.0
6/2/2016	C13-1C	C13-1B	359.3
6/2/2016	C13-1B	C13-1A	325.1
6/2/2016	C13-1A	C13-1	327.5
6/2/2016	C13-2	C13-1	227.0
6/2/2016	C15-7E	C15-9A	335.1
6/2/2016	C15-9C	C15-9B	139.9
6/2/2016	C15-9B	C15-9A	129.8
6/2/2016	C15-9G	C15-9F	257.3
6/2/2016	C15-9F	C15-9A	27.8
6/6/2016	B14C	B14A	178.8
6/6/2016	B14A	B14	255.2
6/6/2016	B14B	B14A	301.5
6/6/2016	B14D	B14A	140.1
6/6/2016	B15C	B15B	142.3
6/6/2016	B15D	B15B	225.7
6/6/2016	B15B	B15A	227.4
6/6/2016	H25A	H25	248.5
6/7/2016	30-2F	30-2D	147.2
6/7/2016	30-2E	30-2D	279.4
6/7/2016	30-2D	30-2C	226.3
6/7/2016	30-2H	30-2G	246.9
6/7/2016	30-2G	30-2C	264.0

Date	MHFROM	MHTO	Footage
6/7/2016	30-2C	30-2B	278.6
6/7/2016	30-2B	30-2A	23.4
6/7/2016	30-2A	30-2	170.7
6/7/2016	B13C	B13B	182.2
6/7/2016	B13B	B13A	107.4
6/7/2016	B13A	B13	260.6
6/7/2016	55-4A	55-4	158.1
6/7/2016	55-4	55-3	128.8
6/7/2016	55-3	55-2	123.0
6/7/2016	55-2	55-1	42.4
6/8/2016	B10-3K	B10-3J	128.7
6/8/2016	B10-3J	B10-3I	88.9
6/8/2016	B10-3I	B10-3G	138.5
6/8/2016	B10-3H	B10-3G	108.8
6/8/2016	B10-3G	B10-3F	290.8
6/8/2016	B10-3F	B10-3B	293.0
6/8/2016	B10-3E	B10-3D	168.3
6/8/2016	B10-3D	B10-3C	174.6
6/8/2016	B10-3C	B10-3B	142.6
6/8/2016	B10-3B	B10-3A-1	118.0
6/9/2016	H13-6C	H13-6B	165.3
6/9/2016	L7	L6	166.5
6/9/2016	L6	L5	99.7
6/9/2016	L5	L4	270.3
6/9/2016	C21-1D	C21-1C	127.4
6/9/2016	L4-1	L4	140.0
6/9/2016	L4-1	L3	289.9
6/9/2016	L3-1	L3	140.0
6/15/2016	D25-6B	D25-6A	284.9
6/15/2016	IP3-15	IP3-14	186.4
6/15/2016	IP3-14	IP3-13	125.0
6/15/2016	IP3-13	IP3-12	125.7
6/15/2016	IP3-12	IP3-7	237.0
6/15/2016	IP3-11	IP3-10	250.1
6/15/2016	IP3-10	IP3-9	252.8
6/15/2016	IP3-9	IP3-8	249.0
6/15/2016	IP3-8	IP3-7	183.0
6/15/2016	IP3-3	IP3-2	273.4
6/15/2016	IP3-2	IP3-1	170.1
6/15/2016	IP3-1	IP3-1	226.8
6/15/2016	IP2-13	IP2-12	281.1
6/17/2016	IP3-7	IP3-6	215.3
6/17/2016	IP3-6	IP3-5	351.3
6/17/2016	IP3-5	IP3-4	249.0
6/17/2016	H35I	H35H	394.0
6/17/2016	H35H	H35G	125.3
6/17/2016	H35G	H35F	95.9
6/17/2016	IP3-4	H35F	108.5
6/17/2016	IP2-12	IP2-11	401.5
6/17/2016	IP2-11	IP2-10	401.4
6/17/2016	IP2-10	IP2-9	199.5
6/17/2016	IP2-9	IP2-8	304.9

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Date	MHFROM	MHTO	Footage
6/17/2016	IP2-16	IP2-15	403.3
6/17/2016	IP2-15	IP2-14	230.4
6/22/2016	C13I	C13-H	199.8
6/21/2016	H35Q	H35R	199.6
6/21/2016	H35R	H35P	201.5
6/21/2016	H35P	H35M	396.6
6/21/2016	H35K	H35L	200.4
6/21/2016	H35L	H35M	393.2
6/21/2016	D25-20	D25-19	289.6
6/21/2016	D25-19A	D25-19	276.1
6/21/2016	D25-19	D25-18	264.4
6/21/2016	D25-18A	D25-18	265.6
6/21/2016	IP2-8	IP2-3	232.4
6/21/2016	IP2-4	IP2-3	183.0
6/21/2016	IP2-3	IP2-2	327.1
6/21/2016	IP2-2	IP2-1	350.0
6/23/2016	IP2-14	IP2-6	221.7
6/23/2016	IP2-7	IP2-6	249.8
6/23/2016	IP2-6	IP2-5	401.2
6/23/2016	IP2-5	IP2-4	399.1
6/23/2016	P7	P6	76.5
6/23/2016	P6	P5	230.7
6/23/2016	P5	P4	169.1
6/23/2016	P4	P3	247.8
6/23/2016	P3	P2	244.0
6/24/2016	D25-20B	D25-20A	222.5
6/24/2016	D25-19B	D25-19A	265.3
6/24/2016	D25-20C	D25-20A	192.4
6/24/2016	D25-19C	D25-19A	214.6
6/24/2016	D25-18B	D25-18A	185.1
6/24/2016	D25-18C	D25-18A	206.9
6/24/2016	K2-5-8D	K2-5-8C	38.7
6/24/2016	K2-5-8E	K2-5-8C	104.2
6/24/2016	K2-5-8C	K2-5-8B	114.3
6/24/2016	K2-5-8B	K2-5-8A	24.6
6/24/2016	D25-18	D25-17	282.7
6/24/2016	D25-17A	D25-17	262.3
6/24/2016	D25-17A	D25-16	260.8
6/27/2016	P7	P6	76.5
6/27/2016	P6	P5	230.7
6/27/2016	P5	P4	169.1
6/27/2016	P4	P3	247.8
6/27/2016	P3	P2	244.0
6/27/2016	P2	P1	402.2
6/27/2016	P9	P8	289.0
6/27/2016	P8	P1	159.6
6/27/2016	M+75	P1	342.9
6/27/2016	D25-15R	D25-15L	174.4
6/27/2016	D25-15N	D25-15L	97.1
6/27/2016	D25-15L	D25-15K	133.5
6/27/2016	K25-15K	D25-15D	279.6
6/27/2016	D25-15E	D25-15D	278.6

Date	MHFROM	MHTO	Footage
6/27/2016	K2-5-7A	K2-5-7	216.7
6/27/2016	K2-5-8	K2-5-7	41.8
6/27/2016	K2-5-7	K2-5-6	233.1
6/27/2016	K2-5-6	K2-5-5-	201.1
6/27/2016	K2-5-11	K2-5-10	256.5
6/27/2016	K2-5-10	K2-5-9	258.0
6/27/2016	K2-5-9	K2-5-8	298.3
6/27/2016	K2-5-8A	K2-5-8	233.2
6/27/2016	D25-6E	D25-6D	245.7
6/27/2016	D25-6D	D25-6C	276.5
6/27/2016	D25-6C	D25-6B	268.7
6/28/2016	D25-15QQ	D25-15P	224.3
6/28/2016	D25-15P	D25-15B	294.9
6/28/2016	D25-15D	D25-15B	305.0
6/28/2016	D25-15C	D25-15B	242.1
6/28/2016	D25-15T	D25-15R	220.6
6/28/2016	D25-15S	D25-15R	238.1
6/29/2016	D25-15R	D25-15A	282.0
6/29/2016	D25-15B	D25-15A	273.6
6/29/2016	D25-15A	D25-15	264.0
6/29/2016	D25-6G	D25-6F	252.7
6/29/2016	D25-6F	D25-6B	294.9
6/29/2016	D25-31E	D25-31D	152.4
6/29/2016	D25-31D	D25-31B	262.7
6/29/2016	D25-31C	D25-31B	137.1
6/29/2016	D25-31B	D25-31A	170.2
6/29/2016	D25-31G	D25-31A	255.9
6/29/2016	D25-31A	D25-31	276.0
6/29/2016	D25-31	D25-30	306.8
6/29/2016	D25-30	D25-29C	270.0
6/29/2016	D25-30D	D25-30B	179.4
6/29/2016	D25-30C	D25-30B	100.0
6/29/2016	D25-30B	D25-30A	143.0
6/29/2016	D25-30E	D25-30A	219.2
6/29/2016	D25-30A	D25-30	271.4
6/29/2016	D25-29E	D25-29D	242.5
6/29/2016	D25-29F	D25-29D	21.8
6/29/2016	D25-29D	D25-29C	275.3
6/30/2016	D25-29B	D25-29A	189.7
6/30/2016	D25-29A	D25-29	325.6
6/30/2016	D25-29C	D25-29	20.0
6/30/2016	D25-29	D25-28	287.0
6/30/2016	D25-28	D25-27	269.1
6/30/2016	D25-27G	D25-27B	212.6
6/30/2016	D25-27B	D25-27	273.1
6/30/2016	D25-27A	D25-27	110.5
6/30/2016	B35-5H	B35-56	214.6
6/30/2016	72	71	302.8
6/30/2016	71A	71	30.5
6/30/2016	71	70	96.3
6/30/2016	70	69	24.8
6/30/2016	D9-25D	D9-25C	241.0

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Date	MHFROM	MHTO	Footage	Date	MHFROM	MHTO	Footage
6/30/2016	D9-25C	D9-25B	231.3	7/9/2016	C15-10	C15-9	325.1
6/30/2016	D9-25B	D9-25A	399.0	7/11/2016	C38-4A	C38-4	165.0
6/30/2016	D9-25A	D9-25	251.5	7/11/2016	D25-19B	D25-19A	265.3
6/30/2016	D9-23E	D9-23D	318.9	7/11/2016	D25-19C	D25-19A	214.6
6/30/2016	D9-23D	D9-23C	242.4	7/11/2016	D25-18C	D25-18A	206.9
6/30/2016	D9-23C-1	D9-23C	213.2	7/11/2016	D25-18B	D25-18A	185.6
6/30/2016	D9-23C	D9-23A	291.5	7/13/2016	K2-9-9B	K2-9-9A	162.4
6/30/2016	D9-23B	D9-23A	220.2	7/13/2016	K2-9-9A	K2-9-9	300.0
6/30/2016	D9-23A	D9-23	289.5	7/13/2016	K2-9-6A	K2-9-7	445.2
7/5/2016	D9-22-4	D9-22-3	112.9	7/13/2016	K2-9-5C	K2-9-5	283.9
7/5/2016	D9-22-3	D9-22-2	170.6	7/13/2016	K2-9-4	K2-9-5	250.6
7/5/2016	D9-22-2A	D9-22-2	121.6	7/13/2016	K12-14D5	K12-14D4	130.3
7/5/2016	D9-22-2A	D9-22-1	204.6	7/13/2016	K12-14D4	K12-14D3	38.7
7/5/2016	D9-22-1	D9-22	85.4	7/13/2016	K12-14D3	K12-14D1	276.0
7/5/2016	D9-23	D9-22	264.8	7/13/2016	K12-14D2	K12-14D1	156.4
7/5/2016	D9-22A	D9-22	26.6	7/13/2016	K12-14D1	K12-14D	186.8
7/5/2016	D9-27	D9-26	273.8	7/13/2016	D25-13	D25-12	199.7
7/5/2016	D9-26	D9-25	25.5	7/13/2016	D25-12B	D25-12A	235.9
7/5/2016	D9-25	D9-24	?	7/13/2016	D25-12A	D25-12	98.1
7/5/2016	D9-24	D9-23	263.2	7/13/2016	D25-12	D25-11	211.8
7/5/2016	D25-25F	D25-25E	146.1	7/13/2016	D25-11B	D25-11A	214.5
7/5/2016	D25-25E	D25-25D	101.7	7/13/2016	D25-11A	D25-11	289.9
7/5/2016	D25-25D	D25-25C	98.7	7/13/2016	D25-11	D25-10	291.0
7/5/2016	D25-25C	D25-25A	162.8	7/13/2016	D25-10D	D25-10B	122.9
7/5/2016	D25-25A	D25-25	20.5	7/13/2016	D25-10B	D25-10A	112.3
7/5/2016	D25-26	D25-25-1	288.1	7/13/2016	D25-10E	D25-10A	129.3
7/5/2016	D25-25-1	D25-25	8.9	7/13/2016	D25-10A	D25-10	283.6
7/5/2016	D25-26B	D25-26A	187.9	7/13/2016	D25-10	D25-9	292.1
7/5/2016	D25-26A	D25-26	276.7	7/13/2016	D25-9A	D25-9	264.4
7/7/2016	D25-33C	D25-33A	388.4	7/14/2016	F18-10	F18-9	232.4
7/7/2016	D25-33B	D25-33A	229.9	7/13/2016	D27K	D27J	234.2
7/7/2016	C17I	C17H	248.8	7/13/2016	D27J	D27I	297.5
7/7/2016	C17H	C17E	401.7	7/13/2016	D27A	D27	36.6
7/7/2016	C17F	C17E	260.7	7/13/2016	D32	D30	277.2
7/7/2016	C17E	C17C	247.6	7/13/2016	D30A	D30	279.8
7/7/2016	D9-22F	D9-22E	286.5	7/13/2016	D30A	D29	270.2
7/7/2016	D9-22E	D9-22D	52.8	7/13/2016	D27I	D27G	260.9
7/7/2016	D9-22D	D9-22C	202.8	7/13/2016	D27G	D27A	243.9
7/7/2016	D9-22C	D9-22B	62.6	7/13/2016	D27C	D27B	249.8
7/7/2016	D9-22B	D9-22A	243.9	7/13/2016	D27B	D27	275.8
7/7/2016	D9-22A	D9-22	26.6	7/13/2016	D29	D28	192.5
7/7/2016	D25-4B	D25-4A	256.9	7/13/2016	D28	D27	105.8
7/7/2016	D25-4A	D25-4	279.0	7/12/2016	D25-6A	D25-6	270.9
7/7/2016	D25-4	D25-3	269.3	7/12/2016	D25-6	D25-5	289.7
7/7/2016	D25-3	D25-2	270.6	7/12/2016	D25-5A	D25-5	279.8
7/7/2016	D25-2	D25-1	276.4	7/12/2016	D25-5A	D25-4	314.5
7/7/2016	D25-1	D25	283.0	7/12/2016	D25-8	D25-7	266.3
7/8/2016	C17M	C17L	390.7	7/12/2016	D25-7	D25-6	39.8
7/8/2016	C17L	C17K	405.4	7/13/2016	D25-9	D25-8	279.4
7/8/2016	C17K	C17J	389.4	7/13/2016	D25-8	D25-7	266.3
7/8/2016	C17J	C17B	30.4	7/13/2016	D25-14B	D25-14A	232.4
7/8/2016	C40-2	C40-1	271.4	7/14/2016	D25-15C	D25-15B	242.1

City of York 2016 Cleaning Summary

Date	MHFROM	MHTO	Footage	Date	MHFROM	MHTO	Footage
7/14/2016	D25-15Q	D25-15P	224.3	8/3/2016	F5-3	F5-2	298.4
7/14/2016	D25-15P	D25-15B	294.9	8/3/2016	F5-2	F5-1	299.8
7/14/2016	D25-15B	D25-15A	273.6	8/3/2016	F5-1C	FC-1B	161.1
7/14/2016	D25-15S	D25-15R	238.1	8/3/2016	F5-1B	F5-1A	19.8
7/14/2016	D25-15T	D25-15R	220.6	8/3/2016	F15-1A	F15-1	258.2
7/14/2016	D25-15R	D25-15A	282.0	8/2/2016	D9-6	D9-5	279.7
7/14/2016	D25-15A	D25-15	264.0	8/2/2016	D9-5	D9-4	336.7
7/14/2016	D25-14C	D25-14A	227.0	8/2/2016	D9-4	D9-3	256.0
7/14/2016	D25-14A	D25-14	270.6	8/2/2016	D9-3	D9-2	286.9
7/14/2016	D25-15	D25-14	257.9	8/2/2016	D9-2C	D9-2A	220.8
7/18/2016	B35-12	B35-11	59.5	8/2/2016	D9-2A	D9-2	242.2
7/18/2016	K12-19	K12-18	93.9	8/2/2016	D9-2	D9-1	264.3
7/18/2016	K12-17D	K12-17C	275.9	8/2/2016	D9-1	D9	230.5
7/18/2016	K12-18A	K12-18	390.1	8/11/2016	C15-9-1	C15-9	264.5
7/18/2016	K12-18	K12-17	383.0	8/11/2016	C15-9A	C15-9	275.0
7/18/2016	K12-17B	K12-17A	207.7	8/11/2016	C15-9	C15-8	262.5
7/18/2016	K12-17A	K12-17	135.4	8/11/2016	C15-8	C15-7	2525.6
7/18/2016	K12-17C	K12-17	244.3	8/11/2016	C15-7	C15-6	252.1
7/18/2016	K12-16D	K12-16C	233.9	8/11/2016	C15-6	C15-5	249.7
7/19/2016	27-10	C27-9	28.4	8/11/2016	C15-5B	C15-5A	82.0
7/19/2016	C27-9	C27-8	179.7	8/11/2016	C15-5A	C15-5	185.7
7/19/2016	C27-8	C27-7	199.9	8/11/2016	C15-5	C15-4	362.0
7/19/2016	C27-7J	C27-7	275.0	8/11/2016	C15-4	C15-3	314.9
7/19/2016	K12-2I	K12-2H	385.0	8/11/2016	C15-3	C15-2	302.1
7/19/2016	K12-2H	K12-2G	371.3	8/11/2016	C15-2	C15-1	301.3
7/19/2016	K12-2G	K12-2G1	27.0	8/15/2016	C17-10	C17-9	302.5
7/19/2016	K12-2G1	K12-2	354.8	8/15/2016	C17-9	C17-8	302.7
7/20/2016	D9-22	D9-21	260.8	8/15/2016	C17-8	C17-7	251.6
7/20/2016	D9-21	D9-20	83.4	8/15/2016	C17-7	C17-6	255.7
7/20/2016	D9-20	D9-19	396.6	8/15/2016	C27-31E	C27-31D	246.7
7/20/2016	D9-19	D9-18	33.1	8/15/2016	C17-2I	C17-2H	301.1
7/20/2016	D9-18	D9-17	267.2	8/15/2016	C17-2H	C17-2G	300.4
7/20/2016	D9-17	D9-16	246.0	8/15/2016	C17-2G	C17-2F	299.7
7/20/2016	D9-16	D9	36.8	8/15/2016	C17-2F	C17-2E	272.0
7/28/2016	F15-7-8	F15-7-7	201.4	8/15/2016	C17-2F	C17-2E	272.0
7/28/2016	F15-7-7	F15-7-6	258.7	8/15/2016	C17-2E	C17-2D	122.9
7/28/2016	F15-7-6	F15-7-5	251.4	8/15/2016	C17-2R	C17-2D	249.7
7/28/2016	F15-7-5	F15-7-4	274.7	8/15/2016	C17-2D	C17-2C	184.1
7/29/2016	F15-1C	F15-1B	161.3	8/15/2016	C17-2C	C17-2B	289.0
7/29/2016	F15-1B	F15-A	19.8	8/15/2016	C17-2N	C17-2B	239.2
7/29/2016	F15-1A	F15-1	258.2	8/15/2016	C17-2B	C17-2A	250.2
7/29/2016	40E	40D	344.2	8/16/2016	C17-3D	C17-3C	362.3
7/28/2016	F5-8	F5-7	279.1	8/16/2016	C17-3C	C17-3B	336.2
7/28/2016	F5-7	F5-6	199.9	8/16/2016	C17-3B	C17-3A	107.8
7/28/2016	F5-6	F5-5	208.1	8/16/2016	C17-6	C17-5	308.9
7/28/2016	F5-5	F5-4	199.4	8/16/2016	C17-5	C17-4	338.3
8/1/2016	D10D	D10C	215.3	8/16/2016	C17-4	C17-3	136.7
8/1/2016	D10C	D10B	249.3	8/16/2016	C17	C17-3	182.1
8/1/2016	D10B	D10A	242.3	8/16/2016	C17-3	C17-2	59.0
8/1/2016	D10A	D10	249.1	8/18/2016	C27-11	C27-10-1	230.3
8/3/2016	40C	40B	259.3	8/18/2016	C27-10-1	C27-10-1	249.5
8/3/2016	F5-4	F5-3	361.5	8/18/2016	C27-10A	C27-10-O	192.4

City of York 2016 Cleaning Summary

Date	MHFROM	MHTO	Footage	Date	MHFROM	MHTO	Footage
8/18/2016	C27-10-O	C27-10	213.4	8/29/2016	D9-22B	D9-27A	240.0
8/18/2016	C27-10	C27-9	28.4	8/29/2016	D9-27A	D9-27	28.8
8/18/2016	C27-7	C27-6	191.4	8/29/2016	D24-7	D24-6	395.7
8/18/2016	C27-6	C27-5	200.5	8/29/2016	D24-6	D24-5	251.8
8/18/2016	C27-5	C27-4	29.9	8/29/2016	D24-5	D24-4-1	213.2
8/17/2016	C27-15	C27-14	59.9	9/1/2016	F17	F16	213.6
8/17/2016	C27-14	C27-13	198.2	9/1/2016	F16	F15	200.2
8/17/2016	C27-13	C27-12	149.5	9/1/2016	F15-1	F15	175.1
8/17/2016	C27-12A	C27-12	444.2	9/1/2016	F15	F15	225.2
8/16/2016	C27-34C		185.7	9/1/2016	B20-3	B20-4	250.6
8/16/2016	K12-17	K12-16C	353.0	9/1/2016	B20-3	B20-2	55.1
8/23/2016	C35A	C35	200.2	9/1/2016	B20-2	B20-1	201.6
8/23/2016	C35A	C34	76.8	9/1/2016	B20-3	B20	206.2
8/23/2016	C37	C36	160.9	9/1/2016	B18-1A	D18-1	253.6
8/23/2016	C36	C35	184.0	9/1/2016	D18-1C	D18-1B	224.3
8/23/2016	C27-30	C27-29	223.0	9/1/2016	D18-1B	D18-1	254.9
8/23/2016	C27-19	C27-28	214.5	9/1/2016	D18-1	D18	287.1
8/23/2016	C17-2T	C17-2S	188.2	9/1/2016	D18	D17	281.8
8/23/2016	C17-2S	C17-2R	112.5	9/1/2016	D17B	D17A	144.7
8/23/2016	C17-2Q	C17-2P	169.8	9/1/2016	D17A	D17	16.0
8/23/2016	C17-2P	C17-2N	262.4	9/1/2016	D17	D16	249.3
8/23/2016	C17-2O	C17-2N	59.8	9/2/2016	F15	F14	415.0
8/22/2016	C35G	C35F	210.7	9/2/2016	F14	F13	180.7
8/22/2016	C35F	C35E	206.8	9/2/2016	F13	F12	150.6
8/22/2016	C35E	C35A	303.8	9/2/2016	F12	F11	274.0
8/22/2016	C35D	C35C	177.8	9/2/2016	F11	F10	235.8
8/22/2016	C35C	C35B-1	116.4	9/2/2016	F10	F9	38.5
8/22/2016	C35B-1	C35B	58.6	9/2/2016	F9	F8	34.0
8/22/2016	C35-B	C35A	129.9	9/19/2016	46-4D	46-4C	189.1
8/24/2016	D18-6	D18-5	241.6	9/28/2016	L9-5	L9-4	282.0
8/24/2016	D18-5	D18-4	290.2	10/12/2016	H13-18	H13-18G	249.7
8/24/2016	D18-4B	D18-4A	149.7	10/20/2016	61-5	61-4	148.0
8/24/2016	D18-4A	D18-4	251.5	10/20/2016	61-4	61-3	271.4
8/24/2016	D18-3B	D18-3A	118.1	10/20/2016	C85D	C85C	192.0
8/24/2016	D18-3A	D18-3	279.8	10/18/2016	B36C	B36B	207.6
8/24/2016	D18-3	D18-2	284.9	10/18/2016	B36B	B36C	60.8
8/24/2016	D18-2A	D18-2	228.1	10/19/2016	76-12	76-11	220.8
8/24/2016	D18-2A	D18-1	292.1	10/19/2016	76-11	76-10	100.9
8/24/2016	D9-15	D9-14	222.2	10/19/2016	76-10	76-9	334.8
8/24/2016	D9-14A	D9-14	544.0	10/19/2016	76-9A	76-9	374.3
8/24/2016	D9-14A	D9-13	267.3	10/19/2016	76-9	76-8	263.0
8/24/2016	D9-13B	D9-13A	383.8	10/19/2016	76-8	76-7	222.0
8/24/2016	D9-13A	D9-13	199.5	10/19/2016	55-5B	55-5A	296.0
8/25/2016	D9-31	D9-30	202.9	10/19/2016	55-5A	55-5	311.5
8/25/2016	D9-30	D9-29	41.3	10/19/2016	55-6	55-5	306.4
8/25/2016	D9-29	D9-28	203.3	10/19/2016	55-5C	55-5	40.3
8/25/2016	D9-28	D9-27	40.4	10/19/2016	55-5F	55-5E	172.4
8/23/2016	B38-14	B38-13	167.0	10/19/2016	55-5E	55-5D	132.2
8/29/2016	D9-22I	D9-22H	66.7	10/19/2016	55-5D	55-5C	323.9
8/29/2016	D9-22H	D9-22G	189.0	10/20/2016	C21-2A	C21-2	401.6
8/29/2016	D9-22G	D9-22F	222.0	10/20/2016	B38-16B	H13-9	264.9
8/29/2016	D9-27C	D9-27B	263.5	10/25/2016	46-4A	46-4	411.9

City of York 2016 Cleaning Summary

Date	MHFROM	MHTO	Footage
10/25/2016	48-3B	48-3A	225.8
10/25/2016	48-3A	48-3	276.9
10/25/2016	46-5	46-4	318.9
10/25/2016	47B	47A	214.0
10/25/2016	47A	47	323.5
10/25/2016	48-2	48-1	249.6
10/25/2016	48-1	48	251.0
10/12/2016	76-3I	76-3H	202.9
10/12/2016	76-3J	76-3H	147.0
10/12/2016	76-3H	76-3G	245.8
10/12/2016	76-3G	76-3F	261.0
10/12/2016	76-3F	76-3E	191.1
10/12/2016	76-3D1	76-3D	81.0
10/12/2016	76-3D	76-3C	250.3
10/12/2016	76-3C	76-3	251.3
10/12/2016	76-6	76-5	267.1
10/12/2016	76-4	76-3	284.5
10/12/2016	A81	76-3	280.9
10/12/2016	76-3	A80	8.4
10/12/2016	A80	A79	273.4
10/13/2016	76-2G	A-79	263.8
10/13/2016	76-2A	A79	249.8
10/13/2016	A79	A-78	254.8
10/13/2016	A78	A77	12.0
10/13/2016	76-1A	77	171.7
10/13/2016	76-1E	76-1D	98.3
10/13/2016	76-1D	76-1C	252.1
10/13/2016	76-1C	76-1B	327.1
10/13/2016	76-1B	A77	175.5
11/2/2016	61-14	61-13	221.1
11/2/2016	61-13	61-12	254.4
11/2/2016	61-12	61-11	317.4
11/2/2016	61-11	61-10	312.1
11/2/2016	61-10	61-9	268.2
11/2/2016	61-9B	61-9A	269.5
11/2/2016	61-9A	61-9	272.5
11/2/2016	61-9D	61-9C	63.9
11/2/2016	61-9C	61-9	255.0
11/2/2016	61-8B	61-8A	298.5
11/2/2016	61-8A	61-8	301.1
11/2/2016	61-9	61-8	288.2
11/2/2016	61-8D	61-8C	202.1
11/2/2016	61-8C	61-8	200.8
11/2/2016	61-7F	61-7E	375.0
11/2/2016	61-7E	61-7D	259.0
11/2/2016	61-7D-1	61-7D	90.0
11/2/2016	61-7D	61-7C	240.7
11/2/2016	61-7C	61-7B	149.1
11/2/2016	61-8D	61-8C	202.1
11/2/2016	61-7B	61-7A	270.1
11/2/2016	61-7A	61-7	175.2
11/2/2016	61-8	61-7-1	126.6
11/2/2016	61-7-1	61-7	105.3
12/3/2016	15-5A	15-5	342.3
12/16/2016	C21-5	C21-4	234.5
12/23/2016	K8-6	K8-5	228.0
12/22/2016	F5-1	F5	273.2
12/23/2016	L12-7	L12-6	270.1

City of York Attachment 2

York City Sewerage Needs Analysis: 5-Year Projection of Additional Flows (gpd)

Map No.	Development Name	2017	2018	2019	2020	2021	Total
1	Northwest Triangle - senior apartments	0	0	0	0	10500	10500
2	Northwest Triangle - remainder	0	0	10000	10000	0	20000
3	1 E Market St	0	2800	0	0	0	2800
4	454 E Princess St (ACCO site)	0	0	0	0	1400	1400
5	200 N Broad Street (Graybill property)	0	1225	0	0	0	1225
6	44-50 W Market St (Woolworth building)	100	2450	2550	2450	0	7550
7	373-379 W King St	0	1200	0	0	0	1200
8	200 S George St	2400	0	0	0	0	2400
9	324-326 S George St	700	700	700	0	0	2100
10	241 S Court St	0	1400	0	0	0	1400
11	43-45 W Market St	720	700	0	0	0	1420
12	303-335 W Maple St	2800	2800	0	0	0	5600
13	600-630 S Pine St	350	350	0	0	0	700
14	120 N Richland Av	0	0	3500	0	0	3500
15	240 Stonewall Avenue	0	1750	1750	0	0	3500
16	462-464 West Market Street	0	0	4200	0	0	4200
17	319 Chestnut St	0	0	0	5250	5250	10500
18	117-119 E Princess St	0	2100	2100	0	0	4200
19	232 E Market St	0	5375	5375	0	0	10750
20	2 W Hamilton Av	0	1050	0	0	0	1050
21	127 N Broad St	0	0	8050	8050	0	16100
22	490 E Boundary Av	350	0	0	0	0	350
23	890 Loucks Rd	4550	0	0	0	0	4550
24	270 S Charles St	350	0	0	0	0	350
25	miscellaneous infill residential development	1400	1400	1400	1400	1400	7000
	Total	**13720**	**25300**	**39625**	**27150**	**18550**	**124345**

York Township Chapter 94 Municipal Wasteload Management

York Township
York County, Pennsylvania

2016 Municipal Wasteload Management Report

York Township System Tributary to
the City of York Wastewater Treatment Plant

March 2017

Gannett Fleming

Excellence Delivered As Promised

Contents

Tables

Attachments

1.0 DESCRIPTION OF WASTEWATER COLLECTION AND CONVEYANCE FACILITIES

The York Township (Township) wastewater collection and conveyance system (System) is owned by the York Township Water and Sewer Authority (Authority) and operated by the Township. The System consists of approximately 46.9 miles of interceptors and collector piping ranging in size from 4-inch diameter to 18-inch diameter and six (6) pumping stations with force mains. The Township System conveys wastewater to the City of York Wastewater Treatment Plant (WWTP).

The Tyler Run Interceptor was placed into operation in 1969 and originally served four (4) sewer districts that have since been combined into one district. In addition to serving portions of York Township, the Interceptor serves several portions of Spring Garden Township. During 2016, the Tyler Run Interceptor transported an approximated 159,000 gallons per day (gpd) of wastewater from Spring Garden Township, based on a combination of metered and unmetered flow data from Spring Garden Township.

The pump stations tributary to the Tyler Run Interceptor include the Marlborough, the Leader Heights, the Joppa Road, the Spangler Meadows, the Imperial Drive, and the Lentzlyn Drive Pump Stations. Information on the operation and maintenance, condition, and capacity of the six (6) pumping stations is included in Section 4.0.

2.0 SYSTEM MONITORING, MAINTENANCE, AND REPAIR

York Township employs six (6) full-time employees licensed by Pennsylvania Department of Environmental Protection (PADEP) to perform operation and maintenance activities of the sanitary sewer system. Major pumping station repairs and electrical problems are addressed through contracted services on an as-needed basis. Sections 3.0 and 4.0 include a summary of the condition and repairs completed on the collection system and conveyance components of the System in 2016. Attachment 1 provides greater detail regarding the Township's maintenance activities in 2016.

3.0 WASTEWATER COLLECTION SYSTEM CONDITION

The Township owns the equipment necessary to maintain the sewer system. As described in Attachment 1, the Township staff flushed and performed closed circuit television (CCTV) inspection of 38,000 linear feet of sewer within the Tyler Run drainage basin during 2016. Cured-in-place lining of 3,855 feet of 8-inch diameter sewer was also performed. During routine maintenance work, the Township completed four (4) repairs that are estimated to reduce the base flow in the Tyler Run basin by up to 2,000 gpd. These included the replacement of an 8-inch sewer that had a circular crack with an offset joint creating a blockage. PADEP was notified and after a site visit with the Township, all PADEP comments and requirements were addressed. Additionally two (2) lateral connections were repaired using PVC wyes and an 8-inch sewer on Joppa Road was repaired with a PVC pipe. The Township will continue its sewer system inspection and rehabilitation program in 2017 to identify and eliminate sources of excessive infiltration and inflow (I/I).

4.0 WASTEWATER CONVEYANCE SYSTEM CONDITION

The Township staff performs routine maintenance twice weekly on the pump stations. Each pump station is monitored by a dial-up paging system to ensure a timely response in the event of a mechanical failure. Following is a summary of each pumping station.

4.1 Marlborough Pump Station

The Marlborough Pump Station is located adjacent to Interstate 83 off Jonquil Road. The Township completed the replacement of the Marlborough Pump Station during 2013 and placed the new facilities in operation in May 2013. The project replaced equipment originally installed in the early 1970s that was at the end of its useful operating life. The original, fixed-speed pumps were replaced with new, variable speed, submersible pumps, each with a rated design capacity of 375 gpm at a Total Dynamic Head of 124 feet. The replacement station was also equipped with a diesel-powered backup pump with a rated capacity of 700 gpd at a Total Dynamic Head of 130 feet to provide pumping capacity in the event of an emergency, such as loss of station power. The new Water Quality Management Part II Permit sets the rated capacity of the facility at 540,000 gpd, which is equal to the rated design capacity with one of the electric powered pumps in service.

However, the new pumps provided with the rehabilitated station have an actual capacity of 350 gpm each, as confirmed by pump performance testing and flow meter readings.

In 2016, the Township installed a "muffin monster" grinder at the Marlborough pump station. Since this may increase the efficiency of the pumps, the actual capacity may increase from the current 350 gpm and should be tested again.

Data from elapsed time meters, which monitor pump motor operating time, are typically recorded on a twice weekly basis by the Township staff. Table 1 includes a summary of the meter readings at the Marlborough Pump Station during 2016. Listed minimum and maximum values are the actual values recorded during the year. The upgraded station now is equipped with a magnetic flow meter to record the station's conveyed flow. Staff also records pump run time for diagnostic purposes.

Table 1: Marlborough Pump Station-2016 Operating Data

	Pump Run Times (hrs/day) (1)	Flow (gpd) (2)	Capacity (gpd) (3)	Peaking Factor (Max/Avg)
Minimum	3.94	82,740	540,000	2.21
Average	5.92	124,320		
Maximum	13.07	274,470		

Notes:

(1) Runtime data provided by York Township Public Works Department.
(2) Based on hours of operation multiplied by actual tested capacity of 350 gpm.
(3) Permitted capacity of the station based on design capacity of 375 gpm with one pump in service and 24 hours of runtime.

Table 2 presents a summary of the projected flows to the pump station for the next two (2) years based on anticipated growth within the Pump Station's service area, as detailed in Attachment 2. Based on the average daily operation time during 2016, the pump station is operating well below its permitted capacity. Accordingly, no overloads are expected at the Marlborough Pump Station over the next two (2) years.

Table 2: Marlborough Pump Station-Estimated 2-Year Flow Increase

	Year		
	2016	2017	2018
Avg. Daily Flow (gpd) (1)	124,320	125,720	125,720
Max. Daily Flow (gpd)	274,470	277,841	277,841
% Loading (design capacity) (2)	50.8%	51.5%	51.5%
% Loading (tested capacity) (3)	54.5%	55.1%	55.1%

Notes:

(1) Future year average flows based on projections of wastewater flows for planned development tributary to the Marlborough Pump Station (see Attachment 2).
(2) Maximum Day Flow divided by station permitted capacity of 540,000 gpd.
(3) Maximum Day Flow divided by station tested capacity of 504,000 gpd.

4.2 Leader Heights Pump Station

The Leader Heights Pump Station is located adjacent to Interstate 83 on Keyway Drive and serves a predominantly commercial area. The station was originally placed in service in 1975 and was at the end of its useful life. Accordingly, the Authority and Township authorized design for replacement of the station with a new submersible pumping station in late 2013. The construction of a submersible replacement station was completed in November 2014.

The new submersible pumping station has a design and permitted capacity of 80 gpm (115,200 gpd). The actual pumping capacity was determined by performing drawdown testing of the pumps. Start-up testing of the pumping station indicated a pumping capacity of 58 gpm with one (1) pump out of service.

Data from the elapsed time meters, which monitor pump motor operating time, are typically recorded on a twice weekly basis by the Township staff. Table 3 includes a summary of the meter readings at the Leader Heights Pump Station during 2016.

4.3 Joppa Road Pump Station

The Joppa Road Pump Station is located adjacent to Interstate 83, south of Leader Heights Road. The pump station has a design capacity of 80 gpm (115,200 gpd). An emergency generator is onsite for standby power. The pumping capacity is determined by performing drawdown testing of the pumps. The most recent drawdown test results demonstrated that the pumping capacity was 85 gpm with the largest pump out of service and 100 gpm with both pumps running. The elapsed time meters, which monitor pump motor operating time, are typically recorded on a twice weekly basis by the Township staff. Table 5 includes a summary of the meter readings at the Joppa Road Pump Station during 2016.

Table 5: Joppa Road Pump Station–2016 Operating Data

	Pump Run Times (hrs/day) (1)	Flow (gpd) (2)	Capacity (gpd) (3)	Peaking Factor (Max/Avg)
Minimum	6.03	30,753	115,200	1.73
Average	8.05	41,055		
Maximum	13.94	71,094		

Notes:

(1) Runtime data provided by York Township Public Works Department.
(2) Based on hours of operation multiplied by actual tested capacity of 85 gpm.
(3) Permitted capacity of the station based on the design capacity of 80 gpm with one pump in service and 24 hours of runtime.

Table 6 presents a summary of the projected flows to the pump station for the next two (2) years based on anticipated growth within the pump station's service area, as detailed in Attachment 2. Based on the average daily operation time during 2016, the pump station is operating at under 60 percent of its tested capacity. No overloads are expected at the Joppa Road Pump Station over the next two (2) years.

Table 6: Joppa Road Pump Station-Estimated 2-Year Flow Increase

	Year		
	2016	2017	2018
Avg. Daily Flow (gpd) (1)	41,055	42,455	42,455
Max. Daily Flow (gpd)	71,094	73,447	73,447
% Loading (design capacity) (2)	61.7%	63.8%	63.8%
% Loading (tested capacity) (3)	58.1%	60.0%	60.0%

Notes:

(1) Future year average flows based on projections of wastewater flows for planned development tributary to the Joppa Road Pump Station (see Attachment 2)
(2) Maximum Day Flow divided by station permitted capacity of 115,200 gpd.
(3) Maximum Day Flow divided by station tested capacity of 122,400 gpd.

4.4 Spangler Meadows Pump Station

The Spangler Meadows Pump Station is located off Fairfield Court. The pump station has a design capacity of 80 gpm (115,200 gpd). An emergency generator is onsite for standby power. The pumping capacity is determined by performing drawdown testing of the pumps. The most recent drawdown test results demonstrated that the pumping capacity was 85 gpm with one pump out of service and 95 gpm with both pumps running.

The elapsed time meters, which monitor pump motor operating time, are typically recorded on a twice weekly basis by the Township staff. Table 7 includes an analysis of the meter readings at the Spangler Meadows Pump Station during 2016.

Table 7: Spangler Meadows Pump Station-2016 Operating Data

	Pump Run Times (hrs/day) (1)	Flow (gpd) (2)	Capacity (gpd) (3)	Peaking Factor (Max/Avg)
Minimum	2.80	14,280	115,200	2.36
Average	4.53	23,103		
Maximum	10.71	54,621		

Notes:

(1) Runtime data provided by York Township Public Works Department.
(2) Based on hours of operation multiplied by actual tested capacity of 85 gpm.
(3) Permitted capacity based on the design capacity of 80 gpm with one pump in service and 24 hours of runtime

Table 8 presents a summary of the projected flows to the pump station for the next two (2) years based on anticipated growth within the pump station's service area, as detailed in Attachment 2. Based on the maximum daily operation time during 2016, the pump station is operating at approximately 45 percent of its tested capacity. No overloads are expected at the Spangler Meadows Pump Station over the next two (2) years.

Table 8: Spangler Meadows Pump Station-Estimated 2-Year Flow Increase

	Year		
	2016	2017	2018
Avg. Daily Flow (gpd) (1)	23,103	23,103	23,103
Max. Daily Flow (gpd)	54,621	54,621	54,621
% Loading (design capacity) (2)	47.4%	47.4%	47.4%
% Loading (tested capacity) (3)	44.6%	44.6%	44.6%

Notes:

(1) Future year average flows based on projections of wastewater flows for planned development tributary to the Imperial Drive Pump Station (see Attachment 2).
(2) Maximum Day Flow divided by station permitted capacity of 115,200 gpd.
(3) Maximum Day Flow divided by station tested capacity of 122,400 gpd.

4.5 Imperial Drive Pump Station

The Imperial Drive Pump Station is located off Imperial Drive in northwest York Township. The pump station has a design capacity of 350 gpm (504,000 gpd). An emergency generator is onsite for standby power. The pumping capacity is determined by performing drawdown testing of the pumps. The most recent drawdown test results demonstrated that the pumping capacity was 330 gpm with one pump out of service and 440 gpm with both pumps running. The elapsed time meters, which monitor pump motor operating time, are typically recorded on a twice weekly basis by the Township staff. Table 9 includes an analysis of the weekly meter readings at the Imperial Drive Pump Station during 2016.

Table 9: Imperial Drive Pump Station-2016 Operating Data

	Pump Run Times (hrs/day) (1)	Flow (gpd) (2)	Capacity (gpd) (3)	Peaking Factor (Max/Avg)
Minimum	2.43	48,114	504,000	1.58
Average	3.48	68,904		
Maximum	5.5	108,900		

Notes:

(1) Runtime data provided by York Township Public Works Department.
(2) Based on hours of operation multiplied by actual tested capacity of 330 gpm.
(3) Permitted capacity based on the design capacity of 350 gpm with one pump in service and 24 hours of runtime.

During 2016, the Township installed a valve vault on the force main leaving Imperial Drive Pump Station. This will enable the Township to use a pump to bypass the pump station in the event of a pump or wet well failure.

Table 10 presents a summary of the projected flows to the pump station within the next two (2) years based on anticipated growth within the pump station's service area, as detailed in Attachment 2. Based on the maximum daily operation time during 2015, the pump station is operating at approximately 23 percent of its tested capacity. Substantial growth is projected in the sewershed served by the Imperial Drive Pump Station. However, no overloads are expected over the next two (2) years.

Table 10: Imperial Drive Pump Station-Estimated 2-Year Flow Increase

	Year		
	2016	2017	2018
Avg. Daily Flow (gpd) (1)	68,904	78,104	109,654
Max. Daily Flow (gpd)	108,900	123,404	173,253
% Loading (design capacity) (2)	21.6%	24.5%	34.4%
% Loading (tested capacity) (3)	22.9%	26.0%	36.5%

Notes:

(1) Future year average flows based on projections of wastewater flows for planned development tributary to the Imperial Drive Pump Station (see Attachment 2).
(2) Maximum Day Flow divided by station permitted capacity of 504,000 gpd.
(3) Maximum Day Flow divided by station tested capacity of 475,000 gpd.

4.6 Lentzlyn Drive Pump Station

The Lentzlyn Drive Pump Station is located off Lentzlyn Drive in western York Township. The station was placed into operation in May 2009 and has a design capacity of 100 gpm. An emergency generator is onsite for standby power. The pumping capacity is determined by performing drawdown testing of the pumps. The most recent drawdown test results demonstrated that the pumping capacity was 100 gpm with one pump out of service. The elapsed time meters, which monitor pump motor operating time, are typically recorded on a twice weekly basis by the Township staff. Table 11 includes a summary of the weekly meter readings at the Lentzlyn Drive Pump Station during 2016.

Table 11: Lentzlyn Drive Pump Station-2016 Operating Data

	Pump Run Times (hrs/day) (1)	Flow (gpd) (2)	Capacity (gpd) (3)	Peaking Factor (Max/Avg)
Minimum	2.56	15,360	144,000	1.38
Average	3.56	21,360		
Maximum	4.91	29,460		

Notes:

(1) Runtime data provided by York Township Public Works Department.
(2) Based on hours of operation multiplied by actual tested capacity of 100 gpm.
(3) Permitted capacity based on the design capacity of 100 gpm with one pump in service and 24 hours of runtime.

Table 12 presents a summary of the projected flows to the pump station within the next two (2) years based on anticipated growth within the pump station's service area, as detailed in Attachment 2. Based on the maximum daily operation time during 2016, the pump station is operating at approximately 21 percent of its design and tested capacity. No overloads are expected at the Lentyzlyn Drive Pump Station over the next two (2) years.

Table 12: Lentzlyn Drive Pump Station-Estimated 2-Year Flow Increase

	Year		
	2016	2017	2018
Avg. Daily Flow (gpd) (1)	21,360	21,360	21,360
Max. Daily Flow (gpd)	29,460	29,460	29,460
% Loading (design capacity) (2)	20.5%	20.5%	20.5%
% Loading (tested capacity) (3)	20.5%	20.5%	20.5%

Notes:

(1) Future year average flows based on projections of wastewater flows for planned development tributary to the Imperial Drive Pump Station (see Attachment 2).
(2) Maximum Day Flow divided by station permitted capacity of 144,000 gpd.
(3) Maximum Day Flow divided by station tested capacity of 144,000 gpd.

5.0 2015 WASTEWATER FLOW TO CITY OF YORK WWTP

The 2016 average daily wastewater flow from the York Township meter on the Tyler Run Interceptor (YT01) was 1,266,842 gpd. This metered flow includes flow from Spring Garden Township, which averaged 158,999 gpd in 2016. In order to determine the actual wastewater flow contributed to the City of York WWTP from York Township, the Spring Garden Township flows must be subtracted from the metered 2016 average daily wastewater flow. Additionally, there are a number of connections in York Township that flow into the Spring Garden Township sewer system and then into the City of York system at one of three metered points (SG1, SG2, or SG3). The average daily flow from these connections totaled 39,365 gpd in 2016. Accordingly, the 2016 average daily flow from York Township into the City of York system was 1,147,207 gpd. Attachment 3 contains a summary of monthly flow readings for the YT01 meter and backup information related to the calculation of York Township's average daily flow to the City of York WWTP for 2016.

6.0 SUMMARY OF CONNECTION PERMITS

During 2016, there were 25 new permits issued for connections to the York Township sewer system. Attachment 4 contains a summary of the new permits connected to the Township's system in 2016. The Township estimates that the flow from these 25 new permits is 10,500 gpd from the 30 total EDUs based on 350 gpd per EDU. As shown in Table 13, a total of 42 connection permits were issued in the past five (5) years for the Township Sewer System tributary to the City of York WWTP.

Table 13: Summary of Connection Permits Issued - Past 5 Years

Year	Number of Permits Issued
2012	0
2013	3
2014	4
2015	10
2016	25
Total	**42**

7.0 PROJECTED COLLECTION SYSTEM CONNECTIONS AND EXTENSIONS

Attachment 2 is a summary of the projected sewer system connections within York Township that will contribute flow to the City of York WWTP. The anticipated wastewater flow increase per year for the next five (5) years is included in Attachment 2. The location of each of the projected connections is shown on the map included as Attachment 5, with the number on the map referring to the number in Attachment 2.

The pumping station flow projections in Tables 2, 4, 6, 8, 10, and 12 were developed using the information in Attachment 2. The total wastewater flow projected per year was used in the tabulation of available sewer capacity included in Attachment 4. As shown in Attachment 4, there is adequate capacity available in the Township System tributary to the City of York WWTP to serve the anticipated development identified in Attachment 2.

8.0 TOTAL NITROGEN OFFSET CREDITS

The City of York WWTP discharges to waters tributary to the Chesapeake Bay and has been issued an NPDES Permit containing an annual cap load for Total Nitrogen (TN). Title 25, Chapter 96 of the Pennsylvania Code provides regulations related to the use of offsets from pollution reduction activities as a component of the WWTP's efforts to comply with its annual cap load for TN. Offsets are granted for elimination of on-lot wastewater systems. An annual offset of 25 pounds per year of TN is granted if the permittee maintains records that show that the on-lot system existed or was put in place prior to January 1, 2003, and was eliminated after January 1,

2003. These records must verify when the on-lot system was built, when the on-lot system was taken out of service, and when the dwelling was connected to the public sewer system.

During 2016, there were no on-lot abandonments in the sewer system tributary to the City of York WWTP. A summary of on-lot systems retired since 2003 is provided in Table 14.

Table 14: Summary of Retired On-Lot Systems

Year	EDUs	Offset TN (lbs/year)
2003	10	250
2005	1	25
2006	3	75
2007	4	100
2008	27	675
2009	109	2,725
2013	2	50
2014	0	0
2015	0	0
2016	0	0
Total	146	3,900

9.0 INFILTRATION/INFLOW REDUCTION PLAN

The City of York maintains a permanent wastewater flow meter (YT01) in the Tyler Run Interceptor to measure the flow contributed by York Township and a portion of Spring Garden Township to the City of York Sewer System. Flow metering results during three major wet weather events in 2011 indicated surcharge conditions in the 18-inch interceptor sewer immediately before its connection to the City of York Sewer System. According to the York Township Public Works Department, there were no indications of sanitary sewer overflows in the Township System during these three surcharge events.

In response to the surcharge events, the 2011 annual report prepared by the Authority for use by York City in its Annual Report included a Corrective Action Plan (CAP) setting forth steps to be taken by York Township to eliminate the surcharge conditions. PADEP also established a ban on new connections to the Tyler Run Interceptor until the hydraulic overload conditions were adequately addressed. York Township completed the majority of the CAP components such that

PADEP lifted the connection ban in a letter dated November 1, 2012. The 2012 CAP and the Township's actions that resulted in the PADEP lifting the CAP were discussed at length in the Township's 2013 Municipal Wasteload Management Report submission.

Annual precipitation in York Township was below normal for 2016, with 36.97 inches recorded at the Springettsbury Township Regional WWTP for the year compared to the long-term average of about 42.4 inches for the York area. Township staff reported that the conveyance system was also able to handle all precipitation events without overflows or surcharges.

Attachment 1 includes a summary of the activities undertaken by York Township in 2016 to reduce I/I within the Township Sewer System tributary to the Tyler Run Interceptor.

Attachment 1

York Township Maintenance Report

YORK TOWNSHIP

Public Works Department

194 Oak Rd., Dallastown,Pa. 17313-9300
Phone (717) 741-3513 Fax (717) 741-1394

January 17, 2017

Mr. Ronald A. Jager
P.O. Box 67100
Harrisburg, PA 17106-7100

Re: 2016 Municipal Wasteload Management Report
York City WWTP

Dear Mr. Jager

York Township employs six (6) full time employees licensed by Pa. DEP to perform maintenance of the sanitary sewer system which flows to the York City WWTP. The personnel perform routine maintenance twice weekly on six (6) sewer pumping stations. Each pump station is monitored by a dial up paging system to ensure a timely response in the event of a mechanical failure.

The township owns the following maintenance equipment. There is one 2015 Gap-Vax combination flusher/vacuum truck for cleaning and removing debris from lines and stations, one 3500 gallon water tank truck to complement the Gap-Vax. We have a 2014 truck equipped with a Rausch tractor and pan/tilt camera for 6" and larger lines. We have also equipped it with a lateral launch camera capable of inspecting laterals up to 100' from the main. We also have one hand fed portable television camera for 4" lateral connections, one portable flusher, root cutter and rodder for laterals. The township also has a trailer mounted Godwin pump (Model #CD160M) capable of bypass pumping any pump station or interceptor line it operates and maintains. The township has added a Godwin Dri-prime Model CD150M critically silenced, trailer mounted pump set.

During 2016 our crew flushed and televised 38,000 lineal feet in the Tyler Run drainage basin. We lined 3,855'of 8" ESVC with a cured in place liner. We made 4 repairs of note in 2016. On 3/10/2016 we repaired an 8" ESVC line that had a circular crack with an offset joint that created a blockage. PADEP was notified and after a site visit with Austin Pardoe all comments and requirements were addressed. On 4/19 and 6/17/2016 two repairs to 8" ESVC lines on Crescent Rd. were repaired by replacing the clay wyes with SDR 35 PVC wyes. On 11/14/2016 an 8" line on Joppa Rd. was repaired using SDR 35 to replace ESVC. The estimated

removal of I&I is approximately 2,000 GPD. On 6/24/2016 a "Muffin Monster" was put in service at the Marlborough pump station. On 11/22/2016 the force main at the Imperial Drive pump station was exposed and a valve vault was placed in line. This will enable us to use a pump to bypass the station in the event of a pump or wet well failure.

In 2017 we intend to continue to identify and remove sources of I&I.

Respectfully submitted,

Robert W. Miller II
Assistant Director of Public Works

Enc: Meter readings
Cc: Public Works Director
Township Manager
Gary Milbrand
Water & Sewer Authority
File

2016 York City WWTP Chapter 94 Report

60 GPM rated in 2014	Leader Heights Pump Station			
	Hours of operation/day	Gallons pumped/day	Actual pump capacity(GPD)	Peaking Factor
Minimum	0.26	936		
Average	0.39	1,404		
Maximum	0.74	2,664	86,400	1.90

85 GPM rated in 2009 100gpm(both motors)	Joppa Rd. Pump Station			
	Hours of operation/day	Gallons pumped/day	Actual pump capacity(GPD)	Peaking Factor
Minimum	6.03	30,753		
Average	8.05	41,055		
Maximum	13.94	71,094	122,400	1.73

350 GPM rated in 2013 501gpm(both motors)	Marlborough Pump Station			
	Hours of operation/day	Gallons pumped/day	Actual pump capacity(GPD)	Peaking Factor
Minimum	3.94	82,740		
Average	5.92	124,320		
Maximum	13.07	274,470	504,000	2.21

330 GPM rated in 2009 440gpm(both motors)	Imperial Dr. Pump Station			
	Hours of operation/day	Gallons pumped/day	Actual pump capacity(GPD)	Peaking Factor
Minimum	2.43	48,114		
Average	3.48	68,904		
Maximum	5.50	108,900	475,200	1.58

85 GPM rated in 2009 95 gpm(both motors)	Spangler Meadows Pump Station			
	Hours of operation/day	Gallons pumped/day	Actual pump capacity(GPD)	Peaking Factor
Minimum	2.80	14,280		
Average	4.53	23,103		
Maximum	10.71	54,621	122,400	2.36

100 GPM rated in 2009	Lentzlyn Drive Pump Station			
	Hours of operation/day	Gallons pumped/day	Actual pump capacity(GPD)	
Minimum	2.56	17500		
Average	3.56	21,360		
Maximum	4.91	29,460	144,000	1.38

Attachment 2

York Township Projected Connections

YORK TOWNSHIP
PROJECTED CONNECTIONS TO York City
WASTEWATER TREATMENT PLANT

		Total Gallons	2017	2018	2019	2020	2021	Future yrs
1	2528 Knob Hill Rd -F. Drenning 1 @ 350 Map 56 Parcel 4 DEP A3-67971-481-3E	350	350					
2	Fair Valley (6) 103 existing mobile home pads 143 new connections Map 19 Parcel 113 & 126 246 @ 350 DEP A3-6791-645-3	86,100		21,000	43,050	22,050		
3	Apple Hill Map HI Parcel 456, 456G & 456B No PM	3,500		3,500				
4	Austin E Hartman Estate DEP A3-67971-614-3E Map 20 Parcel 18B 1 @ 350 1870 Powder Mill Rd	350	350					
5	Reserved for future development							
6	Apple Hill Map HI Parcel 456D 12 @ 250 DEP A3-67971-637-3E	3,000	350	350	2,300			
7	Cherry Lane - Darlene St. A3-67971-611-3E 7 @ 350	2,450	1,050	1,050	700			
8	Jay Crist/Temple Baptist east side of Pine Grove Rd DEP A3-67971-485-3E	5,250	5,250					

YORK TOWNSHIP
PROJECTED CONNECTIONS TO York City
WASTEWATER TREATMENT PLANT

		Total Gallons	2017	2018	2019	2020	2021	Future yrs
9	Kinsley Lot 10 - St. Charles Way Map HI Parcel 308U DEP A3-67971-436-3	1,400	1,400					
10	Reserved for future development							
11	Kinsley/Lehman Tract Map 20 parcel 154,155,158 33 @ 350 DEP Not Filed	11,550		3,850	3,850	3,850		
12	Reserved for future development							
13	Crest Map 8 Parcel 25 DEP P3-67971-159-IV 16 @ 350	5,600			5,600			
14	Reserved for future development							
15	Reserved for future development							
16	Country Meadows (2) (3) Map HI Parcel 130M DEP P3-67971-259-III	21,350	1,400		5,250	14,700		
17	Hunters Path - Dew Drop Rd. Map 03, Parcel 113 16 apts @ 350	5,600	5,600					
18	Bergdoll/Dew Drop Map HI Parcel 241B DEP P3-67971-214-IV 1 @ 350	350	350					

YORK TOWNSHIP
PROJECTED CONNECTIONS TO York City
WASTEWATER TREATMENT PLANT

		Total Gallons	2017	2018	2019	2020	2021	Future yrs
19	M. Parks - 250 Cherry Street (formerly Cherrywood) Map 24 parcel 72 8 @ 350 DEP A3-67971-631-3E	2,800					2,800	
20	Georgakopoulos(6) Map 06 Parcel 16 10 @ 350 No PM	3,500	3,500					
21	Reserved for future development							
22	Reserved for future development							
23	Kinsley Equities II S. Geoge/Old Balt Pike 96 @ 350 No PM	33,600					33,600	
24	Presbyterian Senior Living (4) Leader Heights Road Map 36, Parcels 210 & 211 100 @ 350 No PM	35,000		35,000				
25	Reserved for future use							
26	Reserved for future use							
27	Reserved for future use							
28	OSS/office bldg/expansion Map 20 Parcel 174 DEP A3-67971-596-3E	800					800	
29	Fountainhead (6) 3 @ 350 DEP A3-67971-428-3	1,050	700	350				

YORK TOWNSHIP
PROJECTED CONNECTIONS TO York City
WASTEWATER TREATMENT PLANT

		Total Gallons	2017	2018	2019	2020	2021	Future yrs
30	Reserved for future development							
31	Reserved for future development							
32	Reserved for future development							
33	Wellspan - 2050 South Queen St Map 8 Parcel 23A 10 @ 350 DEP A3-67971-627-3E	3,500			3,500			
34	Reserved for future development							
35	Reserved for future development							
36	Reserved for future development							
37	Reserved for future development							
38	Reserved for future development							
39	Chanticleer Map HI Parcel 458 DEP A3-67971-563-3E 14 @ 250	3,500	500	500	500	500	500	1,000
40	Reserved for future development							
41	Kinsley - Southfield Drive (6) 33 @ 350 DEP A3-67971-580-3E	11,550	2,500	5,000	4,050			
41A	Kinsley/Hovis (6) Leader Heights Road DEP Not Filed	7,700	2,500	5,200				
42	Reserved for future development							
43	Village Grove Estates Map HI parcel 185 414 @ 350 DEP Not Filed	144,900					114,900	

YORK TOWNSHIP
PROJECTED CONNECTIONS TO York City
WASTEWATER TREATMENT PLANT

	Total Gallons	2017	2018	2019	2020	2021	Future yrs
(2) Projects tributary to Marlborough Pump Station	21,350	1,400	0	5,250	14,700	0	0
(3) Projects tributary to Joppa Road Pump Station	21,350	1,400	0	5,250	14,700	0	0
(4) Projects tributary to Leader Heights Pump Station	35,000	0	35,000	0	0	0	0
(5) Projects tributary to Spangler Meadows Pump Station	0	0	0	0	0	0	0
(6) Projects tributary to Imperial Drive Pump Station	109,900	9,200	31,550	47,100	22,050	0	0
(7) Projects tributary to Lentzlyn Drive Pump Station	0	0	0	0	0	0	0

Attachment 3

York Township Reserve Capacity Calculation

ATTACHMENT 3
YORK TOWNSHIP
TABULATION OF AVAILABLE SEWER RESERVE CAPACITY IN CITY OF YORK WWTP
[All flows are in units of gallons per day (gpd)]

Component	2016	2017	2018	2019	2020	2021
Existing Flow from Current Users (1)	1,147,207	1,147,207	1,178,257	1,259,307	1,338,607	1,384,957
Projected Flow Increase (2)	----	31,050	81,050	79,300	46,350	301,000
Total Estimated Wastewater Flows	1,147,207	1,178,257	1,259,307	1,338,607	1,384,957	1,685,957
Percent Usage	34.11%	35.04%	37.45%	39.80%	41.18%	50.13%
Total Reserved Capacity (3)	3,363,000	3,363,000	3,363,000	3,363,000	3,363,000	3,363,000
Remaining Reserved Capacity	2,215,793	2,184,743	2,103,693	2,024,393	1,978,043	1,677,043

Notes:

(1) York City flow meter YT01 reading (1,266,842 gpd) less Spring Garden flow through YT01
(2) From projected future connections (see Attachment 2).
(3) York Township current capacity in City of York WWTP.

York Township
Tabulation of Flows to York City
YC01

Year:	2016

Month	Days	Monthly Flow (MG)
January	31	39.9250
February	29	55.2390
March	31	44.7360
April	30	39.8040
May	31	47.0630
June	30	39.3380
July	31	36.6570
August	31	36.2290
September	30	31.8850
October	31	31.8310
November	30	29.2570
December	31	31.7000
Total	366	463.6640

Average (AGD):	1,266,842	
Less Spring Garden Average(AGD) to YT-01:	158,999	
Sub Total(AGD):	1,107,843	
Plus Unmetered Connections(AGD):	39,365	+
Average Daily Flow (Gallons)	1,147,207	*

* York City Flow Meter YT01 plus Unmetered flows[+] to Spring Garden Township less Spring Garden Township Flows throught YT01.

+ Unmetered connections to Spring Garden Township are then metered to York City via Meter SG1, SG2 or SG03. See attached.

AGD = Average Gallons per Day
MG = Million Gallons

Chapter 94 Report Summary of Spring Garden Flows thru
York Township Flow Meter No. 7 (YT01)

Year 2016

Quarter	Non Metered EDU's	Days	Metered Flow	Total Flow (MG)
1	426	92	931,694	14,648,894
2	426	92	642,730	14,359,930
3	426	90	755,376	14,174,376
4	426	92	1,293,200	15,010,400
	Total:	366		58,193,600

Average (GPD)	158,999

Attachment 4

York Township Sewer Connections to York City - 2016

Sewer Connections					
Municipality: York Township					
YORK CITY - 2016					
NAME / ADDRESS	USE	PERMIT #	DATE	UNITS	GALLONS
LANCASTER HOME BUILDERS - 305 DARLENE ST	1	2016-001	1/4/2016	1	350
LANCASTER HOME BUILDERS - 335 DARLENE ST	1	2016-002	1/4/2016	1	350
MERV MILLER BUILDER - 2035 SOUTHWYND CT	1	2016-005	3/10/2016	1	350
HARRY & GLENNA LATSHAW - 208 FAREDFIELD CT	1	2016-006	3/28/2016	1	350
LANCASTER HOME BUILDERS - 345 DARLENE ST	1	2016-007	4/26/2016	1	350
CHARTER HOMES - 105 VALMERE PATH	1	2016-008	5/3/2016	1	350
HEARTLAND BUILDERS - 101 HUNTERS PATH	1	2016-011	6/27/2016	1	350
HEARTLAND BUILDERS - 102 HUNTERS PATH	1	2016-012	6/27/2016	1	350
HEARTLAND BUILDERS - 103 HUNTERS PATH	1	2016-013	6/27/2016	1	350
HEARTLAND BUILDERS - 104 HUNTERS PATH	1	2016-014	6/27/2016	1	350
HEARTLAND BUILDERS - 105 HUNTERS PATH	1	2016-014	6/27/2016	1	350
HEARTLAND BUILDERS 301 HUNTERS PATH	1	2016-016	7/6/2016	1	350
HEARTLAND BUILDERS 302 HUNTERS PATH	1	2016-017	7/6/2016	1	350
HEARTLAND BUILDERS 303 HUNTERS PATH	1	2016-018	7/6/2016	1	350
HEARTLAND BUILDERS 304 HUNTERS PATH	1	2016-019	7/6/2016	1	350
HEARTLAND BUILDERS 305 HUNTERS PATH	1	2016-020	7/6/2016	1	350
HEARTLAND BUILDERS 306 HUNTERS PATH	1	2016-021	7/6/2016	1	350

SHETZ, INC - 160 LEADER HEIGHTS RD	6	2016-023	7/22/2016	6	2,100
ROBERT BOWSER - 2025 SOUTHWYND CT	1	2016-025	9/20/2016	1	350
HEARTLAND BUILDERS - 201 HUNTERS PATH	1	2016-038	11/8/2016	1	350
HEARTLAND BUILDERS - 202 HUNTERS PATH	1	2016-039	11/8/2016	1	350
HEARTLAND BUILDERS - 203 HUNTERS PATH	1	2016-040	11/8/2016	1	350
HEARTLAND BUILDERS - 204 HUNTERS PATH	1	2016-041	11/8/2016	1	350
HEARTLAND BUILDERS - 205 HUNTERS PATH	1	2016-042	11/8/2016	1	350
HEARTLAND BUILDERS - 206 HUNTERS PATH	1	2016-043	11/8/2016	1	350

Attachment 5

York Township Projected Connections Map

Attachment 3

1. Quality Assurance of Effluent Monitoring §94.12(a)(5), in part

The laboratory at the City of York Wastewater Treatment Plant is responsible for the analysis of raw influents, partially treated and treated wastewater, and its byproducts to determine the efficiency of plant processes and to ensure that the effluent meets state and federal requirements. The laboratory also analyzes industrial wastewater samples collected by Municipal Industrial Pretreatment Program (MIPP) staff. These samples are used to determine whether local industries are meeting the requirements of their permits and to determine the amount of surcharges, if applicable. When other analyses are required, MIPP and the laboratory staff coordinate testing with private laboratories.

The laboratory was accredited by the Pennsylvania Department of Environmental Protection (PADEP) in 2007 according to the requirements in 25 PA Code, Chapter 252 and the Laboratory Accreditation Act (27 PA C.S. §§ 4101 – 4113). The laboratory's accreditation was renewed in 2016. In 2016, the laboratory participated in the Phenova Water Pollution Proficiency Testing Study 316. All values reported in the study were within acceptable limits.

1.1. Sampling

Treatment plant operators typically collect in-house samples. MIPP personnel collect the industrial wastewater samples. Required containers, sampling methods, preservation techniques, and holding times for samples comply with 40 CFR, Part 136.3 Table II.

To ensure sample integrity, these general guidelines are followed:

1. All influent, effluent and some activated sludge samples are collected by refrigerated automatic samplers, set to 4° C, over 24-hour periods running from midnight to midnight. Samples are chilled within a range of 1° C to 6° C. Raw influent, final effluent, and some other process samplers operate in flow proportional mode.
2. Samples are collected in sample containers appropriate to the test requirement (glass, plastic etc.). Fecal coliform samples are collected in sterile plastic bags.
3. Laboratory personnel measure dissolved oxygen (DO) and temperature at the 002 outfall with a portable DO meter. A sample is collected and brought to the laboratory for pH analysis.
4. Samples are preserved in the field and stored at appropriate temperatures as dictated by each individual standard operating procedure (SOP). This minimizes analyte loss due to chemical, physical, or biological degradation.
5. Samples that exceed their holding times or have other quality control issues related to the batch in which they are run are reported with a flagged result if re-sampling is not possible.
6. Individuals responsible for collection of each in-house sample document on a chain of custody form their initials, and the time the sample arrives in the laboratory.
7. Industrial samples have a chain of custody, which includes sample information, time and date collected, type of sample, preservation, etc. The chain of custody also functions as a bench sheet for the sample.

1.2. Analysis

In 2016 the laboratory performed more than 20,200 analyses to complete NPDES permit

compliance reports, plant process-control requirements, and monitoring requirements for industrial discharges. Some analytes, such as oil and grease, cyanide, flash point, priority pollutants, TCLP, and local limit testing, cannot be tested in the laboratory. Testing for these samples was contracted to ALS Environmental. The MIPP contracted ALS Environmental to test for the following analytes that cannot be tested in the laboratory: arsenic, cobalt, cyanide, flash point, mercury, molybdenum, oil and grease, selenium, tin, titanium, vanadium, BTEX, and PAH. ALS Environmental also analyzed two MIPP BOD samples.

Table 1-1 depicts the types and numbers of samples analyzed in the laboratory each week for NPDES permit compliance and process-control. The laboratory also regularly tests industrial discharge samples for the MIPP as shown in Table 1-2 below.

Table 1-1: Number of Treatment Plant Samples Analyzed per Week, by Analyte

Type	Analyte								
	TSS	**VS**	**TS**	**BOD**	**NH_3**	**TKN**	**NO_2NO_3**	**PO_4**	**Fecal Coliform**
Influents	28	0	0	28	21	0	7	28	0
Effluents	7	0	0	7	21	1	21	21	7
Mixed	28	0	0	0	0	0	0	0	0
Return	14	0	0	0	0	0	0	0	0
Other Sludges	0	14	14	0	0	0	0	0	0
GBT Samples	7	14	14	0	0	0	0	0	0
Digester	0	6	6	0	0	0	0	0	0
Train 2 & Train 3	4	0	0	0	20	0	0	20	0
Weekly	88	34	34	35	62	1	28	69	7

Notes: Totals do NOT include quality control samples, industrial wastewater samples, special samples, blanks, etc.

Table 1-2: Number of Industrial Samples Analyzed per Year, by Analyte

Analyte	Number of Samples
pH*	98
Total Suspended Solids	189
BOD_5	188
NH_3	175
PO_4	176
Metals**	184

Notes: Totals do NOT include treatment plant samples, quality control samples, special samples, blanks, etc. The total number of industrial analyses per year is 1,104. Metals samples are counted once regardless of the number of elements tested.

* - pH measurements performed by MIPP staff in the field under laboratory registration #67-04977.

The methods chosen for each analysis have been approved by USEPA and PADEP, and the analytical Standard Operating Procedures (SOP) associated with the methods are reviewed regularly during the PADEP laboratory audits. Table 1-3 lists each analyte tested in the laboratory along with the reference method. All references to Standard Methods refer to the 18th edition. Future references may be integrated from Standard Methods 22nd edition. In 1998 the laboratory received approval from the USEPA for one alternate test procedure for Standard Method 2540-D that allows these samples to be dried overnight before weighing instead of repeating the drying, weighing, drying, weighing cycle to constant weight.

Table 1-3: Reference Methods for Each Analysis

Analyte	Reference Method
Total Solids	SM 2540 G
Total Suspended Solids	SM 2540 D
Residual Solids, Volatile	EPA 160.4
Settleable Solids, Volumetric	SM 2540 F
Metals, Microwave Digestion	SM 3030 K
Metals, Atomic Absorption	SM 3111 B
Ammonia, Distillation	SM 4500 NH_3 B
Ammonia, Selective Electrode	SM 4500 NH_3 F
Kjeldahl Nitrogen	SM 4500 N_{org} B &
Nitrate/Nitrite	SM 4500 NO_3 H
Phosphorus, Digestion	SM 4500 P B
Phosphorus, Ascorbic Acid	SM 4500 P E
BOD/CBOD	SM 5210 B
Fecal Coliform (Initiated 9/17/14)	Colilert 18

1.3. Quality Control Samples

The laboratory analyzes quality control samples with each batch of samples prepared and analyzed. A batch is defined as one (1) to twenty (20) samples of the same matrix prepared and analyzed using the same methods, personnel, and lot(s) of reagents with a maximum elapsed time of 24 hours between the start of preparation of the first and last sample (unless a more stringent requirement is contained in the reference method). Specific details about the required quality control samples are contained in each analytical SOP. The following is a description of the various quality control samples that are used in the laboratory.

1. Blank (BLK): A sample of similar matrix to the associated samples that is free from the analyte(s) of interest. The blank is processed simultaneously with, and under the same conditions as, the environmental samples, through all steps of the analytical procedure. The blank is used to detect the presence of contamination in the analytical environment. Analysis of the blank must indicate that no target analyte(s) or interferences are present at concentrations above the MDL (method detection limit).

2. Duplicate (DUP): Two aliquots of the same sample analyzed by an identical procedure. The duplicate sample measures the precision associated with laboratory procedures, but not with sample collection, preservation, or storage procedures. The duplicate sample is analyzed simultaneously with, and under the same conditions as, the environmental samples, through all steps of the analytical procedure. The duplicate samples are evaluated for relative percent difference (RPD) and a duplicate is considered acceptable when a RPD of 10% or less is obtained, unless otherwise specified in the analytical SOP.
3. Initial Calibration: Two or more standards of known concentration (the number varies depending on the method) are prepared and analyzed according to the procedure detailed in the analytical SOP. For methods that require the use of calibration standards (either daily or periodically), the slope of the resulting curve is examined to ensure that it meets the standards required by the method. Unless otherwise stated in the method, the correlation coefficient of the slope must be at least 0.995 for linear calibration curves, and 0.999 for non-linear calibration curves. Calibration curves are typically verified using at least one low level and one high level secondary source standard (QCS) of known value (see QCS below).
4. Laboratory Control Sample (LCS): A sample of similar matrix to the associated samples that is free from the analyte(s) of interest, spiked with a verified, known amount of method analyte(s). The LCS is analyzed simultaneously with, and under the same conditions as, the environmental samples, through all steps of the analytical procedure. The LCS is used to determine that the methodology is in control, that the laboratory is capable of making accurate and precise measurements, and that the laboratory is able to recover the analyte(s) using the analytical method. The results of the LCS are evaluated for percent recovery (% Rec), and a LCS with a percent recovery of ± 10% is considered acceptable unless otherwise specified in the analytical SOP.
5. Matrix Spike (MS): Two aliquots of the same sample analyzed by an identical procedure, where a known quantity of the method analyte(s) is added to one of the aliquots. The MS is analyzed simultaneously with, and under the same conditions as, the environmental samples, through all steps of the procedure. The MS is used to determine whether the sample matrix contributes bias to the analytical results. The measured values in the MS must be corrected for any background concentration found in the unspiked sample aliquot. The results of the MS are evaluated for percent recovery (% Rec) of ± 10% which is considered acceptable unless otherwise specified in the analytical SOP. Metals analysis MS are evaluated for percent recovery (% Rec) of ± 15%.
6. Secondary Source Standard (QCS): Secondary reference materials or standards are purchased from a different manufacturer or different lot number than the standards used to calibrate the instrument. Analysis of a QCS ensures the accuracy of the calibration standards and is required after each initial instrument calibration. The use of a QCS also provides another method for monitoring the quality of analysis, since their true value is known. QCS are analyzed after every ten samples to verify the initial calibration, and bracket sample results with standards of known value. QCS alternate between a low and a high level standard. The results of the QCS are evaluated for percent recovery (% Rec), and a QCS with a percent recovery of ± 10% is considered acceptable unless otherwise specified in the analytical SOP.

1.4. Other Laboratory Techniques

Other techniques that the laboratory uses to monitor the quality of analyses are not necessarily run with every batch of samples tested, but are nonetheless important in determining the efficacy of the laboratory. Examples of these techniques are given below:

1. Correlation of results: When several similar tests are run on a single sample, the results may be correlated to verify the quality of analysis. For example, soluble BOD results are expected to be less than BOD results, and ortho-phosphate results should be less than total phosphate results.
2. Proficiency Testing (PT): The laboratory analyzes at least one single blind proficiency-testing sample for each accredited test method or analyte in our laboratory scope of work every twelve months. Additional PT studies, including double blind PT studies, may be completed, as the laboratory deems necessary.
3. Retesting: Samples may be retested to compare results and measure accuracy using either the same or different analysts. Retesting samples is used only as a method of assessing the quality of analysis, never to selectively report data for compliance purposes.
4. Split samples: Some industries split the industrial wastewater sample collected by the MIPP with a different laboratory of their choice. Although the laboratory is not always aware of these samples, when this does occur it provides another method of assessing the quality of analysis. The MIPP compares the split sample results to assess the quality of analysis. Split sample results are averaged in accordance with USEPA guidelines.

1.5. Quality Assurance Practices

1. Analytical Balance: The balance is located on a level, vibration-free table, away from drafts, and is leveled and zeroed prior to each use. The balance calibration is verified daily before use and after every ten samples with class S standard weights (1.0000 g, 50.0000 g, and 100.0000 g). If any calibration verification measurement differs by more than 0.0002 g from the expected mass, the balance is recalibrated internally. The balance is serviced and certified annually by a professional technician.
2. Analytical Records: Records are dated and initialed by the analyst. Raw data, calculations, and final results are maintained along with all associated calibration and quality control data for at least five years. Records are also backed-up electronically using a digital archive system.
3. Autoclaves: Autoclaves are tested monthly for sterilization capability using a bio-indicator. The timing devices on the autoclaves are verified four times per year. Autoclaves are serviced and certified annually by a professional technician.
4. Glassware: Glassware is cleaned thoroughly and appropriately for the methods for which it is used. When necessary, specific cleaning details are given in the analytical SOPs. Class A volumetric flasks and pipets are used to prepare reagents and standards.
5. Microwave: The microwave is serviced and certified regularly by a professional technician.
6. pH Meter: The pH meter is calibrated daily using 7.0 and 10.0 standards. A 4.0 standard is used as a calibration check before and after samples are run (less than 10 samples are analyzed per day). Fresh aliquots of pH buffers are used daily, and the probe solution is changed weekly.

7. Reagent Water: Water is prepared by distillation and subsequent deionization. The resistivity of this reagent water is measured and recorded daily. Distillation and deionization equipment are regularly maintained.
8. Thermometers: All laboratory thermometers (liquid in glass) are calibrated against a NIST traceable thermometer in-situ at least once per year. Thermometers are checked for separations and submerged in an appropriate medium (i.e., ethylene glycol for refrigerator and BOD incubator storage, sand for oven storage, etc.). Temperatures are recorded daily (twice daily for microbiological water bath incubators).

Attachment 4

List of Capacity-related Bypassing, SSOs or Surcharging

MUNICIPALITY	DATE	LOCATION	REASON
West Manchester Township	2/5/2016	Fayette Street (MH-276)*	none listed
West Manchester Township	2/16/2016	Fayette Street (MH-276)*	none listed

* - Fayette Street upgrade bids opened, and contract awarded, in January 2017. Project completion expected in early 2017.

Source: Attachment 2 municipal collection system reports.

Attachment 5

2016 Pretreatment Annual Report

York City Wastewater Treatment Facility
(NPDES PA0026263)
York County, Pennsylvania

January 1, 2016 through December 31, 2016

March 2017

Contents

Tables

Exhibits

Appendices

1. Municipal Industrial Pretreatment Program

1.1. Purpose of the Municipal Industrial Pretreatment Program

Wastewater treatment plants are designed to treat domestic sewage; however, they also receive higher strength wastewater from industrial (non-domestic) facilities and processes. Recognizing that industrial wastewater often has different types and greater concentrations of pollutants compared to household wastewater, the United States Environmental Protection Agency (USEPA) established the National Pretreatment Program. The program's authority comes from Section 307 of the Federal Water Pollution Control Act, which is referred to as the Clean Water Act.

The National Pretreatment Program requires wastewater treatment plants to enforce all federal pretreatment standards and requirements in addition to any local sewer use regulations. The goals of the pretreatment program are to:

- prevent the introduction of industrial pollutants into wastewater treatment plants that interfere with, or are incompatible with, wastewater treatment plant processes and operations,
- prevent industrial facility pollutants from passing through wastewater treatment plants into receiving waters (i.e., streams or lakes),
- prevent the contamination of, and improve the quality of, municipal and industrial wastewater and sludges so they can be properly disposed of or used for beneficial purposes, and
- protect treatment plants, sanitary sewer systems, their workers and the safety of the public and the environment from the threats posed by industrial wastewater. [1, 2]

The City of York Municipal Industrial Pretreatment Program (MIPP) is responsible for monitoring the industrial and commercial wastewater dischargers in the City of York Wastewater Treatment Plant service area. This is accomplished through inspections and sampling of industrial wastewater. Inspections are performed to ensure industries conduct their manufacturing processes and operate their wastewater treatment systems in compliance with pretreatment regulations, and to prevent the discharge of unwanted substances to the sanitary sewer system and wastewater treatment plant. The results of wastewater sample tests allow the City of York to evaluate an industrial user's (IU) compliance with both federal and local wastewater regulations. To meet federal and local wastewater limits, some industrial facilities may be required to treat their wastewater before releasing it into the sewer; hence, the term "pretreatment." Wastewater test results are also used to recoup costs incurred by the City of York wastewater treatment plant to process the higher strength industrial waste - costs that would otherwise be borne by ratepayers.

1.2. Reporting Requirements

This section documents the activities of the City of York Municipal Industrial Pretreatment Program (MIPP) for reporting year 2016. It fulfills the Pennsylvania Department of Environmental Protection's (PADEP) annual Chapter 94 reporting requirements, the annual reporting requirements of the City of York Wastewater Treatment Plant's National Pollution Discharge Elimination System (NPDES) permit, and the United States Environmental Protection Agency's (USEPA) annual pretreatment program reporting requirements. The format of the section is based on the USEPA 2016 reporting year pretreatment annual report guidance, which includes a program summary and various supporting attachments showing more detailed information.

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1 40 CFR 401.12(f), 40 CFR 403.2

2 1996. Pretreatment Facility Inspection. 3rd ed. California State University, Sacramento.

1.3. Pretreatment Performance Summary

I. General Information

Control Authority Name: **City of York Wastewater Treatment Plant**
Address: **1701 Blackbridge Rd**
City: **York** State: **PA** Zip+4: **17402-1911**
Contact Person: **James E. Gross**
Contact Title: **Director, Public Works**
Contact Telephone Number: **717-849-2302**
E-mail address: **jgross@yorkcity.org, vchavez@yorkcity.org**
NPDES No.: **PA0026263**
Permit Issuance Date: **2/1/2008** Permit Expiration Date: **1/31/2013 (administratively extended)**
Reporting Period: **January 1, 2017 through December 31, 2017**
Total Categorical IUs (CIUs): 5 (plus 3 zero-discharge NSCIUs)
Total "Middle Tier" CIUs (MTCIUs): **NA**
Total Nonsignificant CIUs (NSCIUs): **3** zero-discharge facilities
Total Significant Noncategorical IUs (SNIUs): **20**

II. Compliance Monitoring Program

1. Number of SIUs with current control documents	(3 zero-discharge NSCIU not permitted)	**25**
2. Number of SIU facilities inspected		**28**
3. Number of SIU facilities sampled	(no discharge to sample from 4 facilities)	**24**
4. Number of SIUs submitting Self-Monitoring Reports	(3 zero-discharge NSCIUs submit certifications)	**25**

III. Significant Industrial User Compliance

1. Number of SIUs violating a compliance schedule/Number on a schedule	**0/2**
2. Number of SIUs in SNC for the July to December review period	**4**
3. Number of SIUs in SNC at any time during calendar year	**4**
4. Number of SIUs in SNC that were also in SNC during the previous calendar year	**1**
5. Number of NSCIUs that violated any standards or requirements	**0**

IV. Enforcement Actions

1. Notices/Letters of Violation issued to SIUs	**31**
2. Enforceable compliance schedules issued to SIUs	**2**
3. Civil/criminal suits filed	**0**
4. Number of SIUs from which penalties have been collected	**0**
5. Other actions (sewer bans, etc.)	**0**

I certify that the information contained in this report and attachments is complete and accurate to the best of my knowledge. (See Part B.V of the instructions).

James E. Gross	Director, Public Works
Name of the Authorized Representative	Title (print)
Signature	3/29/17 Date

1.4. Section I, General Information Attachments

A list of categorical industrial users (CIU), non-significant categorical industrial users (NSCIU), and significant non-categorical industrial users (SI), which matches the industries referenced in Section I of the Pretreatment Performance Summary, is provided in Table 1-1. Categorical industrial users with the potential to discharge are identified in the "classification" column with "CIU" or "NSCIU". The federal regulation reference and industrial category are provided in the two immediately following columns. Both the previous and current permit dates are listed to cover the entire 2016 year.

Changes were made to the industrial user list since the 2015 annual report submission. Four facilities were removed from the list, two facilities were added, and some facilities had a change in name or status.

The following facilities were removed from the 2016 list:

- **Coyne Textile Services**, 3500 West Market Street, York PA 17404 filed for bankruptcy and closed. The last day of production was December 11, 2015.
- **First Capital Powder Coating and Fabrication**, 251 Herman Street, closed with production ceasing on May 4, 2015.
- **New York Wire-Weaving Facility**, 441 East Market Street, changed status from CIU to a non-significant industry effective October 1, 2015. The facility was listed as a CIU in the 2015 report. The facility ceased using the iron phosphate (conversion coating) process some time ago, and continued to be regulated as a CIU due to the potential for re-introduction of the conversion coating process (which never occurred). Production has decreased dramatically, and screen is no longer even cleaned before powder coat application. Conversion coating chemicals have not been on-site in a number of years. The company went through bankruptcy proceedings in late 2015. An estimated 750 gallons per day of process flow now occurs. The pretreatment program still conducts an annual inspection to determine facility status. (**Note:** The company name changed to **IWM International LLC** in early 2016.)
- **Osram Sylvania**, 1128 Roosevelt Avenue, ceased most operations on September 26, 2014. A few precision stamping presses, which did not generate wastewater, ran until the last quarter of 2014, and some limited stamping occurred in early 2015. Therefore, the last day industrial process wastewater was discharged was September 26, 2014. The MIPP program continued to monitor the facility in 2015 through clean-up and decommissioning activities. Equipment and assets were auctioned off on March 4, 2015. The last day non-process generated wastewater was discharged from facility was April 16, 2015.

Two new facilities were added to the list in 2016:

- **Kleen Tech, Inc**., 3500 West Market Street, York PA 17404, is an industrial launderer that opened at the old Coyne Textile Services site. The facility was issued a permit effective August 1, 2016; however, the facility did not begin discharging process wastewater until January 4, 2017.
- **The Hershey Company – Semi Works**, 3400 Farmtrail Road, York PA 17406, is a small food production facility that specializes in research and development and small batch runs. The facility was issued a permit effective April 1, 2016; however, the facility did not begin to discharge process wastewater until October 27, 2016.

Other changes that occurred at industrial facilities are described below:

- **CP Industries**, 785 West Philadelphia Street, York PA 17404, changed status from a permitted zero-discharge categorical industrial user to a non-permitted non-significant categorical industrial user (NSCIU) effective 4/1/2016. The facility has not discharged process wastewater since 2009. The facility is listed as a NSCIU in this report.
- **EQ Pennsylvania, 730 Vogelsong Road**, changed their name to **US Ecology** in mid-2015. EQ Pennsylvania is now listed as US Ecology on the 2016 list.

- **New York Wire-Weaving Facility,** 829 Loucks Mill Road, York PA 17402, was sold and the name changed to **IWM International LLC** in early 2016.
- **RecOil, 280 North East Street**, a zero discharge facility, was purchased **by Covanta Environmental Solutions, LLC** in the latter part of 2015. The facility name did not change until October 1, 2106. RecOil is now listed as Covanta Environmental Solutions, LLC on the 2016 list. In addition, the facility's status changed from a permitted CIU to non-permitted NSCIU effective October 1, 2015. The facility has not discharged since 2004. The facility is listed as a NSCIU in this report.
- **York Newspaper Company, 1891 Loucks Road**, changed ownership in 2015. The facility name did not change. York Newspaper Company was purchased by Gannett Company, Inc.

Table 1-1: Categorical and Significant Noncategorical Industrial Users, 2016

ID#	Industrial User	Site Address	Classification	Categorical Reference	Category	Control Document Issue/ Effective Date	Control Document Expiration Date	Control Document Issue/ Effective Date	Control Document Expiration Date
0057	AMZ Corp+	2206 Pennsylvania Av	NSCIU	40 CFR 433	metal finishing			certification	certification
0047	Bickel's Snack Foods - College	1000-1050 W College Av	SI					10/1/2015	9/30/2018
0045	Bickel's Snack Foods - Zinn	1120 Zinn's Quarry Rd	SI					10/1/2015	9/30/2018
0100	Cintas Corp.	1111 Smile Wy	SI					7/1/2014	6/30/2017
0083	Columbia Gas of Pennsylvania, Inc.	201 Grant St	SI					10/1/2015	9/30/2018
0085	Covanta Environmental Solutions+	280 East North St	NSCIU	40 CFR 437	centralized waste treatment			certification	certification
0104	CP Industries+, **	785 W Philadelphia St	NSCIU	40 CFR 417	soap and detergent	5/8/2013	3/31/2016	certification	certification
0021	Dentsply International Inc.	470 W College Av	CIU	40 CFR 433	metal finishing			10/1/2015	9/30/2018
0099	Dentsply Int'l. Professional Division	1301-1311 Smile Wy	SI					1/1/2015	12/31/2017
0006	Frito-Lay, Inc.	3553 Gillespie Dr	SI					10/1/2015	9/30/2018
0106	Gamlet, Inc.	1750 Toronita St	CIU	40 CFR 433	metal finishing	10/1/2013	9/30/2016	10/1/2016	9/30/2019
0108	The Hershey Company – Semi Works	3400 Farmtrail Rd	SI					4/1/2016	3/31/2019
0098	Hess Gas Station 38254	253 S Queen St	SI			10/1/2014	3/31/2016	4/1/2016	3/31/2019
0069	IWM International LLC	829 Loucks Mill Rd	CIU	40 CFR 433	metal finishing	10/1/2015	9/30/2018	2/5/2016	9/30/2018
0095	Johnson Controls Inc.- Grantley Campus	631 S Richland Av	SI					10/1/2015	9/30/2018
0109	Kleen Tech, Inc.	3500 West Market St	SI					8/1/2016	7/31/2019
0013	North Metal & Chemical Company	609 E King St	SI					10/1/2015	9/30/2018
0089	Protech Powder Coatings Inc.	939 Monocacy Rd	SI					10/1/2015	9/30/2018
0018	Rutter's Dairy, Inc.	2100 N George St	SI					10/1/2015	9/30/2018
0092	Surtech Industries Inc	915 Borom Rd	CIU	40 CFR 433	metal finishing			10/1/2015	9/30/2018
0039	Warrell Classic Company, The	231 West College Av	SI					7/1/2015	6/30/2018
0005	US Ecology	730 Vogelsong Rd	CIU	40 CFR 437	centralized waste treatment			10/1/2015	9/30/2018
0103	WC Manufacturing Co LLC	615 South Pine St	SI					7/1/2014	6/30/2017
0035	YGS Group, The	3650 W Market St	SI					10/1/2015	9/30/2018
0059	York County Solid Waste & Refuse Auth.	2651 Blackbridge Rd	SI					10/1/2015	9/30/2018
0070	York Newspaper Company	1891 Loucks Rd	SI					10/1/2015	9/30/2018
0034	York Wallcoverings Inc.- Linden Av	750 Linden Av	SI					10/1/2015	9/30/2018
0084	York Wallcoverings Loucks Rd	2075 Loucks Rd	SI					1/1/2015	12/31/2017

CIU – Categorical Industrial User. SI – Significant Non-Categorical Industrial User. NSCIU – Non-Significant Categorical Industrial User.
+ Zero discharge facility.
* Facility closure.
**Facility status changed from CIU to NSCIU effective 4/1/2016.

1.5. Section II, Compliance Monitoring Program Attachments

Permits

As shown in Table 1-21, there were twenty-five (25) significant industrial users with current individual control documents (i.e., permits) in 2016. The City of York does not issue general permits. There are no lapsed or administratively extended permits. All permitted industries submitted the required self-monitoring reports.

The City of York did not assign any mass-based limits in place of concentration-based limits to any categorical industrial users, nor were any monitoring waivers granted under 40 CFR 403.12(e)(2) for any categorically regulated pollutant. The City of York required all permitted industrial users that can discharge to self-monitor their wastewater. The City of York did not have any "middle tier" categorical industrial users. There were three zero-discharge non-significant categorical industrial users (NSCIU) in 2016.

Inspections

All facilities were inspected in 2016. A summary of 2016 inspection activities is provided in Table 1-2. A comprehensive annual inspection is conducted once per year. Observations are recorded using the annual inspection form.

All three zero-discharge facilities were inspected in 2016: AMZ Manufacturing Corp., located at 2206 Pennsylvania Avenue; CP Industries, located at 785 West Philadelphia Street; and, Covanta Environmental Solutions, LLC (formerly RecOil, Inc.), located at 260 North East Street. AMZ Manufacturing Corp. is a metal finisher under 40 CFR 433, CP industries is a soap and detergent manufacturer under 40 CFR 417, and Covanta Environmental Solutions, LLC is a centralized waste treatment facility under 40 CFR 437. AMZ Manufacturing Corp. evaporates wastewater and hauls evaporator solids off-site. CP Industries does not discharge: wash waters are reincorporated in the production process. RecOil, Inc. hauls all wastewater for off-site disposal.

Sampling

Wastewater samples were collected from twenty-four (24) facilities**.** A summary of 2016 sampling activities is provided in Table 1-2. The number of industrial user sampling events, number of City of York sampling events, and the minimum required number of industrial user samples are shown. The City of York required all permitted industrial users that discharge to self-monitor their wastewater.

Four industries were not sampled by the City of York in 2016. Two industries were not sampled due to zero-discharge NSCIU status. CP Industries does not discharge. RecOil, Inc.'s wastewater is hauled off-site. (Sanitary waste samples were obtained from AMZ Manufacturing Corp., a zero-discharge NSCIU metal finisher whose wastewater is evaporated and/or hauled off-site.) KleenTech, Inc., a new facility in 2016, did not discharge process wastewater until January 2017. North Metal & Chemical Company did not generate process wastewater in 2016 due to lack of production.

Table 1-2: Compliance Monitoring Summary, 2016

ID#	Industrial User	Site Address	IU Sample Results	City of York Sample Results	Total Samples	Required IU Samples	Annual Inspections	Compliance Inspections	Total Inspections
0057	AMZ Corp[1]	2206 Pennsylvania Av York PA 17404	0	2	2	0	1	0	1
0047	Bickel's Snack Foods - College	1000-1050 W College Av York PA 17404	15	14	29	4	1	0	1
0045	Bickel's Snack Foods - Zinn	1120 Zinn's Quarry Rd York PA 17404	16	15	31	4	1	0	1
0100	Cintas Corp.	1111 Smile Wy York PA 17404	4	13	17	4	1	0	1
0083	Columbia Gas of Pennsylvania, Inc.	201 Grant St York PA 17403	4	8	12	4	1	0	1
0085	Covanta Environmental Solutions[2]	280 East North St York PA 17403	0	0	0	0	1	0	1
0104	CP Industries[2]	785 W Philadelphia St York PA 17404	0	0	0	0	1	0	1
0021	Dentsply International Inc.	470 W College Av York PA 17404	12	12	24	4	1	0	1
0099	Dentsply Int'l. Professional Division	1301-1311 Smile Wy York PA 17404	4	8	12	4	1	0	1
0006	Frito-Lay, Inc.	3553 Gillespie Dr York PA 17404	51	51	102	4	1	0	1
0106	Gamlet, Inc.	1750 Toronita St York PA 17402	6	9	15	4	1	0	1
0108	The Hershey Company – Semi Works[3]	3400 Farmtrail Rd York PA 17406	4	2	6	1	1	1	2
0098	Hess Gas Station 38254	253 S Queen St York PA 17403	4	7	11	4	1	0	1
0069	IWM International LLC	829 Loucks Mill Rd York PA 17402	4	8	12	4	1	0	1
0095	Johnson Controls Inc.- Grantley Campus	631 S Richland Av York PA 17403	4	9	13	4	1	0	1
0109	Kleen Tech, Inc.[4]	3500 West Market St York PA 17404	0	0	0	0	1	0	1
0013	North Metal & Chemical Company[4]	609 E King St York PA 17403	0	0	0	0	1	0	1
0089	Protech Powder Coatings Inc.	939 Monocacy Rd York PA 17404	4	8	12	4	1	3	4
0018	Rutter's Dairy, Inc.	2100 N George St York PA 17404	12	13	25	4	1	0	1
0092	Surtech Industries Inc	915 Borom Rd York PA 17404	12	9	21	4	1	0	1
0039	Warrell Classic Company, The	231 West College Av York PA 17401	8	24	32	8	1	0	1
0005	US Ecology[5]	730 Vogelsong Rd York PA 17404	76	13	89	12	1	1	2
0103	WC Manufacturing Co LLC	615 South Pine St York PA 17403	4	8	12	4	1	0	1
0035	YGS Group, The	3650 W Market St York PA 17404	4	8	12	4	1	0	1
0059	York County Solid Waste & Refuse Auth.	2651 Blackbridge Rd York PA 17406	8	12	20	4	1	0	1
0070	York Newspaper Company	1891 Loucks Rd York PA 17408	8	8	16	4	1	0	1
0034	York Wallcoverings Inc.- Linden Av	750 Linden Av York PA 17404	4	12	16	4	1	0	1
0084	York Wallcoverings Loucks Rd	2075 Loucks Rd York PA 17408	5	12	17	4	1	0	1
	Total		**273**	**285**	**558**	**101**	**28**	**5**	**33**

1- Facility is a zero-discharge NSCIU facility, and is not required to be sampled. Sanitary wastewater samples were collected by staff.
2- Facility is a zero-discharge NSCIU facility, and is not required to be sampled.
3- Facility did not commence operation until 4th quarter 2016: therefore, only one sample was required.
4- Facility did not discharge in 2016 due to lack of production; therefore, no samples were obtained or required.
5- Samples that were split by this industry and sent to two independent laboratories are counted as two samples.

1.6. Section III, Significant Industrial User Compliance Attachments

There were four industrial users in significant noncompliance (SNC) during the 2016 reporting period. Table 1-3 summarizes the review period evaluation. Bickels Snack Foods (Zinns Quarry Road facility) was in SNC in 2015 for oil and grease under the technical review criterion. A notarized copy of the 2016 public notice published March 28, 2017 is located in Exhibit 1-1.

Table 1-3 Significant Industrial Users in SNC During 2016

Review Period	Industry	Criteria
1st review period October 2015 to March 2016	No industries in significant non-compliance.	
2nd review period January 2016 to June 2016	Gamlet, Inc. 1750 Toronita St, York PA 17402	Daily technical and chronic review criteria for zinc. Monthly technical and chronic review criteria for zinc.
3rd review period April 2016 to September 2016	Gamlet, Inc. 1750 Toronita St, York PA 17402	Daily technical and chronic review criteria for zinc. Monthly technical and chronic review criteria for zinc.
4th review period July 2016 to December 2016	Bickels Snack Foods, 1120 Zinns Quarry Rd, York PA 17404	Technical review criterion for oil and grease.
	York Newspaper Co./Gannett Company, Inc. 1891 Loucks Rd, York PA 17408	Technical review criterion for oil and grease.
	Gamlet, Inc. 1750 Toronita St, York PA 17402	Daily technical review criterion for zinc. Monthly technical and chronic review criteria for zinc.
Third Quarter 2016	Protech Powder Coating, 939 Monocacy Rd, York PA 17404	Criterion H – violations that adversely affect the pretreatment program.

There are three NSCIUs: no facilities violated any pretreatment standard or requirement during the reporting year. There were no significant industrial users on written "informal" compliance schedules.

Bickels Snack Foods, 1120 Zinns Quarry Road, was in SNC in the fourth review period for oil and grease under the technical review criterion. For further discussion see Section IV, Enforcement Actions Attachments.

Gamlet, Inc., 1750 Toronita Street, was in SNC during the second, third, and fourth review periods for monthly technical and chronic review criteria for zinc. Gamlet, Inc. was in SNC for second and third review periods for daily technical and chronic review criteria for zinc, and during the fourth review period for daily technical review criterion for zinc. For further discussion see Section IV, Enforcement Actions Attachments.

Protech Powder Coatings, 939 Monocacy Road, was in SNC during the third quarter under criterion H (violations that adversely affect the pretreatment program). The facility discharged plastic beads to the pretreatment plant in August 2016. For further discussion see Section IV, Enforcement Actions Attachments.

York Newspaper Company, 1891 Loucks Road, was in SNC during the fourth review period under the technical review criterion for one oil and grease result: this was the facility's only violation in 2016. For further discussion see Section IV, Enforcement Actions Attachments.

Formal Compliance

Bickels Snack Foods, 1120 Zinns Quarry Road, was placed under a formal compliance schedule effective July 26, 2016 to address oil and grease violations. For further discussion see Section IV, Enforcement Actions Attachments.

Frito Lay, 3553 Gillespie Drive, was under a formal compliance schedule in 2016. The facility instituted further water conservation measures at the facility causing BOD concentrations to increase. The facility was previously under an administrative order related to concentration increases due to increased water conservation methods, but was not under one in 2013. Further water conservation measures caused the need for an administrative order in 2015. For further discussion see Section IV, Enforcement Actions Attachments.

Exhibit 1-1: Significant Non-Compliance Newspaper Notice

Proof of Publication
State of Pennsylvania

AD # 0001664228-01

The York Dispatch/York Sunday News and York Daily Record are the names of the newspaper(s) of general circulation published continuously for more than six months at its principal place of business, 1891 Loucks Road, York, PA 17408.

Attach Copy of Advertisement here

The printed copy of the advertisement hereto attached is a true copy, exactly as printed and published, of an advertisement printed in the regular issues of the said **The York Dispatch/York Sunday News and York Daily Record** published on the following dates, viz:

3/28/2017

Public Notice **Public Notice** **Public Notice**

NOTICE OF INDUSTRIES IN SIGNIFICANT NON-COMPLIANCE

The City of York reports, in accordance with the United States Environmental Protection Agency regulation of 40 CFR 403.8(f)(2(viii), that the following industry was in Significant Non-Compliance (SNC) of environmental wastewater pretreatment requirements or pretreatment standards during the calendar year 2016. The City of York Wastewater Treatment Plant services North York Borough, West York Borough, the City of York, and portions of Manchester, Spring Garden, West Manchester, and York Townships.

1st review period: October 1, 2015 to March 31, 2016.
No industries in significant non-compliance.

2nd review period: January 1, 2016 to June 30, 2016.
Gamlet, Inc. 1750 Toronita St, York PA 17402 located in Manchester Township for daily technical and chronic review criteria for zinc, and monthly technical and chronic review criteria for zinc.

3rd review period: April 1, 2016 to September 30, 2016.
Gamlet, Inc. 1750 Toronita St, York PA 17402 located in Manchester Township for daily technical and chronic review criteria for zinc, and monthly technical and chronic review criteria for zinc.

4th review period: July 1, 2016 to December 31, 2016.
Bickels Snack Foods, 1120 Zinns Quarry Rd, York PA 17404 located in West Manchester Township for technical review criterion for oil and grease

Gamlet, Inc. 1750 Toronita St, York PA 17402 located in Manchester Township for daily technical review criterion for zinc, and monthly technical and chronic review criteria for zinc.

York Newspaper Co./Gannett Company, Inc. 1891 Loucks Rd, York PA 17408 located in West Manchester Township for technical review criterion for oil and grease.

Third Quarter 2016
Protech Powder Coatings, Inc., 939 Monocacy Rd, York PA 17404 located in the City of York for Criterion H, violations that adversely affect the pretreatment program.

James E. Gross
Director, Department of Public Works
City of York

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF YORK

Before me, a Notary Public, personally came Pam Rodencal who being duly sworn deposes and says that she is the Legal Advertising Clerk of The York Dispatch/York Sunday News and York Daily Record and her personal knowledge of the publication of the advertisement mentioned in the foregoing statement as to the time, place and character of publications are true, and that the affiant is not interested in the subject matter of the above mentioned advertisement.

Sworn and subscribed to before me, on this 28 day of March 2017

Amy L. Miller } Pam Rodencal

Notary Public

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
AMY L MILLER
Notary Public
WEST MANCHESTER TWP, YORK COUNTY
My Commission Expires Apr 7, 2019

The charge for the following publication of above mentioned advertisement and the expense of the affidavit.

Advertisement Cost	$395.80
Affidavit Fee	$5.00
Total Cost	$400.80

1.7. Section IV, Enforcement Actions Attachments

Enforcement Actions Summary

A list of significant industrial users that received written notices of violation in 2016 and the number of violations issued to each user is provided in Table 1-4. Parameter violations are listed first, followed by other types of permit violations. Each non-compliance event is issued a separate notice of violation. For example, if a wastewater sample shows that both lead and copper exceeded permit limits, two separate notices of violation are sent to the industrial user, one for lead and one for copper. In 2016 thirty-one (31) Notices of Violation were issued to eight industrial users (26 NOVs in 2015, 51 NOVs in 2014, 30 NOVs in 2013, 24 NOVs in 2012, 31 NOVs in 2011, 38 NOVs in 2010, 56 NOVs in 2009). Of the 31 NOVs, 39% were issued to Frito Lay for BOD violations caused by the water conservation efforts at the facility (see discussion below).

Industries in SNC Not Subject to Additional Enforcement

York Newspaper Co., 1891 Loucks Road, was in SNC under the technical review criterion for oil and grease based on one sample. All other oil and grease samples during 2016 were compliant, and the violation was the sole violation for the facility in 2016.

Protech Powder Coating, 939 Monocacy Road, released plastic beads to the sewer system on three days in August 2016 and was listed in SNC under criterion H (violations that adversely affect the treatment program). The facility received compliance inspections (including surveillance once at 4:30 a.m. for three hours). The facility made changes to the pretreatment methods, staff training, frequency of sedimentation tank cleaning, and method of sedimentation tank cleaning. On November 3, 2106 the digester recirculation pump #1 failed due to plastic beads behind the wear plate behind the lobes. Pump parts were replaced and the pump was back on-line the same day. The facility was required to submit a slug control plan to be incorporated in their permit. Penalties for the release of beads and failure of the digester recirculation pump will be collected in 2017. Staff met with a Canadian corporate representative to discuss all facility issues. This series of events does not meet the definition of pass-through or the two-part definition of interference (see discussion Part B, Section 1.8.1, Interference, Upset, Permit Violations). Penalties will be collected in 2017: at this point any further issues with the facility will most likely be responded with criminal citation and/or cease of wastewater discharge privileges.

Gamlet, Inc., 1750 Toronita Street, was in SNC for multiple review periods under daily and monthly chronic and technical review criteria for zinc. The facility is small and mostly conducts machine shop and welding activities with some iron phosphate wash and painting. Some of the violations were due to an increased volume of aluminum and galvanized materials going through the wash room. Further violations were caused by using a zinc primer for a custom project. The facility looked for alternative products that would not have a high zinc level. At one point a zinc primer was applied in the wash room instead of the adjacent paint room. This was corrected also. Based on on-site meetings with the facility and violation responses, the facility determined that residual solids were most likely trapped at the trench, pH adjustment tank, and sump that receives waste pumped from the pretreatment area across the ceiling to the discharge line on the other side of the building. These areas were cleaned and solids disposed of. It appeared that the facility had a series of different causes that were abated as they arose. Late 2016 saw compliance. Facility will be observed and further enforcement taken if the zinc violations reoccur.

Administrative Orders

One administrative order was issued in 2016 to Frito Lay, 3553 Gillespie Drive due to the further step-wise water conservation efforts at the facility (see Exhibit 1-). The facility was previously under an administrative order related to concentration increases due to increased water conservation methods, but was not under one in 2013. Further water conservation measures caused the need for an administrative order in 2014. The facility continued to examine various chemical additions and conducted bench testing,

and examined plate press replacement *versus* a new centrifuge system in mid- to late-2014. In January 2015 an on-site turn-key centrifuge system pilot study showed it was effective in producing higher quality effluent by reducing both BOD and TSS. Corporate approval for purchase of a centrifuge occurred in 2015, with work started in late 2015. System installation was completed in February 2016. The facility also conducted an extensive pretreatment process study evaluating various parameters throughout the pretreatment process in 2016. A new, smaller clarifier was specified in 2016 to replace the existing 76,000 gallon clarifier .Work commenced in early-2017 and the clarifier is expected to be in service in June. It is expected that the administrative order can be lifted after performance is evaluated.

Compliance Schedules

One compliance schedule was issued in 2016 to Bickels Snack Foods, 1120 Zinns Quarry Road due to oil and grease violations (see Exhibit 1-2). The start-up date of December 30, 2016 was not met. The facility will not be in compliance with the schedule in 2017. This will be addressed in 2017. Previously, Bickels Snack Foods, 1120 Zinns Quarry Road, was in significant non-compliance in 2015 for oil and grease under the technical review criterion in the first and fourth review periods. The facility was in compliance at the end of 2015 (tank retention time adjustments were made to allow better separation). In early January 2016 Bickels Snack Foods submitted a capital expenditure request, which had not yet been approved by corporate for fabrication and installation of a 10,000 gallon storage tank to allow for longer retention times. After discussion with facility representatives in mid-2016, the facility submitted a compliance schedule. The compliance schedule was then incorporated into their permit on July 26, 2016.

Penalties Assessed and Collected, Criminal Citations

No administrative penalties were collected in 2016. Penalties for Protech Powder Coatings' discharge of plastic beads will be collected in 2017.

2016

The City of York
Pennsylvania

101 South George Street ❖ PO Box 509 ❖ York PA 17405
www.yorkcity.org
Honorable C. Kim Bracey, Mayor

ADMINISTRATIVE COMPLIANCE ORDER

Frito Lay, Inc.
3553 Gillespie Drive
York, Pennsylvania 17404

1. Whereas, Frito Lay, Inc. has violated conditions of its wastewater contribution permit by discharging wastewater having biochemical oxygen demand (BOD) concentrations in excess of 3,000 mg/l; and

2. Whereas, Frito Lay, Inc. has markedly reduced water usage multiple times in manufacturing processes; and

3. Whereas, Frito Lay, Inc. has submitted documentation showing a relationship between increases in BOD concentrations and the contemporaneous decreases in water consumption due to water conservation efforts at the facility; and

4. Whereas, the substantial reduction in water usage has caused an increase in effluent BOD concentrations without an increase in pounds of BOD discharged; and

5. Whereas, conservation of the resources of the Commonwealth, including water conservation and adoption of water-saving technologies, is recognized as a beneficial industrial activity; and

6. Whereas, there is currently in place a mechanism in the City of York Codified Ordinances, also adopted by West Manchester Township, to determine compliance with discharge limits using alternative methods such as converting concentrations to loadings, allocating headworks loadings, or accepting wastes of a different strength or character; and

7. Whereas, it is the intent of this order to not penalize Frito Lay, Inc. for implementing water resource conservation measures and, to this end, provide some measure of relief from progressive judicial enforcement action as it relates strictly to BOD violations due to continued documented water conservation efforts until such time as an alternate method of determining BOD compliance is in place for the facility and the facility's industrial wastewater discharge permit is amended to reflect the selected method.

8. Whereas, Frito Lay has invested in an upgrade to the wastewater treatment system to address the most recent violations due to water conservation efforts, which is anticipated to be installed in the First Quarter 2016.

Therefore, based on the above findings, Frito Lay, Inc. is ordered to:

1. Submit within 7 calendar days of each sampling event, the total flow discharged as measured at the sample location. The flow shall reflect the same time period as when the sample was collected (i.e., 7:00 a.m. to 7:00 a.m.).

2. Submit by the 15th day of each month a tabulation of daily discharge flows for each calendar month. The flows shall reflect the same time frame as the sampling events (i.e., 7:00 a.m. to 7:00 a.m.). The submission shall be on Frito Lay, Inc.'s letterhead and have the following certification statement signed in accordance with the signatory requirements of Frito Lay, Inc.'s permit.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on by inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations."

Frito Lay, Inc. may fax or email the required information; however, hardcopy shall follow in the mail.

3. Maintain the effluent flow meter in a fully operational and accurate condition. The City of York reserves the right to require Frito Lay, Inc. to provide effluent meter calibration reports as deemed necessary.

4. Comply with all terms, conditions, and requirements of Frito Lay, Inc.'s existing wastewater discharge permit, which remains in full force and effect. The quality of effluent shall be limited at all times as specified in Article 931 of the Codified Ordinances of the City of York and Frito Lay Inc.'s discharge permit, with the understanding that continued water conservation efforts may cause BOD concentrations in excess of the permit requirement.

5. Remit to the City of York any applicable administrative penalties according to the following schedule:

Failure to submit effluent flow data as required:	$1,000.00 per day per event
Failure to comply with permit reporting requirements:	$1,000.00 per day per event

In accordance with Article 931.99 a separate offense shall be deemed committed on each day during or on which a violation or failure to comply occurs or continues.

Therefore, the following clauses are part of this administrative order:

1. Nothing in this administrative order shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. No provision of this order shall be construed to limit the City of York's authority to issue supplementary or additional orders or take other action deemed necessary to

implement its pretreatment program should conditions warrant, including issuing Notices of Violation (NOV).

2. Compliance with the terms and conditions of this administrative order will not be construed to relieve Frito Lay, Inc. of its obligation to comply with applicable Federal, State and local law.

3. Noncompliance with any term or condition of this order shall constitute a violation of the York City Wastewater Treatment Plant sewer use ordinance.

4. The provisions of this order shall be binding upon Frito Lay, Inc. its officers, directors, agents, employees, successors, assigns, and all persons, firms, and corporations acting under, through or on behalf of Frito Lay, Inc.

5. The provisions of this order are severable, and if any provision of the order is held invalid, the remainder shall remain in full force.

6. The City of York reserves the right to modify or terminate this administrative compliance order as may be deemed necessary.

7. This administrative compliance order shall become effective on January 1, 2016 and shall expire on December 31, 2016.

James E. Gross
Director of Public Works

12/15/15
Date

Exhibit 1-3 Bickels Snack Foods, Zinns Quarry Road, Compliance Schedule

(Reference: text source below is from Industrial Wastewater Discharge Permit Part C – Special Conditions, Section h, page 14 for Bickels Snack Foods (1120 Zinns Quarry Rd). Permit issued 8/31/2015, effective date 10/1/2015 through 9/30/2018, amended 7/26/2016.)

"h. SANITATION WASTEWATER BYPASS COMPLIANCE SCHEDULE

1. Interim and final corrective actions are required to comply with the City of York Codified Ordinances, 931.03(j):
   "(j) Pretreatment. All persons using the sewage works shall provide wastewater treatment as required to comply with this article and with all federal pretreatment standards, requirements and prohibitions within the time limitations specified by federal regulation or other limits that may from time to time be set by regulatory agencies."
2. A compliance schedule in accordance with the City of York Codified Ordinances, 931.03(v) is required, and was provided on July 12, 2016. The compliance schedule is reproduced below:

Task	Description	Start Date	Completion Date	Progress Report Due Date
1	Wastewater Testing Plan	7/8/2016	7/15/2016	No report due
2	Wastewater Sampling & Analyses	7/15/2016	7/29/2016	No report due
3	Evaluate Results	7/29/2016	8/5/2016	No report due
4	Feasibility Study – Develop Options	8/5/2016	8/19/2016	9/2/2016
5	Alternatives Selection	8/19/2016	8/26/2016	9/9/2016
6	Conceptual Design	8/26/2016	9/2/2016	9/16/2016
7	Preliminary Design	9/2/2016	9/16/2016	9/30/2016
8	Final Design	9/16/2016	9/30/2016	10/14/2016
9	Procurement	9/30/2016	10/21/2016	11/4/2016
10	Construction	10/21/2016	12/2/2016	12/16/2016
11	Start-Up	12/2/2016	12/16/2016	12/30/2016

3. In accordance with the City of York Codified Ordinances, 931.03(v)(3), the User shall submit a progress report to the General Manager no later than fourteen (14) days following each completion date in the schedule. These reports should include at a minimum whether or not the increment of progress was met on the expected date and, if not, the date on which it is expected to be met, the reason for any delay, and the steps being taken by the User to return to the established schedule. Due dates for the progress reports are incorporated into the compliance schedule above for ease of reference.
4. Failure to provide progress reports by the fourteen (14) days following each completion date in the schedule may result in penalties per Part C, section d of this permit.

Permit amendment: July 26, 2016"

Table 1-4: Enforcement Actions Summary, 2016

ID#	Industrial User	Parameter Violations					Other Permit Violations		Enforcement Actions				
		BOD	Cyanide	Oil and Grease	Selenium	Zinc	Reporting	Other	NOVs Issued	Citations Issued	Compliance Schedule	Orders Issued	Penalties Collected
0045	Bickel's Snack Foods - Zinn			6					6		1		
0006	Frito Lay, Inc.	12							12			1	
0106	Gamlet, Inc.					6			6				
0089	Protech Powder Coatings Inc.							3	3				
0092	Surtech Industries, Inc.					1			1				
0005	US Ecology		1						1				
0039	Warrell Classic Company						1		1				
0070	York Newspaper Co.			1					1				
	Total	**12**	**1**	**7**		**7**	**1**	**3**	**31**	**0**	**1**	**1**	**$0.00**

Each parameter violation is issued a separate notice of violation.
Some NOVs may not have been enforced until 2017.

1.8. Part B: Pretreatment Developments

1.8.1. Summary of POTW Operations

Interference, Upset, Permit Violations

There were no upset, pass-through or interference events attributable to industrial causes at the City of York Wastewater Treatment Plant during 2016. As previously discussed plastic beads particles approximately 2-3 mm in size and somewhat round in shape were discharged by Protech Powder Coatings, Inc. The beads caused the failure of the digester recirculation pump #1. The beads did not pass-through the plant, nor did they meet the two part test of interference, which includes disrupting treatment processes and therefore causing a violation of the treatment plant's NPDES permit (including solids disposal, etc.). For this reason, the facility was listed in SNC for the third quarter 2016 under Criterion H.

The York City Wastewater Treatment Plant met all permit requirements in 2016 with the following exceptions. None of the permit excursions were attributable to industrial discharges.

- PADEP Notice of Violation issued March 23, 2016 for the February 25, 2016 plant overflow resulting in unauthorized discharges of sewage to on-site stormwater drains due to loss of power at the treatment plant. There is no alternate non-grid source of power for the treatment plant. An estimated 455,000 gallons of mixed stormwater, partially treated water, raw sewage, and mixed liquor was discharged through the 001 outfall.
- PADEP Notice of Violation issued July 1, 2016 based on June 6, 2016 and June 28, 2016 PADEP inspections. The NOV notes: influent and effluent representative sampling issues, inoperable effluent flow meter at flows exceeding 20 MGD, malfunctioning sand filters, and an inoperable sluice gate on the gravity discharge line from the stormwater basin

POTW Influent, Effluent and Biosolids Priority Pollutant Data, and Local Limit Data

The USEPA sets influent, effluent and biosolids goals for certain pollutants based on the most recently approved local limits evaluation. In general, these goals are based on the maximum amount of pollutants the treatment plant can receive without harming treatment plant processes, exceeding the water quality criteria of the Codorus Creek (the receiving stream), or exceeding the USEPA exceptional quality standards for land application of biosolids. The data associated with these goals are summarized in Table 1-5 through Table 1-7. Influent, effluent, and biosolids analytical results are included in Appendix A. Monthly average influent concentrations are provided for BOD, ammonia-nitrogen, and total suspended solids. The City of York Wastewater Treatment Plant met effluent and biosolids goals in 2016. Biosolids are land applied for beneficial reuse. One influent goal was exceeded (with no effect on treatment plant processes): the molybdenum goal was exceeded on May 11, 2016 with a value of 0.073 mg/l. The value is three times more than normal. The sample was realized at the same laboratory and a similar result was obtained. Staff believe this value is the result of laboratory error or matrix interference. Staff reviewed regulated and non-regulated industries in the sewershed for possible sources, but did not arrive at any conclusions. No impact on plant effluent quality nor internal process control data were observed that day or the following day. Phosphorus and ammonia removal across the anaerobic A stage and across all four aeration basins ran efficiently on the following day (profiles are not run daily). All other influent values were normal.

The City of York will investigate the possibility of slug discharges. The MIPP program tracks historic local limit and priority pollutant results in a spreadsheet with a data start point of 2007. Data is also graphed for trends.

Table 1-5: Priority Pollutant Influent Goals Data Summary, 2016*

York City Wastewater Treatment Plant

Parameter Code	Influent Pollutant	Goal	Frequency Per Year	3/16/2016	4/13/2016	4/21/2016	4/27/2016	5/11/2016	6/15/2016	9/1/2016	11/3/2016	1/2016
01002	Arsenic- total	0.017	4	<0.0015				<0.0050	<0.0015	<0.0015	<0.0015	
39100	Bis (2-ethylhexyl) Phthalate	0.5058	1		0.0066	0.0072	0.0076	0.0061	0.0084	0.0044	0.0314	
00310	BOD- 5-day	699.772	4									241
01027	Cadmium- total	0.0041	4	<0.00050				<0.0010	<0.00050	<0.00050	<0.00050	
01034	Chromium- total	0.1616	4	0.0022				<0.0025	0.0022	0.0019	0.0019	
01042	Copper- total	0.183	4	0.026				0.031	0.041	0.034	0.043	
00720	Cyanide- total	0.057	4	<0.0050				<0.0050	<0.0050	<0.0050	<0.0050	
01051	Lead- total	0.0407	4	0.0038				0.0037	0.0062	0.0060	0.0051	
71900	Mercury- total	0.0014	4	<0.00020				<0.00020	<0.00020	<0.00020	<0.00020	
01062	Molybdenum- total	0.04	4	0.023				**0.073**	0.026	0.025	0.026	
01067	Nickel- total	0.1059	4	0.0046				<0.010	0.0049	0.0034	0.0027	
00610	Nitrogen- Ammonia	60.3248	0									18.6
00630	Nitrogen- total	72.5	0									
04166	PCB- total	0.0005	1					<0.00047				
00665	Phosphorus- total	19.2959	0									
01147	Selenium- total	0.028	4	<0.0020				<0.010	<0.0020	<0.0020	<0.0020	
01077	Silver- total	0.1374	4	<0.0010				<0.0020	<0.0010	<0.0010	<0.0010	
00530	Solids- Total Suspended	723.898	0									201
01092	Zinc- total	0.5234	4	0.083				0.092	0.12	0.089	0.099	

Notes: Samples are flow proportionate 24-hour composite samples. Results are reported in mg/l.

Non-detectable results are reported as "<" less than the test detection limit. Bolded results indicate goal exceedance, or test insufficient minimum detection limit.

Dates represented by month and year only (i.e., '3/2015') reflect monthly averages as per EPA annual report guidance.

* Table continued on next page.

Table 1-5 continued: Priority Pollutant Influent Goals Data Summary, 2016
York City Wastewater Treatment Plant

Parameter Code	Influent Pollutant	Goal	Frequency Per Year	2/2016	3/2016	4/2016	5/2016	6/2016	7/2016	8/2016	9/2016	10/2016	11/2016	12/2016
01002	Arsenic- total	0.017	4											
39100	Bis (2-ethylhexyl) Phthalate	0.5058	1											
00310	BOD- 5-day	699.772	4	157	222	279	240	278	290	291	305	312	362	336
01027	Cadmium- total	0.0041	4											
01034	Chromium- total	0.1616	4											
01042	Copper- total	0.183	4											
00720	Cyanide- total	0.057	4											
01051	Lead- total	0.0407	4											
71900	Mercury- total	0.0014	4											
01062	Molybdenum- total	0.04	4											
01067	Nickel- total	0.1059	4											
00610	Nitrogen- Ammonia	60.3248	0	10.2	16.5	20.2	16.2	18.9	19.9	19.2	22.8	23.2	25.5	22.9
00630	Nitrogen- total	72.5	0											
04166	PCB- total	0.0005	1											
00665	Phosphorus- total	19.2959	0											
01147	Selenium- total	0.028	4											
01077	Silver- total	0.1374	4											
00530	Solids- Total Suspended	723.898	0	149	186	222	220	252	247	261	307	258	293	286
01092	Zinc- total	0.5234	4											

Notes: Samples are flow proportionate 24-hour composite samples. Results are reported in mg/l.
Non-detectable results are reported as "<" less than the test detection limit. Bolded results indicate goal exceedance, or test insufficient minimum detection limit.
Dates represented by month and year only (i.e., '3/2016') reflect monthly averages as per EPA annual report guidance.

Table 1-6: Priority Pollutant Effluent Goals Data Summary, 2016
York City Wastewater Treatment Plant

Parameter Code	Effluent Pollutant	Goal	Frequency By Year	3/16/2016	4/13/2016	4/20/2016	4/27/2016	6/15/2016	9/1/2016	11/3/2016
01002	Arsenic- total	0.034	4	<0.0015				<0.0015	<0.0015	<0.0015
39100	Bis (2-ethylhexyl) Phthalate	0.0339	0		<0.0029	<0.0028	<0.0028			
00310	BOD- 5-day	No Goal	0							
01027	Cadmium- total	0.0014	4	<0.00050				<0.00050	<0.00050	<0.00050
01034	Chromium- total	0.034	4	<0.0010				<0.0010	<0.0010	<0.0010
01042	Copper- total	0.0497	4	<0.0025				<0.0025	<0.0025	0.0029
00720	Cyanide- total	0.0177	4	<0.0050				<0.0050	<0.0050	<0.0050
01051	Lead- total	0.021	4	<0.0010				<0.0010	<0.0010	<0.0010
71900	Mercury- total	0.0002	4	<0.00020				<0.00020	<0.00020	<0.00020
01062	Molybdenum- total	Monitor	4	0.030				0.025	0.030	0.020
01067	Nickel- total	0.2764	4	<0.0025				0.0049	<0.0025	<0.0025
00610	Nitrogen- Ammonia	No Goal	0							
00630	Nitrogen- total	No Goal	0							
04166	PCB- total	No Goal	0							
00665	Phosphorus- total	No Goal	0							
01147	Selenium- total	0.017	4	<0.0020				<0.0020	<0.0020	<0.0020
01077	Silver- total	0.0317	4	<0.0010				<0.0010	<0.0010	<0.0010
00530	Solids- Total Suspended	No Goal	0							
01092	Zinc- total	0.6353	4	0.026				0.025	0.019	0.023

Notes: Samples are flow proportionate 24-hour composite samples. Results are reported in mg/l.
Non-detectable results are reported as "<" less than the test detection limit. Bolded results indicate goal exceedance, or test insufficient minimum detection limit.

Table 1-7: Priority Pollutant Biosolids Goal Data Summary, 2016
York City Wastewater Treatment Plant

Parameter Code	Effluent Pollutant	Goal	Frequency By Year	1/5/2016	3/15/2016	5/3/2016	5/10/2016	6/15/2016	7/5/2016	9/1/2016	11/2/2016	11/2/2016
01002	Arsenic- total	41	4	<2.49	<11.7	<3.31	<10.5	<11.7	3.15	<11.0	<12.3	3.69
39100	Bis (2-ethylhexyl) Phthalate	Monitor	1				3.360	<6.740		<7.120	3.630	
00310	BOD- 5-day	No Goal	0									
01027	Cadmium- total	39	4	1.85	<2.9	1.65	<2.6	<2.9	1.79	<2.8	<3.1	1.60
01034	Chromium- total	Monitor	4	18.1	29.3	21.3	26.3	31.1	29.6	30.3	30.1	26.3
01042	Copper- total	1500	4	334.7	341	291.1	292	334	374.0	372	374	418.1
00720	Cyanide- total	Monitor	4	<1	<1.5	<1	<1.3	1.5	<1	1.6	2.9	<1
01051	Lead- total	300	4	53.6	50.0	40.0	52.7	42.3	52.4	47.4	52.2	53.4
71900	Mercury- total	17	4	1.30	3.1	0.88	0.61	1.2	1.28	1.2	0.78	1.41
01062	Molybdenum- total	75	4	17.5	21.7	15.6		22.2	15.8	21.8	23.5	23.3
01067	Nickel- total	420	4	15.8	25.1	17.5	21.7	28.0	21.7	23.0	22.8	19.2
00610	Nitrogen- Ammonia	No Goal	0									
00630	Nitrogen- total	No Goal	0									
04166	PCB- total	4	1	<0.16		<0.13	<0.35					<0.03
00665	Phosphorus- total	No Goal	0									
01147	Selenium- total	100	4	6.06	<29.2	<5.51	<26.2	<29.3	3.97	<27.6	<30.8	6.53
01077	Silver- total	Monitor	4		6.2		3.9	9.4		4.9	4.7	
00530	Solids- Total Suspended	No Goal	0									
01092	Zinc- total	2800	4	712.6	615	520.7	625	615	724.7	769	773	876.5

Notes: Data reflect testing of composited centrifuge cake. Data reflect dry weight in mg/kg.
Non-detectable results are reported as "<" less than the test detection limit. Bolded results indicate goal exceedance, or test insufficient minimum detection limit.

1.8.2. Trucked or Hauled Wastewater

The City of York does not accept trucked or hauled industrial or non-industrial wastewater at the treatment plant or other places within the collection system.

Significant industrial users in the wastewater service area that hauled wastewater in 2016 to somewhere other than the City of York wastewater treatment plant are: AMZ Manufacturing, Johnson Controls, New York Wire-Wire Facility, and RecOil, Inc.

AMZ Corporation is a zero-discharge metal finisher (40 CFR 433) that generates wastewater from its plating operations. Wastewater is usually evaporated on-site; however, during times of increased production excess wastewater was hauled off-site by US Ecology (EQ Pennsylvania) and received by US Ecology. US Ecology is a CIU regulated by the City of York MIPP: the wastewaters are delisted/decharacterized in US Ecology's liquid processing unit and discharged to the City of York POTW.

Johnson Controls, Inc. is permitted to discharge wastewater to the collection system and usually does not have wastewater hauled off-site. Most of their wastewater is generated from chiller testing and vessel testing. Waste propylene glycol wastewaters, paint wash booth wastewaters, and oily waters were transported and disposed of by Environmental Recovery Corp. (ERC).

IWM International, LLC (formerly New York Wire-Wire Facility) is a metal finisher (40 CFR 433). Steel wire is copper plated before final drawing. Process wastewater is discharged to the sanitary sewer system. However, oily wastewater from floor washing is directed to an outdoor storage tank. The tank wastewater was transported by Clean Venture, Inc. and CycleChem, Inc. and disposed of by CycleChem, Inc. (1,164 gallons total in 2016).

RecOil, Inc. is a zero-discharge centralized waste treatment facility for oils treatment and recovery (40 CFR 437 subpart B). Oily waters are received on-site and allowed to separate *via* gravity: the resulting mostly-water layer is then shipped off-site. During the calendar year 708,027 gallons were disposed of by: ERC, Spirit Services, and PetroMax.

Increasingly, brine wastes from oil and gas drilling are becoming more important in Pennsylvania. US Ecology (formerly EQ Pennsylvania) receives hauled wastes, which it then de-lists and de-characterizes. US Ecology received 900 gallons of mixed fracking wastewater from one generator at its York facility in 2016. This waste was accepted for management only (no treatment through the facility). The wastewater was re-manifested out for disposal at the EQ Detroit facility. No brine wastes were accepted for processing in either the solids or liquid processing units, and there were no brine wastes discharged to the sewer system.

1.8.3. Pretreatment Program Changes

Staffing in 2016 remained unchanged from 2015. Staffing in 2016 included one Pretreatment Permit and Compliance Manager and one Pretreatment Compliance Officer, with the exception of a two-month period where the Pretreatment Compliance Officer position was vacant. The Director of Public Works supervised pretreatment staff in 2016 as the General Manager position continued to be vacant.

The City of York continues to use Linko CTS to manage its industrial information from a cloud-based hosted environment. The software is networked between the pretreatment program and the wastewater treatment plant laboratory. The City of York continues to update its Standard Operating Procedures (SOP) and policies as the need arises: usually some portion of the SOP is updated monthly.

TetraTech, contractors representing the USEPA, audited the pretreatment program September 22-23, 2014. USEPA audit comments have not been received as of late-March 2017.

The City of York wastewater treatment plant's NPDES discharge permit expired January 13, 2013: the new permit has not been issued as of late-March 2017. The local limits sampling plan is required to be submitted to EPA within three months of permit issuance.

1.8.4. Miscellaneous Developments

Activities

In 2016 MIPP engaged in the following activities:

- Attended pretreatment program trainings.
- Continued to search for other significant industrial users.
- Continued to evaluate industrial-sourced BOD loading decreases and recommended supplemental carbon feed dosing windows to maintain effective POTW plant ammonia and phosphorus removal.
- Assisted with MS4 field mapping, illicit discharge detection and elimination, regional Chesapeake Bay Pollutant Reduction Plan development, outfall water sampling, and MS4 SOP development.
- Compiled and submitted the wastewater treatment plant annually required reports and/or plans: Air Information Management System (AIMS); Spill, Prevention, Control and Countermeasure Plan; and, SARA Title III Community Right-to-Know Plan.
- Conducted the wastewater treatment plant's annual NPDES stormwater outfall inspections.
- Processed sewage facility planning modules for the treatment plant sewershed.
- Assisted wastewater treatment plant staff with: data and document compilation for potential lease of the POTW; NPDES permit renewal; air quality permit renewal; pressure vessel guidance documentation; above ground storage tank compliance; 5-year capital improvements plan preparation.
- Assisted the City of York with: subdivision and land development plan reviews related to stormwater and sanitary sewage facilities; sewage facility planning modules; sewer bans; and, corrective action plans.
- The Pretreatment Permit & Compliance Manager member passed the Pennsylvania wastewater operator certification exam for Class A, sub-classification 1. In addition, Leadership York's nine-month long Leadership Training Program and a passing grade was received for completing the Sacramento State Office of Water Programs Wastewater Operations Volume 2 course.

In 2017 MIPP intends to:

- Attend pretreatment program trainings.
- Complete training the new Stormwater Coordinator (see discussion below).
- Continue to search for other significant industrial users.
- Continue to assist the wastewater treatment plant with projects and reports.
- Evaluate all MIPP SOPs.
- Prepare a program for annual wastewater treatment plant tour for SIUs.
- Continue to evaluate industrial sourced BOD loading decreases to aid the POTW in effective ammonia and phosphorus removal.
- Assist POTW staff with operational SOP revisions.
- Enroll the new Pretreatment Compliance Officer in the Sacramento State Office of Water Programs Pretreatment Facility Inspection course.
- Apply for Pennsylvania wastewater operator Class A, sub-classification 1 licensure.
- Implement the expected passage of the new dental amalgam regulations.

Environmental Investigations
The pretreatment program is relied upon to provide environmental investigation assistance. Typically, a citizen complaint is lodged either directly or through PADEP to investigate a release to the Codorus Creek, storm sewer system, or public roadway. It is appropriate that pretreatment staff, which are familiar with industrial sources, sanitary sewer system infrastructure and general environmental knowledge, respond to these situations. MIPP staff has received some training to provide reliable and safe assistance to area fire and emergency response units as well as state agencies.

Municipal Separate Storm Sewer System (MS4) NPDES Permit
Staff was brought into the City of York's MS4 NPDES program during the 2010 USEPA MS4 program audit, and from that point forward has been involved in some of the required MS4 activities. The MIPP Pretreatment Permit and Compliance Manager is a member of the MS4 task force. In 2016 MIPP staff were responsible for: documenting all illicit discharge events in the City of York for annual reporting to the PADEP and USEPA; creating quarterly illicit discharge reports; developing and maintaining an illicit discharge event database; assisting in illicit discharge investigation as needed; addressing illicit discharge complaints submitted by citizens to the MS4 "hotline' number or website link; assisting with dry-weather storm system sampling and outfall inspection; and, coordinating with other departments to ensure all illicit discharge events are reported. In the last quarter of 2016 the City of York hired a Stormwater Coordinator, whom is being trained by the Pretreatment Permit and Compliance Manager in the above listed activities.

In 2016 there were twenty-five (25) illicit discharge investigations: of those, four (4) were not illicit discharges as defined by the City of York MS4 permit, and two (2) were located in other municipalities. Although the City of York NPDES permit covers only the municipal boundaries, MIPP responds to and assists in events throughout the entire sewershed if necessary. Pollution events and watercourses don't heed municipal boundaries: tracing discharge sources may lead to source locations outside the City of York.

Industrial Property Records
In 2010 MIPP instituted a permanent property address file for all properties researched in the sanitary sewer system. The files house important past and current site information such as site plans, manufacturing uses, chemical storage, photographs, state and federal environmental notifications, and results from MIPP inspections and investigations. All information from the systematic search of industrial users, whether the users were found to be significant or not, is added to the permanent property address. There are three sections in the address file system: files for each property located in the sanitary sewer system for which there is current or historic information, by address; properties not currently served by any the treatment plant system, but which will come to the City of York wastewater treatment plant in the future given logical extensions of the sanitary sewer system; and, a file for properties researched and found to be outside the current and future City of York treatment plant service area, grouped by municipality and then address. The address file is permanently housed in the MIPP office as an "active" information resource. Historic information is being retrieved from the last set of MIPP archived files and new information is continually added.

Appendix A
Local Limits and Priority Pollutant Analytical Reports

PENNSTATE

Agricultural Analytical Services Laboratory
College of Agricultural Sciences
The Pennsylvania State University
University Park, PA 16802

Phone: 814-863-0841
Fax: 814-863-4540
Web: www.aasl.psu.edu

PA DEP Lab ID # 14-00588

Analysis Report for Use of Biosolids on Cropland

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E17442
Date Received: 1/6/2016
Date Sampled: 1/5/16
Report Date: 1/28/2016
Sample type: Composite
County: York
Customer Sample ID: Centrifuge Cake

RESULTS

pH @ 22.5 C	Solids	Volatile	Tot-N	Org-N	NH_4 N	P	K	Mg	Ca	Na	Fe	Al
	— % —					% (dry weight basis)						
8.3	17.07	82.60	6.81	5.85	0.96	2.01	0.47	0.42	2.59	0.05	0.81	0.27

Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB[1]	Reactive CN
						mg/kg (dry weight basis)						
183.6	< 2.49	1.85	18.1	334.7	53.6	1.30	17.5	15.8	6.06	712.6	< .16	< 1

NR-Not Requested One dry ton of this material is equivalent to 1405 gallons of wet material or 5.9 tons of wet material

PRIMARY NUTRIENT CONTENT

	% (dry wt basis)		
Total N	6.81	0.73	dry tons of this biosolid will supply 100 lbs of total N.
P_2O_5	4.60	2.49	dry tons of this biosolid will supply 100 lbs of P
K_2O	0.56		

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Brooks	1/15/2016	12:57:06
As	3050B + 6010	Brooks	1/15/2016	12:57:06
Se	3050B + 6010	Brooks	1/15/2016	12:57:06
Hg	7473	Brooks	1/18/2016	3:26:08 PM
PCB[1]	8082			

[1]Subcontracted to Fairway Laboratories, Inc. (ID 7-00062)

RAW LABORATORY BENCH DATA FOR EPA 503 POLLUTANTS

	As	Cd	Cu	Hg		Mo	Ni	Pb	Se	Zn
Wet Wt. aliquot (g)	1.763	1.763	1.763	0.243		1.763	1.763	1.763	1.763	1.763
Analyte conc. in sample/ digest (mg/L except Hg)	0.012	0.011	2.01	0.054	ug	0.11	0.10	0.32	0.04	4.29
Method limit (mg/L except Hg)	0.015	0.005	0.015	0.0010	ug	0.015	0.010	0.025	0.025	0.050

Optional Analyses: Results (except soluble salts) on dry weight basis

Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:
13.93				

Sample Receipt

PENNSTATE

Agricultural Analytical Services Laboratory
College of Agricultural Sciences
The Pennsylvania State University
University Park, PA 16802

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Web: www.aasl.psu.edu

PA DEP Lab ID # 14-00588

Biosolids Analysis Report

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E17442
Date Received: 1/6/2016
Date Sampled: 1/5/16
County: York
Customer Sample ID: Centrifuge Cake

RESULTS (Dry Weight Basis)

Parameter Analyzed		Result	Units	Sample Detection Limit
pH		8.30	—	—
Solids		17.07	%	—
Total Phosphorus		20,084	mg/kg	41.55
Total Potassium		4,692	mg/kg	83.09
Total Combustion Nitrogen		6.81	%	-
Ammonium Nitrogen		0.96	%	0.014
Nitrate		13.93	mg/kg	1.16
Cadmium		1.85	mg/kg	0.83
Copper		334.7	mg/kg	2.49
Nickel		15.8	mg/kg	1.66
Lead		53.6	mg/kg	4.15
Zinc		712.6	mg/kg	8.31
Mercury		1.30	mg/kg	0.02
Arsenic	<	2.49	mg/kg	2.49
Molybdenum		17.52	mg/kg	2.49
Selenium		6.06	mg/kg	4.15
PCBs		< .16	mg/kg	0.16

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PA DEP Lab ID # 14-00588

Analysis Report for Use of Biosolids on Cropland

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E17625
Date Received: 3/9/2016
Date Sampled: 3/7/2016
Report Date: 3/29/2016
Sample type: Composite
County: York
Customer Sample ID: Centrifuge Cake

RESULTS

pH @ 22.9 C	Solids	Volatile	Tot-N	Org-N	NH_4 N	P	K	Mg	Ca	Na	Fe	Al
	— % —				% (dry weight basis)							
8.2	18.72	79.48	5.35	4.48	0.87	2.14	0.45	0.46	2.66	0.05	1.32	0.26

Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB[1]	Reactive CN
mg/kg (dry weight basis)												
167.5	2.71	1.59	17.8	301.3	43.7	0.94	17.6	15.9	5.65	557.4	< .14	< 1

NR-Not Requested One dry ton of this material is equivalent to 1281 gallons of wet material or 5.3 tons of wet material

PRIMARY NUTRIENT CONTENT

	% (dry wt basis)		
Total N	5.35	0.93	dry tons of this biosolid will supply 100 lbs of total N.
P_2O_5	4.90	2.33	dry tons of this biosolid will supply 100 lbs of P
K_2O	0.54		

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Brooks	3/18/2016	12:08:11
As	3050B + 6010	Brooks	3/18/2016	12:08:11
Se	3050B + 6010	Brooks	3/18/2016	12:08:11
Hg	7473	Brooks	3/17/2016	12:02:26 PM
PCB[1]	8082			

[1]Subcontracted to Fairway Laboratories, Inc. (ID 7-00062)

RAW LABORATORY BENCH DATA FOR EPA 503 POLLUTANTS

	As	Cd	Cu	Hg	Mo	Ni	Pb	Se	Zn
Wet Wt. aliquot (g)	3.794	3.794	3.794	0.434	3.794	3.794	3.794	3.794	3.794
Analyte conc. in sample/ digest (mg/L except Hg)	0.039	0.023	4.28	0.077 ug	0.25	0.23	0.62	0.08	7.92
Method limit (mg/L except Hg)	0.015	0.005	0.015	0.0010 ug	0.015	0.010	0.025	0.025	0.050

Optional Analyses: Results (except soluble salts) on dry weight basis

Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:
11.22				

Sample Receipt

PENNSTATE

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College of Agricultural Sciences
The Pennsylvania State University
University Park, PA 16802

Phone: 814-863-0841
Fax: 814-863-4540
Web: www.aasl.psu.edu

PA DEP Lab ID # 14-00588

Biosolids Analysis Report

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E17625
Date Received: 3/9/2016
Date Sampled: 3/7/2016
County: York
Customer Sample ID: Centrifuge Cake

RESULTS (Dry Weight Basis)

Parameter Analyzed	Result	Units	Sample Detection Limit
pH	8.17	—	—
Solids	18.72	%	—
Total Phosphorus	21,415	mg/kg	17.60
Total Potassium	4,459	mg/kg	35.20
Total Combustion Nitrogen	5.35	%	-
Ammonium Nitrogen	0.87	%	0.009
Nitrate	11.22	mg/kg	1.07
Cadmium	1.59	mg/kg	0.35
Copper	301.3	mg/kg	1.06
Nickel	15.9	mg/kg	0.70
Lead	43.7	mg/kg	1.76
Zinc	557.4	mg/kg	3.52
Mercury	0.94	mg/kg	0.01
Arsenic	2.71	mg/kg	1.06
Molybdenum	17.56	mg/kg	1.06
Selenium	5.65	mg/kg	1.76
PCBs	< .14	mg/kg	0.14

PENNSTATE

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PA DEP Lab ID # 14-00588

Analysis Report for Use of Biosolids on Cropland

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E17708
Date Received: 5/4/2016
Date Sampled: 5/3/2016
Report Date: 5/20/2016
Sample type: Composite
County: York
Customer Sample ID: Centrifuge Cake

RESULTS

pH @ 22.3 C	Solids	Volatile	Tot-N	Org-N	NH_4 N	P	K	Mg	Ca	Na	Fe	Al
	— % —	% (dry weight basis)										
7.6	20.07	78.30	6.55	5.65	0.91	2.51	0.43	0.50	3.07	0.05	2.11	0.28

Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB[1]	Reactive CN
mg/kg (dry weight basis)												
168.4	< 3.31	1.65	21.3	291.1	40.0	0.88	15.6	17.5	<5.51	520.7	< .13	< 1

NR-Not Requested One dry ton of this material is equivalent to 1195 gallons of wet material or 5.0 tons of wet material

PRIMARY NUTRIENT CONTENT

	% (dry wt basis)		
Total N	6.55	0.76	dry tons of this biosolid will supply 100 lbs of total N.
P_2O_5	5.74	1.99	dry tons of this biosolid will supply 100 lbs of P
K_2O	0.51		

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Brooks	5/13/2016	13:39:13
As	3050B + 6010	Brooks	5/13/2016	13:39:13
Se	3050B + 6010	Brooks	5/13/2016	13:39:13
Hg	7473	Rishel	5/11/2016	9:52:25 AM
PCB[1]	8082			

[1]Subcontracted to Fairway Laboratories, Inc. (ID 7-00062)

RAW LABORATORY BENCH DATA FOR EPA 503 POLLUTANTS

	As	Cd	Cu	Hg	Mo	Ni	Pb	Se	Zn
Wet Wt. aliquot (g)	1.130	1.130	1.130	0.228	1.130	1.130	1.130	1.130	1.130
Analyte conc. in sample/ digest (mg/L except Hg)	0.006	0.008	1.32	0.040 ug	0.07	0.08	0.18	0.02	2.36
Method limit (mg/L except Hg)	0.015	0.005	0.015	0.0010 ug	0.015	0.010	0.025	0.025	0.050

Optional Analyses: Results (except soluble salts) on dry weight basis

Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:
8.94				

Sample Receipt

PENNSTATE

Agricultural Analytical Services Laboratory
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The Pennsylvania State University
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Web: www.aasl.psu.edu

PA DEP Lab ID # 14-00588

Biosolids Analysis Report

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E17708
Date Received: 5/4/2016
Date Sampled: 5/3/2016
County: York
Customer Sample ID: Centrifuge Cake

RESULTS (Dry Weight Basis)

Parameter Analyzed		Result	Units	Sample Detection Limit
pH		7.58	—	—
Solids		20.07	%	—
Total Phosphorus		25,072	mg/kg	55.13
Total Potassium		4,283	mg/kg	110.25
Total Combustion Nitrogen		6.55	%	-
Ammonium Nitrogen		0.91	%	0.011
Nitrate		8.94	mg/kg	0.99
Cadmium		1.65	mg/kg	1.10
Copper		291.1	mg/kg	3.31
Nickel		17.5	mg/kg	2.21
Lead		40.0	mg/kg	5.51
Zinc		520.7	mg/kg	11.03
Mercury		0.88	mg/kg	0.02
Arsenic	<	3.31	mg/kg	3.31
Molybdenum		15.60	mg/kg	3.31
Selenium	<	5.51	mg/kg	5.51
PCBs		< .13	mg/kg	0.13

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PA DEP Lab ID # 14-00588

Analysis Report for Use of Biosolids on Cropland

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E17788
Date Received: 7/7/2016
Date Sampled: 7/5/2016
Report Date: 7/27/2016
Sample type: Composite
County: York
Customer Sample ID: Centrifuge Cake

RESULTS

pH @ 24.5 C	Solids	Volatile	Tot-N	Org-N	NH_4 N	P	K	Mg	Ca	Na	Fe	Al
	— % —				% (dry weight basis)							
10.3	16.40	72.05	7.53	6.13	1.40	3.18	0.18	0.58	3.94	0.07	2.93	0.39

Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB[1]	Reactive CN
mg/kg (dry weight basis)												
219.5	3.15	1.79	29.6	374.0	52.4	1.28	15.8	21.7	3.97	724.7	< .03	< 1

NR-Not Requested One dry ton of this material is equivalent to 1463 gallons of wet material or 6.1 tons of wet material

PRIMARY NUTRIENT CONTENT

	% (dry wt basis)		
Total N	7.53	0.66	dry tons of this biosolid will supply 100 lbs of total N.
P_2O_5	7.29	1.57	dry tons of this biosolid will supply 100 lbs of P
K_2O	0.22		

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Stecko	7/14/2016	14:42:20
As	3050B + 6010	Stecko	7/14/2016	14:42:20
Se	3050B + 6010	Stecko	7/14/2016	14:42:20
Hg	7473	Spargo	7/13/2016	1:45:06 PM
PCB[1]	8082			

[1]Subcontracted to Fairway Laboratories, Inc. (ID 7-00062)

RAW LABORATORY BENCH DATA FOR EPA 503 POLLUTANTS

	As	Cd	Cu	Hg		Mo	Ni	Pb	Se	Zn
Wet Wt. aliquot (g)	2.277	2.277	2.277	0.551		2.277	2.277	2.277	2.277	2.277
Analyte conc. in sample/ digest (mg/L except Hg)	0.024	0.013	2.79	0.116	ug	0.12	0.16	0.39	0.03	5.41
Method limit (mg/L except Hg)	0.015	0.005	0.015	0.0010	ug	0.015	0.010	0.025	0.025	0.050

Optional Analyses: Results (except soluble salts) on dry weight basis

Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:
10.17				

Sample Receipt

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PA DEP Lab ID # 14-00588

Biosolids Analysis Report

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E17788
Date Received: 7/7/2016
Date Sampled: 7/5/2016
County: York
Customer Sample ID: Centrifuge Cake

RESULTS (Dry Weight Basis)

Parameter Analyzed	Result	Units	Sample Detection Limit
pH	10.27	—	—
Solids	16.40	%	—
Total Phosphorus	31,832	mg/kg	33.48
Total Potassium	1,846	mg/kg	66.96
Total Combustion Nitrogen	7.53	%	-
Ammonium Nitrogen	1.40	%	0.013
Nitrate	10.17	mg/kg	1.20
Cadmium	1.79	mg/kg	0.67
Copper	374.0	mg/kg	2.01
Nickel	21.7	mg/kg	1.34
Lead	52.4	mg/kg	3.35
Zinc	724.7	mg/kg	6.70
Mercury	1.28	mg/kg	0.01
Arsenic	3.15	mg/kg	2.01
Molybdenum	15.84	mg/kg	2.01
Selenium	3.97	mg/kg	3.35
PCBs	< .03	mg/kg	0.03

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PA DEP Lab ID # 14-00588

Analysis Report for Use of Biosolids on Cropland

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E17918
Date Received: 9/8/2016
Date Sampled: 9/6/2016
Report Date: 9/22/2016
Sample type: Composite
County: York
Customer Sample ID: Centrifuge Cake

RESULTS

pH @ 23.4 C	Solids	Volatile	Tot-N	Org-N	NH_4 N	P	K	Mg	Ca	Na	Fe	Al
	— % —	% (dry weight basis)										
8.5	16.14	74.54	6.67	5.64	1.04	2.87	0.13	0.43	3.89	0.07	2.33	0.41

Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB[1]	Reactive CN
mg/kg (dry weight basis)												
187.4	3.6	1.63	27.1	411.6	50.0	1.08	20.4	20.5	9.49	832.1	< .03	< 1

NR-Not Requested One dry ton of this material is equivalent to 1486 gallons of wet material or 6.2 tons of wet material

PRIMARY NUTRIENT CONTENT

	% (dry wt basis)		
Total N	6.67	0.75	dry tons of this biosolid will supply 100 lbs of total N.
P_2O_5	6.58	1.74	dry tons of this biosolid will supply 100 lbs of P
K_2O	0.16		

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Stecko	9/19/2016	10:54:15
As	3050B + 6010	Stecko	9/19/2016	10:54:15
Se	3050B + 6010	Stecko	9/19/2016	10:54:15
Hg	7473	Brooks	9/16/2016	1:18:13 PM
PCB[1]	8082			

[1]Subcontracted to Fairway Laboratories, Inc. (ID 7-00062)

RAW LABORATORY BENCH DATA FOR EPA 503 POLLUTANTS

	As	Cd	Cu	Hg		Mo	Ni	Pb	Se	Zn
Wet Wt. aliquot (g)	2.981	2.981	2.981	0.243		2.981	2.981	2.981	2.981	2.981
Analyte conc. in sample/ digest (mg/L except Hg)	0.035	0.016	3.96	0.042	ug	0.20	0.20	0.48	0.09	8.01
Method limit (mg/L except Hg)	0.015	0.005	0.015	0.0010	ug	0.015	0.010	0.025	0.025	0.050

Optional Analyses: Results (except soluble salts) on dry weight basis

Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:
2.98				

Sample Receipt

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PA DEP Lab ID # 14-00588

Biosolids Analysis Report

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E17918
Date Received: 9/8/2016
Date Sampled: 9/6/2016
County: York
Customer Sample ID: Centrifuge Cake

RESULTS (Dry Weight Basis)

Parameter Analyzed	Result	Units	Sample Detection Limit
pH	8.48	—	—
Solids	16.14	%	—
Total Phosphorus	28,729	mg/kg	25.98
Total Potassium	1,328	mg/kg	51.97
Total Combustion Nitrogen	6.67	%	-
Ammonium Nitrogen	1.04	%	0.010
Nitrate	2.98	mg/kg	1.19
Cadmium	1.63	mg/kg	0.52
Copper	411.6	mg/kg	1.56
Nickel	20.5	mg/kg	1.04
Lead	50.0	mg/kg	2.60
Zinc	832.1	mg/kg	5.20
Mercury	1.08	mg/kg	0.03
Arsenic	3.6	mg/kg	1.56
Molybdenum	20.36	mg/kg	1.56
Selenium	9.49	mg/kg	2.60
PCBs	< .03	mg/kg	0.03

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PA DEP Lab ID # 14-0058

Analysis Report for Use of Biosolids on Cropland

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E17997
Date Received: 11/4/2016
Date Sampled: 11/2/2016
Report Date: 11/21/2016
Sample type: Composite
County: York
Customer Sample ID: Centrifuge Cake

RESULTS

pH @ 23.2 C	Solids	Volatile	Tot-N	Org-N	NH_4 N	P	K	Mg	Ca	Na	Fe	Al
	— % —				% (dry weight basis)							
8.5	15.57	75.25	7.32	6.29	1.03	2.86	0.20	0.40	3.72	0.06	2.28	0.43

Mn	As	Cd	Cr	Cu	Pb	Hg	Mo	Ni	Se	Zn	PCB[1]	Reactive CN
mg/kg (dry weight basis)												
194.4	3.69	1.60	26.3	418.1	53.4	1.41	23.3	19.2	6.53	876.5	< .03	< 1

NR-Not Requested One dry ton of this material is equivalent to 1541 gallons of wet material or 6.4 tons of wet material

PRIMARY NUTRIENT CONTENT

	% (dry wt basis)		
Total N	7.32	0.68	dry tons of this biosolid will supply 100 lbs of total N.
P_2O_5	6.55	1.75	dry tons of this biosolid will supply 100 lbs of P
K_2O	0.24		

ANALYSIS INFORMATION FOR EPA 503 POLLUTANTS

Analyte	EPA SW-846 Method	Analyst	Date	Time
Cd,Cu,Mo,Pb,Ni, Zn	3050B + 6010	Stecko	11/10/2016	9:26:00
As	3050B + 6010	Stecko	11/10/2016	9:26:00
Se	3050B + 6010	Stecko	11/10/2016	9:26:00
Hg	7473	Rishel	11/11/2016	12:36:20 PM
PCB[1]	8082			

[1]Subcontracted to Fairway Laboratories, Inc. (ID 7-00062)

RAW LABORATORY BENCH DATA FOR EPA 503 POLLUTANTS

	As	Cd	Cu	Hg		Mo	Ni	Pb	Se	Zn
Wet Wt. aliquot (g)	1.843	1.843	1.843	0.196		1.843	1.843	1.843	1.843	1.843
Analyte conc. in sample/ digest (mg/L except Hg)	0.021	0.009	2.40	0.043	ug	0.13	0.11	0.31	0.04	5.03
Method limit (mg/L except Hg)	0.015	0.005	0.015	0.0010	ug	0.015	0.010	0.025	0.025	0.050

Optional Analyses: Results (except soluble salts) on dry weight basis

Nitrate-N (mg/kg)	Total Carbon (%)	CCE Calcium Carbonate Equivalent (%)	Soluble Salts (mmhos/cm)	Other:
79.39				

Sample Receipt

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PA DEP Lab ID # 14-00588

Biosolids Analysis Report

Joseph Concino
City of York - WWTP
1701 Black Bridge Rd
York PA 17402

Lab Sample ID: E17997
Date Received: 11/4/2016
Date Sampled: 11/2/2016
County: York
Customer Sample ID: Centrifuge Cake

RESULTS (Dry Weight Basis)

Parameter Analyzed	Result	Units	Sample Detection Limit
pH	8.48	—	—
Solids	15.57	%	—
Total Phosphorus	28,602	mg/kg	43.57
Total Potassium	1,976	mg/kg	87.15
Total Combustion Nitrogen	7.32	%	-
Ammonium Nitrogen	1.03	%	0.013
Nitrate	79.39	mg/kg	1.22
Cadmium	1.60	mg/kg	0.87
Copper	418.1	mg/kg	2.61
Nickel	19.2	mg/kg	1.74
Lead	53.4	mg/kg	4.36
Zinc	876.5	mg/kg	8.71
Mercury	1.41	mg/kg	0.03
Arsenic	3.69	mg/kg	2.61
Molybdenum	23.27	mg/kg	2.61
Selenium	6.53	mg/kg	4.36
PCBs	< .03	mg/kg	0.03

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

March 31, 2016

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**2016-ANNUAL TESTING**	Workorder:	**2130700**
Purchase Order:	**PO-000003774**	Workorder ID:	**Local Limits**

Dear Mr. Concino:

Enclosed are the analytical results for samples received by the laboratory on Thursday, March 17, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Shannon Butler

Ms. Shannon Butler
Project Coordinator

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2130700 Local Limits

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2130700001	Raw Influent Composite	Waste Water	3/16/2016 00:00	3/17/2016 14:24	Collected by Client
2130700002	002 Effluent Composite	Waste Water	3/16/2016 00:00	3/17/2016 14:24	Collected by Client
2130700003	Raw Influent Grab	Waste Water	3/16/2016 11:00	3/17/2016 14:24	Collected by Client
2130700004	002 Effluent Grab	Waste Water	3/16/2016 10:50	3/17/2016 14:24	Collected by Client
2130700005	Centrifuge Cake	Solid	3/15/2016 00:00	3/17/2016 14:24	Collected by Client

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit

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ANALYTICAL RESULTS

Workorder: 2130700 Local Limits

Lab ID: **2130700001** Date Collected: 3/16/2016 00:00 Matrix: Waste Water

Sample ID: **Raw Influent Composite** Date Received: 3/17/2016 14:24

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	3/28/16 11:55	MMA	3/29/16 02:36	LJF	A
METALS										
Arsenic, Total	ND		mg/L	0.0015	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:02	ZMC	B1
Cadmium, Total	ND		mg/L	0.00050	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:02	ZMC	B1
Chromium, Total	0.0022		mg/L	0.0010	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:02	ZMC	B1
Copper, Total	0.026		mg/L	0.0025	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:02	ZMC	B1
Lead, Total	0.0038		mg/L	0.0010	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:02	ZMC	B1
Mercury, Total (Low-level)	ND		mg/L	0.00020	EPA 245.1	3/22/16 05:00	MNP	3/22/16 10:24	MNP	B2
Molybdenum, Total	0.023		mg/L	0.0010	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:02	ZMC	B1
Nickel, Total	0.0046		mg/L	0.0025	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:02	ZMC	B1
Selenium, Total	ND		mg/L	0.0020	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:02	ZMC	B1
Silver, Total	ND		mg/L	0.0010	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:02	ZMC	B1
Zinc, Total	0.083		mg/L	0.0025	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:02	ZMC	B1

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2130700 Local Limits

Lab ID: **2130700002** Date Collected: 3/16/2016 00:00 Matrix: Waste Water

Sample ID: **002 Effluent Composite** Date Received: 3/17/2016 14:24

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	3/28/16 11:55	MMA	3/29/16 02:36	LJF	A
METALS										
Arsenic, Total	ND		mg/L	0.0015	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:05	ZMC	B1
Cadmium, Total	ND		mg/L	0.00050	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:05	ZMC	B1
Chromium, Total	ND		mg/L	0.0010	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:05	ZMC	B1
Copper, Total	ND		mg/L	0.0025	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:05	ZMC	B1
Lead, Total	ND		mg/L	0.0010	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:05	ZMC	B1
Mercury, Total (Low-level)	ND		mg/L	0.00020	EPA 245.1	3/22/16 05:00	MNP	3/22/16 10:25	MNP	B2
Molybdenum, Total	0.030		mg/L	0.0010	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:05	ZMC	B1
Nickel, Total	ND		mg/L	0.0025	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:05	ZMC	B1
Selenium, Total	ND		mg/L	0.0020	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:05	ZMC	B1
Silver, Total	ND		mg/L	0.0010	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:05	ZMC	B1
Zinc, Total	0.026		mg/L	0.0025	EPA 200.8	3/21/16 08:15	JPS	3/22/16 02:05	ZMC	B1

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2130700 Local Limits

Lab ID: **2130700003** Date Collected: 3/16/2016 11:00 Matrix: Waste Water

Sample ID: **Raw Influent Grab** Date Received: 3/17/2016 14:24

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Oil/Grease Hexane Extractable	12.8		mg/L	2.4	EPA 1664B			3/29/16 10:00	MPP	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2130700 Local Limits

Lab ID: **2130700004** Date Collected: 3/16/2016 10:50 Matrix: Waste Water

Sample ID: **002 Effluent Grab** Date Received: 3/17/2016 14:24

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Oil/Grease Hexane Extractable	ND		mg/L	2.2	EPA 1664B			3/29/16 10:00	MPP	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

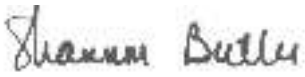
ANALYTICAL RESULTS

Workorder: 2130700 Local Limits

Lab ID: **2130700005** Date Collected: 3/15/2016 00:00 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 3/17/2016 14:24

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	1.5	SW846 9012B	3/18/16 10:35	MMA	3/21/16 03:57	LJF	A
Hexane Extractable Material	59000		mg/kg	1200	SW846 9071B			3/29/16 19:00	AT	A
Moisture	83.5		%	0.1	S2540G-11			3/21/16 10:30	KAM	A
Silica Gel Treated HEM	17300		mg/kg	1200	SW846 9071B			3/29/16 19:00	AT	A
Total Solids	16.5		%	0.1	S2540G-11			3/21/16 10:30	KAM	A
METALS										
Arsenic, Total	ND		mg/kg	11.7	SW846 6010C	3/22/16 11:30	JPS	3/23/16 06:45	TSS	A1
Cadmium, Total	ND		mg/kg	2.9	SW846 6010C	3/22/16 11:30	JPS	3/23/16 06:45	TSS	A1
Chromium, Total	29.3		mg/kg	5.8	SW846 6010C	3/22/16 11:30	JPS	3/23/16 06:45	TSS	A1
Copper, Total	341		mg/kg	11.7	SW846 6010C	3/22/16 11:30	JPS	3/23/16 06:45	TSS	A1
Lead, Total	50.0		mg/kg	11.7	SW846 6010C	3/22/16 11:30	JPS	3/23/16 06:45	TSS	A1
Mercury, Total	3.1		mg/kg	0.29	SW846 7471B	3/29/16 09:30	MNP	3/29/16 13:08	MNP	A2
Molybdenum, Total	21.7		mg/kg	11.7	SW846 6010C	3/22/16 11:30	JPS	3/23/16 06:45	TSS	A1
Nickel, Total	25.1		mg/kg	11.7	SW846 6010C	3/22/16 11:30	JPS	3/23/16 06:45	TSS	A1
Selenium, Total	ND		mg/kg	29.2	SW846 6010C	3/22/16 11:30	JPS	3/23/16 06:45	TSS	A1
Silver, Total	6.2		mg/kg	2.9	SW846 6010C	3/22/16 11:30	JPS	3/23/16 06:45	TSS	A1
Zinc, Total	615		mg/kg	11.7	SW846 6010C	3/22/16 11:30	JPS	3/23/16 06:45	TSS	A1



Ms. Shannon Butler
Project Coordinator

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 1

Courier:

Tracking #:

2130700

Co. Name: YORK CITY WWTP

Contact (Report to): JOSEPH CONCINO Phone: 8452794

Address: 1701 BLACK BRIDGE ROAD YORK, PA 17402

Bill to (if different than Report to): PO#: PO-0000003774

Project Name/#: LOCAL LIMITS ALS Quote #: 524036

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges. Date Required: Approved By:

Email? [X] -Y JCONCINO@YORKCITY.ORG

Fax? [ ] -Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	ANALYSES/METHOD REQUESTED: TOTAL As,Cd,Cr,Mo,Pb Zn,Ag,Cu,Ni,Se,Hg	CYANIDE	OIL & GREASE 1664	TOTAL MOISTURE	OIL & GREASE 9071B	CYANIDE	TOTAL As,Cd,Cr,Mo,Pb Zn,Ag,Cu,Ni,Se,Hg
***Container Type						PL	AL	GL	GL	GL	GL	GL
***Container Size						250mL	0.5L	1L	1L	1L	1L	1L
*** Preservative						HNO3	NAOH	H2SO4	—	—	—	—
1 RAW INFLUENT		3/16/16	0000 2400	C	WW	1	1					
2 002 EFFLUENT		3/16/16	0000 2400	C	WW	1	1					
3 RAW INFLUENT		3/16/16	1100	G	WW			2				
4 002 EFFLUENT		3/16/16	1050	G	WW			2				
5 CENTRIFUGE CAKE	1HR 3/14/16	3/15/16	2300 0300	C	SL				X	X	X	X → 2 BOTTLES
6												
7												
8	3/17/16 2141											

Enter Number of Containers Per Analysis

Cooler Temp: 3.1 C

Therm. ID: 352

No. of Coolers:

Notes:

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
	N	N	N	N	
	Y	N	N	N	
	Y	Y	Y	Y	Y

	Custody seals Present?	(if present) Seals Intact?	Received on Ice?	COC/Labels complete/accurate?	Container in good condition?
	Y	Y	Y	Y	Y

SAMPLED BY (Please Print):

Project Comments: SB 323

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1	3-17-16	0926	2	3-17-16	0924
3	3-17-16	1424	4	3/17	1424
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ]

EDDs Required? [ ] If yes, format type:

DOD Criteria Required?

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Other

ALS FIELD SERVICES: [X] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite

**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Ol=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

April 21, 2016

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**2016-ANNUAL TESTING**	Workorder:	**2136808**
Purchase Order:		Workorder ID:	**NPDES 4/14/16**

Dear Mr. Concino:

Enclosed are the analytical results for samples received by the laboratory on Thursday, April 14, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Shannon Butler

Ms. Shannon Butler
Project Coordinator

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2136808 NPDES 4/14/16

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2136808001	Raw Influent Composite	Waste Water	4/13/2016 00:00	4/14/2016 21:45	Collected by Client
2136808002	002 Effluent Composite	Waste Water	4/13/2016 00:00	4/14/2016 21:45	Collected by Client

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2136808 NPDES 4/14/16

Lab ID: **2136808001** Date Collected: 4/13/2016 00:00 Matrix: Waste Water

Sample ID: **Raw Influent Composite** Date Received: 4/14/2016 21:45

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
bis(2-Ethylhexyl)phthalate	6.6		ug/L	2.8	EPA 625	4/19/16 08:40	ACD	4/20/16 02:41	DRS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	91.5		%	47 - 128	EPA 625	4/19/16 08:40	ACD	4/20/16 02:41	DRS	A
2-Fluorobiphenyl (S)	67.7		%	52 - 118	EPA 625	4/19/16 08:40	ACD	4/20/16 02:41	DRS	A
2-Fluorophenol (S)	36.2		%	20 - 87	EPA 625	4/19/16 08:40	ACD	4/20/16 02:41	DRS	A
Nitrobenzene-d5 (S)	64.8		%	27 - 139	EPA 625	4/19/16 08:40	ACD	4/20/16 02:41	DRS	A
Phenol-d5 (S)	23.9		%	10 - 81	EPA 625	4/19/16 08:40	ACD	4/20/16 02:41	DRS	A
Terphenyl-d14 (S)	74.1		%	46 - 133	EPA 625	4/19/16 08:40	ACD	4/20/16 02:41	DRS	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2136808 NPDES 4/14/16

Lab ID: **2136808002** Date Collected: 4/13/2016 00:00 Matrix: Waste Water

Sample ID: **002 Effluent Composite** Date Received: 4/14/2016 21:45

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
bis(2-Ethylhexyl)phthalate	ND		ug/L	2.9	EPA 625	4/20/16 08:15	ACD	4/21/16 04:36	GEC	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	75.8		%	47 - 128	EPA 625	4/20/16 08:15	ACD	4/21/16 04:36	GEC	A
2-Fluorobiphenyl (S)	63.5		%	52 - 118	EPA 625	4/20/16 08:15	ACD	4/21/16 04:36	GEC	A
2-Fluorophenol (S)	42.3		%	20 - 87	EPA 625	4/20/16 08:15	ACD	4/21/16 04:36	GEC	A
Nitrobenzene-d5 (S)	61.5		%	27 - 139	EPA 625	4/20/16 08:15	ACD	4/21/16 04:36	GEC	A
Phenol-d5 (S)	26.1		%	10 - 81	EPA 625	4/20/16 08:15	ACD	4/21/16 04:36	GEC	A
Terphenyl-d14 (S)	73.4		%	46 - 133	EPA 625	4/20/16 08:15	ACD	4/21/16 04:36	GEC	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 1

Courier: SB

Tracking #:

* 2 1 3 6 8 0 8 *

Co. Name: YORK CITY WWTP

Contact (Report to): JOSEPH CONCINO Phone: (717) 845-2794

Address: 1701 BLACK BRIDGE ROAD, YORK PA 17402

Bill to (if different than Report to):

PO#: 4959

Project Name/#: NPDES

ALS Quote #: 533522

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] Y JCONCINO@YORKCITY.ORG

Fax? [ ] Y No.:

Container Type: GL | Container Size: 1L | Preservative: —

ANALYSES/METHOD REQUESTED: BIS-2 ETHYLHEXYL PHTHALATE

AG 4/15/16

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	BIS-2 ETHYLHEXYL PHTHALATE (Enter Number of Containers Per Analysis)
1 RAW INFLUENT		4/13/16	0000-2400	C	WW	2
2 002 EFFLUENT		4/13/16	0000-2400	C	WW	2
3						
4						
5						
6						
7						
8						

Performed by: | Initial: DY

Cooler Temp: 5°C

Therm. ID: TH291

No. of Coolers:

Notes:

Circle appropriate Y or N.

Check	Y/N
Correct containers?	(Y) N
Correct sample volume?	(Y) N
Correct preservation?	(Y) N
Headspace/Volatiles?	—
Custody seals Present?	Y (N)
(If present) Seals Intact?	—
Received on Ice?	(Y) N
COC/Labels complete/accurate?	(Y) N
Container in good condition?	(Y) N

SAMPLED BY (Please Print):

Project Comments:

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] YORKCITY	4/14/16	0935	2	Darlene Joseph ALS	4/14/16	0935
3	Darlene Joseph ALS	4/14/16	2034	4	[signature] ALS	4/14	2034
5	[signature] ALS	4/14	2145	6	[signature]	4/14	2145
7				8			
9				10			

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other

EDDs Required? [ ] If yes, format type:

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ] Other

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Enter PWSID#

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite

**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

April 27, 2016

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**2016-ANNUAL TESTING**	Workorder:	**2138293**
Purchase Order:		Workorder ID:	**NPDES 4/20/16**

Dear Mr. Concino:

Enclosed are the analytical results for samples received by the laboratory on Thursday, April 21, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Shannon Butler

Ms. Shannon Butler
Project Coordinator

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2138293 NPDES 4/20/16

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2138293001	Raw Influent	Waste Water	4/20/2016 00:00	4/21/2016 21:40	Collected by Client
2138293002	002 Effluent	Waste Water	4/20/2016 00:00	4/21/2016 21:40	Collected by Client

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2138293 NPDES 4/20/16

Lab ID: **2138293001** Date Collected: 4/20/2016 00:00 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 4/21/2016 21:40

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
bis(2-Ethylhexyl)phthalate	7.2		ug/L	2.8	EPA 625	4/26/16 08:20	ACD	4/26/16 23:13	DHF	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	84.2		%	47 - 128	EPA 625	4/26/16 08:20	ACD	4/26/16 23:13	DHF	A
2-Fluorobiphenyl (S)	69.7		%	52 - 118	EPA 625	4/26/16 08:20	ACD	4/26/16 23:13	DHF	A
2-Fluorophenol (S)	45		%	20 - 87	EPA 625	4/26/16 08:20	ACD	4/26/16 23:13	DHF	A
Nitrobenzene-d5 (S)	74.6		%	27 - 139	EPA 625	4/26/16 08:20	ACD	4/26/16 23:13	DHF	A
Phenol-d5 (S)	30.2		%	10 - 81	EPA 625	4/26/16 08:20	ACD	4/26/16 23:13	DHF	A
Terphenyl-d14 (S)	67.4		%	46 - 133	EPA 625	4/26/16 08:20	ACD	4/26/16 23:13	DHF	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2138293 NPDES 4/20/16

Lab ID: **2138293002** Date Collected: 4/20/2016 00:00 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 4/21/2016 21:40

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
bis(2-Ethylhexyl)phthalate	ND		ug/L	2.8	EPA 625	4/26/16 08:20	ACD	4/26/16 23:39	DHF	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	75.6		%	47 - 128	EPA 625	4/26/16 08:20	ACD	4/26/16 23:39	DHF	A
2-Fluorobiphenyl (S)	57.3		%	52 - 118	EPA 625	4/26/16 08:20	ACD	4/26/16 23:39	DHF	A
2-Fluorophenol (S)	39		%	20 - 87	EPA 625	4/26/16 08:20	ACD	4/26/16 23:39	DHF	A
Nitrobenzene-d5 (S)	59		%	27 - 139	EPA 625	4/26/16 08:20	ACD	4/26/16 23:39	DHF	A
Phenol-d5 (S)	24.9		%	10 - 81	EPA 625	4/26/16 08:20	ACD	4/26/16 23:39	DHF	A
Terphenyl-d14 (S)	77		%	46 - 133	EPA 625	4/26/16 08:20	ACD	4/26/16 23:39	DHF	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

SB

Page 1 of 1

Courier:

Tracking #:

2138293

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Co. Name: YORK CITY WWTP

Contact (Report to): JOSEPH CONCINO Phone: 8452794

Address: 1701 BLACK BRIDGE ROAD YORK PA 17402

Bill to (if different than Report to):

PO#: 4959

Project Name/#: NPDES

ALS Quote #: 533522

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.

Date Required:

Approved By:

Email? [X] Y JCONCINO@YORKCITY.ORG

Fax? [ ] Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	***Container Type	***Container Size	*** Preservative	ANALYSES/METHOD REQUESTED: BIS-2 ETHYL HEXYL PHTHALATE	Enter Number of Containers Per Analysis
1 RAW INFLUENT		4/20/16	0000-2400	C	WW	GL	1L	1		2
2 002 EFFLUENT		4/20/16	0000-2400	C	WW					2
3										
4										
5										
6										
7										
8										

Performed by: SKM

Cooler Temp: 6

Therm. ID: Th-291

No. of Coolers:

Notes:

Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
Y	Y	Y	Y	
N	N	N	N	
N	N	N	N	
Y	Y	Y	Y	

Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
Y	Y	Y	Y	Y

LMG 04/22/16 0201

SAMPLED BY (Please Print):

Project Comments:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 YORK CITY	4/21/16	0918	2 Sandra Negley ALS	4/21/16	0918
3 Sandra Negley	4/21/16	2038	4	4/21	2038
5	4/21	2140	6	4/21	2140
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other

EDDs Required? [ ] If yes, format type:

DOD Criteria Required?

SDWA Forms? ⇨ yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Other

Enter PWSID No.

ALS FIELD SERVICES

[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite

**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Ot=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

May 6, 2016

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**2016-ANNUAL TESTING**	Workorder:	**2139961**
Purchase Order:		Workorder ID:	**NPDES 04/27/16**

Dear Mr. Concino:

Enclosed are the analytical results for samples received by the laboratory on Thursday, April 28, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Shannon Butler

Ms. Shannon Butler
Project Coordinator

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2139961 NPDES 04/27/16

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2139961001	Raw Influent	Waste Water	4/27/2016 00:00	4/28/2016 20:20	Collected by Client
2139961002	002 Effluent	Waste Water	4/27/2016 00:00	4/28/2016 20:20	Collected by Client

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2139961 NPDES 04/27/16

Lab ID: **2139961001** Date Collected: 4/27/2016 00:00 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 4/28/2016 20:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
bis(2-Ethylhexyl)phthalate	7.6		ug/L	2.8	EPA 625	4/29/16 09:40	CAC	5/4/16 22:31	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	88.4		%	47 - 128	EPA 625	4/29/16 09:40	CAC	5/4/16 22:31	CGS	A
2-Fluorobiphenyl (S)	77.7		%	52 - 118	EPA 625	4/29/16 09:40	CAC	5/4/16 22:31	CGS	A
2-Fluorophenol (S)	43.6		%	20 - 87	EPA 625	4/29/16 09:40	CAC	5/4/16 22:31	CGS	A
Nitrobenzene-d5 (S)	70.2		%	27 - 139	EPA 625	4/29/16 09:40	CAC	5/4/16 22:31	CGS	A
Phenol-d5 (S)	28.9		%	10 - 81	EPA 625	4/29/16 09:40	CAC	5/4/16 22:31	CGS	A
Terphenyl-d14 (S)	68.6		%	46 - 133	EPA 625	4/29/16 09:40	CAC	5/4/16 22:31	CGS	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2139961 NPDES 04/27/16

Lab ID: **2139961002** Date Collected: 4/27/2016 00:00 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 4/28/2016 20:20

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
bis(2-Ethylhexyl)phthalate	ND		ug/L	2.8	EPA 625	4/29/16 09:40	CAC	4/30/16 04:39	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	88.9		%	47 - 128	EPA 625	4/29/16 09:40	CAC	4/30/16 04:39	CGS	A
2-Fluorobiphenyl (S)	72.2		%	52 - 118	EPA 625	4/29/16 09:40	CAC	4/30/16 04:39	CGS	A
2-Fluorophenol (S)	47.1		%	20 - 87	EPA 625	4/29/16 09:40	CAC	4/30/16 04:39	CGS	A
Nitrobenzene-d5 (S)	73		%	27 - 139	EPA 625	4/29/16 09:40	CAC	4/30/16 04:39	CGS	A
Phenol-d5 (S)	29		%	10 - 81	EPA 625	4/29/16 09:40	CAC	4/30/16 04:39	CGS	A
Terphenyl-d14 (S)	78.1		%	46 - 133	EPA 625	4/29/16 09:40	CAC	4/30/16 04:39	CGS	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

SB

Courier:
Tracking #:

2139961

Co. Name: YORK CITY WWTP
Contact (Report to): JOSEPH CONCINO Phone: 7178452794
Address: 1701 BLACK BRIDGE ROAD

Bill to (if different than Report to): PO#: 4959

Project Name/#: NPDES ALS Quote #: 533522

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required:
Approved By:

Email? [X] Y JCONCINO@YORKCITY.ORG
Fax? [ ] Y No.:

						Analyses/Method Requested
					***Container Type	6C
					***Container Size	1L
					*** Preservative	—
						BIS-2 ETHYLHEXYL PHTHALATE
Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	Enter Number of Containers Per Analysis
1 RAW INFLUENT		4/27/16	0000-2400	C	WW	2
2 002 EFFLUENT		4/27/16	0000-2400	C	WW	2
3						
4						
5						
6						
7						
8						

Receipt Information (completed by Sample Receiving)
Performed by: UMa
Cooler Temp: 1
Therm. ID: 35L
No. of Coolers:
Notes:

Circle appropriate Y or N.

	Sample 1	Sample 2
Correct containers?	Y	Y
Correct sample volume?	Y	—
Correct preservation?	Y	N
Headspace/Volatiles?	—	N

Custody seals Present?	Y
(if present) Seals intact?	—
Received on Ice?	Y
COC/Labels complete/accurate?	Y
Container in good condition?	Y

UMa 04/28/16 0019

SAMPLED BY (Please Print):

Project Comments: 5B 5/4

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] YORK CITY	4/28/16	1022	2 Dennis Rowe	4/28/16	1022
3 Dennis Rowe	4/28/16	1923	4 [signature]	4/28	1923
5 [signature]	4/28	2020	6 [signature]	4/28/16	2020
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ]
EDDs Required? [ ] If yes, format type:
SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ]
State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ] Other
Enter PWSID No.
DOD Criteria Required?

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

May 31, 2016

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**2016-ANNUAL TESTING**	Workorder:	**2143366**
Purchase Order:	**3101**	Workorder ID:	**PPL Sludge 05/10/16**

Dear Mr. Concino:

Enclosed are the analytical results for samples received by the laboratory on Thursday, May 12, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Shannon Butler

Ms. Shannon Butler
Project Coordinator

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2143366 PPL Sludge 05/10/16

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2143366001	Centrifuge Cake	Solid	5/10/2016 23:00	5/12/2016 20:50	Collected by Client

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2143366 PPL Sludge 05/10/16

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

PROJECT SUMMARY

Workorder: 2143366 PPL Sludge 05/10/16

Sample Comments

Lab ID: 2143366001 **Sample ID:** Centrifuge Cake **Sample Type:** SAMPLE

This sample was analyzed at a dilution in the 8081 Pesticide analysis due to sample matrix interference. Reporting limits were adjusted accordingly.

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2143366 PPL Sludge 05/10/16

Lab ID: **2143366001** Date Collected: 5/10/2016 23:00 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 5/12/2016 20:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acrolein	ND		ug/kg	9990	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Acrylonitrile	ND		ug/kg	2000	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Benzene	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Bromodichloromethane	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Bromoform	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Bromomethane	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
2-Butanone	ND		ug/kg	4000	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Carbon Tetrachloride	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Chlorobenzene	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Chlorodibromomethane	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Chloroethane	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
2-Chloroethylvinyl ether	ND		ug/kg	799	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Chloroform	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Chloromethane	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
1,1-Dichloroethane	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
1,2-Dichloroethane	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
1,1-Dichloroethene	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
trans-1,2-Dichloroethene	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
1,2-Dichloropropane	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
1,3-Dichloropropene, Total	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Ethylbenzene	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Methylene Chloride	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
1,1,2,2-Tetrachloroethane	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Tetrachloroethene	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Toluene	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
1,1,1-Trichloroethane	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
1,1,2-Trichloroethane	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Trichloroethene	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Vinyl Chloride	ND		ug/kg	400	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	62	4	%	71 - 146	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
4-Bromofluorobenzene (S)	56.7		%	46 - 138	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Dibromofluoromethane (S)	54.9		%	42 - 143	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
Toluene-d8 (S)	61.5		%	54 - 141	SW846 8260B	5/12/16 22:18	DD	5/19/16 19:00	DD	A1
SEMIVOLATILES										
Acenaphthene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2143366 PPL Sludge 05/10/16

Lab ID: **2143366001** Date Collected: 5/10/2016 23:00 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 5/12/2016 20:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Acenaphthylene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Anthracene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Benzidine	ND		ug/kg	2670	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Benzo(a)anthracene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Benzo(a)pyrene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Benzo(b)fluoranthene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Benzo(g,h,i)perylene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Benzo(k)fluoranthene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
4-Bromophenyl-phenylether	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Butylbenzylphthalate	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
4-Chloro-3-methylphenol	ND		ug/kg	2670	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
bis(2-Chloroethyl)ether	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
2-Chloronaphthalene	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
2-Chlorophenol	ND		ug/kg	2670	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
4-Chlorophenyl-phenylether	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Chrysene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Di-n-Butylphthalate	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Di-n-Octylphthalate	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Dibenzo(a,h)anthracene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
1,2-Dichlorobenzene	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
1,3-Dichlorobenzene	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
1,4-Dichlorobenzene	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
3,3-Dichlorobenzidine	ND		ug/kg	2670	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
2,4-Dichlorophenol	ND		ug/kg	2670	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Diethylphthalate	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
2,4-Dimethylphenol	ND		ug/kg	2670	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Dimethylphthalate	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
2,4-Dinitrophenol	ND		ug/kg	2670	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
2,4-Dinitrotoluene	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
2,6-Dinitrotoluene	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
1,2-Diphenylhydrazine	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
bis(2-Ethylhexyl)phthalate	3360		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Fluoranthene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Fluorene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Hexachlorobenzene	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Hexachlorobutadiene	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A

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ANALYTICAL RESULTS

Workorder: 2143366 PPL Sludge 05/10/16

Lab ID: **2143366001** Date Collected: 5/10/2016 23:00 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 5/12/2016 20:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Hexachlorocyclopentadiene	ND		ug/kg	2670	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Hexachloroethane	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Isophorone	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/kg	2670	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Naphthalene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Nitrobenzene	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
2-Nitrophenol	ND		ug/kg	2670	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
4-Nitrophenol	ND		ug/kg	2670	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
N-Nitrosodimethylamine	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
N-Nitrosodiphenylamine	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Pentachlorophenol	ND		ug/kg	2670	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Phenanthrene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Phenol	ND		ug/kg	2670	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Pyrene	ND		ug/kg	668	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
1,2,4-Trichlorobenzene	ND		ug/kg	1340	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
2,4,6-Trichlorophenol	ND		ug/kg	2670	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	79.9		%	19 - 132	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
2-Fluorobiphenyl (S)	59		%	40 - 110	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
2-Fluorophenol (S)	60.3		%	26 - 116	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Nitrobenzene-d5 (S)	64.9		%	38 - 112	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Phenol-d5 (S)	66.4		%	35 - 111	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
Terphenyl-d14 (S)	72		%	45 - 126	SW846 8270D	5/13/16 04:45	CMA	5/13/16 19:38	CGS	A
PCBs										
Total Polychlorinated Biphenyl	ND		mg/kg	0.35	SW846 8082A	5/13/16 01:15	CMA	5/13/16 19:32	KJH	A
Aroclor-1016	ND		mg/kg	0.35	SW846 8082A	5/13/16 01:15	CMA	5/13/16 19:32	KJH	A
Aroclor-1221	ND		mg/kg	0.35	SW846 8082A	5/13/16 01:15	CMA	5/13/16 19:32	KJH	A
Aroclor-1232	ND		mg/kg	0.35	SW846 8082A	5/13/16 01:15	CMA	5/13/16 19:32	KJH	A
Aroclor-1242	ND		mg/kg	0.35	SW846 8082A	5/13/16 01:15	CMA	5/13/16 19:32	KJH	A
Aroclor-1248	ND		mg/kg	0.35	SW846 8082A	5/13/16 01:15	CMA	5/13/16 19:32	KJH	A
Aroclor-1254	ND		mg/kg	0.35	SW846 8082A	5/13/16 01:15	CMA	5/13/16 19:32	KJH	A
Aroclor-1260	ND		mg/kg	0.35	SW846 8082A	5/13/16 01:15	CMA	5/13/16 19:32	KJH	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	82.6		%	49 - 115	SW846 8082A	5/13/16 01:15	CMA	5/13/16 19:32	KJH	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2143366 PPL Sludge 05/10/16

Lab ID: **2143366001** Date Collected: 5/10/2016 23:00 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 5/12/2016 20:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Tetrachloro-m-xylene (S)	86.4		%	27 - 137	SW846 8082A	5/13/16 01:15	CMA	5/13/16 19:32	KJH	A
PESTICIDES										
Aldrin	ND		ug/kg	90.8	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
alpha-BHC	ND		ug/kg	90.8	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
beta-BHC	ND		ug/kg	90.8	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
delta-BHC	ND		ug/kg	90.8	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
gamma-BHC	ND		ug/kg	90.8	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
alpha-Chlordane	ND		ug/kg	90.8	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
gamma-Chlordane	ND		ug/kg	90.8	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
4,4'-DDD	ND		ug/kg	176	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
4,4'-DDE	ND		ug/kg	176	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
4,4'-DDT	ND		ug/kg	176	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
Dieldrin	ND		ug/kg	176	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
Endosulfan I	ND		ug/kg	90.8	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
Endosulfan II	ND		ug/kg	176	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
Endosulfan Sulfate	ND		ug/kg	176	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
Endrin	ND		ug/kg	176	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
Endrin Aldehyde	ND		ug/kg	176	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
Endrin Ketone	ND		ug/kg	176	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
Heptachlor	ND		ug/kg	90.8	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
Heptachlor Epoxide	ND		ug/kg	90.8	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
Methoxychlor	ND		ug/kg	176	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
Mirex	ND		ug/kg	176	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
Toxaphene	ND		ug/kg	1870	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	62.3		%	30 - 135	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
Tetrachloro-m-xylene (S)	43.1		%	30 - 111	SW846 8081B	5/13/16 01:15	CMA	5/13/16 22:08	RWS	A
WET CHEMISTRY										
Cyanide, Total	ND		mg/kg	1.3	SW846 9012B	5/19/16 12:25	MMA	5/20/16 01:31	LJF	A
Moisture	81.3		%	0.1	S2540G-11			5/14/16 09:31	SLC	A
Phenolics	109	5	mg/kg	2.6	SW846 9066	5/26/16 22:00	NV	5/30/16 16:03	JLG	A
Total Solids	18.7		%	0.1	S2540G-11			5/14/16 09:31	SLC	A
METALS										
Antimony, Total	ND		mg/kg	10.5	SW846 6010C	5/15/16 12:30	JPS	5/17/16 06:57	TSS	A1
Arsenic, Total	ND		mg/kg	10.5	SW846 6010C	5/15/16 12:30	JPS	5/17/16 06:57	TSS	A1
Beryllium, Total	ND		mg/kg	5.2	SW846 6010C	5/15/16 12:30	JPS	5/17/16 06:57	TSS	A1
Cadmium, Total	ND		mg/kg	2.6	SW846 6010C	5/15/16 12:30	JPS	5/17/16 06:57	TSS	A1

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ANALYTICAL RESULTS

Workorder: 2143366 PPL Sludge 05/10/16

Lab ID: **2143366001** Date Collected: 5/10/2016 23:00 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 5/12/2016 20:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Chromium, Total	26.3		mg/kg	5.2	SW846 6010C	5/15/16 12:30	JPS	5/17/16 06:57	TSS	A1
Copper, Total	292		mg/kg	10.5	SW846 6010C	5/15/16 12:30	JPS	5/17/16 06:57	TSS	A1
Lead, Total	52.7		mg/kg	10.5	SW846 6010C	5/15/16 12:30	JPS	5/17/16 06:57	TSS	A1
Mercury, Total	0.61		mg/kg	0.23	SW846 7471B	5/24/16 11:00	MNP	5/24/16 14:16	MNP	A2
Nickel, Total	21.7		mg/kg	10.5	SW846 6010C	5/15/16 12:30	JPS	5/17/16 06:57	TSS	A1
Selenium, Total	ND		mg/kg	26.2	SW846 6010C	5/15/16 12:30	JPS	5/17/16 06:57	TSS	A1
Silver, Total	3.9		mg/kg	2.6	SW846 6010C	5/15/16 12:30	JPS	5/17/16 06:57	TSS	A1
Thallium, Total	ND		mg/kg	15.7	SW846 6010C	5/15/16 12:30	JPS	5/17/16 06:57	TSS	A1
Zinc, Total	625		mg/kg	10.5	SW846 6010C	5/15/16 12:30	JPS	5/17/16 06:57	TSS	A1

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2143366001	4	Centrifuge Cake	SW846 8260B	1,2-Dichloroethane-d4

The surrogate 1,2-Dichloroethane-d4 for method SW846 8260B was outside of control limits. The % Recovery was reported as 62 and the control limits were 71 to 146. This result was reported at a dilution of 50.

2143366001	5	Centrifuge Cake	SW846 9066	Phenolics

The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits.

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Courier:
Tracking #:

2143366

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK. SB

Co. Name: YORK CITY WWTP
Contact (Report to): JOSEPH CONCINO Phone: (717) 8452794
Address: 1701 BLACKBRIDGE ROAD YORK, PA 17402

Bill to (if different than Report to): PO#: 3101

Project Name/#: P.PL. SLUDGE ALS Quote #: 524036

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] -Y JCONCINO@YORKCITY.ORG
Fax? [ ] -Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	***Container Type	***Container Size	*** Preservative	8081 PESTICIDES	PCB's	VOC's 8260	BNA 8270	CYANIDE	PHENOLICS	P.PL. METALS
1 CENTRIFUGE CAKE		5/10/16	1500-2300	C	SL	GL	1L	-	2	BOTTLES →					
2															
3															
4															
5	SENT FOR EXTRACTION @														
6	S.Beshore 5/12/16 2100														
7															
8															

ANALYSES/METHOD REQUESTED
Enter Number of Containers Per Analysis

Preserved by: INITIAL HERE DG
Cooler Temp: 6°C
Therm. ID: TH291
No. of Coolers:
Notes:

Circle appropriate Y or N.	Container in good condition?	COC/Labels complete/accurate?	Received on Ice?	(if present) Seals intact?	Custody seals Present?
Correct containers?	Y	Y	N	Y	Y
Correct sample volume?	Y	Y	N	Y	Y
Correct preservation?	Y	Y	N	N	N
Headspace/Volatiles?	Y	Y	N	N	N

SAMPLED BY (Please Print):

Project Comments: SP 5/17/16 Rush 5/12 2229

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 YORK CITY	5/12/16	1025	2 Darlene Joseph ALS	5/12/16	1025
3 Darlene Joseph ALS	5/12/16	2000	4 C Brown	5/12	2000
5 C Brown	5/12	2050	6 Rush	5/12	2050
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other
EDDs Required? [ ] If yes, format type:
SDWA Forms? ⇨ yes [ ] yes [ ] yes [ ]
State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]
Other
DOD Criteria Required?

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite
**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY
Rev 01-2013

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

June 1, 2016

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Revised Report - 6/1/2016 5:47:49 PM - See workorder comment section for explanation

Project Name:	**2016-ANNUAL TESTING**	Workorder:	**2143540**
Purchase Order:	**3772**	Workorder ID:	**Raw Influent 05/11/16**

Dear Mr. Concino:

Enclosed are the analytical results for samples received by the laboratory on Thursday, May 12, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Shannon Butler

Ms. Shannon Butler
Project Coordinator

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2143540 Raw Influent 05/11/16

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2143540001	Raw Influent Composite	Waste Water	5/11/2016 00:00	5/12/2016 20:50	Collected by Client
2143540002	Raw Influent Grab	Waste Water	5/11/2016 10:40	5/12/2016 20:50	Collected by Client

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SAMPLE SUMMARY

Workorder: 2143540 Raw Influent 05/11/16

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 2143540 Raw Influent 05/11/16

Workorder Comments

This work order was re-issued to include Molybdenum per email from Joe Concino. SB 06/01/16.

Sample Comments

Lab ID: 2143540002 **Sample ID:** Raw Influent Grab **Sample Type:** SAMPLE

The reporting limits for GCMS volatile analytes were raised due to the dilution of the sample caused by matrix.

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ANALYTICAL RESULTS

Workorder: 2143540 Raw Influent 05/11/16

Lab ID: **2143540001** Date Collected: 5/11/2016 00:00 Matrix: Waste Water

Sample ID: **Raw Influent Composite** Date Received: 5/12/2016 20:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
SEMIVOLATILES										
Acenaphthene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Acenaphthylene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Anthracene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Benzidine	ND		ug/L	7.5	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Benzo(a)anthracene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Benzo(a)pyrene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Benzo(b)fluoranthene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Benzo(g,h,i)perylene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Benzo(k)fluoranthene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
4-Bromophenyl-phenylether	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Butylbenzylphthalate	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
4-Chloro-3-methylphenol	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
bis(2-Chloroethoxy)methane	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
bis(2-Chloroethyl)ether	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
bis(2-Chloroisopropyl)ether	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
2-Chloronaphthalene	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
2-Chlorophenol	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
4-Chlorophenyl-phenylether	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Chrysene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Di-n-Butylphthalate	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Di-n-Octylphthalate	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Dibenzo(a,h)anthracene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
3,3-Dichlorobenzidine	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
2,4-Dichlorophenol	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Diethylphthalate	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
2,4-Dimethylphenol	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Dimethylphthalate	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
2,4-Dinitrophenol	ND		ug/L	5.6	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
2,4-Dinitrotoluene	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
2,6-Dinitrotoluene	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
1,2-Diphenylhydrazine	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
bis(2-Ethylhexyl)phthalate	6.1		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Fluoranthene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Fluorene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Hexachlorobenzene	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Hexachlorobutadiene	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Hexachlorocyclopentadiene	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A

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ANALYTICAL RESULTS

Workorder: 2143540 Raw Influent 05/11/16

Lab ID: **2143540001** Date Collected: 5/11/2016 00:00 Matrix: Waste Water

Sample ID: **Raw Influent Composite** Date Received: 5/12/2016 20:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Hexachloroethane	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Indeno(1,2,3-cd)pyrene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Isophorone	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
2-Methyl-4,6-dinitrophenol	ND		ug/L	5.6	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Naphthalene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Nitrobenzene	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
2-Nitrophenol	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
4-Nitrophenol	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
N-Nitrosodimethylamine	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
N-Nitroso-di-n-propylamine	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
N-Nitrosodiphenylamine	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Pentachlorophenol	ND		ug/L	5.6	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Phenanthrene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Phenol	19.2		ug/L	7.5	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Pyrene	ND		ug/L	1.4	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
1,2,4-Trichlorobenzene	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
2,4,6-Trichlorophenol	ND		ug/L	2.8	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	86.9		%	47 - 128	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
2-Fluorobiphenyl (S)	71.7		%	52 - 118	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
2-Fluorophenol (S)	41.3		%	20 - 87	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Nitrobenzene-d5 (S)	68.6		%	27 - 139	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Phenol-d5 (S)	28.1		%	10 - 81	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Terphenyl-d14 (S)	69.9		%	46 - 133	EPA 625	5/17/16 08:55	CAC	5/19/16 03:54	CGS	A
Pesticides and PCBs										
Aldrin	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
alpha-BHC	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
beta-BHC	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
delta-BHC	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
gamma-BHC	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Chlordane	ND		ug/L	0.47	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
4,4'-DDD	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
4,4'-DDE	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
4,4'-DDT	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Dieldrin	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Endosulfan I	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Endosulfan II	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C

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ANALYTICAL RESULTS

Workorder: 2143540 Raw Influent 05/11/16

Lab ID: **2143540001** Date Collected: 5/11/2016 00:00 Matrix: Waste Water

Sample ID: **Raw Influent Composite** Date Received: 5/12/2016 20:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Endosulfan Sulfate	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Endrin	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Endrin Aldehyde	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Heptachlor	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Heptachlor Epoxide	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Mirex	ND		ug/L	0.019	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Toxaphene	ND		ug/L	0.94	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Aroclor-1016	ND		ug/L	0.47	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Aroclor-1221	ND		ug/L	0.47	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Aroclor-1232	ND		ug/L	0.47	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Aroclor-1242	ND		ug/L	0.47	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Aroclor-1248	ND		ug/L	0.47	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Aroclor-1254	ND		ug/L	0.47	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Aroclor-1260	ND		ug/L	0.47	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Decachlorobiphenyls (S)	58.6		%	30 - 150	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
Tetrachloro-m-xylene (S)	54.1		%	36 - 112	EPA 608	5/16/16 14:35	PDK	5/17/16 23:09	RWS	C
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	5/20/16 14:51	MMA	5/22/16 22:26	LJF	F
Phenolics	0.028		mg/L	0.005	EPA 420.4	5/13/16 09:30	AK	5/17/16 13:49	JLG	G
METALS										
Antimony, Total	ND		mg/L	0.010	EPA 200.7	5/16/16 08:30	JPS	5/20/16 21:26	TSS	E1
Arsenic, Total	ND		mg/L	0.0050	EPA 200.7	5/16/16 08:30	JPS	5/20/16 21:26	TSS	E1
Beryllium, Total	ND		mg/L	0.0020	EPA 200.7	5/16/16 08:30	JPS	5/20/16 21:26	TSS	E1
Cadmium, Total	ND		mg/L	0.0010	EPA 200.7	5/16/16 08:30	JPS	5/20/16 21:26	TSS	E1
Chromium, Total	ND		mg/L	0.0025	EPA 200.7	5/16/16 08:30	JPS	5/20/16 21:26	TSS	E1
Copper, Total	0.031		mg/L	0.0050	EPA 200.7	5/16/16 08:30	JPS	5/20/16 21:26	TSS	E1
Lead, Total	0.0037		mg/L	0.0030	EPA 200.7	5/16/16 08:30	JPS	5/20/16 21:26	TSS	E1
Mercury, Total	ND		mg/L	0.00020	EPA 245.1	5/24/16 01:00	MNP	5/24/16 09:51	MNP	E2
Molybdenum, Total	0.073		mg/L	0.010	EPA 200.7	5/16/16 08:30	JPS	5/20/16 21:26	TSS	E1
Nickel, Total	ND		mg/L	0.010	EPA 200.7	5/16/16 08:30	JPS	5/20/16 21:26	TSS	E1
Selenium, Total	ND		mg/L	0.010	EPA 200.7	5/16/16 08:30	JPS	5/20/16 21:26	TSS	E1
Silver, Total	ND		mg/L	0.0020	EPA 200.7	5/16/16 08:30	JPS	5/20/16 21:26	TSS	E1
Thallium, Total	ND		mg/L	0.010	EPA 200.7	5/16/16 08:30	JPS	5/20/16 21:26	TSS	E1
Zinc, Total	0.092		mg/L	0.010	EPA 200.7	5/16/16 08:30	JPS	5/20/16 21:26	TSS	E1

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2143540 Raw Influent 05/11/16

Lab ID: **2143540001** Date Collected: 5/11/2016 00:00 Matrix: Waste Water

Sample ID: **Raw Influent Composite** Date Received: 5/12/2016 20:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 2143540 Raw Influent 05/11/16

Lab ID: **2143540002** Date Collected: 5/11/2016 10:40 Matrix: Waste Water

Sample ID: **Raw Influent Grab** Date Received: 5/12/2016 20:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Acrolein	ND		ug/L	50.0	EPA 624			5/17/16 16:02	DD	A
Acrylonitrile	ND		ug/L	25.0	EPA 624			5/17/16 16:02	DD	A
Benzene	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
Bromodichloromethane	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
Bromoform	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
Bromomethane	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
Carbon Tetrachloride	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
Chlorobenzene	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
Chlorodibromomethane	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
Chloroethane	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
2-Chloroethylvinyl ether	ND		ug/L	10.0	EPA 624			5/17/16 16:02	DD	A
Chloroform	5.5		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
Chloromethane	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
1,2-Dichlorobenzene	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
1,3-Dichlorobenzene	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
1,4-Dichlorobenzene	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
1,1-Dichloroethane	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
1,2-Dichloroethane	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
1,1-Dichloroethene	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
trans-1,2-Dichloroethene	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
1,2-Dichloropropane	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
cis-1,3-Dichloropropene	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
trans-1,3-Dichloropropene	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
1,3-Dichloropropene, Total	ND		ug/L	10.0	EPA 624			5/17/16 16:02	DD	A
Ethylbenzene	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
Methylene Chloride	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
Tetrachloroethene	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
Toluene	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
1,1,1-Trichloroethane	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
1,1,2-Trichloroethane	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
Trichloroethene	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
Trichlorofluoromethane	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
Vinyl Chloride	ND		ug/L	5.0	EPA 624			5/17/16 16:02	DD	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	92.7		%	72 - 142	EPA 624			5/17/16 16:02	DD	A

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2143540 Raw Influent 05/11/16

Lab ID: **2143540002** Date Collected: 5/11/2016 10:40 Matrix: Waste Water

Sample ID: **Raw Influent Grab** Date Received: 5/12/2016 20:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
4-Bromofluorobenzene (S)	95.6		%	73 - 119	EPA 624			5/17/16 16:02	DD	A
Dibromofluoromethane (S)	85.9		%	74 - 132	EPA 624			5/17/16 16:02	DD	A
Toluene-d8 (S)	91.3		%	75 - 133	EPA 624			5/17/16 16:02	DD	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

SB

Courier:
Tracking #:

2143540

Co. Name: YORK CITY WWTP
Contact (Report to): JOSEPH CONCINO Phone: (717) 8452794
Address: 1701 BLACK BRIDGE ROAD
YORK, PA 17402

Bill to (if different than Report to):
PO#: 3772

Project Name/#: P,P C, WASTEWATER ALS Quote #: 524036

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] -Y JCONCINO@YORKCITY.ORG
Fax? [ ] -Y No.:

***Container Type	PL	GL	GL	GL	GL	PC				
***Container Size	0.5L	250mL	1L	40mL	1L	100mL				
*** Preservative	NaOH	H_2SO_4	—	—	—	HNO_3				

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	CYANIDE	PHENOLICS	PESTICIDES & PCBs 608	P.PL, VOCs 624	SEMI VOLATILES 625	P.PL METALS				
1 RAW INFLUENT		5/11/16	0000-2400	C	WW	1	1	2		2	1				
2 RAW INFLUENT		5/11/16	1040	G	WW				2						
3															
4															
5															
6															
7															
8															

Enter Number of Containers Per Analysis

(completed by Sample Receiving)
Performed by: INITIAL HERE
Cooler Temp: 6°C
Therm. ID: TH291
No. of Coolers:
Notes:

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
	Y N	Y N	Y N	Y N	

	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
	Y	Y N	Y N	Y N	Y N

SAMPLED BY (Please Print):

Project Comments: SB 5/17/16

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 YORK CITY	5/12/16	1025	2 Walter Joseph / ALS	5/12/16	1025
3 Walter Joseph / ALS	5/12/16	2000	4 C Bethel	5/12	2000
5 C Bethel	5/12	2050	6 Anderson	5/12	2050
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] ____
EDDs Required? [ ] If yes, format type:
DOD Criteria Required?

SDWA Forms? ⇨ yes [ ] yes [ ] yes [ ] yes [ ]
State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]
Other
EXEMPT PWSID No.

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

*G=Grab; C=Composite
**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Oi=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

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June 28, 2016

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**2016-ANNUAL TESTING**	Workorder:	**2152130**
Purchase Order:	**3777**	Workorder ID:	**ADD Local Limits**

Dear Mr. Concino:

Enclosed are the analytical results for samples received by the laboratory on Thursday, June 16, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Shannon Butler

Ms. Shannon Butler
Project Coordinator

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2152130 ADD Local Limits

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2152130001	Raw Influent	Waste Water	6/15/2016 00:00	6/16/2016 19:30	Collected by Client
2152130002	T2 Influent	Waste Water	6/15/2016 00:00	6/16/2016 19:30	Collected by Client
2152130003	Centrifuge Cake	Solid	6/15/2016 05:00	6/16/2016 19:30	Collected by Client

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SAMPLE SUMMARY

Workorder: 2152130 ADD Local Limits

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2152130 ADD Local Limits

Lab ID: **2152130001** Date Collected: 6/15/2016 00:00 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 6/16/2016 19:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
bis(2-Ethylhexyl)phthalate	8.4		ug/L	2.8	EPA 625	6/22/16 08:50	ACD	6/23/16 08:54	DHF	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	86.7		%	47 - 128	EPA 625	6/22/16 08:50	ACD	6/23/16 08:54	DHF	A
2-Fluorobiphenyl (S)	73.7		%	52 - 118	EPA 625	6/22/16 08:50	ACD	6/23/16 08:54	DHF	A
2-Fluorophenol (S)	49		%	20 - 87	EPA 625	6/22/16 08:50	ACD	6/23/16 08:54	DHF	A
Nitrobenzene-d5 (S)	78.7		%	27 - 139	EPA 625	6/22/16 08:50	ACD	6/23/16 08:54	DHF	A
Phenol-d5 (S)	32.8		%	10 - 81	EPA 625	6/22/16 08:50	ACD	6/23/16 08:54	DHF	A
Terphenyl-d14 (S)	75.4		%	46 - 133	EPA 625	6/22/16 08:50	ACD	6/23/16 08:54	DHF	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2152130 ADD Local Limits

Lab ID: **2152130002** Date Collected: 6/15/2016 00:00 Matrix: Waste Water

Sample ID: **T2 Influent** Date Received: 6/16/2016 19:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
METALS										
Copper, Total	0.032		mg/L	0.0050	EPA 200.7	6/19/16 08:00	JPS	6/20/16 14:52	TSS	A1
Silver, Total	ND		mg/L	0.0020	EPA 200.7	6/19/16 08:00	JPS	6/20/16 14:52	TSS	A1
Zinc, Total	0.11		mg/L	0.010	EPA 200.7	6/19/16 08:00	JPS	6/20/16 14:52	TSS	A1

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2152130 ADD Local Limits

Lab ID: **2152130003** Date Collected: 6/15/2016 05:00 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 6/16/2016 19:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
bis(2-Ethylhexyl)phthalate	ND		ug/kg	6740	SW846 8270D	6/22/16 04:30	CMA	6/22/16 23:08	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	77.3		%	19 - 132	SW846 8270D	6/22/16 04:30	CMA	6/22/16 23:08	CGS	A
2-Fluorobiphenyl (S)	63.4		%	40 - 110	SW846 8270D	6/22/16 04:30	CMA	6/22/16 23:08	CGS	A
2-Fluorophenol (S)	69		%	26 - 116	SW846 8270D	6/22/16 04:30	CMA	6/22/16 23:08	CGS	A
Nitrobenzene-d5 (S)	71.9		%	38 - 112	SW846 8270D	6/22/16 04:30	CMA	6/22/16 23:08	CGS	A
Phenol-d5 (S)	69.7		%	35 - 111	SW846 8270D	6/22/16 04:30	CMA	6/22/16 23:08	CGS	A
Terphenyl-d14 (S)	76.2		%	45 - 126	SW846 8270D	6/22/16 04:30	CMA	6/22/16 23:08	CGS	A
WET CHEMISTRY										
Moisture	82.6		%	0.1	S2540G-11			6/24/16 14:11	SLC	A
Total Solids	17.4		%	0.1	S2540G-11			6/24/16 14:11	SLC	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 1

Courier:

Tracking #:

215213 0

Co. Name: YORK CITY WWTP (717)
Contact (Report to): JOSEPH CONCINO Phone: 845-2794
Address: 1701 BLACK BRIDGE ROAD
YORK, PA 17402

Bill to (if different than Report to): PO#: 3777

Project Name/#: ADD. LOCAL LIMITS ALS Quote #: 524036

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] -Y JCONCINO@YORKCITY.ORG
Fax? [ ] -Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	BIS-2 ETHYL HEXYL PHTHALATE 625	TOTAL CN, Ag, Zn	BIS-2 ETHYL HEXYL PHTHALATE 8270
				***Container Type		GL	PL	GL
				***Container Size		1L	0.5L	250ml
				*** Preservative		—	HNO3	—
1 RAW INFLUENT		6/15/16	0000-2400	C	WW	2		
2 T2 INFLUENT		6/15/16	0000-2400	C	WW		1	
3 CENTRIFUGE CAKE		6/15/16	0000-0500	C	SL			1
4								
5								
6								
7								
8								

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Analysis

(completed by Sample Receiving)
Performed by: INITIAL HERE
Cooler Temp: 3° C
Therm. ID: TH291
No. of Coolers:
Notes:

	Correct containers?	Correct sample volume	Correct preservation	Headspace/Volatiles?	Circle appropriate Y or N.
	N	N	N	N	
	Y	Y	Y	—	
	N	N	N	N	N
	Y	—	Y	Y	Y
	Custody seals Present?	(If present) Seals Intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?

SAMPLED BY (Please Print):

Project Comments: SB 6/21

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other

EDDs Required? [ ] If yes, format type:

SDWA Forms? ⇨ yes [ ] yes [ ] yes [ ] yes [ ]

State Samples Collected In? ND [ ] NJ [ ] NY [ ] PA [ ]

Other

DOD Criteria Required?

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 YORK CITY	6/16/16	0953	2 Marlene Joseph ALS	6/16/16	0953
3 Marlene Joseph ALS	6/16/16	1840	4	6/16	1840
5	6/16	1930	6	6/16	1930
7			8		
9			10		

* G=Grab; C=Composite

**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

Rev 01-2013

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

July 19, 2016

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**2016-ANNUAL TESTING**	Workorder:	**2152134**
Purchase Order:	**3774**	Workorder ID:	**Local Limits**

Dear Mr. Concino:

Enclosed are the analytical results for samples received by the laboratory on Thursday, June 16, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Shannon Butler

Ms. Shannon Butler
Project Coordinator

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2152134 Local Limits

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2152134001	Raw Influent	Waste Water	6/15/2016 00:00	6/16/2016 19:30	Collected by Client
2152134002	002 Effluent	Waste Water	6/15/2016 00:00	6/16/2016 19:30	Collected by Client
2152134003	Raw Influent	Waste Water	6/15/2016 09:20	6/16/2016 19:30	Collected by Client
2152134004	002 Effluent	Waste Water	6/15/2016 09:10	6/16/2016 19:30	Collected by Client
2152134005	Centrifuge Cake	Solid	6/15/2016 05:00	6/16/2016 19:30	Collected by Client

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SAMPLE SUMMARY

Workorder: 2152134 Local Limits

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2152134 Local Limits

Lab ID: **2152134001** Date Collected: 6/15/2016 00:00 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 6/16/2016 19:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Cyanide, Total	ND	1	mg/L	0.0050	EPA 335.4	6/27/16 08:55	CTD	6/29/16 03:03	LJF	A
METALS										
Arsenic, Total	ND		mg/L	0.0015	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:25	ZMC	B1
Cadmium, Total	ND		mg/L	0.00050	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:25	ZMC	B1
Chromium, Total	0.0022		mg/L	0.0010	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:25	ZMC	B1
Copper, Total	0.041		mg/L	0.0025	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:25	ZMC	B1
Lead, Total	0.0062		mg/L	0.0010	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:25	ZMC	B1
Mercury, Total (Low-level)	ND		mg/L	0.00020	EPA 245.1	6/23/16 01:00	MNP	6/23/16 08:50	MNP	B2
Molybdenum, Total	0.026		mg/L	0.0010	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:25	ZMC	B1
Nickel, Total	0.0049		mg/L	0.0025	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:25	ZMC	B1
Selenium, Total	ND		mg/L	0.0020	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:25	ZMC	B1
Silver, Total	ND		mg/L	0.0010	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:25	ZMC	B1
Zinc, Total	0.12		mg/L	0.0025	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:25	ZMC	B1

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 2152134 Local Limits

Lab ID: **2152134002** Date Collected: 6/15/2016 00:00 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 6/16/2016 19:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Cyanide, Total	ND	1	mg/L	0.0050	EPA 335.4	6/27/16 08:55	CTD	6/29/16 03:03	LJF	A
METALS										
Arsenic, Total	ND		mg/L	0.0015	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:29	ZMC	B1
Cadmium, Total	ND		mg/L	0.00050	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:29	ZMC	B1
Chromium, Total	ND		mg/L	0.0010	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:29	ZMC	B1
Copper, Total	ND		mg/L	0.0025	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:29	ZMC	B1
Lead, Total	ND		mg/L	0.0010	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:29	ZMC	B1
Mercury, Total (Low-level)	ND		mg/L	0.00020	EPA 245.1	6/23/16 01:00	MNP	6/23/16 08:51	MNP	B2
Molybdenum, Total	0.025		mg/L	0.0010	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:29	ZMC	B1
Nickel, Total	0.0049		mg/L	0.0025	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:29	ZMC	B1
Selenium, Total	ND		mg/L	0.0020	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:29	ZMC	B1
Silver, Total	ND		mg/L	0.0010	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:29	ZMC	B1
Zinc, Total	0.025		mg/L	0.0025	EPA 200.8	6/19/16 08:00	JPS	6/20/16 03:29	ZMC	B1

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2152134 Local Limits

Lab ID: **2152134003** Date Collected: 6/15/2016 09:20 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 6/16/2016 19:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Oil/Grease Hexane Extractable	11.1		mg/L	2.3	EPA 1664B			6/24/16 06:40	MPP	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2152134 Local Limits

Lab ID: **2152134004** Date Collected: 6/15/2016 09:10 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 6/16/2016 19:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Oil/Grease Hexane Extractable	ND		mg/L	2.3	EPA 1664B			6/24/16 06:40	MPP	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2152134 Local Limits

Lab ID: **2152134005** Date Collected: 6/15/2016 05:00 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 6/16/2016 19:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Cyanide, Total	1.5		mg/kg	1.5	SW846 9012B	6/28/16 10:05	CTD	6/29/16 00:48	LJF	A
Hexane Extractable Material	45400		mg/kg	1160	SW846 9071B			6/19/16 11:00	AT	A
Moisture	83.0		%	0.1	S2540G-11			6/25/16 14:45	MLM	A
Silica Gel Treated HEM	14500		mg/kg	1160	SW846 9071B			6/19/16 11:00	AT	A
Total Solids	17.0		%	0.1	S2540G-11			6/25/16 14:45	MLM	A
METALS										
Arsenic, Total	ND		mg/kg	11.7	SW846 6010C	6/20/16 13:45	JPS	6/23/16 09:33	TSS	A1
Cadmium, Total	ND		mg/kg	2.9	SW846 6010C	6/20/16 13:45	JPS	6/23/16 09:33	TSS	A1
Chromium, Total	31.1		mg/kg	5.9	SW846 6010C	6/20/16 13:45	JPS	6/23/16 09:33	TSS	A1
Copper, Total	334		mg/kg	11.7	SW846 6010C	6/20/16 13:45	JPS	6/23/16 09:33	TSS	A1
Lead, Total	42.3		mg/kg	11.7	SW846 6010C	6/20/16 13:45	JPS	6/23/16 09:33	TSS	A1
Mercury, Total	1.2		mg/kg	0.29	SW846 7471B	6/21/16 10:00	MNP	6/21/16 15:01	MNP	A2
Molybdenum, Total	22.2		mg/kg	11.7	SW846 6010C	6/20/16 13:45	JPS	6/23/16 09:33	TSS	A1
Nickel, Total	28.0		mg/kg	11.7	SW846 6010C	6/20/16 13:45	JPS	6/23/16 09:33	TSS	A1
Selenium, Total	ND		mg/kg	29.3	SW846 6010C	6/20/16 13:45	JPS	6/23/16 09:33	TSS	A1
Silver, Total	9.4		mg/kg	2.9	SW846 6010C	6/20/16 13:45	JPS	6/23/16 09:33	TSS	A1
Zinc, Total	615		mg/kg	11.7	SW846 6010C	6/20/16 13:45	JPS	6/23/16 09:33	TSS	A1

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2152134001	1	Raw Influent	EPA 335.4	Cyanide, Total
The LCS associated with this sample was recovered at 65%. The method acceptance limits are 90-110%. A bias may exist with the result.				
2152134002	1	002 Effluent	EPA 335.4	Cyanide, Total
The LCS associated with this sample was recovered at 65%. The method acceptance limits are 90-110%. A bias may exist with the result.				

ALS Environmental
34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Courier:
Tracking #:

* 2152134 *

Co. Name: YORK CITY WWTP (717)
Contact (Report to): JOSEPH CONCINO Phone: 8452794
Address: 1701 BLACK BRIDGE ROAD
YORK, PA 17402

Bill to (if different than Report to): PO#: 3774

Project Name/#: LOCAL LIMITS ALS Quote #: 524036

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] -Y JCONCINO@YORKCITY.ORG
Fax? [ ] -Y No.:

	Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	TOTAL As, Cd, Cu, Mo, Pb, Zn, Ag, Cr, Ni, Se, Hg	CYANIDE	OIL & GREASE 1664	TOTAL MOISTURE	OIL & GREASE 9071B	CYANIDE	TOTAL As, Cd, Cu, Mo, Pb, Zn, Ag, Cr, Ni, Se, Hg
	***Container Type						PL	PL	GL	GL	GL	GL	GL
	***Container Size						0.5L	0.5L	1L	1L	1L	1L	1L
	***Preservative						HNO_3	NaOH	H_2SO_4	—	—	—	—
		ANALYSES/METHOD REQUESTED					Enter Number of Containers Per Analysis						
1	RAW INFLUENT		6/15/16	0000-2400	C	WW	1	1					
2	002 EFFLUENT		6/15/16	0000-2400	C	WW	1	1					
3	RAW INFLUENT		6/15/16	0920	G	WW			2				
4	002 EFFLUENT		6/15/16	0910	G	WW			2				
5	CENTRIFUGE CAKE		6/15/16	0000-0300	C	SL				X	X	X	X — 1 BOTTLE
6													
7													
8													

Receipt Information (completed by Sample Receiving)
Performed by: INITIAL HERE
Cooler Temp: 3°C
Therm. ID: TH291
No. of Coolers:
Notes:

	Correct containers?	Correct sample volume?	Correct preservation?	Headspace/Volatiles?	Circle appropriate Y or N.
N					
Y	Y	Y	Y	Y	

	Custody seals Present?	(if present) Seals intact?	Received on ice?	COC/Labels complete/accurate?	Container in good condition?
N					
Y	Y	Y	Y	Y	

SAMPLED BY (Please Print):

Project Comments: SB 6/23

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] other
EDDs Required? [ ] If yes, format type:
SDWA Forms? yes [ ] yes [ ] yes [ ]
State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]
Other
DOD Criteria Required?

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	YORKCITY	6/16/16	0953	2	Darlene Joseph ALS	6/16/16	0953
3	Darlene Joseph ALS	6/16/16	1840	4		6/16/16	1840
5		6/16	1930	6		6/16	1930
7				8			
9				10			

* G=Grab; C=Composite
**Matrix: Al=Air; DW=Drinking Water; GW=Groundwater; Ol=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

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ALS Environmental

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September 9, 2016

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**2016-ANNUAL TESTING**	Workorder:	**2172234**
Purchase Order:		Workorder ID:	**ADD Local Limits**

Dear Mr. Concino:

Enclosed are the analytical results for samples received by the laboratory on Friday, September 2, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Shannon Butler

Ms. Shannon Butler
Project Coordinator

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2172234 ADD Local Limits

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2172234001	Raw Influent	Waste Water	9/1/2016 00:00	9/2/2016 21:00	Collected by Client
2172234002	T2 Influent	Waste Water	9/1/2016 00:00	9/2/2016 21:00	Collected by Client
2172234003	Centrifuge Cake	Solid	9/1/2016 06:15	9/2/2016 21:00	Collected by Client

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2172234 ADD Local Limits

Notes

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RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2172234 ADD Local Limits

Lab ID: **2172234001** Date Collected: 9/1/2016 00:00 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 9/2/2016 21:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
bis(2-Ethylhexyl)phthalate	4.4		ug/L	3.1	EPA 625	9/6/16 09:05	CAC	9/8/16 06:59	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	64.4		%	47 - 128	EPA 625	9/6/16 09:05	CAC	9/8/16 06:59	CGS	A
2-Fluorobiphenyl (S)	54.9		%	52 - 118	EPA 625	9/6/16 09:05	CAC	9/8/16 06:59	CGS	A
2-Fluorophenol (S)	36.7		%	20 - 87	EPA 625	9/6/16 09:05	CAC	9/8/16 06:59	CGS	A
Nitrobenzene-d5 (S)	52.7		%	27 - 139	EPA 625	9/6/16 09:05	CAC	9/8/16 06:59	CGS	A
Phenol-d5 (S)	25.2		%	10 - 81	EPA 625	9/6/16 09:05	CAC	9/8/16 06:59	CGS	A
Terphenyl-d14 (S)	55.3		%	46 - 133	EPA 625	9/6/16 09:05	CAC	9/8/16 06:59	CGS	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 2172234 ADD Local Limits

Lab ID: **2172234002** Date Collected: 9/1/2016 00:00 Matrix: Waste Water

Sample ID: **T2 Influent** Date Received: 9/2/2016 21:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
METALS										
Copper, Total	0.032		mg/L	0.0050	EPA 200.7	9/7/16 08:00	JPS	9/8/16 16:18	TSS	A1
Silver, Total	ND		mg/L	0.0020	EPA 200.7	9/7/16 08:00	JPS	9/8/16 16:18	TSS	A1
Zinc, Total	0.087		mg/L	0.010	EPA 200.7	9/7/16 08:00	JPS	9/8/16 16:18	TSS	A1

Shannon Butler

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ANALYTICAL RESULTS

Workorder: 2172234 ADD Local Limits

Lab ID: **2172234003** Date Collected: 9/1/2016 06:15 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 9/2/2016 21:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
SEMIVOLATILES										
bis(2-Ethylhexyl)phthalate	ND		ug/kg	7120	SW846 8270D	9/7/16 02:55	CMA	9/8/16 06:29	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	58.8		%	19 - 132	SW846 8270D	9/7/16 02:55	CMA	9/8/16 06:29	CGS	A
2-Fluorobiphenyl (S)	53.6		%	40 - 110	SW846 8270D	9/7/16 02:55	CMA	9/8/16 06:29	CGS	A
2-Fluorophenol (S)	66.4		%	26 - 116	SW846 8270D	9/7/16 02:55	CMA	9/8/16 06:29	CGS	A
Nitrobenzene-d5 (S)	65.2		%	38 - 112	SW846 8270D	9/7/16 02:55	CMA	9/8/16 06:29	CGS	A
Phenol-d5 (S)	61.1		%	35 - 111	SW846 8270D	9/7/16 02:55	CMA	9/8/16 06:29	CGS	A
Terphenyl-d14 (S)	59.6		%	45 - 126	SW846 8270D	9/7/16 02:55	CMA	9/8/16 06:29	CGS	A
WET CHEMISTRY										
Moisture	84.3		%	0.1	S2540G-11			9/6/16 13:59	VKB	
Total Solids	15.7		%	0.1	S2540G-11			9/6/16 13:59	VKB	

Shannon Butler

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Project Coordinator

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

SO

Page 1 of 1

Courier:

Tracking #:

* 2 1 7 2 2 3 4 *

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Co. Name: YORK CITY WWTP (717)

Contact (Report to): JOSEPH CONCINO Phone: 8452794

Address: 1701 BLACK BRIDGE ROAD
YORK, PA 17402

Bill to (if different than Report to): PO#: 3777

Project Name/#: ADD. LOCAL LIMITS ALS Quote #: 524036

TAT: [X] Normal-Standard TAT is 10-12 business days. Date Required:
[ ] Rush-Subject to ALS approval and surcharges. Approved By:

Email? [X] Y JCONCINO@YORKCITY.ORG
Fax? [ ] Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	ANALYSES/METHOD REQUESTED: BIS-2 ETHYL HEXYL PHTHALATE 625	TOTAL Cu, Ag, Zn	BIS-2 ETHYL HEXYL PHTHALATE 8270	Enter Number of Containers Per Analysis
1 RAW INFLUENT		9/1/16	0000-2400	C	WW	2			
2 T2 INFLUENT		9/1/16	0000-2400	C	WW		1		
3 CENTRIFUGE CAKE		9/1/16	0805-0815	C	SL			1	
4									
5									
6									
7									
8									

***Container Type: GL PL GL
***Container Size: 1L 0.5L 250mL
*** Preservative: — HNO3 —

Performed by: INITIAL HERE

Cooler Temp: 2°C

Therm. ID: TH291

No. of Coolers:

Notes:

	1	2	3	4	5
Correct containers?	Y	Y	Y	Y	Y
Correct sample volume?	Y	Y	Y	Y	Y
Correct preservation?	Y	N	Y	Y	Y
Headspace/Volatiles?	N	N	N	N	N
Circle appropriate Y or N.					
Custody seals Present?	N	N	Y	Y	Y
(if present) Seals intact?	N	N	Y	Y	Y
Received on Ice?	N	N	Y	Y	Y
COC/Labels complete/accurate?	N	N	Y	Y	Y
Container in good condition?	N	N	Y	Y	Y

LMG 09/03/16 0154

SAMPLED BY (Please Print): Sarah Larouche

Project Comments:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Sarah Larouche York WWTP	9/2/16	1038	2 Marlene Joseph AS	9/2/16	1038
3 Marlene Joseph ALS	9/2/16	2000	4		2000
5		2100	6	9/2	2100
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] NJDEP

EDDs Required? [ ] If yes, format type:

DOD Criteria Required?

SDWA Forms? ⇨ yes [ ] yes [ ] yes [ ]

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Other

⇨ Enter PWSID No.

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite

**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY

***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

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September 15, 2016

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**2016-ANNUAL TESTING**	Workorder:	**2172235**
Purchase Order:		Workorder ID:	**Local Limits**

Dear Mr. Concino:

Enclosed are the analytical results for samples received by the laboratory on Friday, September 2, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Shannon Butler

Ms. Shannon Butler
Project Coordinator

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2172235 Local Limits

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2172235001	Raw Influent	Waste Water	9/1/2016 00:00	9/2/2016 21:00	Collected by Client
2172235002	002 Effluent	Waste Water	9/1/2016 00:00	9/2/2016 21:00	Collected by Client
2172235003	Raw Influent	Waste Water	9/1/2016 09:25	9/2/2016 21:00	Collected by Client
2172235004	002 Effluent	Waste Water	9/1/2016 09:10	9/2/2016 21:00	Collected by Client
2172235005	Centrifuge Cake	Solid	9/1/2016 06:15	9/2/2016 21:00	Collected by Client

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SAMPLE SUMMARY

Workorder: 2172235 Local Limits

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2172235 Local Limits

Lab ID: **2172235001** Date Collected: 9/1/2016 00:00 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 9/2/2016 21:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	9/6/16 09:15	TRR	9/6/16 11:34	CTD	A
METALS										
Arsenic, Total	ND		mg/L	0.0015	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:08	ZMC	B1
Cadmium, Total	ND		mg/L	0.00050	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:08	ZMC	B1
Chromium, Total	0.0019		mg/L	0.0010	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:08	ZMC	B1
Copper, Total	0.034		mg/L	0.0025	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:08	ZMC	B1
Lead, Total	0.0060		mg/L	0.0010	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:08	ZMC	B1
Mercury, Total (Low-level)	ND		mg/L	0.00020	EPA 245.1	9/13/16 00:15	MNP	9/13/16 09:24	MNP	B2
Molybdenum, Total	0.025		mg/L	0.0010	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:08	ZMC	B1
Nickel, Total	0.0034		mg/L	0.0025	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:08	ZMC	B1
Selenium, Total	ND		mg/L	0.0020	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:08	ZMC	B1
Silver, Total	ND		mg/L	0.0010	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:08	ZMC	B1
Zinc, Total	0.089		mg/L	0.0025	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:08	ZMC	B1

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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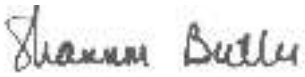
ANALYTICAL RESULTS

Workorder: 2172235 Local Limits

Lab ID: **2172235002** Date Collected: 9/1/2016 00:00 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 9/2/2016 21:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	9/6/16 09:15	TRR	9/6/16 11:34	CTD	A
METALS										
Arsenic, Total	ND		mg/L	0.0015	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:12	ZMC	B1
Cadmium, Total	ND		mg/L	0.00050	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:12	ZMC	B1
Chromium, Total	ND		mg/L	0.0010	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:12	ZMC	B1
Copper, Total	ND		mg/L	0.0025	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:12	ZMC	B1
Lead, Total	ND		mg/L	0.0010	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:12	ZMC	B1
Mercury, Total (Low-level)	ND		mg/L	0.00020	EPA 245.1	9/13/16 00:15	MNP	9/13/16 09:25	MNP	B2
Molybdenum, Total	0.030		mg/L	0.0010	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:12	ZMC	B1
Nickel, Total	ND		mg/L	0.0025	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:12	ZMC	B1
Selenium, Total	ND		mg/L	0.0020	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:12	ZMC	B1
Silver, Total	ND		mg/L	0.0010	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:12	ZMC	B1
Zinc, Total	0.019		mg/L	0.0025	EPA 200.8	9/7/16 08:00	JPS	9/8/16 05:12	ZMC	B1



Ms. Shannon Butler
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 2172235 Local Limits

Lab ID: **2172235003** Date Collected: 9/1/2016 09:25 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 9/2/2016 21:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Oil/Grease Hexane Extractable	14.5		mg/L	2.5	EPA 1664B			9/12/16 07:20	MPP	A

Shannon Butler

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ANALYTICAL RESULTS

Workorder: 2172235 Local Limits

Lab ID: **2172235004** Date Collected: 9/1/2016 09:10 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 9/2/2016 21:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Oil/Grease Hexane Extractable	ND		mg/L	2.1	EPA 1664B			9/12/16 07:20	MPP	A

Shannon Butler

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ANALYTICAL RESULTS

Workorder: 2172235 Local Limits

Lab ID: **2172235005** Date Collected: 9/1/2016 06:15 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 9/2/2016 21:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Cyanide, Total	1.6		mg/kg	1.6	SW846 9012B	9/6/16 12:15	CTD	9/7/16 13:16	CTD	A
Hexane Extractable Material	42000	1	mg/kg	1280	SW846 9071B			9/9/16 07:20	MPP	A
Moisture	84.4		%	0.1	S2540G-11			9/6/16 13:59	VKB	
Silica Gel Treated HEM	13200	2	mg/kg	1280	SW846 9071B			9/9/16 07:20	MPP	A
Total Solids	15.6		%	0.1	S2540G-11			9/6/16 13:59	VKB	
METALS										
Arsenic, Total	ND		mg/kg	11.0	SW846 6010C	9/12/16 11:00	JPS	9/13/16 05:33	TSS	A1
Cadmium, Total	ND		mg/kg	2.8	SW846 6010C	9/12/16 11:00	JPS	9/13/16 05:33	TSS	A1
Chromium, Total	30.3		mg/kg	5.5	SW846 6010C	9/12/16 11:00	JPS	9/13/16 05:33	TSS	A1
Copper, Total	372		mg/kg	11.0	SW846 6010C	9/12/16 11:00	JPS	9/13/16 05:33	TSS	A1
Lead, Total	47.4		mg/kg	11.0	SW846 6010C	9/12/16 11:00	JPS	9/13/16 05:33	TSS	A1
Mercury, Total	1.2		mg/kg	0.32	SW846 7471B	9/15/16 11:30	MNP	9/15/16 13:48	MNP	A2
Molybdenum, Total	21.8		mg/kg	11.0	SW846 6010C	9/12/16 11:00	JPS	9/13/16 05:33	TSS	A1
Nickel, Total	23.0		mg/kg	11.0	SW846 6010C	9/12/16 11:00	JPS	9/13/16 05:33	TSS	A1
Selenium, Total	ND		mg/kg	27.6	SW846 6010C	9/12/16 11:00	JPS	9/13/16 05:33	TSS	A1
Silver, Total	4.9		mg/kg	2.8	SW846 6010C	9/12/16 11:00	JPS	9/13/16 05:33	TSS	A1
Zinc, Total	769		mg/kg	11.0	SW846 6010C	9/12/16 11:00	JPS	9/13/16 05:33	TSS	A1

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2172235005	1	Centrifuge Cake	SW846 9071B	Hexane Extractable Material

The QC sample type MS for method SW846 9071B was outside the control limits for the analyte Hexane Extractable Material. The % Recovery was reported as 192 and the control limits were 75 to 125.

2172235005	2	Centrifuge Cake	SW846 9071B	Silica Gel Treated HEM

The QC sample type DUP for method SW846 9071B was outside the control limits for the analyte Silica Gel Treated HEM. The RPD was reported as 32.4 and the upper control limit is 25.

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

SB

Page 1 of 1
Courier:
Tracking #:

* 2 1 7 2 2 3 5 *

Co. Name: YORK CITY WWTP
Contact (Report to): JOSEPH CONCINO Phone: (717) 845 2794
Address: 1701 BLACK BRIDGE ROAD YORK PA 17402

Bill to (if different than Report to): PO#: 3774

Project Name/#: LOCAL LIMITS ALS Quote #: 524036

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required:
Approved By:

Email? [X] -Y JCONCINO @ YORK CITY, ORG
Fax? -Y No.:

Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	TOTAL As, Cd, Cu, Mo, Pb, Zn, Ag, Cr, Ni, SE, Hg	CYANIDE	OIL & GREASE 1664	TOTAL MOISTURE	OIL & GREASE 9071B	CYANIDE	TOTAL As, Cd, Cu, Mo, Pb, Zn, Ag, Cr, Ni, SE, Hg
***Container Type						PL	PL	GL	GL	GL	GL	GL
***Container Size						0.5L	0.5L	1L	1L	1L	1L	1L
***Preservative						HNO_3	NaOH	H_2SO_4	—	—	—	—
1 RAW INFLUENT		9/1/16	0000-2400	C	WW	1	1					
2 002 EFFLUENT		9/1/16	0000-2400	C	WW	1	1					
3 RAW INFLUENT		9/1/16	0925	G	WW			2				
4 002 EFFLUENT		9/1/16	0910	G	WW			2				
5 CENTRIFUGE CAKE		9/1/16	0105-0615	C	SL				X	X	X	X – 1 BOTTLE
6												
7												
8												

Enter Number of Containers Per Analysis

UMG 09/03/16 0157

Performed by: Initial Here
Cooler Temp: 2°C
Therm. ID: TH201
No. of Coolers:
Notes:

Circle appropriate Y or N.

	Y/N
Correct containers?	(Y) N
Correct sample volume?	(Y) N
Correct preservation?	(Y) N
Headspace/Volatiles?	Y N
Custody seals Present?	Y (N)
(If present) Seals intact?	Y N
Received on ice?	(Y) N
COC/Labels complete/accurate?	(Y) N
Container in good condition?	(Y) N

SAMPLED BY (Please Print): Sarah J. Laroche

Project Comments: SB 9/9/16

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	Sarah J Laroche / York WWTP	9/2/16	1038	2	Darlene Joseph ALS	9/2/16	1238
3	Darlene Joseph ALS	9/2/16	2000	4	[illegible]		2000
5			2100	6	[illegible]	9/2	2100
7				8			
9				10			

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] If yes, format type:
EDDs Required?
SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ] Other
State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]
DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY Rev 01-2013

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

November 17, 2016

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**2016-ANNUAL TESTING**	Workorder:	**2187206**
Purchase Order:	**3774**	Workorder ID:	**Local Limits**

Dear Mr. Concino:

Enclosed are the analytical results for samples received by the laboratory on Friday, November 4, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2187206 Local Limits

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2187206001	Raw Influent	Waste Water	11/3/2016 00:00	11/4/2016 21:15	Collected by Client
2187206002	002 Effluent	Waste Water	11/3/2016 00:00	11/4/2016 21:15	Collected by Client
2187206003	Raw Influent	Waste Water	11/3/2016 09:55	11/4/2016 21:15	Collected by Client
2187206004	002 Effluent	Waste Water	11/3/2016 09:05	11/4/2016 21:15	Collected by Client
2187206005	Centrifuge Cake	Solid	11/2/2016 14:20	11/4/2016 21:15	Collected by Client

ALS Environmental

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SAMPLE SUMMARY

Workorder: 2187206 Local Limits

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2187206 Local Limits

Lab ID: **2187206001** Date Collected: 11/3/2016 00:00 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 11/4/2016 21:15

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	11/14/16 10:15	CTD	11/14/16 13:23	KXK	A
METALS										
Arsenic, Total	ND		mg/L	0.0015	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:53	MO	B1
Cadmium, Total	ND		mg/L	0.00050	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:53	MO	B1
Chromium, Total	0.0019		mg/L	0.0010	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:53	MO	B1
Copper, Total	0.043		mg/L	0.0025	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:53	MO	B1
Lead, Total	0.0051		mg/L	0.0010	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:53	MO	B1
Mercury, Total (Low-level)	ND		mg/L	0.00020	EPA 245.1	11/15/16 08:00	MNP	11/15/16 13:34	MNP	B2
Molybdenum, Total	0.026		mg/L	0.0010	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:53	MO	B1
Nickel, Total	0.0027		mg/L	0.0025	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:53	MO	B1
Selenium, Total	ND		mg/L	0.0020	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:53	MO	B1
Silver, Total	ND		mg/L	0.0010	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:53	MO	B1
Zinc, Total	0.099		mg/L	0.0025	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:53	MO	B1

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

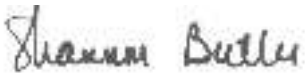
ANALYTICAL RESULTS

Workorder: 2187206 Local Limits

Lab ID: **2187206002** Date Collected: 11/3/2016 00:00 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 11/4/2016 21:15

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Cyanide, Total	ND		mg/L	0.0050	EPA 335.4	11/14/16 10:15	CTD	11/14/16 13:23	KXK	A
METALS										
Arsenic, Total	ND		mg/L	0.0015	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:57	MO	B1
Cadmium, Total	ND		mg/L	0.00050	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:57	MO	B1
Chromium, Total	ND		mg/L	0.0010	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:57	MO	B1
Copper, Total	0.0029		mg/L	0.0025	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:57	MO	B1
Lead, Total	ND		mg/L	0.0010	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:57	MO	B1
Mercury, Total (Low-level)	ND		mg/L	0.00020	EPA 245.1	11/15/16 08:00	MNP	11/15/16 13:37	MNP	B2
Molybdenum, Total	0.020		mg/L	0.0010	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:57	MO	B1
Nickel, Total	ND		mg/L	0.0025	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:57	MO	B1
Selenium, Total	ND		mg/L	0.0020	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:57	MO	B1
Silver, Total	ND		mg/L	0.0010	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:57	MO	B1
Zinc, Total	0.023		mg/L	0.0025	EPA 200.8	11/8/16 06:00	TSS	11/9/16 12:57	MO	B1



Ms. Shannon Butler
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2187206 Local Limits

Lab ID: **2187206003** Date Collected: 11/3/2016 09:55 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 11/4/2016 21:15

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Oil/Grease Hexane Extractable	42.1		mg/L	2.7	EPA 1664B			11/10/16 10:35	MPP	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 2187206 Local Limits

Lab ID: **2187206004** Date Collected: 11/3/2016 09:05 Matrix: Waste Water

Sample ID: **002 Effluent** Date Received: 11/4/2016 21:15

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Oil/Grease Hexane Extractable	3.4	1	mg/L	2.2	EPA 1664B			11/10/16 10:35	MPP	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

ALS Environmental

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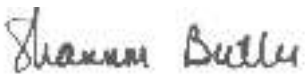
ANALYTICAL RESULTS

Workorder: 2187206 Local Limits

Lab ID: **2187206005** Date Collected: 11/2/2016 14:20 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 11/4/2016 21:15

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
WET CHEMISTRY										
Cyanide, Total	2.9		mg/kg	1.5	SW846 9012B	11/9/16 13:15	CTD	11/10/16 08:08	KXK	A
Hexane Extractable Material	19800		mg/kg	1300	SW846 9071B			11/14/16 07:20	MPP	A
Moisture	84.7		%	0.1	S2540G-11			11/16/16 13:00	VKB	
Silica Gel Treated HEM	7240		mg/kg	1300	SW846 9071B			11/14/16 07:20	MPP	A
Total Solids	15.3		%	0.1	S2540G-11			11/16/16 13:00	VKB	
METALS										
Arsenic, Total	ND		mg/kg	12.3	SW846 6010C	11/11/16 15:48	TRR	11/15/16 05:43	TSS	A1
Cadmium, Total	ND		mg/kg	3.1	SW846 6010C	11/11/16 15:48	TRR	11/15/16 05:43	TSS	A1
Chromium, Total	30.1		mg/kg	6.2	SW846 6010C	11/11/16 15:48	TRR	11/15/16 05:43	TSS	A1
Copper, Total	374		mg/kg	12.3	SW846 6010C	11/11/16 15:48	TRR	11/15/16 05:43	TSS	A1
Lead, Total	52.2		mg/kg	12.3	SW846 6010C	11/11/16 15:48	TRR	11/15/16 05:43	TSS	A1
Mercury, Total	0.78		mg/kg	0.29	SW846 7471B	11/14/16 09:30	MNP	11/14/16 13:42	MNP	A2
Molybdenum, Total	23.5		mg/kg	12.3	SW846 6010C	11/11/16 15:48	TRR	11/15/16 05:43	TSS	A1
Nickel, Total	22.8		mg/kg	12.3	SW846 6010C	11/11/16 15:48	TRR	11/15/16 05:43	TSS	A1
Selenium, Total	ND		mg/kg	30.8	SW846 6010C	11/11/16 15:48	TRR	11/15/16 05:43	TSS	A1
Silver, Total	4.7		mg/kg	3.1	SW846 6010C	11/11/16 15:48	TRR	11/15/16 05:43	TSS	A1
Zinc, Total	773		mg/kg	12.3	SW846 6010C	11/11/16 15:48	TRR	11/15/16 05:43	TSS	A1



Ms. Shannon Butler
Project Coordinator

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2187206004	1	002 Effluent	EPA 1664B	Oil/Grease Hexane Extractable

The QC sample type MS for method EPA 1664B was outside the control limits for the analyte Oil/Grease Hexane Extractable. The % Recovery was reported as 37 and the control limits were 78 to 114.

ALS Environmental

34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F.717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

SB

Page 1 of 1
Courier:
Tracking #:

* 2 1 8 7 2 0 6 *

Co. Name: YORK CITY WWTP
Contact (Report to): JOSEPH CONCINO
Phone: (717) 845-2794
Address: 1701 BLACK BRIDGE ROAD
YORK, PA 17402

Bill to (if different than Report to):
PO#: 3774

Project Name/#: LOCAL LIMITS
ALS Quote #: 524036

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required:
Approved By:

Email? [X] Y JCONCINO@YORKCITY.ORG
Fax? Y No.:

					***Container Type	PL	PL	GL	GL	GL	GL	GL
					***Container Size	0.5L	0.5L	1L	1L	1L	1L	1L
					***Preservative	HNO3	NaOH	H2SO4	—	—	—	—
					ANALYSES/METHOD REQUESTED	TOTAL As, Cd, Cu, Mo, Pb, Zn, Ag, Cr, Ni, SE, Hg	CYANIDE	OIL + GREASE 1664	TOTAL MOISTURE	OIL & GREASE 9071B	CYANIDE	TOTAL As, Cd, Cu, Mo, Pb, Zn, Ag, Cr, Ni, SE, Hg
Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	Enter Number of Containers Per Analysis						
1 RAW INFLUENT		11/3/16	0000-2400	C	WW	1	1					
2 002 EFFLUENT		11/3/16	0000-2400	C	WW	1	1					
3 RAW INFLUENT		11/3/16	0955	G	WW			2				
4 002 EFFLUENT		11/3/16	0905	G	WW			2				
5 CENTRIFUGE CAKE		11/2/16	0820-1420	C	SL				X	X	X	X - 1 BOTTLE
6												
7												
8												

(completed by Sample Receiving) Performed by: INITIAL HERE NG
Cooler Temp: 1°C
Therm. ID: TH241
No. of Coolers:
Notes:

Circle appropriate Y or N.
- Correct containers? (Y) N
- Correct sample volume? (Y) N
- Correct preservation? (Y) N
- Headspace/Volatiles? — N
- Custody seals Present? Y (N)
- (if present) Seals Intact? — —
- Received on Ice? (Y) N
- COC/Labels complete/accurate? (Y) N
- Container in good condition? (Y) N

LM/ 11/05/16 0722

SAMPLED BY (Please Print):
Project Comments:

	Relinquished By / Company Name	Date	Time		Received By / Company Name	Date	Time
1	[signature] - YORK CITY	11/4/16	0845	2	Darlene Joseph ALS	11/4/16	0845
3	Darlene Joseph ALS	11-4-16		4	[signature] ALS		2020
5	[signature] ALS		2120	6	[signature]	11-4-16	2115
7				8			
9				10			

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] Other
EDDs Required? [ ] If yes, format type:
SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ] Other
State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]
<Enter PWSID No.
DOD Criteria Required?

ALS FIELD SERVICES
[ ] Pickup
[ ] Labor
[ ] Composite Sampling
[ ] Rental Equipment
[ ] Other:

* G=Grab; C=Composite
**Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY
Rev 01-2013

ALS Environmental

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

November 17, 2016

Mr. Joe Concino
York, City of (WWTP)
1701 Blackridge Road
York, PA 17405

Certificate of Analysis

Project Name:	**2016-ANNUAL TESTING**	Workorder:	**2187210**
Purchase Order:	**3777**	Workorder ID:	**Add. Local Limits**

Dear Mr. Concino:

Enclosed are the analytical results for samples received by the laboratory on Friday, November 4, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Shannon Butler (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

Shannon Butler

Ms. Shannon Butler
Project Coordinator

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2187210 Add. Local Limits

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2187210001	Raw Influent	Waste Water	11/3/2016 00:00	11/4/2016 21:15	Collected by Client
2187210002	T2 Influent	Waste Water	11/3/2016 00:00	11/4/2016 21:15	Collected by Client
2187210003	Centrifuge Cake	Solid	11/2/2016 14:20	11/4/2016 21:15	Collected by Client

ALS Environmental

34 Dogwood Lane ▪ Middletown, PA 17057 ▪ Phone: 717-944-5541 ▪ Fax: 717-944-1430 ▪ www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2187210 Add. Local Limits

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incurbator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2187210 Add. Local Limits

Lab ID: **2187210001** Date Collected: 11/3/2016 00:00 Matrix: Waste Water

Sample ID: **Raw Influent** Date Received: 11/4/2016 21:15

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
SEMIVOLATILES										
bis(2-Ethylhexyl)phthalate	31.4		ug/L	5.7	EPA 625	11/8/16 09:20	CAC	11/9/16 22:24	CGS	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	101		%	47 - 128	EPA 625	11/8/16 09:20	CAC	11/9/16 22:24	CGS	A
2-Fluorobiphenyl (S)	76.5		%	52 - 118	EPA 625	11/8/16 09:20	CAC	11/9/16 22:24	CGS	A
2-Fluorophenol (S)	46.2		%	20 - 87	EPA 625	11/8/16 09:20	CAC	11/9/16 22:24	CGS	A
Nitrobenzene-d5 (S)	89.7		%	27 - 139	EPA 625	11/8/16 09:20	CAC	11/9/16 22:24	CGS	A
Phenol-d5 (S)	36.5		%	10 - 81	EPA 625	11/8/16 09:20	CAC	11/9/16 22:24	CGS	A
Terphenyl-d14 (S)	80.9		%	46 - 133	EPA 625	11/8/16 09:20	CAC	11/9/16 22:24	CGS	A

Shannon Butler

Ms. Shannon Butler
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2187210 Add. Local Limits

Lab ID: **2187210002** Date Collected: 11/3/2016 00:00 Matrix: Waste Water

Sample ID: **T2 Influent** Date Received: 11/4/2016 21:15

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
METALS										
Copper, Total	0.028		mg/L	0.0025	EPA 200.8	11/9/16 09:20	TRR	11/10/16 09:04	ZMC	A1
Silver, Total	ND		mg/L	0.0010	EPA 200.8	11/9/16 09:20	TRR	11/10/16 09:04	ZMC	A1
Zinc, Total	0.068		mg/L	0.0025	EPA 200.8	11/9/16 09:20	TRR	11/10/16 09:04	ZMC	A1

Shannon Butler

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ANALYTICAL RESULTS

Workorder: 2187210 Add. Local Limits

Lab ID: **2187210003** Date Collected: 11/2/2016 14:20 Matrix: Solid

Sample ID: **Centrifuge Cake** Date Received: 11/4/2016 21:15

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
SEMIVOLATILES										
bis(2-Ethylhexyl)phthalate	3630		ug/kg	642	SW846 8270D	11/8/16 09:00	JTH	11/9/16 05:06	DHF	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4,6-Tribromophenol (S)	64.9		%	19 - 132	SW846 8270D	11/8/16 09:00	JTH	11/9/16 05:06	DHF	A
2-Fluorobiphenyl (S)	42.3		%	40 - 110	SW846 8270D	11/8/16 09:00	JTH	11/9/16 05:06	DHF	A
2-Fluorophenol (S)	62.4		%	26 - 116	SW846 8270D	11/8/16 09:00	JTH	11/9/16 05:06	DHF	A
Nitrobenzene-d5 (S)	69.6		%	38 - 112	SW846 8270D	11/8/16 09:00	JTH	11/9/16 05:06	DHF	A
Phenol-d5 (S)	66.6		%	35 - 111	SW846 8270D	11/8/16 09:00	JTH	11/9/16 05:06	DHF	A
Terphenyl-d14 (S)	60.7		%	45 - 126	SW846 8270D	11/8/16 09:00	JTH	11/9/16 05:06	DHF	A
WET CHEMISTRY										
Moisture	84.6		%	0.1	S2540G-11			11/16/16 13:00	VKB	
Total Solids	15.4		%	0.1	S2540G-11			11/16/16 13:00	VKB	

Shannon Butler

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

SB

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Page 1 of 1

Courier:

Tracking #:

* 2 1 8 7 2 1 0 *

Co. Name: YORK CITY WWTP

Contact (Report to): JOSEPH CONCINO Phone: (717) 845-2794

Address: 1701 BLACK BRIDGE ROAD YORK, PA 17402

Bill to (if different than Report to): PO#: 3777

Project Name/#: ADD, LOCAL LIMITS ALS Quote #: 524036

TAT: [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges. Date Required: Approved By:

Email? [X] -Y JCONCINO@YORKCITY.ORG

Fax? [ ] -Y No.:

						BIS-2ETHYL HEXYL PHTHALATE 625	TOTAL CU, Ag, ZN	BIS-2ETHYL HEXYL PHTHALATE 8270							
				***Container Type		GL	PL	GL							
				***Container Size		1L	0,5L	250 mL							
				***Preservative		—	HNO3	—							
Sample Description/Location (as it will appear on the lab report)	COC Comments	Sample Date	Military Time	*G or C	**Matrix	Enter Number of Containers Per Analysis									
1 RAW INFLUENT		11/3/16	0000-2400	C	WW	2									
2 T2 INFLUENT		11/3/16	0000-2400	C	WW		1								
3 CENTRIFUGE CAKE		11/2/16	0820-1420	C	SL			1							
4															
5															
6															
7															
8															

ANALYSES/METHOD REQUESTED

WW 2 11/05/16 0730

Cooler Temp: 1°C Performed by: Initial Here: JW

Therm. ID: TH291

No. of Coolers:

Notes:

Circle appropriate Y or N.

Check		
Correct containers?	(Y)	N
Correct sample volume?	(Y)	N
Correct preservation?	(Y)	N
Headspace/Volatiles?	Y	N
Custody seals Present?	Y	(N)
(if present) Seals intact?	Y	N
Received on ice?	(Y)	N
COC/Labels complete/accurate?	(Y)	N
Container in good condition?	(Y)	N

SAMPLED BY (Please Print):

Project Comments:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] YORKCITY	11/4/16	0945	2 Darlene Joseph ALS	11-4-16	0945
3 Darlene Joseph ALS	11-4-16		4 [signature] ALS		2020
5 [signature] ALS		2120	6 [signature]	11-4-16	2115
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] NJ-Reduced [ ] NJ-Full [ ] srw

EDDs Required? [ ] If yes, format type:

SDWA Forms? yes [ ] yes [ ] yes [ ] yes [ ] Other

State Samples Collected In? MD [ ] NJ [ ] NY [ ] PA [ ]

Enter PWSID No.

DOD Criteria Required?

ALS FIELD SERVICES: [ ] Pickup [ ] Labor [ ] Composite Sampling [ ] Rental Equipment [ ] Other:

* G=Grab; C=Composite **Matrix: AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY ***Container Type: AG-Amber Glass; CG-Clear Glass, PL-Plastic. Container Size: 250ml, 500ml, 1L, 8oz., etc. Preservative: HCl, HNO3, NaOH, etc.

Rev 01-2013

Attachment 6

Solids Management Inventory

PARAMETER	VALUE	UNIT
Annual Average Flow	10.118	MGD
Average Annual Influent BOD_5	276	mg/l
Average Annual Effluent $CBOD_5$	3	mg/l
Total Volume of Sludge Wasted	89,493,811	G
Average Annual Solids Concentration of Return Sludge Flow	8016	mg/l
Total Biosolids Generated	1,495.32	dry tons

Attachment 7

Control Systems 21

"Your Process Control Specialists"

CERTIFICATE of CALIBRATION

Cal Certificate # 29857

Company Name YWWTP
Instrument ID **YP-023**

Description	Influent Flowmeter @ Headworks	**Status**	Active
Manufacturer	Milltronics	**Temp °F**	45
Model Number	MultiRanger	**Cal Proc**	4.8
Serial Number	N/A	**Adjusted To Improve**	No
Location	Plant	**Calibration Frequency**	6 Months
Building	Headworks	**Calibrated**	03/02/2016
Department	N/A	**Next Due Date**	09/30/2016

Calibration Specifications

Group Name Flow Meter

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	15.00 MGD	+3.70/-3.69	15.04 MGD	P	15.04 MGD	P	0.04

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	4/30/2016

Equipment listed on this cert is certified in reference to our current work instructions as part of our quality system.

Where applicable and noted calibrations were performed using standards whose calibration is traceable through NIST or another National Metrology Institute to the International System of Units (SI units).

Control Systems 21 utilizes the comparison method of calibration. Results are reviewed, when applicable, and any results exceeding the agreed upon specifications are indicated by red and/or bold print

All results with this certification relate only to the item(s) calibrated. This certificate shall not be reproduced except in full and with written consent of Control Systems 21. Unless otherwise noted all calibrations were performed in the field at the customers location.

Please note: *any number of factors may cause the calibration item to drift out of tolerance before the calibration interval has expired.*

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Galen Anderson

Finalized By: Galen Anderson 02 March 2016 1:46:36PM

Print Date: 11/23/2016

Control Systems 21
713 Range End Rd. • Dillsburg, PA 17019 • Voice: 717 432-5511 • Fax: 717 432-7550
email@controlsystems21.com

Control Systems 21

"Your Process Control Specialists"

CERTIFICATE of CALIBRATION

Cal Certificate # 32285

Company Name YWWTP

Instrument ID **YP-023**

Description	Influent Flowmeter @ Headworks	**Status**	Active
Manufacturer	Milltronics	**Temp °F**	75
Model Number	MultiRanger	**Cal Proc**	4.8
Serial Number	N/A	**Adjusted To Improve**	No
Location	Plant	**Calibration Frequency**	6 Months
Building	Headworks	**Calibrated**	09/21/2016
Department	N/A	**Next Due Date**	03/31/2017

Calibration Specifications

Group Name Flow Meter

Test Point	Ref Standard	Tol	UUT As Found	P/F	UUT As Left	P/F	Dev
1	8.89 MGD	+3.70/-3.69	9.07 MGD	P	9.07 MGD	P	0.18

Calibration Standards Used

Test Instrument ID	Manufacturer	Model Number	Serial Number	Next Cal Date
ISCO	Isco Flow Book	N/A	N/A	
M-003	Komelon	SL2825	N/A	4/30/2017

Equipment listed on this cert is certified in reference to our current work instructions as part of our quality system.

Where applicable and noted calibrations were performed using standards whose calibration is traceable through NIST or another National Metrology Institute to the International System of Units (SI units).

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Please note: *any number of factors may cause the calibration item to drift out of tolerance before the calibration interval has expired.*

Remarks or Special Requirements:

Calibration Result: Calibration Successful

Calibrated By: Galen Anderson

Finalized By: Galen Anderson 03 October 2016 2:06:09PM

Print Date: 10/17/2016

Control Systems 21

713 Range End Rd. • Dillsburg, PA 17019 • Voice: 717 432-5511 • Fax: 717 432-7550

email@controlsystems21.com